Progressive Rehabilitation and Closure Plan

Version Reference: v5.2d

Document Reference: ODC-OPS-ENV-MP-002

February 2026

PEMBROKE

OLIVE DOWNS COMPLEX

STEELMAKING COAL



DOCUMENT CONTROL				
Reference	Date	Prepared	Checked	Authorised
ODC-OPS-ENV-MP-002-v4	30 June 2025	N. Dixon	N Tranter	M. Sheldon
ODC-OPS-ENV-MP-002-v5.1	09 Jan 2026	N. Dixon	N. Tranter	N. Tranter
ODC-OPS-ENV-MP-002-v5.2	02 Feb 2026	N. Dixon	N. Tranter	N. Tranter
ODC-OPS-ENV-MP-002-v.5.2d	02 Feb 2026	N. Tranter	N. Tranter	N. Tranter

DOCUMENT LOCATION
EMS/1. Overarching/1.1 Licenses & Permitting/PRCP/01.Main Docs

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Contents

1 Introduction 1

1.1 Purpose and Structure 1
1.2 Environmental Authority 2
1.3 Transitional Provisions 2
1.3.1 Continuity of Land Outcomes 2
1.4 Land Outcome Documents 3

Part A: Rehabilitation Planning 4

2 Baseline Information 4

2.1 Project Setting 4
2.2 Climate 4
2.2.1 Rainfall 6
2.2.2 Evaporation 6
2.2.3 Temperature 7
2.2.4 Humidity Data and Statistics 7
2.2.5 Bushfire Risk 7
2.2.6 Consideration of Climate Change Projections for Australia and Queensland 10
2.3 Geography and Topography 10
2.3.1 Topography 10
2.4 Geology 12
2.4.1 Cainozoic Sediments 16
2.4.2 Triassic 16
2.4.3 Permian Coal Measures (Blackwater Group) 16
2.5 Soils 17
2.5.1 Topsoil Details 17
2.5.2 Subsoil details 18
2.6 Ecology 21
2.6.1 Fauna Present and Populations 21
2.6.2 Flora Present 21
2.6.3 Weeds and Pests 22
2.7 Surface Water Resources – Presence, Quality and Use 23
2.7.1 Catchment Context 23
2.7.2 Streamflows 26
2.7.3 Regional Water Quality 26
2.7.4 Upstream and Downstream Users 26
2.8 Groundwater Presence, Quality and Use 27
2.8.1 Main Hydrogeological Units Relevant to ODP 27
2.8.2 Groundwater Monitoring 27
2.8.3 Baseline Groundwater Quality 30
2.8.4 Groundwater Use 35
2.8.5 Groundwater Dependent Ecosystems (GDE) 38
2.9 Land Use 42
2.9.1 Land Suitability Classes 43
2.9.2 Sensitive Receptors 44
2.9.3 Underlying Landholder/Overlapping Tenure 46
2.9.4 Native Title and Cultural Heritage 46

3 Project Description 49

3.1 Mining Tenements 49
3.2 Environmentally Relevant Activities 49
3.3 Type of Mining Operations 51
3.3.1 Mine Development & Progressive Rehabilitation Stages 51
3.4 Proposed Duration 52
3.5 Mine Infrastructure 52
3.5.1 Olive Downs South Domain 53
3.5.2 Willunga Domain 53
3.6 Design for closure 63
3.7 Rehabilitation/Improvement Planning 63
3.7.1 Planning 63
3.7.2 Existing Rehabilitation 64

4 Post Mining Land Use 64

4.1 Transitionary Provisions 65
4.1.1 Contemporary Definitions of PMLUs and NUMAs 65
4.1.2 Final Land Use Outcomes 66
4.2 Final Landform Design 68
4.2.1 Residual Mine Voids 68
4.3 Transitional PMLUs 70
4.3.1 Agriculture (Low Intensity Cattle Grazing) 70
4.3.2 Native Vegetation (Woodland) 71
4.3.3 Fauna Habitat 72
4.3.4 Undisturbed Areas 72
4.3.5 Extents of PMLUs 73
4.4 Transitional NUMA 74
4.4.1 Residual Void Waterbodies (IA1) 74
4.4.2 Highwalls and Set-back Areas (IA2) 79
4.4.3 Extents of NUMAs 80
4.5 Strategies and Plans 81
4.6 Final Milestone Criteria 82

5 Community Consultation 83

5.1 Overview 83
5.2 EIS Consultation Process 83
5.3 Life of Mine Community Engagement 84
5.3.1 Community and Stakeholder Engagement Plan (CSEP) 84
5.3.2 Community Consultation Outcomes 85

6 Rehabilitation Methodology 89

6.1 Hydrogeology 89
6.1.1 Relevant Milestones 92
6.2 Flood Risk Assessment and Management 92
6.2.1 Flood Risk Assessment 92
6.2.2 Flood Protection 92
6.2.3 Final Landform Assessment 93
6.2.4 Relevant Milestones 97
6.3 Waste Characterisation 97
6.3.1 ODS – Potential Spoil Characterisation 98
6.3.2 ODS – Potential Reject Characterisation 98
6.4 Waste Rock and Rejects Management 99
6.4.1 Waste Rock 99
6.4.2 Coarse Reject 100
6.4.3 Management of Out-of-Pit Coal Reject Emplacements 100
6.4.4 Management of In-Pit Coal Reject Emplacements 100
6.4.5 Fine Reject (Tailings) 100
6.4.6 Relevant Milestones 100
6.5 Growth Material Assessment 101
6.5.1 Soil Materials Balance 101
6.5.2 Surface Preparation 106
6.5.3 Topsoil/ Subsoil Management 106
6.5.4 Relevant Milestones 106

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

6.6 Revegetation Objectives 107
6.6.1 Relevant Milestones 108
6.7 (Erosion Management 109
6.7.1 Erosion and Sediment Control Plan 110
6.7.2 Relevant Milestones 110
6.8 Voids 111
6.8.1 Void Rehabilitation Strategies 111
6.8.2 Void Geotechnical Reports 112
6.8.3 Void Water Quality 112
6.8.4 Supervision and Verification of Final Design 113
6.8.5 Relevant Milestones 113
6.9 Surface Drainage 115
6.9.1 Relevant Milestones 115
6.10 Ripstone Creek Diversion 116
6.10.1 Relevant Milestones 116
6.11 Built Infrastructure 117
6.11.1 Water Management Structures 118
6.11.2 Ancillary Disturbances 118
6.11.3 Remediation of Contaminated Land 118
6.11.4 Removal or Treatment of Safety Risks 118
6.11.5 Relevant Milestones 118

7 Mine Closure Risk Assessment 120

7.1 Summary of Key Closure Risks 121
7.2 Risk Treatment Plan 122
7.3 Rehabilitation Trials 122

8 Monitoring and Maintenance 123

8.1 Rehabilitation Monitoring 123
8.1.1 Surface Water Monitoring 124
8.1.2 Groundwater Monitoring 130
8.1.3 Soil Assessment 132
8.1.4 Landform Function Analysis (LFA) 133
8.1.5 Erosion Monitoring 133
8.1.6 Revegetation Monitoring 134
8.1.7 BioCondition Assessment 135
8.1.8 Rehabilitation and Closure Maintenance and Management 136

Part B: PRCP Schedule 138

9 PRCP Schedule 138

9.1 Final Site Design 138
9.2 Rehabilitation and Improvement Areas 138
9.3 Rehabilitation and Improvement Timeframes 141
9.3.1 Published Timeframes 141
9.3.2 Continuous Improvement 144
9.4 Milestones and Milestone Criteria 144
9.4.1 Justification for Milestones 144
9.4.2 Milestone Completion Dates 145

10 References 166

Tables

Table 1 Meteorological summary (Average rainfall, evaporation, temperature and humidity) **6**
Table 2 Adopted climate change impact projections (source Hatch, 2018a) **10**
Table 3 Summary of ODP Topsoils and Subsoils **19**
Table 4 Restricted pest plants and WoNS recorded from the study area (Source DPM, 2018a) **22**
Table 5 Physio-chemical water quality parameters - December 2016 and July 2017 **26**
Table 6 List of Isaac River surface water licences (Source Hatch, 2018a) **28**
Table 7 Registered use of groundwater bores within the study area **35**
Table 8 Land use of the Isaac-Connors sub catchment (Source DNRW, 2006) **43**
Table 9 SMUs Suitability Assessments and Areas for classes of cropping and grazing **43**
Table 10 Properties within and adjacent to ODP ML and MLA areas **46**
Table 11 ODP Mining Lease Tenements **49**
Table 12 Environmentally Relevant Activities **49**
Table 13 Indicative Mine Schedule **52**
Table 14 LOD Rehabilitation & Closure Outcomes **66**
Table 15 Authorised Designs of Residual Voids (as per EA0001976, Table H2) **69**
Table 16 Total area of PMLU's For ODP **73**
Table 17 Total area of NUMAs For ODP **80**
Table 18 Community Consultation Register **87**
Table 19 Soil stripping depths and volumes **102**
Table 20 WEPP Modelling Outcomes for Grazing and Woodland PMLUs **109**
Table 21 Progressive Rehabilitation & Closure Risk Assessment Overview **120**
Table 22 Rehabilitation Monitoring Program for ODP Milestone Criteria **123**
Table 23. Surface water monitoring locations **126**
Table 24 Surface Water quality limits **127**
Table 25 Groundwater monitoring locations **132**
Table 26 Maintenance and Management Actions **136**
Table 27 Proposed Rehabilitation and Improvement Areas **141**
Table 28 Summary of Prior-Specified Timeframes for Rehabilitation and Improvement Areas/Activities **141**
Table 29 Rehabilitation Milestones and Associated Criteria **146**
Table 30 EA Rehabilitation Criteria, With Relevant Milestones **157**
Table 31 Milestone Completion Dates **163**

Figures

Figure 1 Regional Location of the Pembroke Olive Downs Complex (ODP) **5**
Figure 2 Meteorological Stations Near ODP **8**
Figure 3 Long-Term Monthly Rainfall And Rainfall Residual Mass Curve At Carfax Station (34016). **9**
Figure 4 Highest And Mean Rainfall At The Moranbah Water Treatment Plant (34038) **9**
Figure 5 Terrain Surface Classification **11**

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Figure 6 Geological Cross Section - ODS Domain (Hydrosimulations [2018]) **13**
Figure 7 Surface Geology (Hydrosimulations [2018]) **14**
Figure 8 Outcrop Geology (Hydrosimulations [2018]) **15**
Figure 9 Isaac River Catchment And Project Area **24**
Figure 10 Flow Volume And River Height In The Isaac River At Deverill (Dnrme Station 130410a, located to the northwest of ODP) (Hatch, [2018]) **25**
Figure 11 ISDS Gauge Recorded Flow Rate (Hatch, [2018a]) **25**
Figure 12 Site Groundwater Monitoring Bores **29**
Figure 13 Piper Diagram Of Project Site Bores (Hydrosimulations [2018]) **30**
Figure 14 Piper Diagram Of All Data (Hydrosimulations [2018]) **31**
Figure 15 FAO (2013) Salinity Ranking By Unit (Hydrosimulations [2018]) **32**
Figure 16 Isaac River Salinity (Hydrosimulations [2018]) **33**
Figure 17 Distribution Of TDS In Groundwater **34**
Figure 18 Location And Uses Of Registered Bores **37**
Figure 19 Surface Water GDEs **40**
Figure 20 Sub-Surface Water GDEs **41**
Figure 21 Examples of Aquatic Habitats at ODP **42**
Figure 22 Location Of Sensitive Receptors In Proximity To ML Areas **45**
Figure 23 Tenure – Background Land Ownership **47**
Figure 24 Native Title Determination And Indigenous Land Use Agreement **48**
Figure 25 ODP Mining Tenure **50**
Figure 26 ODS Domain General arrangement and mine pits **54**
Figure 27 Willunga Domain General arrangement and mine pits **55**
Figure 28 ODS Domain General arrangement – 2027 (Stage 1) **56**
Figure 29 ODS Domain General Arrangement – 2043 (Stage 2-3) **57**
Figure 30 Willunga Domain General arrangement – 2043 (Stage 2 – 3) **58**
Figure 31 ODS Domain General arrangement – 2066 (Stage 5) **59**
Figure 32 Willunga Domain General Arrangement – 2066 (Stage 5) **60**
Figure 33 ODS Domain General Arrangement – 2085 (Stage 6) **61**
Figure 34 Willunga Domain General Arrangement – 2085 (Stage 6) **62**
Figure 35 ODS3 Residual Void 3D representation and position of safety bund at edge of set-back area **76**
Figure 36 ODS7/8 Residual Void 3D representation and position of safety bund at edge of set-back area **77**
Figure 37 WIL5 Residual Void 3D representation and position of safety bund at edge of set-back area **78**
Figure 38 Predicted Groundwater Levels In Unconsolidated Sediments (Layer 1 And 2) – Post Mining Equilibrium **90**
Figure 39 Predicted Groundwater Levels In The Vermont Seam (Layer 7) – Post Mining Equilibrium **91**
Figure 40 Final Landform 0.1% AEP Flood Velocity and Extents (Hatch 2018b) **95**
Figure 41 Final Landform PMF Flood Velocity and Extents (Hatch 2018b) **96**
Figure 42 ASC Soil Types **104**
Figure 43 Residual void perimeter bund typical detail (not to scale) **112**
Figure 44 Surface water monitoring locations **129**
Figure 45 Groundwater monitoring locations **131**
Figure 46 Transect Layout Showing Dimensions And Quadrats **134**
Figure 47 Final Site Design For ODS Project Domain **139**
Figure 48 Final Site Design For Willunga Project Domain **140**
Figure 49 Rehabilitation And Improvement Areas - ODS **142**
Figure 50 Rehabilitation And Improvement Areas – Willunga **143**

Appendices

Appendix A Environmental Authority EA0001976 **171**
Appendix B Coordinator General Report **171**
Appendix C PRCP Transition Notice **171**
Appendix D MNES Management Plan **171**
Appendix E EIS Rehabilitation Strategy **171**
Appendix F Void Closure Plan **171**
Appendix G Social Impact Management Plan (SIMP) **171**
Appendix H Topsoil Management Plan **171**
Appendix I Erosion and Sediment Control Plan **171**
Appendix J EIS – Soil and Land Suitability Assessment **171**
Appendix K Revegetation Management Plan **171**
Appendix L Risk Assessment **171**
Appendix M Rehbailitation Monitoring Plan **171**
Appendix N Receiving Environment Monitoring Program (REMP) **171**
Appendix O Water Management Plan **171**
Appendix P Weed & Pest Management Plan **172**
Appendix Q PRCP Schedule **172**
Appendix R EIS Flood Assessment **172**

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

1 Introduction

1.1 Purpose and Structure

This transitional Progressive Rehabilitation and Closure Plan (PRCP) has been prepared for the Olive Downs Project (ODP) in accordance with the relevant requirements of the *Mineral and Energy Resources* (Financial Provisioning) *Act 2018* (MERFP Act) and the *Environmental Protection Act 1994* (EP Act), as described in the *Progressive Rehabilitation and Closure Plan Gui*deline (PRCP Guideline) (ESR/2019/4964 Version 2.00).

Pembroke has considered the following relevant guidelines and current practice guidance materials for the development of the ODP rehabilitation strategy, as described in the PRCP:

- Mined Land Rehabilitation Policy (DES, 2018)
- Information Sheet Non-use Management Areas (DETSI, 2025)
- Leading practice approaches to select post-mining land uses for residual mine voids (Office of the Queensland Mine Rehabilitation Commissioner, 2023)
- Aquatic ecosystems in post-mining landscapes (Office of the Queensland Mine Rehabilitation Commissioner, 2024)
- Management of coal mine voids as non-use management areas (Office of the Queensland Mine Rehabilitation Commissioner, 2025)
- Geotechnical stability of final voids as non-use management areas (Office of the Queensland Mine Rehabilitation Commissioner, 2025)
- Application requirements for activities with impacts to land (DEHP, 2017)
- Rehabilitation Requirements for Mining Resources Activities Guideline (DEHP, 2014)
- EIS information guideline – Land (DEHP, 2016a)
- EIS information guideline – Rehabilitation (DEHP, 2016b)
- Planning for Integrated Mine Closure: Toolkit (International Council on Mining and Metals, 2008)
- Strategic Framework for Mine Closure (Australian and New Zealand Minerals and Energy Council and the Minerals Council of Australia, 2000)
- Leading Practice Sustainable Development Program for the Mining Industry: Mine Rehabilitation (Commonwealth Department of Industry, Innovation and Science, 2016a); and
- Leading Practice Sustainable Development Program for the Mining Industry: Mine Closure (Commonwealth Department of Industry, Innovation and Science, 2016b).

This PRCP comprises two parts:

- Part A: Rehabilitation Planning – providing information about the site, the rehabilitation plans, and evidence and justification to support the development of the proposed PRCP schedule.
- Part B: PRCP Schedule – including maps of rehabilitation and closure outcomes for the site, and tables of time-based rehabilitation milestones.

This document also contains Appendices providing the key information and technical studies used to support development of this plan.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

1.2 Environmental Authority

The associated Environmental Authority (EA) associated with ODP and the transitionary provisions is:

ENVIRONMENT AUTHORITY HOLDER:	PEMBROKE OLIVE DOWNS PTY LTD
Environmental Authority Number:	EA0001976
Land Description:	ML700032; ML700033; ML700034; ML700035; ML700036

Environmentally relevant activities at ODP are mining black coal, chemical storage, mineral processing, and sewage treatment. These activities are undertaken under the conditions of the site's EA0001976 dated 26 February 2024 (Appendix A). This EA forms a key Land Outcome Document (LOD) which informs the PRCP's development (refer section 1.4).

1.3 Transitional Provisions

The MERFP Act was passed by Parliament on 30th November 2018 which saw the establishment of transitional provisions within Part 27, Chapter 13 of the EP Act. The subsequent PRCP Guideline, Section 5, sets forward that existing EA holders must transition to the PRC Plan Framework (DESI, 2023).

At the time of this change, the ODP was in the final stages of approval via Environmental Impact Statement (EIS) in accordance with the provisions of the *State Development and Public Works Organisation Act 1971* (SDPWO Act). The result of this assessment pathway was the Olive Downs Project: Coordinator-General's evaluation report on the environmental impact statement issued in May 2019 (Appendix B) In keeping with the provisions of the SDPWO Act and the EP Act, EA0001976 was issued to Pembroke Olive Downs Pty Ltd (Pembroke) in August 2022.

As per the above transitional provision, a PRCP transition notice was issued to Pembroke under section 754 of the EP Act on 20 August 2021 (Appendix C) Pembroke submitted its first PRCP to the (then) Department of Environment and Science (the Department) on 31 October 2022.

1.3.1 Continuity of Land Outcomes

Including the original PRCP submission there has been a total of four (4) prior iterations of the PRCP with four (4) RFIs being provided by the Department and ongoing dialogue on how best to transition the ODP into the regime to facilitate progressive rehabilitation in keeping with the purpose of the PRCP Guideline which is to:

- Require the holder of an EA to plan for how, where and when the activities will be carried out on land in a way that maximises the progressive rehabilitation of the land to a stable condition; and
- Provide for the condition to which the holder must rehabilitation the land before the EA may be surrendered.

This latest version, being version 5, has been updated to reflect the 3 July 2025 PRCP change request made pursuant to section 132 of the EP Act. The Department accepted the change request which was focused upon the navigating the consistent intent presented and subsequently approved within the various LODs and the contemporary interpretation and application of the concepts of 'post mine land use areas' (PMLUs) and 'non-use management areas' (NUMAs) introduced by the PRCP requirements (refer section 4.4).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

1.4 Land Outcome Documents

Land Outcome Documents (LODs) are specified in Section 750 of the EP Act and include:

(a) *An EA for a resource activity on the land;*

(b) *A document made under a condition of the EA that:*

(i) Relates to the management or rehabilitation of land (e.g., rehabilitation and closure plan or residual void management plan); and

(ii) Was provided to the administering authority, and had not been superseded, before 30 November 2018; and

(iii) Before 15 January 2019, the administering authority had not notified the EA holder that the document was insufficient.[1]

(c) *A document made under a condition of an EA that:*

(i) Relates to the management of a void; and

(ii) Was provided to the administering authority between 30 November 2019 and 30 November 2022; and

(iii) Within 20 business days after receiving the document, the administering authority had not notified the EA holder that the document was insufficient[2].

(d) *A report evaluating an EIS under section 34D of the SDPWO Act;*

(e) *An EIS assessment report; and*

(f) *A written agreement between the EA holder and the State that is in force on 30 November 2018.*

For the purposes of the ODP, the following are considered the LODs for this transitional PRCP:

- EA0001976 (Appendix A); and
- Olive Downs Project: Coordinator-General's (CG) evaluation report on the EIS (CG's Report) (Appendix B).

The land outcomes specified in the EA are discussed in section 4.1. These are consistent with the post-mining land use expectations described in section 5.1.3 of the CG's Report, being:

- More than 90% of the disturbed areas of the site to be restored to grazing land uses (low intensity cattle grazing) or native vegetation (woodland); and
- The balance of the site would include dams, final voids or areas not disturbed by mining activities.

[1] Section 750(b) does not apply, as the EA was issued after 30 November 2018.
[2] Section 750(c) does not apply, as the EA does not require void management documentation until 5 years prior to the commencement of the final void (i.e. ODS3 is scheduled to commence after 2030).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Part A: Rehabilitation Planning

In accordance with section 126C(1)(b) and (c)(ii) of the EP Act the purpose of the rehabilitation planning part of the PRCP is to support and justify the development of the proposed PRCP schedule. This part must detail how progressive rehabilitation and closure will be carried out over the entire Project site and on both a rehabilitation area basis and improvement area basis. The key components of the rehabilitation planning part for the ODP are:

- Project planning (refer sections 2 and 3):
  - Baseline information (section 2)
  - Project description – (section 3)
  - Design for closure – (section 3); and
  - Rehabilitation/improvement planning (section 3).
- Post-mining land use (PMLU) and/or non-use management area (NUMA) determination (refer section 4).
- Community Consultation (refer section 5).
- Rehabilitation management and methodology (refer Section 6).
- Risk assessment (refer section 7).
- Monitoring and maintenance program (refer section 8).

2 Baseline Information

In keeping with the PRCP Guideline requirements for rehabilitation planning this transitional PRCP summarises the required baseline information collected and presented within the EIS process. The information is presented to provide the context for the suitability of the proposed PRCP outcomes and methodologies.

2.1 Project Setting

The ODP is located in the Bowen Basin region of Central Queensland, approximately 40 km south-east of Moranbah and approximately 40 km north of Dysart, in an existing mining precinct comprising several existing or approved nearby coal mining operations (Figure 1). Pre-mining land use within the approximately 25,000 ha ODP overall project area (as defined by the Mining Leases boundaries, refer section 3) contained mostly (70%) land cleared for cattle grazing and not associated with any remnant native vegetation, with the remainder made up of remnant and regrowth forest and woodland, as well as the Isaac River and other watercourses. Trees are largely absent but generally consist of isolated acacias and eucalypts. Cattle grazing and associated agricultural practices have impacted and caused degradation to the vegetation (including fauna habitats) across the Project area to varying extents. The following sections describe the pre-mining environmental and social setting in more detail, where those factors are relevant to informing the PRCP.

2.2 Climate

Long-term meteorological data for the region is available from a range of Commonwealth Bureau of Meteorology (BoM) meteorological stations (Figure 2). The Carfax Station (34016) located approximately 5 km south-east of ODP provides the most extensive rainfall dataset in the vicinity of ODP. The Moranbah Water Treatment Plant (WTP) weather station (34038) located approximately 40 km north-west of the ODP has provided the most extensive temperature dataset, however, it was decommissioned in 2012 and replaced with the Moranbah Airport weather station (34035).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

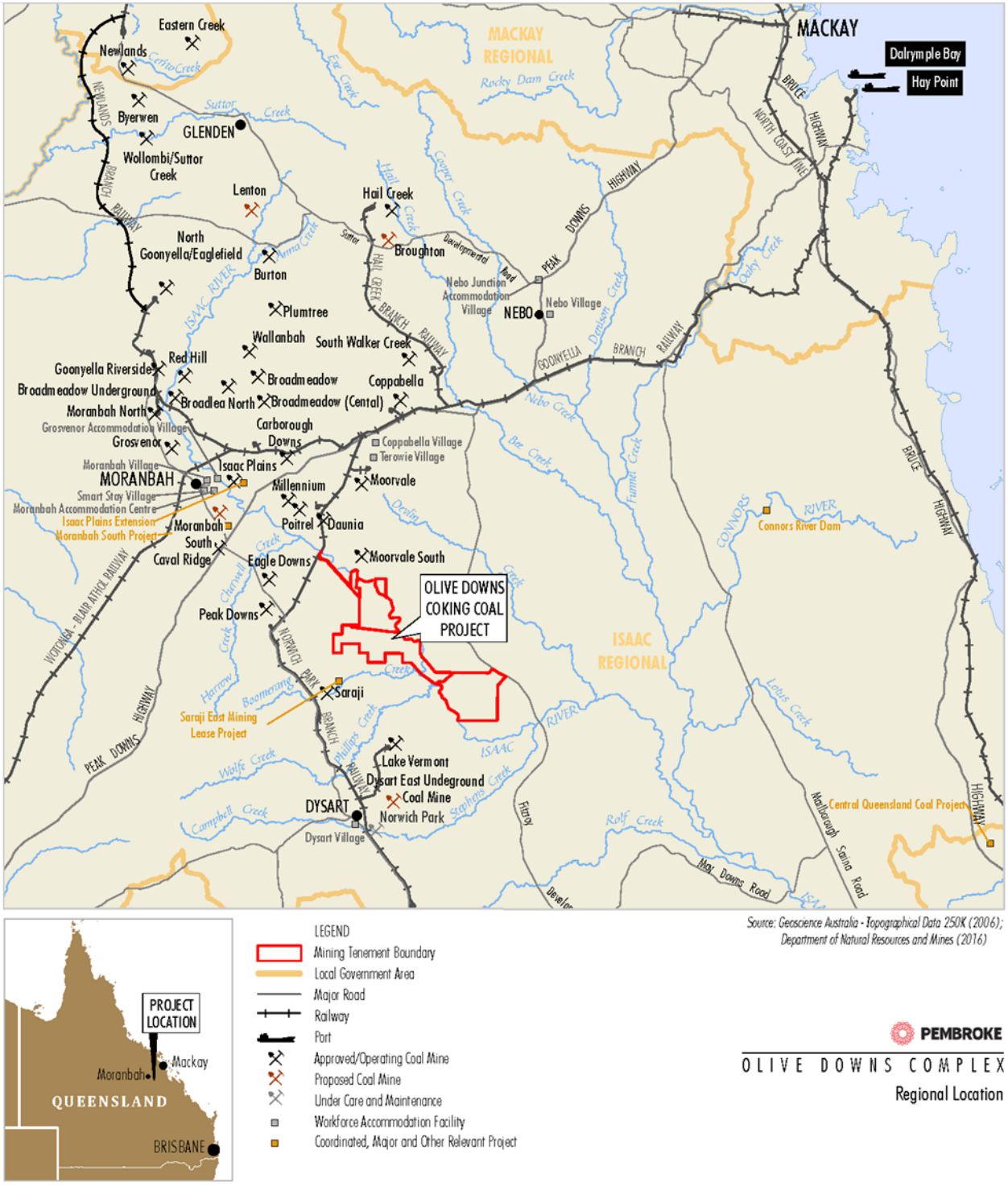


FIGURE 1 REGIONAL LOCATION OF THE PEMBROKE OLIVE DOWNS COMPLEX (ODP)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.2.1 Rainfall

The long-term average annual rainfall recorded at the Carfax Station (34016) is 614.5 mm based on records dating back to 1962 (Table 1). The Carfax weather station (34016) data shows that the period between 1992 and 2009 was predominately dryer than average. Rainfall from 2011 to 2017 at Carfax Station (34016) is consistent with the long- term average.

The long-term average annual rainfall recorded at the Moranbah Water Treatment Plant weather station (34038) is 614 mm, based on records from 1972 to 2012 (Table 1). This corresponds with the long-term average observed at Carfax Station (34016). Additionally, Figure 3 displays the long-term monthly rainfall and rainfall residual mass curve at Carfax Station (34016) and Figure 4 displays the highest and mean rainfall at the Moranbah Water Treatment Plant (34038).

2.2.2 Evaporation

Evaporation records are available from the Carfax Station (34016) and the Moranbah Airport (33047) meteorological stations (Figure 2), which have recorded average annual potential evaporation (Class A pan) of approximately 1,668 mm and 1,619 mm, respectively (Table 1). The BoM has mapped average actual evapotranspiration rates (collective term used for the transfer of water from vegetated and un-vegetated land surfaces) in the vicinity of the project as between 544 to 597 millimetres per year (mm/year), which is approximately 35 % of the measured Class A pan evaporation.

Based on the available datasets, measured monthly average potential evaporation exceeds the measured monthly-average rainfall all year round (Table 1).

TABLE 1 METEOROLOGICAL SUMMARY (AVERAGE RAINFALL, EVAPORATION, TEMPERATURE AND HUMIDITY)

PERIOD OF RECORD	AVERAGE MONTHLY RAINFALL (MM)			AVERAGE MONTHLY POTENTIAL EVAPORATION (MM)		AVERAGE DAILY TEMPERATURE (⊠C) [MIN – MAX]	AVERAGE MONTHLY HUMIDITY (%) [9AM – 3PM]
	CARFAX (34016)	MORANBAH WTP (34038)	MORANBAH AIRPORT (34035)	CARFAX (34016)	MORANBAH AIRPORT (34035)	MORANBAH WTP (34038)	MORANBAH WTP (34038)
	1962 – 2021	1972 – 2012	2012 – 2022	1962 – 2017	2012 – 2017	1986 – 2012	1986 – 2010
January	109.8	103.8	92.5	187	175	21.9 – 33.8	69 – 43
February	93.6	100.7	84.9	155	147	21.8 – 33.1	74 – 48
March	62.2	55.4	83.0	170	163	20.2 – 32.1	70 – 41
April	31.1	36.4	26.7	124	120	17.6 – 29.5	72 – 43
May	35.8	34.5	35.7	96	95	14.2 – 26.5	73 – 43
June	27.5	22.1	18.1	80	80	11.2 – 23.7	73 – 44
July	22.1	18.0	38.5	81	81	9.9 – 23.7	69 – 39
August	22.4	25.0	13.3	100	98	11.1 – 25.5	66 – 35
September	18.5	9.1	9.7	126	124	14.1 – 29.2	60 – 30
October	35.7	35.7	22.6	172	171	17.6 – 32.3	58 – 31
November	55.0	69.3	49.5	189	186	19.4 – 33.1	60 – 34
December	95.6	103.9	65.1	188	179	21.1 – 34.0	64 – 38
Annual Average	*614.5*	*614.2*	*539.5*	*1,668*	*1,619*	*16.7 – 29.7*	*67 – 39*

Source: BOM (2022)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.2.3 Temperature

The closest BoM meteorological station to the ODP with sufficient temperature data is Moranbah Water Treatment Plant (34038) (BoM, 2017) (Figure 2). Monthly-average daily maximum temperatures and daily minimum temperatures for the Moranbah Water Treatment Plant meteorological station are shown (Table 1).

2.2.4 Humidity Data and Statistics

The closest BoM meteorological station to the project with recorded humidity data is located at the Moranbah Water Treatment Plant (34038) (BoM, 2017) (Figure 4). Monthly-average relative humidity records at 9.00 am and 3.00 pm for the Moranbah Water Treatment Plant meteorological station are shown (Table 1).

2.2.5 Bushfire Risk

The ODP is located on areas of 'medium potential bushfire intensity' bushfire hazard (Department of Infrastructure, Local Government and Planning, 2016).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

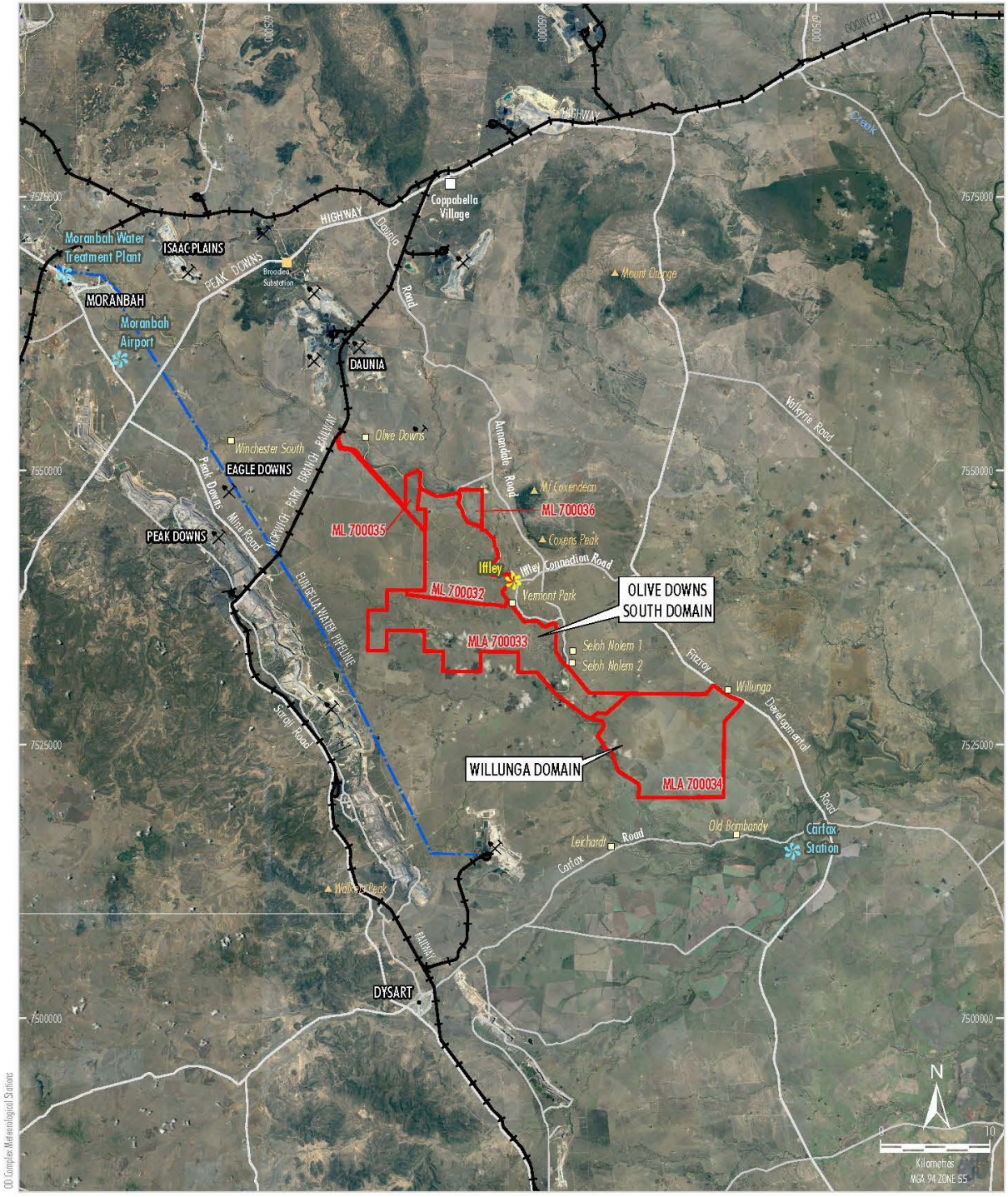


FIGURE 2 METEOROLOGICAL STATIONS NEAR ODP

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

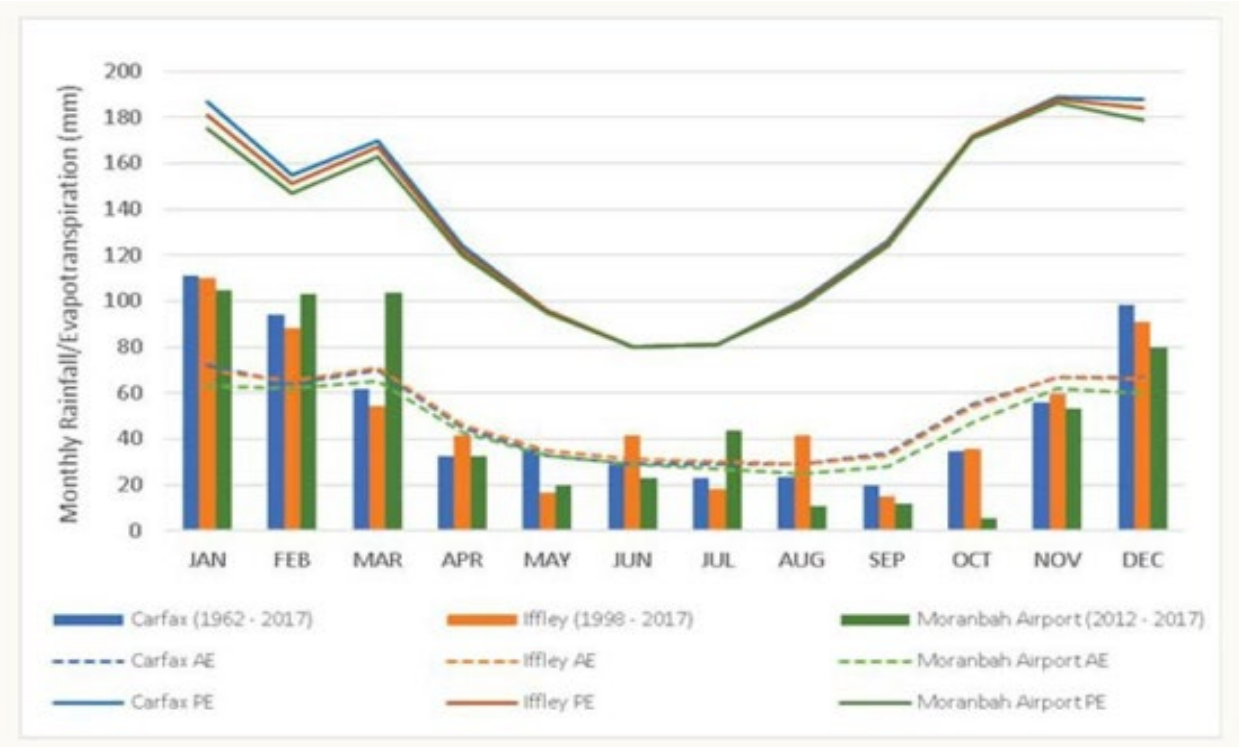


FIGURE 3 LONG-TERM MONTHLY RAINFALL AND RAINFALL RESIDUAL MASS CURVE AT CARFAX STATION (34016).

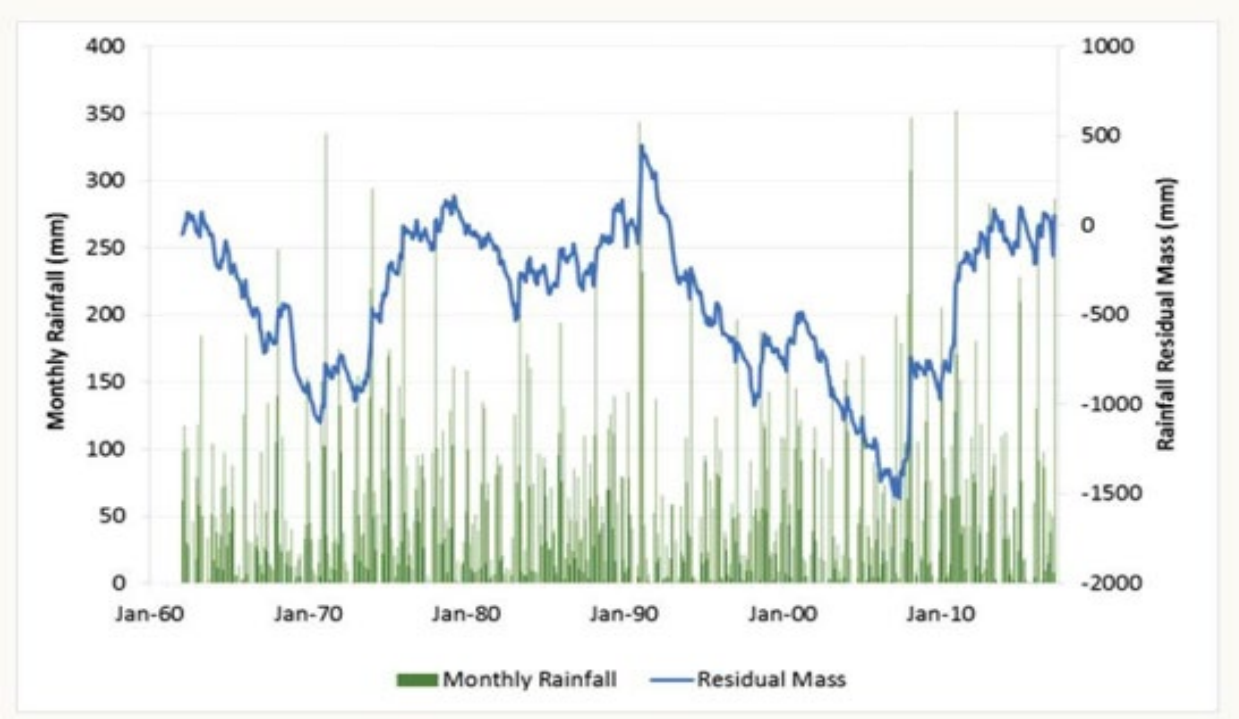


FIGURE 4 HIGHEST AND MEAN RAINFALL AT THE MORANBAH WATER TREATMENT PLANT (34038)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.2.6 Consideration of Climate Change Projections for Australia and Queensland

Consideration of the potential implications of climate change involves complex interactions between climatic, biophysical, social, economic, institutional, and technological processes. Although understanding of climate change has improved markedly over the past several decades, climate change projections are still subjected to uncertainties such as (CSIRO, 2015):

- Scenario uncertainty, due to the uncertain future emissions and concentrations of greenhouse gases and aerosols
- Response uncertainty, resulting from limitations in our understanding of the climate system and its representation in climate models; and
- Natural variability uncertainty, the uncertainty stemming from unperturbed variability in the climate system.

The assumptions relevant to predictive modelling, such as flood levels, are listed in Table 2.

TABLE 2 ADOPTED CLIMATE CHANGE IMPACT PROJECTIONS (SOURCE HATCH, 2018A)

CASE	CHANGE IN ANNUAL RAINFALL	CHANGE IN ANNUAL EVAPOTRANSPIRATION
Best Case	- 19.8 %	+ 6.9 %
Worst Case	+ 4.4 %	+ 5.5 %

2.3 Geography and Topography

The landscape of the ODP site includes level plains to gently undulate plains with elevations of approximately 200 m Australian Height Datum (AHD). The overall elevation of the project site ranges from 150 m in the low- lying southeast of the project to 250 m in the higher areas to the north of the project site (Queensland Government 2016). The ODP is bordered by a cluster of small mountains to the north-east, approximately 400 m high, as well as a range of low-lying mountains ranging from 300-400 m high, 10 km to the south-west of ODP. The ODS domain is located to the south and west of the Isaac River. The Willunga Domain is located to the north and east of the Isaac River, further downstream of the ODS domain.

2.3.1 Topography

An analysis of the terrain across the ODP and its surrounding area was undertaken at part of the EIS (Fluvial Systems, 2018). The study identified that the terrain with the project area was at less than 10 degrees slope, except for moderately steep slopes forming the bank of Ripstone Creek (Figure 5).

Over the plains of the wider area, slopes were gentle, with steeper slopes associated with isolated hills and open cut mine to the southwest. The channels of the major watercourses including the Isaac River, lower Phillips Creek and lower North Creek had almost continuous very steep banks, while the lower Boomerang Creek channel had continuous moderately steep channel banks.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

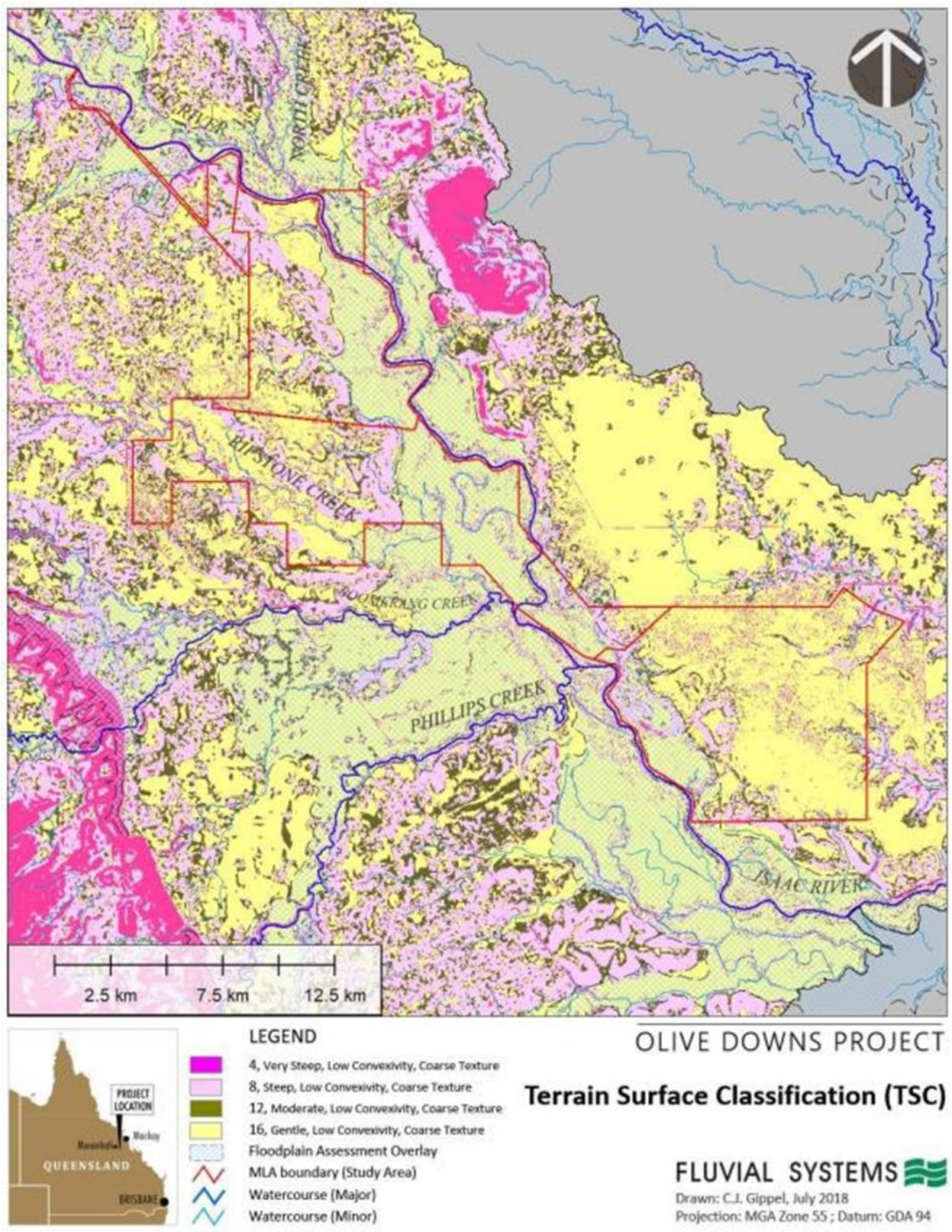


FIGURE 5 TERRAIN SURFACE CLASSIFICATION

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.4 Geology

The ODP coal deposit is in the northern part of the Bowen Basin, a foreland sedimentary basin of approximately 200,000 km^2. The Bowen Basin is an NNW-SSE oriented basin and contains the largest coal reserves in Australia. The economic seams of the project are contained in the Late Permian Rangal Coal Measures. The Permian sediments occur at outcrop on the eastern and western edges of the Basin and are unconformably overlain by the Triassic aged terrestrial sediments of the Rewan Group. While not present at ODP, isolated pockets of remnant quartzose sandstones of the Middle Triassic Clematis Group are also mapped near the ODS domain, on the eastern side of the Isaac River. The Permian and Triassic sediments are covered by a thin veneer of unconsolidated to semi-consolidated Cainozoic sediments (Tertiary to Quaternary alluvium and colluvium). The alluvial sediments are localised along rivers and creeks (i.e., Isaac River). Volcanic intrusions and extrusions (i.e., basalt) are also present within the region but not mapped at the ODP site.

The Permian coal measures occur as stratified sequences of interbedded and consolidated sandstone, siltstone, mudstone and coal. The Permian coal measures occur as a southerly plunging syncline structure, with the coal measures present at outcrop to the east and west of the Isaac River.

Compressive deformation of the Bowen Basin units occurred from the Middle to Late Triassic period, resulting in regional uplift and erosion, folding of sediments and strike-slip movement along faults to accommodate contraction. This led to a series of north-south trending faults with (generally) westward directed thrusts, which bound the eastern margin of the basin (Green, 1997). All faulting is truncated by the Tertiary unconformity, with little to no fault activity during the Cainozoic (Esterle et al., 2002, Clark et al., 2011). Regional faults are shown in Figure 6, including faults mapped by Pembroke and potential faults identified as part of the TEM survey. Within the ODS domain, the coal measures dip around 7° to the east, which steepens in the south to 15° to the east. The ODS domain is moderately to highly faulted with several regional fault structures with a dominant north-north-west trend, including the Iffley Fault Zone. The faults have throws of up to 100 m (JB Mining Services 2016), resulting in vertical displacement in some places. On the western side of the ODS domain is the Isaac Thrust Fault, which has up to 500 m vertical displacement. This displacement effectively separates the two proposed open cut pits within the ODS domain. At Willunga, the coal measures dip around 5° to 7° towards the west. However, dips within the Willunga domain can vary due to minor folding, with an eastern and western syncline separated by a small anticline (IMC 2014). The Willunga domain does not appear to have any significant faulting

The stratigraphic profile within the Study Area comprises three distinct units:

- Cainozoic sediments (alluvium and regolith)
- Early Triassic Rewan Group; and
- Permian aged coal measures.

Each of the main stratigraphic units is discussed in further detail below.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

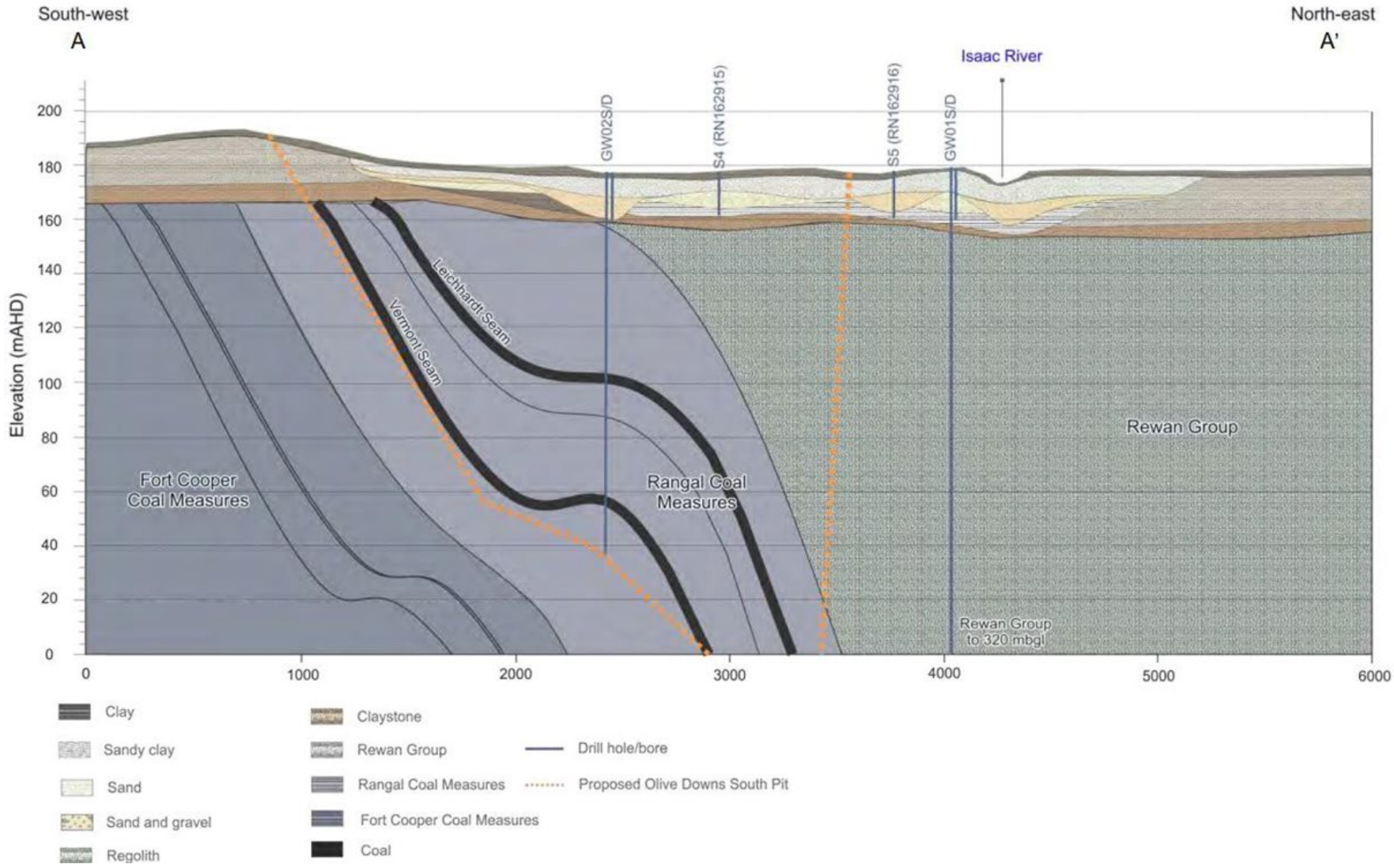


FIGURE 6 GEOLOGICAL CROSS SECTION - ODS DOMAIN (HYDROSIMULATIONS [2018])

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

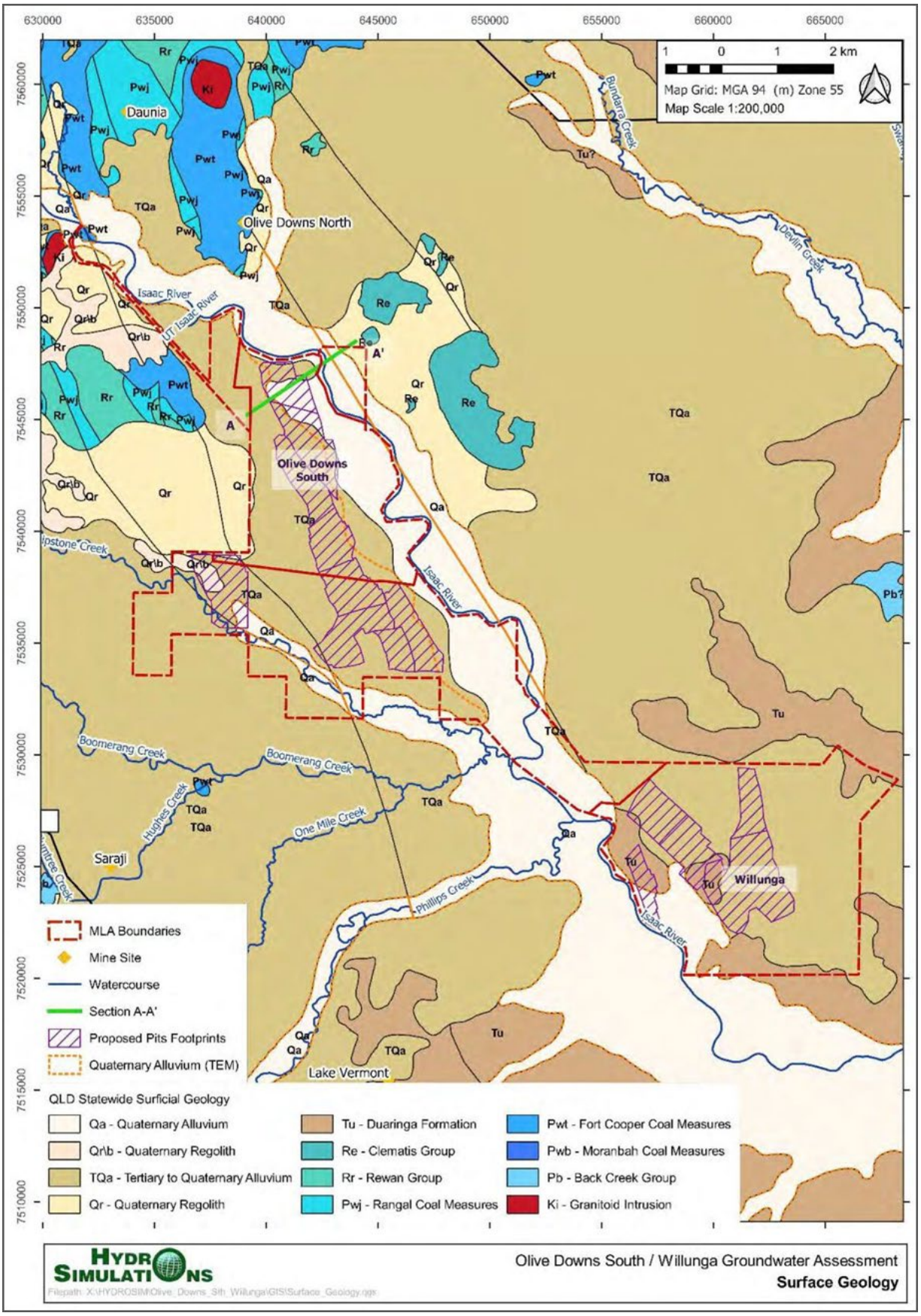


FIGURE 7 SURFACE GEOLOGY (HYDROSIMULATIONS [2018])

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

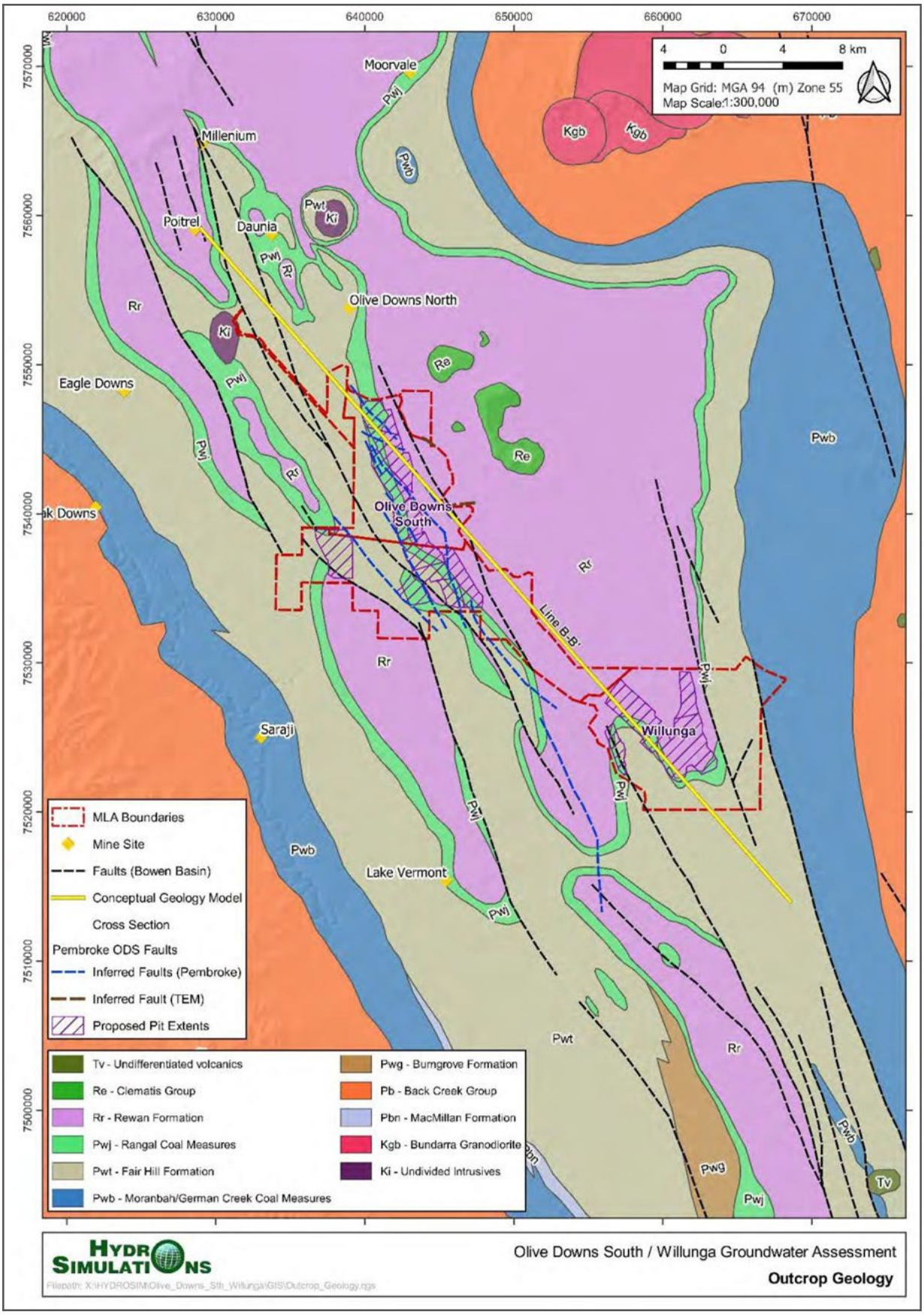


FIGURE 8 OUTCROP GEOLOGY (HYDROSIMULATIONS [2018])

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.4.1 Cainozoic Sediments

Alluvium

At the ODP, the alluvium is present on the northern and eastern edge of the ODS domain and on the western edge of the Willunga domain. Alluvial sediments occur further west than is mapped at the ODS domain. These sediments are generally less than 12 m thick, but the alluvium can be up to 30 m thick within a narrow corridor along the Isaac River, thinning out with distance from the river. The heterogeneous distribution of alluvial sediments is shown in the geological cross section in Figure 6.

Regolith

The surficial regolith material covering much of the project site comprises Cainozoic (Quaternary to Tertiary) aged sediments, including alluvium and colluvium. Older alluvial (TQa) sediments are distributed extensively across the region and colluvium and residual deposits (Qr and Qr\b) within isolated patches to the north. The Cainozoic (Tertiary) aged Duaringa Formation (Tu) is also mapped at surface at the southern end of ODP, within the Willunga domain.

Based on site geological logs, the regolith comprises a heterogeneous distribution of fine to coarse grained sand, clay, sandstone and claystone. The regolith material is generally 15 m to 45 m thick. The units are all recorded as being highly weathered, with the depth of weathering extending to around 50 m below ground level (mbgl), into the underlying coal measures (IMC 2014).

2.4.2 Triassic

The Triassic sediments include an isolated pocket of Clematis Group sediments to the east of the Isaac River near the ODS domain, and the more regionally extensive Rewan Group. The outcrop of Clematis Group is approximately 100 m thick and forms a localised topographic high at an elevation of around 330 mAHD. The Clematis Group comprises cross-bedded quartzose sandstone with minor conglomerate and mudstone.

Regionally the Rewan Group unconformably overlies the Permian coal measures as in-fill material. The unit is largely absent where the Permian coal measures occur at outcrop and thickens towards the Isaac River. At ODP, the Rewan Group is present throughout the Vermont Park and southern Iffley areas but is limited to a small area in the north-western corner of Willunga only. The Triassic aged Rewan Group sediments include two formations, the Rewan Formation that comprises green lithic sandstone, pebbly lithic sandstone, green to reddish brown mudstone and minor volcanolithic pebble conglomerate, and the underlying Sagittarius Sandstone unit that comprises lithic sandstone interbedded with mudstones and siltstones with scattered carbonaceous plant material.

The Rewan Group occurs beneath the alluvium and regolith, from approximately 20 m depth, and is up to around 300 m thick where it occurs within ODP. The transition from the Rewan Group to the underlying Permian coal measures is generally difficult to define. Transition is often based on the change in colour (i.e., green-grey to blue-grey) and depth (15 m to 60 m) above the first major coal seam (Leichhardt Seam) of the Rangal Coal Measures (JB Mining Services 2016).

2.4.3 Permian Coal Measures (Blackwater Group)

Rangal Coal Measures

The shallowest coal measures, the Rangal Coal Measures are around 90 m – 195 m thick at the project site and contain the target seams for the project (JB Mining Services 2016). The Rangal Coal Measures comprise light grey, cross-bedded, fine to medium grained labile and well cemented sandstones, grey siltstones, mudstones, shale and coal seams. The non-coal portions of the sequence being predominantly sandstones, siltstones, mudstone and shales are referred to as interburden in the mining context. The stratified

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

sequences can be fractured and displaced through faulting. However, drilling logs indicate this is localised along fault lines and is logged as small, discontinuous horizons vertically (< 20 m).

The principal coal seams of the ODP are the Lower Leichhardt and Vermont Upper seams of the Rangal Coal Measures. Within the project site, the Lower Leichhardt Seam has three main splits:

- LL1 (Lower Leichhardt 1) – < 1 m thick
- LL2 (Lower Leichhardt 2) – approximately 2.5 m thick; and
- LL3 (Lower Leichhardt 3) – approximately 1.7 m thick.

The Leichhardt Seam occurs at depths of between 25 m and 317 mbgl, at elevations of around 150 mAHD to - 142 mAHD at ODS domain (IMC 2014). At Willunga, the Leichhardt Seam occurs 30 m to 270 mbgl, at elevations of around 130 mAHD to -110 mAHD (IMC 2012). The Vermont Upper Seam (VU2) is approximately 3.8 m to 5.1 m thick and is separated from the overlying Leichhardt Seam by 29 m to 54 m of interburden material.

Fort Cooper Coal Measures

The Fort Cooper Coal Measures conformably underlie the Rangal Coal Measures and also occur at outcrop to the east and west of the Isaac River. At the project site, drilling logs indicate the Fort Cooper Coal Measures are present around 20 m below the Vermont Upper Seam, around 140 m to 380 mbgl (IMC 2012; IMC 2014).

The unit is approximately 350 m thick and comprises tuffaceous sandstones, siltstones, mudstones and coal seams. The transition between the Rangal Coal Measures and the Fort Cooper Coal Measures is marked by the 0.5 m to 1.5 m thick Yarrabee Tuff; a basin-wide marker bed comprised of weak, brown tuffaceous claystone. Economic coal seams of the Fort Cooper Coal Measures include the Vermont Lower Seam, although the unit is not intended to be targeted by mining at the project.

Moranbah Coal Measures

The Moranbah Coal Measures conformably underlie the Fort Cooper Coal Measures. The coal measures occur at subcrop to the west of ODP, where they are targeted as part of the Peak Downs and Saraji mines. The Moranbah Coal Measures comprise volcanic lithic sandstones, with lesser siltstone, mudstone, conglomerate and coal.

2.5 Soils

2.5.1 Topsoil Details

GT Environmental Pty Ltd (GTE) was commissioned to complete a soil and land suitability assessment of the ODP site (GTE, 2018). The assessment identified that twelve Soil Management Units (SMUs) are present and these have been grouped according to basic soil morphology, position in the landscape, and parent material (Table 3). Individual SMUs have been classified in accordance with the Australian Soil Classification (Isbell 2002).

Review of the SMUs indicates that overall, they are marginal to unsuitable for broadacre rainfed cropping (Class 4 – 5). In general, this is due to limitations in plant available water capacity (PAWC) and nutrients, with some SMU-specific limitations including salinity, topography and flooding.

Beef cattle grazing was assessed as marginal to suitable (Class 3 and 4) with moderate limitations, such as moisture, nutrients and salinity, but these are less impactful compared with establishing cropping lands. Pre-existing agricultural land use demonstrated successful beef cattle grazing activities across ODP.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Areas to be disturbed as a result of open cut mining activities, construction of a rail spur connection, water pipeline, Electrical Transmission Line (ETL), access roads and associated infrastructure will require stripping of the topsoil and possibly subsoil for reuse in rehabilitation programs. Therefore, all soils within the project site have been assessed to determine their suitability for stripping and reuse for rehabilitation purposes (Table 3).

2.5.2 Subsoil details

The ODP mine area includes six main soil types: Vertosol, Sodosol, Dermosol, Rudosol, Chromosol, and Kandosol (GTE, 2018). Of these, the Sodosols and Vertosols, have the highest erosion and pollution potential. The Sodosol subsoils possess a strongly sodic B horizon, which causes the soil structure to become highly dispersive when wet, making it severely prone to tunnel erosion and slumping if exposed on final landform slopes. The dispersive nature of Sodosols also contributes to poor water infiltration and low surface stability. The Vertosols contain useful clay materials for rehabilitation but are described as "highly sodic and saline from 0.3 m depth." If mobilized, this high salt and sodium load could lead to salt-rise (salinisation) on the landform surface, which may be detrimental to revegetation efforts and/or impact the quality of surface water runoff. SMU containing these subsoils are identified in Table 3, as well as their recommended placement or use in the final rehabilitation landform.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

TABLE 3 SUMMARY OF ODP TOPSOILS AND SUBSOILS

SMU	CONCEPT	LAND SYSTEMS	MAJOR VEGETATION	TOPSOIL RECOMMENDED REHABILITATION USE	SUBSOIL RECOMMENDED REHABILITATION USE
Flat to gently undulating plains dominated by uniform and gradational clays					
C1	Brown light clayswith melon hole microrelief	Somerby, Monteagle, Connors, Humboldt, Blackwater	Brigalow	Support native vegetation andgrasses. For rehabilitation of areas that are relatively flat and verygently undulating areas (less than 3.0% slope).	Buried supporting subsoils for topsoil.
C2	Grey to brown light to medium clay with normal gilgai microrelief	Somerby, Monteagle, Connors, Humboldt, Blackwater	Brigalow and associated Blackbutt andPoplar Box	Support nativevegetation andgrasses. For Rehabilitation of areas that are relatively flat and verygently undulating areas (less than 3.0% slope).	Capping material over wasterock.
Gently undulating plains dominated by sandy duplex with gradational sandy loams incorporated					
S1	Brown shallow to deep duplex loamy sands to clay loam sandy earths	Somerby, Monteagle, Connors, Humboldt, Blackwater	Poplar box	Support nativevegetation andgrasses. For rehabilitation ofareas that are relatively flat to sloped areas such as backfill batters.	Buried supporting subsoils for topsoil.
S2	Brown gradational sands, loamy to clayey sands	Somerby, Monteagle, Connors, Humboldt, Blackwater	Blackbutt, Eucalypts	Support nativevegetation andgrasses. For rehabilitation ofareas that are relatively flat to sloped areas such as backfill batters	Natural vegetation growth assistance with additional soil fertility conditioning andpotentially increase topsoil reserves. Buried supporting subsoils for topsoil.
R1	Light red loamy sands to reddish loamy/clayey sands	Somerby, Monteagle, Connors, Humboldt, Blackwater, Junee	Blackbutt, Poplar Box	Support nativevegetation andgrasses. For rehabilitation ofareas that are relatively flat to sloped areas such asbackfill batters.	Natural vegetation growth assistance with additional soil fertility conditioning andpotentially increase topsoil reserves. Buried supporting subsoils for topsoil.
R2	Brown to reddish brown loamy sandsto sandy clay loams	Somerby Monteagle Humboldt Blackwater Junee	Poplar Box	Support nativevegetation andgrasses. For rehabilitation ofareas that are relatively flat to sloped areas such asbackfill batters.	Natural vegetation growth assistance with additional soil fertility conditioning andpotentially increase topsoil reserves. Buried supporting subsoils for topsoil.
L1	Shallow (0.20 m) loamy sands to deep light clay	Monteagle, Connors, Humboldt, Blackwater	Poplar Box,Ironbark	Support nativevegetation andgrasses. For rehabilitation ofareas that are relatively flat to sloped areas such asbackfill batters.	Buried supporting subsoilsfor topsoil. Subsoils 0.35-1.00 mbgl. Soils below 0.35 m are not recommended to be reused; however, may be marginally suitable with possible use as capping material over wasterock.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

SMU	CONCEPT	LAND SYSTEMS	MAJOR VEGETATION	TOPSOIL RECOMMENDED REHABILITATION USE	SUBSOIL RECOMMENDED REHABILITATION USE
L2	Deeper (0.40-0.60m) loamy sands tolight clay	Monteagle,Connors, Humboldt, Blackwater	Poplar Box,Ironbark	Support nativevegetation andgrasses. For rehabilitation ofareas that are relatively flat to sloped areas such asbackfill batters.	Capping material over wasterock.
Relic alluvial plains and low-lying plains					
B1	Black, to brown-grey duplex soils with loamy sands, silty clay loams to clayey sands, mottled silty clay loams and clay loams	Somerby, Monteagle, Humboldt	Poplar box, Ironbark, Blackbutt, minor Moreton Bay Ash	Support nativevegetation andgrasses. For rehabilitation ofareas that are relatively flat to sloped areas such as backfill batters.	Natural vegetation growth assistance with additional soil fertility conditioning and potentially increase topsoil reserves for level plains Buried supporting subsoils for topsoil.
B2	Brown silty loams to light clays with cracking surface on lower flat plains	Somerby, Connors, Humboldt, Blackwater	Poplar Box,minor Brigalow	Support native vegetation and grasses. For rehabilitation of areas that are relatively flat to sloped areas such as backfill batters.	Natural vegetation growth assistance with additional soil fertility conditioning and potentially increase topsoil reserves. Subsoils 0.50-1.00 mbgl
B2-DV	Drainage Variant of B2, surface horizon removed by stream bank erosion.		Poplar Box, Brigalow		Subsoil below 0.5 m would not be favourable for supporting native vegetation growth due to poorly structured, poor water holding and fertility attributes. It would be recommended as buried supporting soils for SMUs within this category.
Recent alluvial floodplain and active channels with stratified loamy sands					
A1	Loam to loamy sands within active channels	Monteagle,Connors, Blackwater	Moreton BayAsh, Paperbark Eucalypts	Support nativevegetation andgrasses. For rehabilitation ofareas that are relatively flat to sloped areas such as backfill batters.	Natural vegetation growth assistance with additional soil fertility conditioning and potentially increase topsoil reserves. Buried supporting subsoilsfor topsoil.
A2	Clayey sands to light medium clay within alluvial depression	Somerby, Monteagle, Connors, Humboldt, Blackwater	Moreton BayAsh, Eucalypts	Support native vegetation and grasses. For rehabilitation of areasthat are relatively flat to sloped areas such as backfill batters.	Capping material over wasterock.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.6 Ecology

2.6.1 Fauna Present and Populations

Searches of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters database (Department of the Environment and Energy [DEE], 2018a) and Queensland Wildlife Online database (DES, 2018) identified the potential occurrence of 17 Endangered, Vulnerable or Near Threatened (EVNT) fauna species within a search area extending 10 km and 50 km (respectively) from ODP area. Of these, five EVNT fauna species were considered 'likely' to occur within ODP based on the likely occurrence of their preferred habitat, as well as previous species records from within 10 km of the ODP area.

Four of these five species were subsequently recorded within the ODP area (DPM Envirosciences [DPM], 2018b), including:

- Koala (*Phascolarctos cinereus*) – Endangered (EPBC Act and Queensland Nature Conservation Act 1992 [NC Act])
- Greater Glider (*Petauroides volans*) – Vulnerable (EPBC Act and NC Act)
- Ornamental Snake (*Denisonia maculata*) – Vulnerable (EPBC Act and NC Act); and
- Squatter Pigeon – Southern subspecies (*Geophaps scripta scripta*) – Vulnerable (EPBC Act and NC Act).

No Australian Painted Snipe (*Rostratula australis*) which is listed Endangered under EPBC Act and Vulnerable under Queensland Nature Conservation Act (NC Act) were detected, although transient individuals are likely to utilise the ODP area on occasion.

2.6.2 Flora Present

Special Least Concern Species

A total of 335 Least Concern flora species have been recorded in the Mining Lease (ML), Mining Lease Application (MLA) and infrastructure corridors during surveys conducted in spring 2016 and autumn 2017 (DPM, 2018a). There were ten Special Least Concern (SLC) flora species recorded from the ML, MLA and infrastructure corridors during these field surveys, namely:

- Broad-leaved bottle tree (*Brachychiton australis*)
- Mulga fern (*Cheilanthes sieberi*)
- Darling lily (*Crinum flaccidum*)
- Black orchid (*Cymbidium canaliculatum*)
- Wavy marshwort (*Nymphoides crenata*)
- Swamp lily (*Otellia ovalifolia*)
- Sandalwood (*Santalum lanceolatum*)
- *Stylidium eriorhizum*
- Australian bluebell (*Wahlenbergia gracilis*); and
- *Wahlenbergia queenslandica*.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Some of these species are widespread across the ML, MLA and infrastructure corridors and in the greater region, particularly mulga fern and Australian bluebell.

2.6.3 Weeds and Pests

A total of 73 introduced plant species were recorded from the ML, MLA and infrastructure corridors (DPM, 2018a). Eleven of these are Category 3[3] restricted matter species listed under the *Queensland Biosecurity Act 2014*, including ten that are also listed Weeds of National Significance (WoNS) (Table 4).

TABLE 4 RESTRICTED PEST PLANTS AND WONS RECORDED FROM THE STUDY AREA (SOURCE DPM, 2018A)

SCIENTIFIC NAME	COMMON NAME	QLD BIO ACT*	NATIONAL STATUS^	IDENTIFIED IN STUDY AREA
Cryptostegia grandiflora	Rubbervine	3	WoNS	✓
Harrisia martini	Harrisia cactus	3		✓
Jatropha gossypiifolia	Bellyache bush	3	WoNS	✓
Lantana camara	Lantana	3	WoNS	✓
Lantana montevidensis	Creeping lantana	3		✓
Opuntia stricta	Common pest pear	3	WoNS	✓
Opuntia tomentosa	Velvety tree pear	3	WoNS	✓
Parkinsonia aculeata	Parkinsonia	3	WoNS	✓
Parthenium hysterophorus	Parthenium	3	WoNS	✓
Senecio madagascariensis	Fireweed	3	WoNS	✓
Vachellia nilotica subsp. *indica*	Prickly acacia	3	WoNS	✓

Notes:
*Restricted species under the Queensland Biosecurity Act 2014 (Qld Bio Act)
^Species listed as WoNS (DEE, 2018b)

Eight introduced fauna species were recorded within the ODP and they are (DPM, 2018b):

- Cane toad (*Rhinella marina*)
- Cat (*Felis catus*)
- Dog (*Canis lupus familiaris*)
- European hare (*Lepus europaeus*)
- European rabbit (*Oryctolagus cuniculus*)
- Fallow deer (*Dama dama*)
- House mouse (*Mus musculus*); and
- Feral pig (*Sus scrofa*).

From a management perspective, the most important feral animal is feral pig. Most of the wetlands and major watercourses have suffered from pig diggings. Dingoes and wild dogs are in large numbers across the offset properties and likely having some impact on native animals. Cats and foxes are also present.

[3] Category 3 restricted matter weed species must not be distributed; meaning that they must not be given as a gift, sold, traded, or released into the environment unless the distribution or disposal is authorised under a regulation or under a permit. For category 3, there is no requirement to notify Biosecurity Queensland of their occurrence.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.7 Surface Water Resources – Presence, Quality and Use

2.7.1 Catchment Context

The ODP is situated within the Isaac-Connors sub-catchment of the Fitzroy Basin. The Isaac River is the main watercourse which bisects the project area and flows in a north-west to south-east direction, passing the township of Moranbah and the Millennium, Poitrel and Daunia coal mines upstream of the project area. The Isaac River flows to the north/east of the Olive Downs South domain and then further downstream to the south of the Willunga domain before continuing in a south-easterly direction. The Connors River, which has a catchment area similar to the upstream Isaac River, flows into the Isaac River approximately 85 km downstream of ODP. The Isaac River finally converges with the Mackenzie River a further approximate 50 km downstream. Ultimately, the Mackenzie River joins the Fitzroy River, which flows initially north and then east towards the east coast of Queensland and discharges into the Coral Sea southeast of Rockhampton near Port Alma.

At a regional scale, the greater Isaac-Connors sub-catchment area (at the confluence with the Mackenzie River) is approximately 22,364 km^2 of the total Fitzroy River catchment of 142,665 km^2, or if represented as a percentage, it accounts for 15 percent of the overall Fitzroy River catchment area. ODP is approximately 250 km^2 and represents one percent and 0.2 percent of the overall Isaac-Connors and Fitzroy River catchment areas, respectively. Figure 9 shows the location of ODP and Isaac River catchment upstream of confluence with Connors River.

The Isaac River is a seasonally flowing ephemeral watercourse, typically with surface flows in the wetter months from November to April, reducing to shallow subsurface flows from about May to October. All other waterways of ODP are expected to be ephemeral and experience flow only after sustained or intense rainfall in the catchment. Stream flows are highly variable, with most channels drying out during winter to early spring when rainfall and runoff is historically low, although with some pools expected to hold water for extended periods. Therefore, physical attributes, water quality, and the composition of aquatic flora and fauna communities are also expected to be highly variable over time.

Named tributaries of the Isaac River in the vicinity of the project area (Figure 9) include (from upstream to downstream:

- North Creek
- Ripstone Creek
- Boomerang Creek; and
- Phillips Creek.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

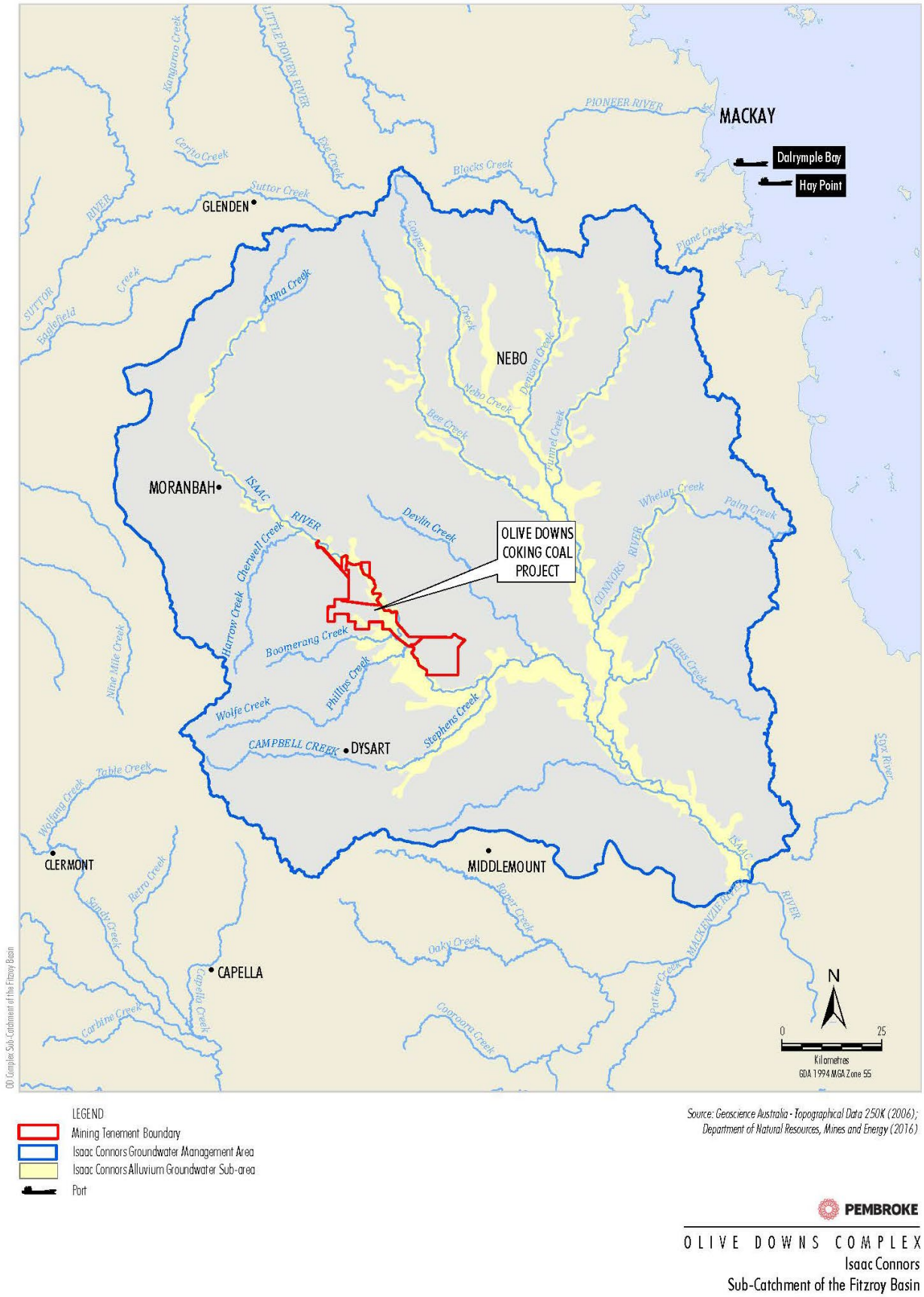


FIGURE 9 ISAAC RIVER CATCHMENT AND PROJECT AREA

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

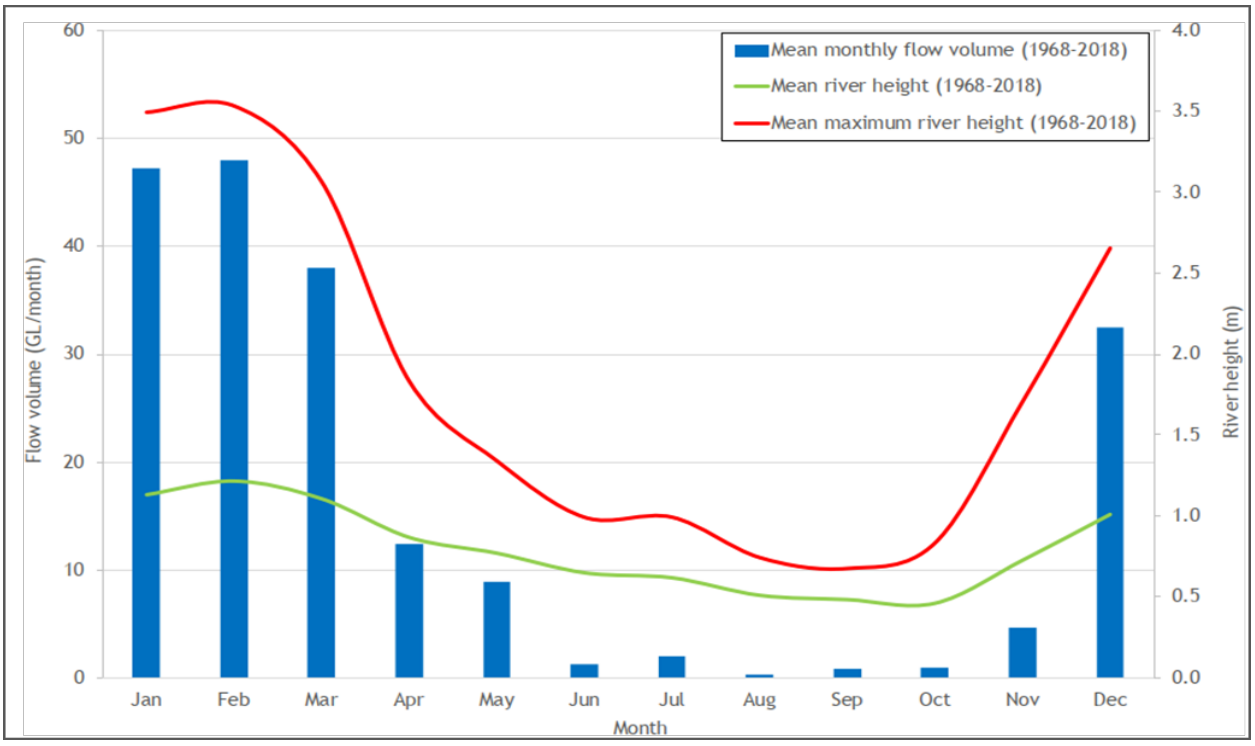


FIGURE 10 FLOW VOLUME AND RIVER HEIGHT IN THE ISAAC RIVER AT DEVERILL (DNRME STATION 130410A, LOCATED TO THE NORTHWEST OF ODP) (HATCH, [2018])

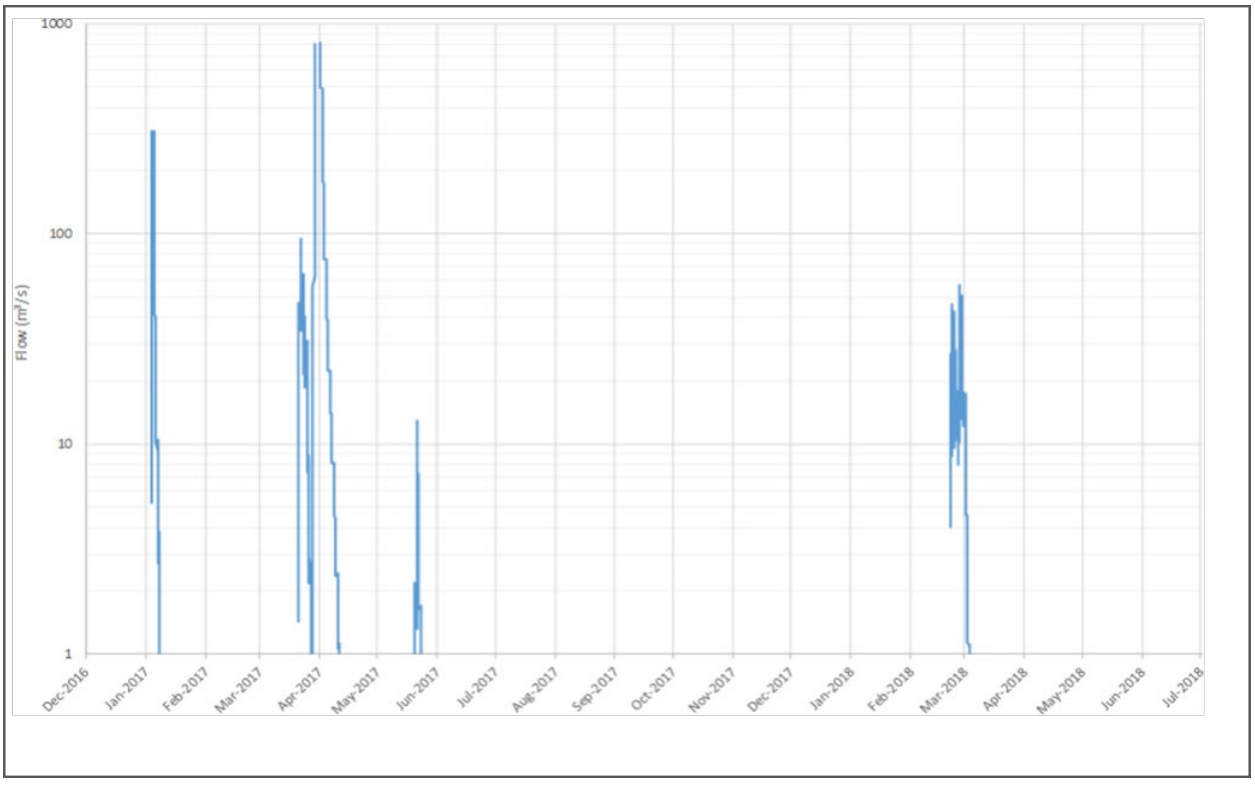


FIGURE 11 ISDS GAUGE RECORDED FLOW RATE (HATCH, [2018A])

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.7.2 Streamflows

Historical flow and river height monitoring data (1968-2018) for the Isaac River at Deverill Department of Natural Resources and mines, Manufacturing and Regional and Rural Development (formerly Department of Natural Resources, Mines and Energy (DNRME)) monitoring station 130410A, located to the north-west of ODP, provides an indication of the local flow regime (Figure 10). Surveyed cross section data for this gauging station in September 2014 (DNRME, 2017) indicates that sediment covers the bottom one metre of the gauge range. The mean river height data (Figure 10) indicates that surface flow above the sand is more likely to occur only in the wetter months from November to April, reducing to shallow subsurface flows from about May to October in an average year.

As part of the EIS study process a temporary water quality station was established by Pembroke between 2016 and 2018. The station recorded Isaac River flow data (Figure 11). Five flow events were recorded (with a peak flow greater than 1 m^3/s) during installation, with the highest recorded discharge of 804 m3/sec occurring in March 2017.

2.7.3 Regional Water Quality

DPM undertook baseline aquatic ecology surveys in December 2016 and July 2017 for the ODP. Part of the baseline surveys included collection of physiochemical water quality parameters at riverine sites R2, R3, R6 and R8 (Table 5). Note that riverine sites R1 and R5 were unable to be sampled during the December 2016 surveys due to dry conditions and sites R4 and R7 were unable to be sampled due to restricted access. Riverine sites R1 and R7 were unable to be sampled in July due to restricted access.

Table 5 shows water samples at a range of sites exceeded regional Water Quality Objectives (WQO) for dissolved oxygen and turbidity. It is noted that the flow conditions (e.g., flowing or ponded water) at the time of sampling is expected to have influenced sampling results.

TABLE 5 PHYSIO-CHEMICAL WATER QUALITY PARAMETERS - DECEMBER 2016 AND JULY 2017

PARAMETER	UNITS	RIVERINE SITES									WQO (HATCH, 2018A)
		R2	R3		R4	R5	R6		R8		
		14/12/16	17/12/16	08/07/17	07/07/17	06/07/17	14/02/17	09/07/17	16/12/17	10/07/17	
Temperature	℃	26.7	32.6	18.6	19.5	20.4	31.5	20.0	31.0	20.9	-
Electrical Conductivity (EC)	µS/cm	151	221	220	182	680	193	293	244	287	< 720 (base flow) < 250 (high flow)
pH	-	7.73	7.59	6.9	7.3	7.60	7.24	7.5	7.86	7.4	6.5-8.5
Dissolved Oxygen (DO)	%	82.5	97.0	77.2	59.4	81.0	88.6	81	88.3	86.3	85-110
	mg/L	6.61	6.94	7.1	5.30	7.40	6.50	7.4	6.56	7.7	> 4
Turbidity	NTU	459	11.7	27.7	23.4	12.8	274	51	168	26.1	< 50

2.7.4 Upstream and Downstream Users

Detailed information regarding individual licences for Isaac River surface water users was obtained through analysis of water licences data provided by DNRME. Some limitations in the dataset include the absence of names of water users, and in some cases, allocated volumes for water licenses due to privacy restrictions.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

There are also several historical riparian water access notifications along the Isaac River which authorise stock and domestic supplies only (WRM, 2020). Section 20 of the *Water Act 2000* provides that an owner of land adjoining a watercourse may take water for domestic and stock purposes without the need for a permit or licence.

2.8 Groundwater Presence, Quality and Use

2.8.1 Main Hydrogeological Units Relevant to ODP

A groundwater assessment was undertaken in accordance with the Queensland government requirements and the EPBC Act (Water Trigger) by HydroSimulations (2018). Based on the understanding of the geological setting, the hydrogeological regime relevant to the project comprises the following hydrogeological units:

- Cainozoic sediments
    - Quaternary alluvium – unconfined aquifer localised along Isaac River; and
    - Regolith – unconfined and largely unsaturated unit bordering alluvium.
- Triassic Rewan Group – aquitard
    - Permian coal measures with hydrogeologically 'tight' interburden units; and coal sequences that exhibit secondary porosity through cracks and fissures.

The sandstones of the Clematis Group are generally considered to form an aquifer and are included within the Great Artesian Basin (GAB) aquifers. However, at project site the unit only occurs as a small, isolated outcrop, and is not regionally extensive or hydraulically connected to the GAB. Consequently, the Clematis Group is not discussed in detail.

2.8.2 Groundwater Monitoring

Pembroke has a project groundwater monitoring network that comprises a total of 21 bores and five vibrating wire piezometers (VWP) containing a total of 20 sensors. The network was first established in November 2016, and in November 2017 additional alluvial monitoring bores (S-series bores) were constructed. The network's monitoring bores target a range of hydrostratigraphic units, including:

- Quaternary alluvium
- Regolith (Cainozoic sediments)
- Rewan Group
- Coal seams of the Rangal Coal Measures; and
- Interburden and overburden material of the Rangal Coal Measures.

The locations of the 26 monitoring bores are shown in Figure 12.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

TABLE 6 LIST OF ISAAC RIVER SURFACE WATER LICENCES (SOURCE HATCH, 2018A)

STUDY SUB CATCHMENT	WATERCOURSE	AUTHORISATION REFERENCE	AUTHORISATION TYPE	AUTHORISATION STATUS	AUTHORISATION EXPIRY DATE	PURPOSE	ALLOCATION	LOCATION LAND LIST	LOCATION
Fitzroy Basin	Isaac River	0548416L	Licence to take water	Issued	30/06/2111	Mining	100 ML	ML 70108	Isaac River U/Sof project area
Fitzroy Basin	Isaac River	174800	Licence to interfere by diversion channel	Issued	30/06/2111	Divert thecourse of flow	NULL	ML 70109	Isaac River U/Sof project area
Fitzroy Basin	Isaac River	405577	Licence to take water	Issued	30/06/2111	Irrigation;Stock Intensive	60 ML	14/ROP89	Isaac River D/Sof project area
Fitzroy Basin	Isaac River	405578	Licence to take water	Issued	30/06/2111	Irrigation	150 ha	14/ROP89	Isaac River D/Sof project area
Fitzroy Basin	Isaac River	43173WL	Licence to take water	Issued	30/06/2111	Water harvesting	NULL	18/SP1133 22	Isaac River U/Sof project area
Fitzroy Basin	Isaac River	43174L	Licence to take water	Issued	30/06/2111	Water harvesting	NULL	18/SP1133 22	Isaac River U/Sof project area
Fitzroy Basin	Isaac River	45202U	Licence to take water	Issued	30/06/2111	Stock	NULL	A ON ROP185	Isaac River D/Sof project area
Fitzroy Basin	Isaac River	45321U	Licence to take water	Issued	30/06/2111	Irrigation	40 ha	14/ROP89	-
Fitzroy Basin	Isaac River	55557L	Licence tointerfere	Issued	30/06/2111	Impoundwater	NULL	11/RP8524 66	Isaac River U/Sof project area
Fitzroy Basin	Isaac River	55661L	Licence to take water	Issued	30/06/2111	Domesticsupply; Mining; Stock	1700 ML	11/RP8524 66	-
Fitzroy Basin	Isaac River	54781U	Licence to take water	Issued	30/06/2111	Irrigation	40 ha	6/ RP86005 1	Isaac River D/Sof project area
Fitzroy Basin	Isaac River	617184	Licence to take water	Issued	15/03/219	Construction	5 ML	11/KL135;9/CNS98	Isaac River atproject area

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

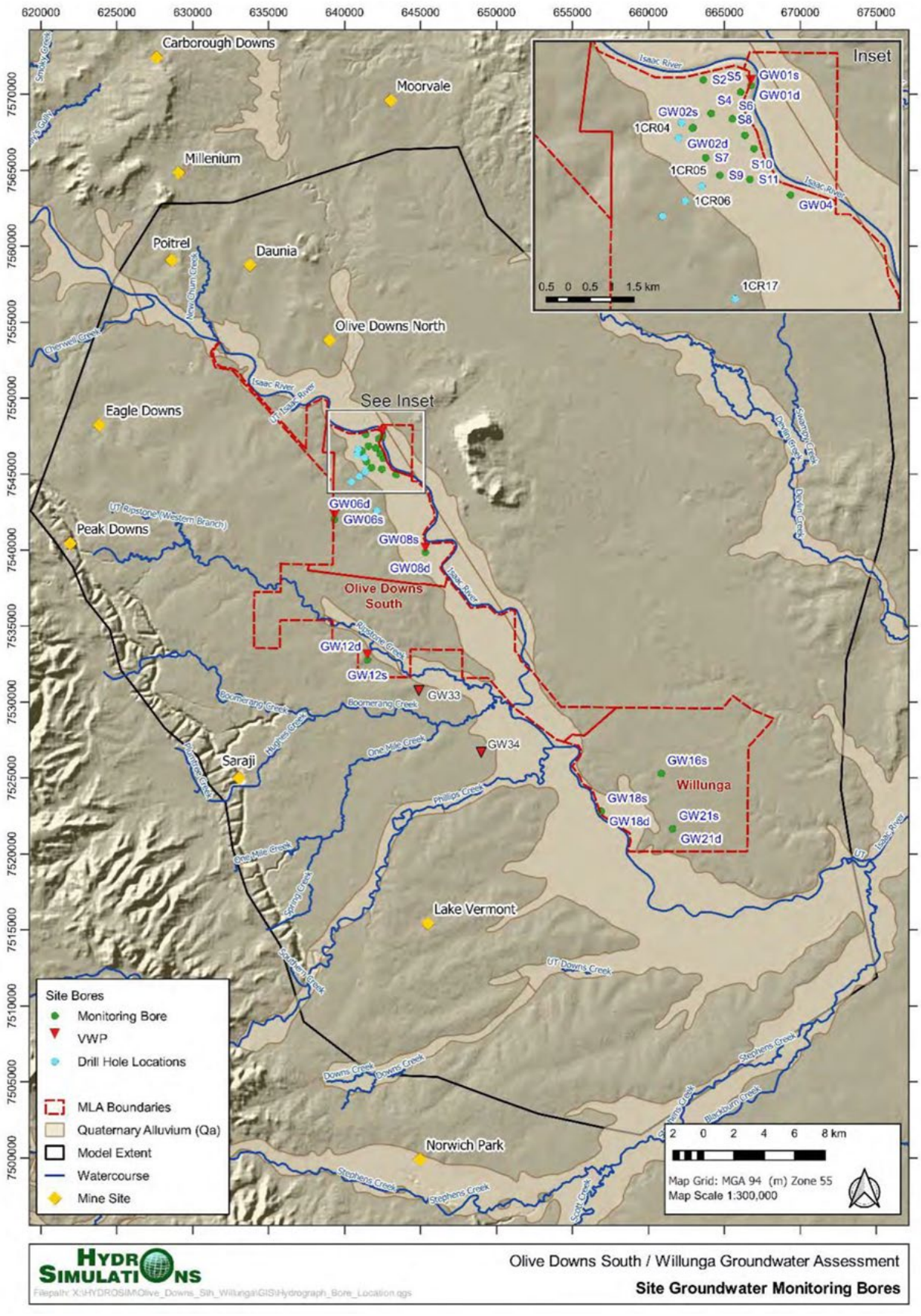


FIGURE 12 SITE GROUNDWATER MONITORING BORES

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.8.3 Baseline Groundwater Quality

Water Type

As part of the EIS studies the proportions of the major anions and cations were used to determine the hydro-chemical facies of groundwaters sampled. The anion-cation balance for the ODP monitoring bores is shown on the Piper diagram (Figure 13). The results for these monitoring bores generally indicated that although the cation compositions were similar between groundwater units, there was clear differences in the anion makeup of groundwater from each unit. Alluvium groundwaters were classified as Na-Ca or Na-Mg type water and were higher in bicarbonate than the other groundwater units. The proportion of chloride was higher within the regolith material, which was classified as Na-Cl-SO_4 or Na-Cl-HCO_3 type water. The Permian coal measures generally contained Na-Cl type water, with some also recording a high proportion of Mg but with very little sulphate compared to the other groundwater units.

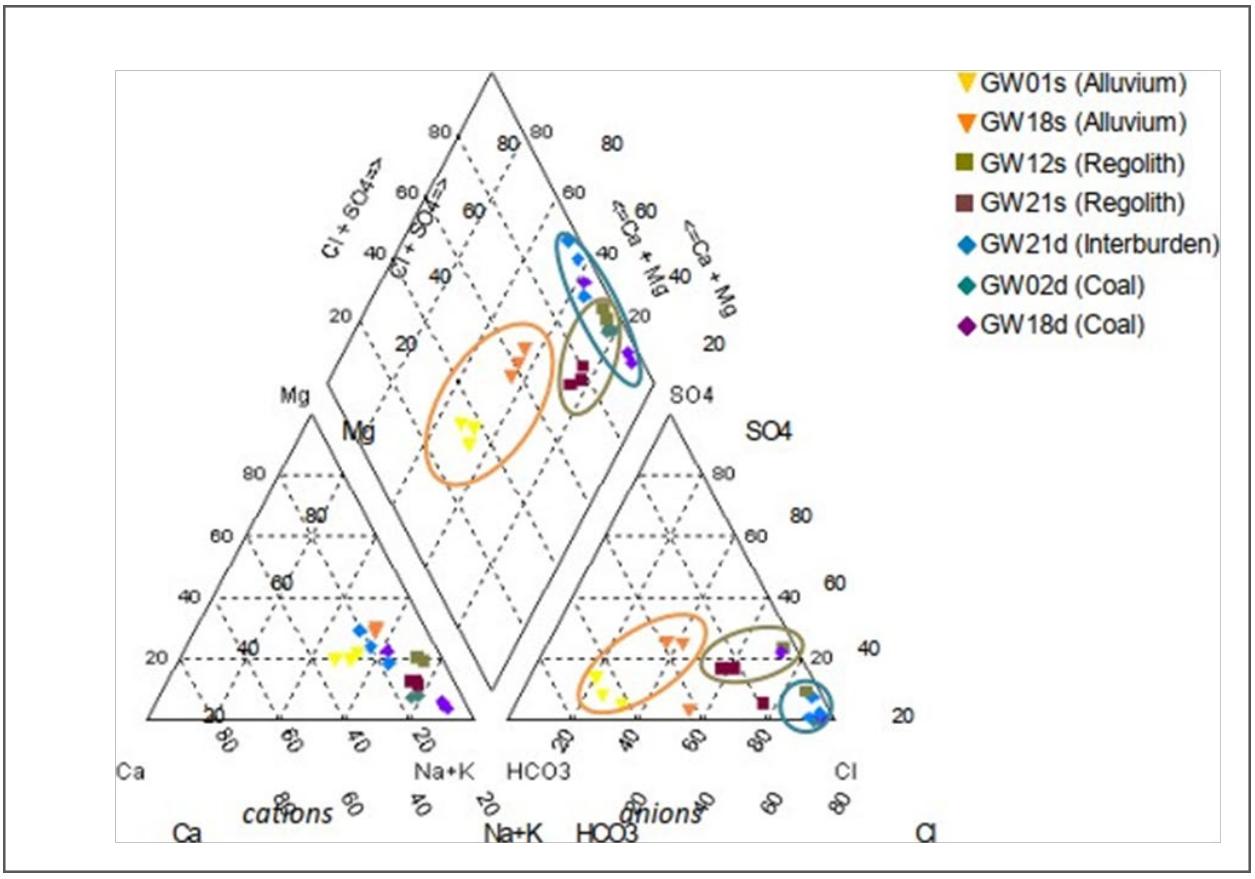


FIGURE 13 PIPER DIAGRAM OF PROJECT SITE BORES (HYDROSIMULATIONS [2018])

Major ion data collected from site bores, collected as part of the landholder bore census and publicly available sources is shown (Figure 14), along with data for the Isaac River at Deverill (station 130410A). Figure 14 showed that the broader dataset roughly aligned with results for site monitoring bores; however, a greater spread is visible.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

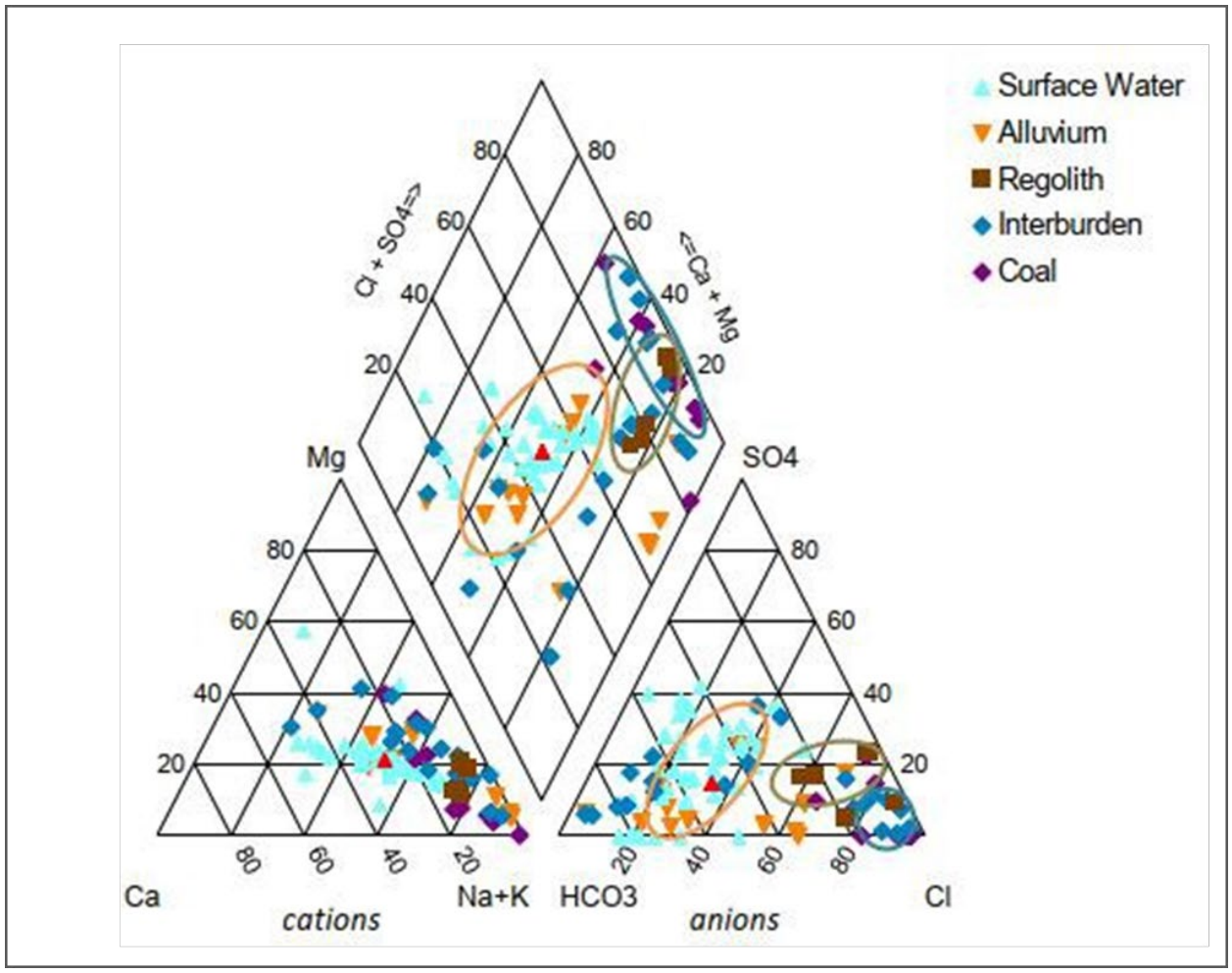


FIGURE 14 PIPER DIAGRAM OF ALL DATA (HYDROSIMULATIONS [2018])

Salinity

Water quality data from site bores, collected as part of the landholder bore census and publicly available sources provides useful information on the beneficial use of groundwater associated with the major stratigraphic units. Salinity is a key constraint to water management and groundwater use and can be described by total dissolved solid (TDS) concentrations.

Figure 15 shows that water within the Isaac River was largely fresh, while water within the alluvium was fresh to moderately saline with an average TDS of 1,458 mg/L, ranging between 201 mg/L and 3,430 mg/L. Water within the regolith material was generally highly saline, but could be brackish to moderately saline with an average TDS of 9,757 mg/L, ranging between 1,460 mg/L and 18,600 mg/L. Water within the Permian coal measures could range between fresh and highly saline, but was generally saline within the coal seams, and brackish to moderately saline within the interburden units. Coal seam units of the Permian coal measures recorded an average TDS of 7,402 mg/L, ranging between 2,544 mg/L and 14,700 mg/L. The interburden units of the Permian coal measures recorded an average TDS of 4,746 mg/L, ranging between 421 mg/L and 18,400 mg/L.

Available long-term trends in salinity within the alluvium and Isaac River within the Study Area are presented in Figure 15. Salinity within the alluvium was highly variable spatially. As shown, salinity varied at one location temporally. Results for government alluvial bore RN13040180 indicated an EC range between 199 µS/cm and 7,400 µS/cm (fresh to moderately saline). Figure 16 also shows EC as recorded at Isaac River station 130410A, ranging between 49 µS/cm and 1,173 µS/cm (fresh to brackish).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

The water quality data for the alluvium occasionally showed an inverse correlation in EC to rainfall residual mass curve, with rising EC recorded during periods of declining/ below average rainfall and vice versa. However, due to the lack of temporal readings, there was no clear correlation between groundwater salinity in the alluvium at RN13040180 and stream flow and salinity of the Isaac River.

Spatial distribution of TDS across the waterways has been mapped in Figure 17 and shows all freshwater quality localised along the Isaac River, with brackish to moderately saline water along the river and tributaries. As expected, the salinity within the coal measures appeared to increase with depth. Bores within the coal measures near the subcrop areas west of site generally recorded moderately saline water quality, which increases to saline quality where the coal measures are deepest near Isaac River. This corresponds with the coal measures being largely recharged by rainfall where they occur at subcrop.

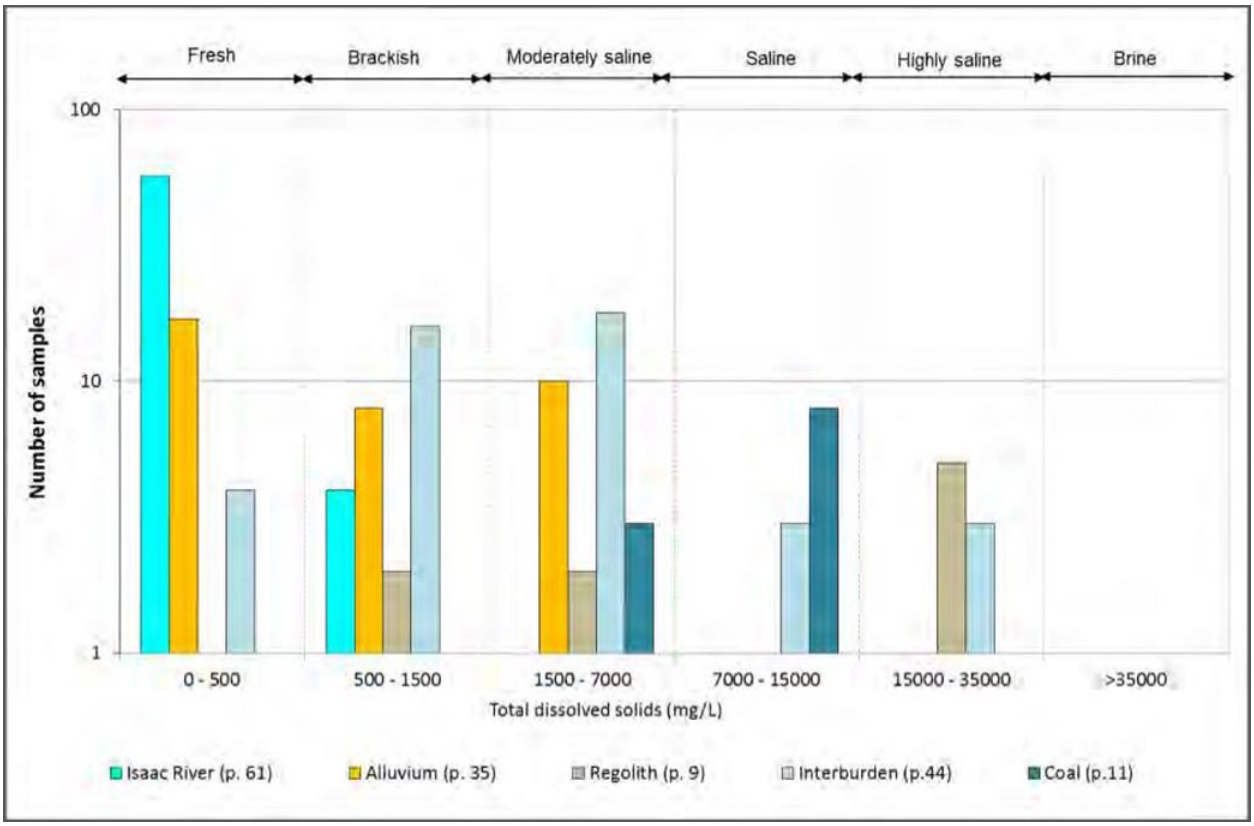


FIGURE 15 FAO (2013) SALINITY RANKING BY UNIT (HYDROSIMULATIONS [2018])

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

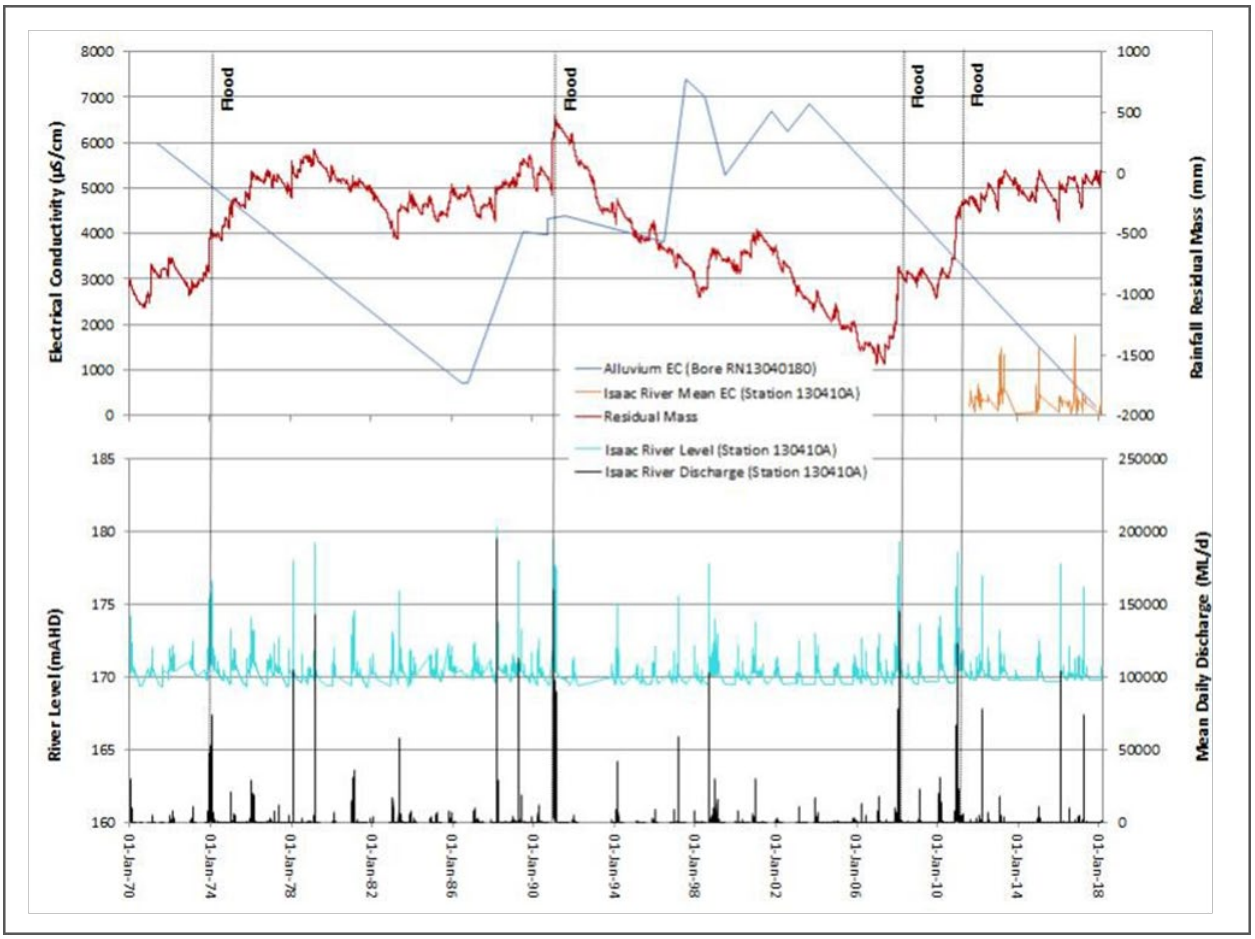


FIGURE 16 ISAAC RIVER SALINITY (HYDROSIMULATIONS [2018])

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

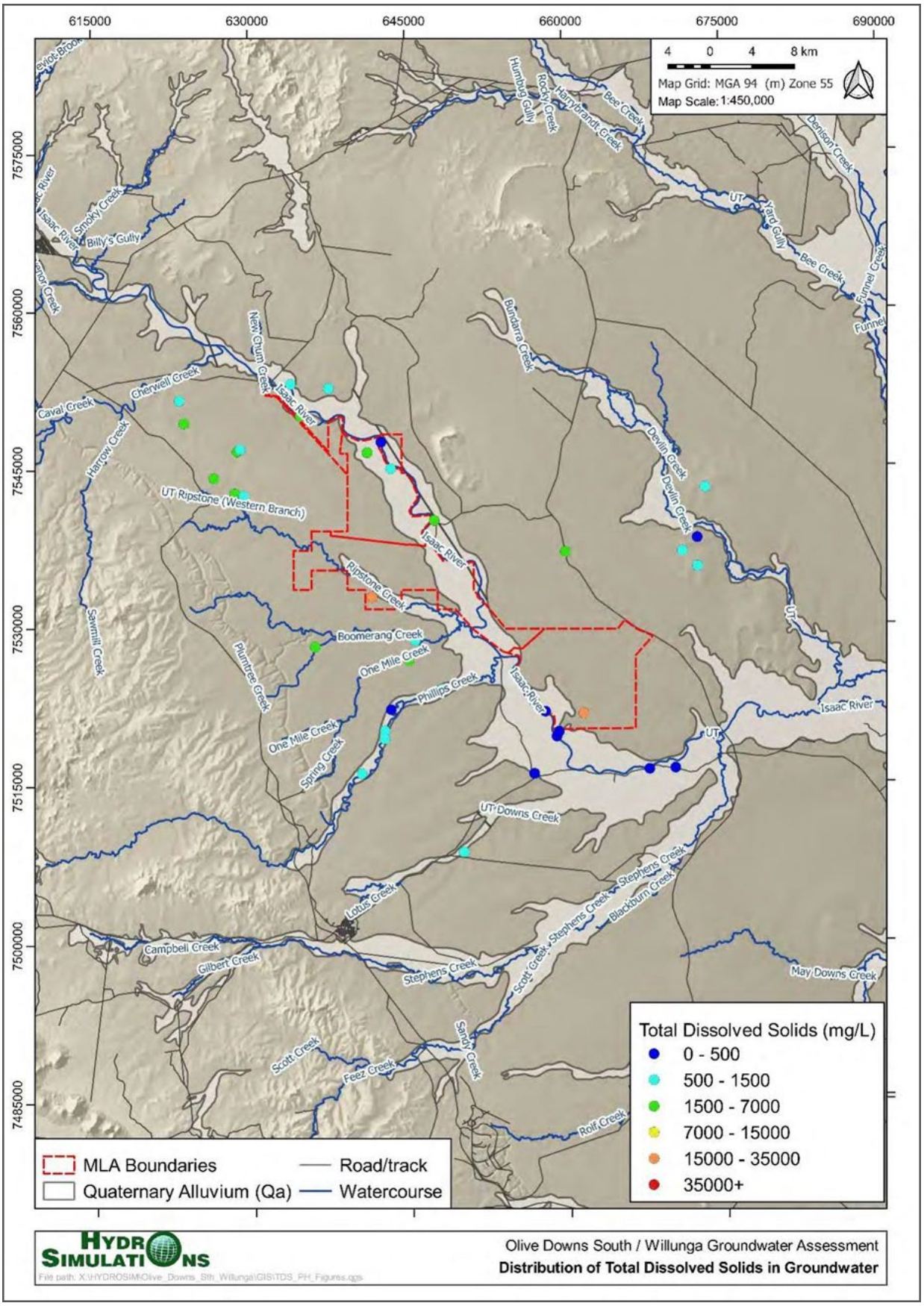


FIGURE 17 DISTRIBUTION OF TDS IN GROUNDWATER

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.8.4 Groundwater Use

The Isaac River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (Qld Gov 2011) – includes environmental values for Isaac groundwater, including the following uses, aquatic ecosystems, irrigation, farm supply/ use, stock watering, primary recreation, drinking water as well as being of cultural and spiritual value. Comparing the data to relevant guideline levels (HydroSimulations, 2018), the summary results indicate that water within the Quaternary alluvium is generally suitable for stock water supply and irrigation. Water within the regolith material exhibits poorer quality compared to the alluvium and is not considered a suitable groundwater resource for livestock, irrigation, drinking water or aquatic ecosystems. Water within the siltstones and sandstones of the Permian coal measures is generally suitable for stock water supply, with the exception of some TDS concentrations exceeding guideline levels for pigs and poultry. In contrast, groundwater within the coal seams generally exhibits a higher TDS, which is on average higher than the guideline level for beef cattle but below the guideline level for sheep. Comparison of results to the guideline levels indicates the coal measures are not considered a suitable groundwater resource for irrigation, drinking water or aquatic ecosystems.

It was noted in the literature review and from site visits that landholder pumping from the alluvial sediments at the project was used for stock water supply purposes (Hydrosimulations, 2018). A search of the Queensland Government's Groundwater Bore Database (GWBD) and the Bureau of Meteorology's National Groundwater Information System (NGIS) was carried out in May 2017 for registered bores within the Study Area. This search indicated that there are 200 registered bores, of which 80 bores (40 %) were used for groundwater monitoring and investigations, and 69 bores (34.5 %) used for water supply. The remainder of bores had an unknown use or resulted from exploration activities (Table 7).

TABLE 7 REGISTERED USE OF GROUNDWATER BORES WITHIN THE STUDY AREA

REGISTERED USE	COUNT	PERCENT OF TOTAL
Groundwater monitoring (mine monitoring, water resource investigation etc)	80	40
Water Supply	69	34.5
Unknown	43	21.5
Exploration (petroleum, gas, coal, stratigraphic etc)	8	4
Total	200	100

A field bore census of groundwater bores and wells within 20 km of the project was conducted by Environment & Natural Resource Solutions (ENRS) from September to November 2017. The bore census involved visiting bores on 12 properties, with a total of 120 bore locations assessed. Of the 120 bores:

- 40 bores were found to be existing and in use
- 35 bores are existing but not in use
- 7 bores were of unknown status (could not access); and
- 38 bores were abandoned and destroyed.

Figure 18 shows the locations and uses of registered bores (as of May 2017) and those visited during the bore census. For the existing and unknown bores with geological information available, 22 intersected alluvium, 10 were within regolith material and 30 intersected Permian aged coal measures (Rangal Coal Measures, Blackwater Group and Back Creek Group).

Twenty-two of the inspected bores were equipped with a submersible pump with variable power sources (i.e., mains power, diesel motor and windmill). Twenty-five bores were positioned near water storage tanks,

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

ranging in size from 20 kilolitres (kL) to 100 kL, with two bores equipped with a float actuated pressure switch to maintain tank water levels. There were limited details on abstraction volumes and yields, but some reported maximum yields of around 1 L/s to 2 L/s.

Four of the existing bores inspected as part of the bore census were within 5 km of the proposed pit footprints within the ODS domain. Three of the bores (Bore 8, RN141677 and RN136090) intersected the Isaac River alluvium, while one bore (Swamp Bore) on the Meadowbrook property intersected Permian coal measures to a depth of around 85 m. Two of the four bores (Bore 8 and RN136090) were equipped with submersible pumps and used for stock and domestic purposes, respectively. Bore RN141677 was not used, and the measured total depth did not match with the drill details, indicating the bore may have collapsed. Swamp Bore was also not in use or equipped, but the landholder indicated it has previously been used for stock water supply with a yield of around 1,600 gallons per hour (GPH).

Seven of the bores inspected as part of the bore census were within 5 km of the proposed pit footprints within the Willunga Domain. The seven bores (RN97180, RN97181, RN97182, RN97183, RN97184, RN97185 and River Bore) were relatively shallow (< 40 m deep), intersected the Isaac River alluvium and were used for stock water supply. Three of the bores (RN97181, RN97182 and River Bore) were equipped with electric submersible pumps, with a maximum yield of around 1.3 L/s. One of the bores (RN97180) is assumed to be present but could not be accessed during the bore census but the landholder indicated the bore has had a yield of 800 GPH.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

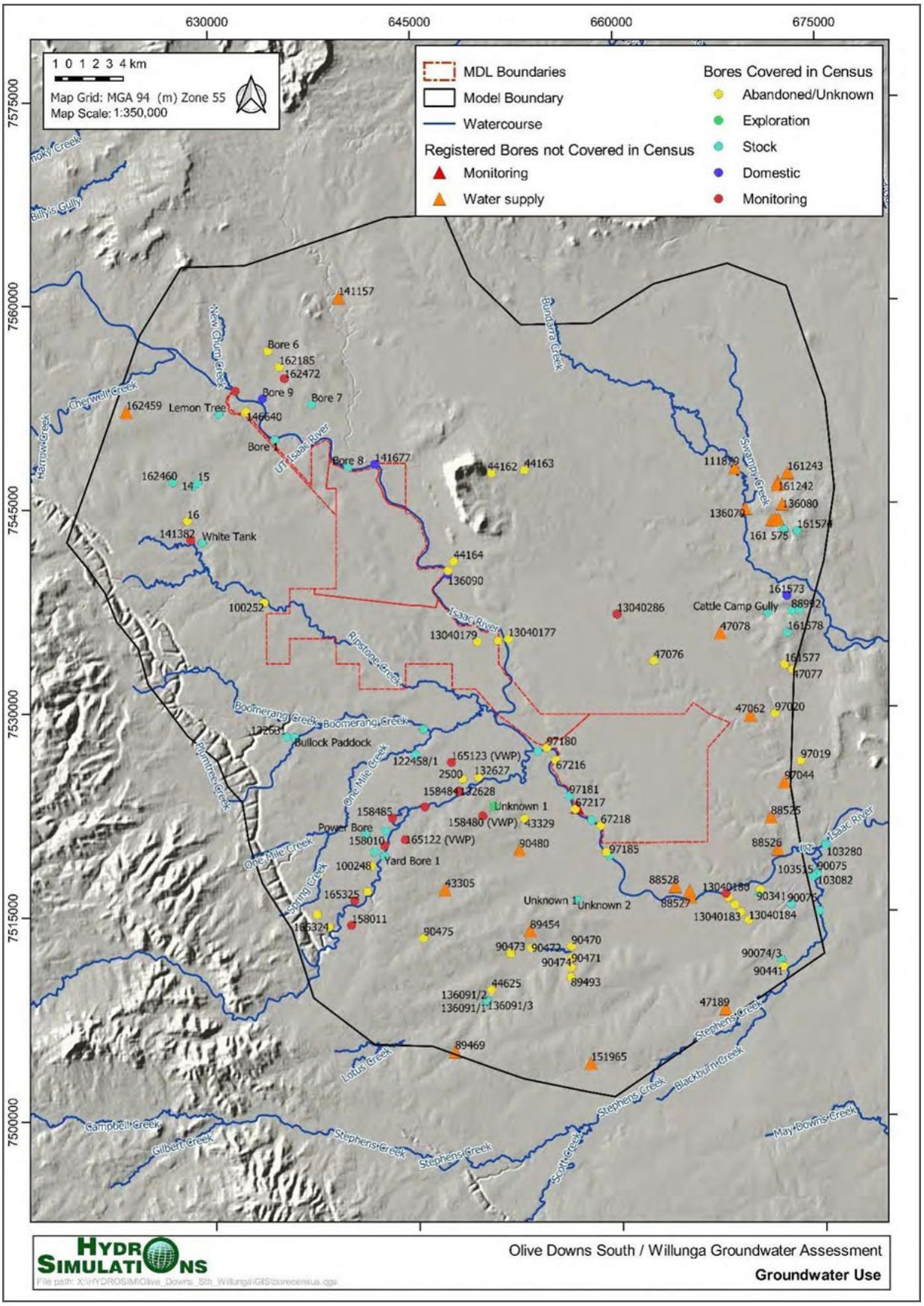


FIGURE 18 LOCATION AND USES OF REGISTERED BORES

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.8.5 Groundwater Dependent Ecosystems (GDE)

A groundwater dependant ecosystem (GDE) is one in which the plant and/or animal community is dependent on the availability of groundwater to maintain its structure and function (HydroSimulations 2018).

Desktop mapping of potential GDEs through-out QLD indicates that areas with possible high, moderate and low potential for groundwater interaction occur within ODP locality (BoM 2018). In ODP the GDE Atlas classifies ecosystems based on the potential for dependence on groundwater based on multiple lines of scientific evidence. Ecosystems have been mapped as either:

- High potential for groundwater interaction (indicating a strong possibility the ecosystem is interacting with groundwater)
- Moderate potential for groundwater interaction; and
- Low potential for groundwater interaction (indicating it is relatively unlikely the ecosystem will be interacting with groundwater and will include ecosystems that are not interacting with groundwater).

Surface ecosystems that may be reliant on surface expression of groundwater are shown in Figure 19. Surface ecosystems that may be reliant on subsurface groundwater are shown in Figure 20. The desktop GDE mapping (BoM 2018) indicates:

- Terrestrial vegetation associated with the Isaac River, Phillips Creek, North Creek, Cherwell Creek and the downstream extent of Ripstone Creek is mapped as having a high potential to be dependent on the subsurface expression of groundwater.
- Aquatic habitat associated with the Isaac River, Phillips Creek, North Creek and Cherwell Creek is mapped as having a high potential to be dependent intermittently on the surface expression of groundwater.
- Terrestrial vegetation and aquatic habitat associated with a number of palustrine wetlands surrounding the ODS and Willunga domains is mapped as having a moderate potential to be associated with the surface expression of groundwater.
- All other terrestrial vegetation (regional ecosystems mapped by DSITI 2018) and aquatic habitat within the project locality, is broadly mapped as having a low to moderate potential of being associated with the presence of groundwater (BoM 2018).

The accuracy of the desktop GDE mapping (BoM 2018) of the project locality was reviewed by DPM Enviroscienses (2018a), with the following conclusions made in relation to the presence/absence of GDEs based on detailed site surveys and assessments:

- The majority of the terrestrial vegetation associated with the Isaac River, Phillips Creek, North Creek and Cherwell Creek is unlikely to be dependent on groundwater given the vegetation communities along these features are known to occur more widely across the landscape and are not restricted to areas where they could potentially access groundwater. There are areas of RE 11.3.25, RE 11.3.27 and RE 11.3.4 along the Isaac River which contain Queensland Blue Gum (*Eucalyptus tereticornis*) and River Oak (*Casuarina cunninghamiana*) which have the potential to be reliant on access to groundwater (Independent Expert Scientific Committee [IESC], 2018). The existing groundwater monitoring network within the project area indicates that the groundwater levels within the ODS and Willunga domains range from approximately 10 m to 17 m below surface (HydroSimulations 2018). Based on the depth to groundwater surrounding the ODS and Willunga domains being

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

greater than 10 mbgl, DPM Envirosciences (2018a) concluded that these communities have a low likelihood of being reliant on access to groundwater.

- Consistent with the IESC (2018) Assessing Groundwater-Dependent Ecosystems: IESC Information Guidelines Explanatory Note, the ephemeral nature of the aquatic habitat associated with Isaac River, Phillips Creek, North Creek and Cherwell Creek indicates that these habitats have a low likelihood of being dependent on groundwater (Figure 21); and
- Terrestrial vegetation and aquatic habitat associated with the palustrine wetlands surrounding the ODS and Willunga domains could potentially be reliant on groundwater given the RE mapped by DSITI (2018). DSITI (2018) has mapped these areas as RE 11.3.27 and RE 11.5.17 which contain River Red Gum (Eucalyptus camaldulensis) and Queensland Blue Gum, both species that could be reliant on the presence of groundwater to some degree. However, given groundwater levels in this area have been identified as being in excess of 10 mbgl (HydroSimulations 2018), DPM concluded that these communities would have a low likelihood of being reliant on groundwater. In addition, the aquatic ecology surveys identified aquatic macroinvertebrate species within these wetlands that are indicative of an area subject to complete drying and wetting cycles (DPM 2018c). The clay-rich substrates of these wetlands are likely to hold surface run-on for extended periods, creating a 'perched' system not influenced by groundwater levels (DPM 2018c).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

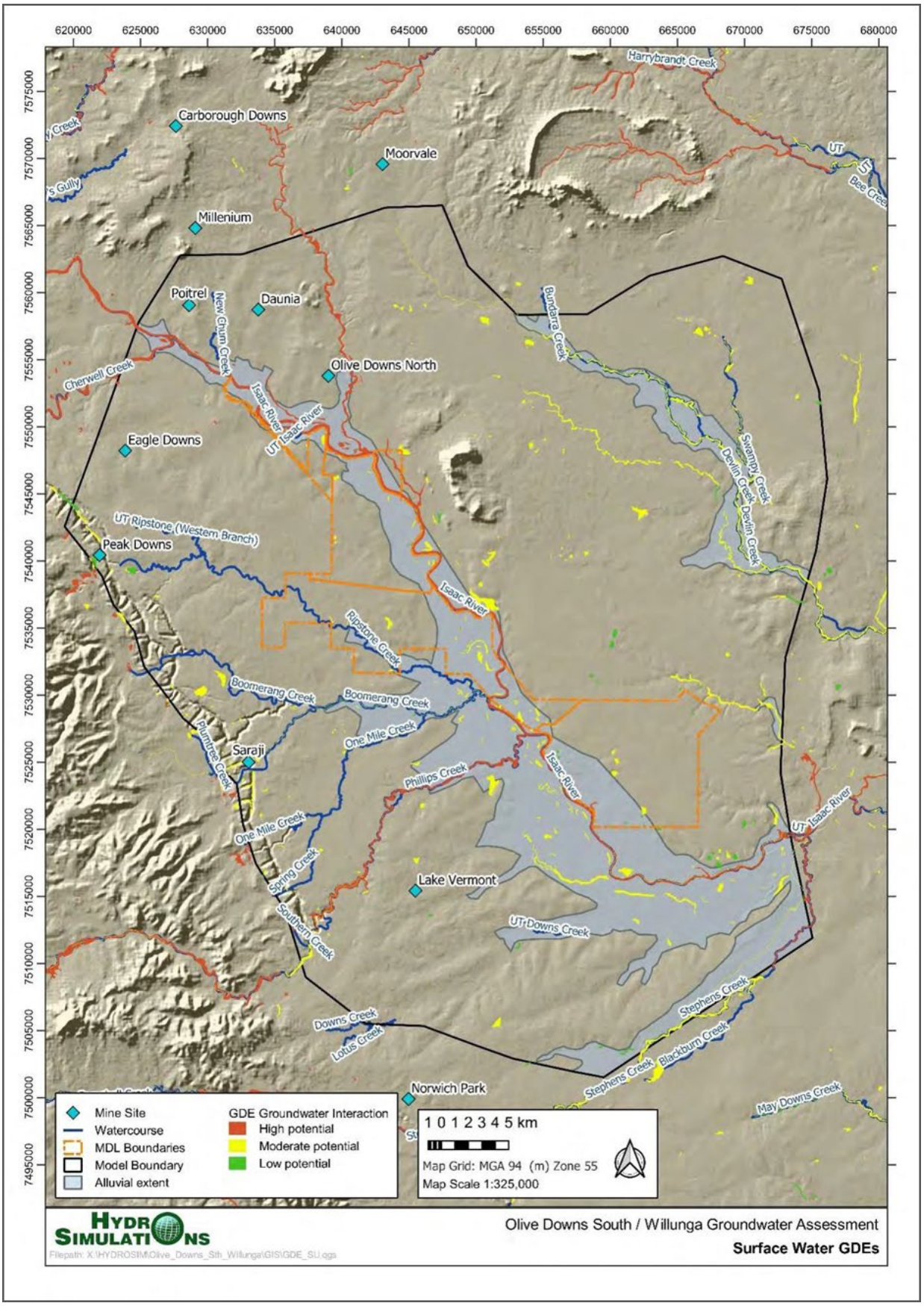


FIGURE 19 SURFACE WATER GDES

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

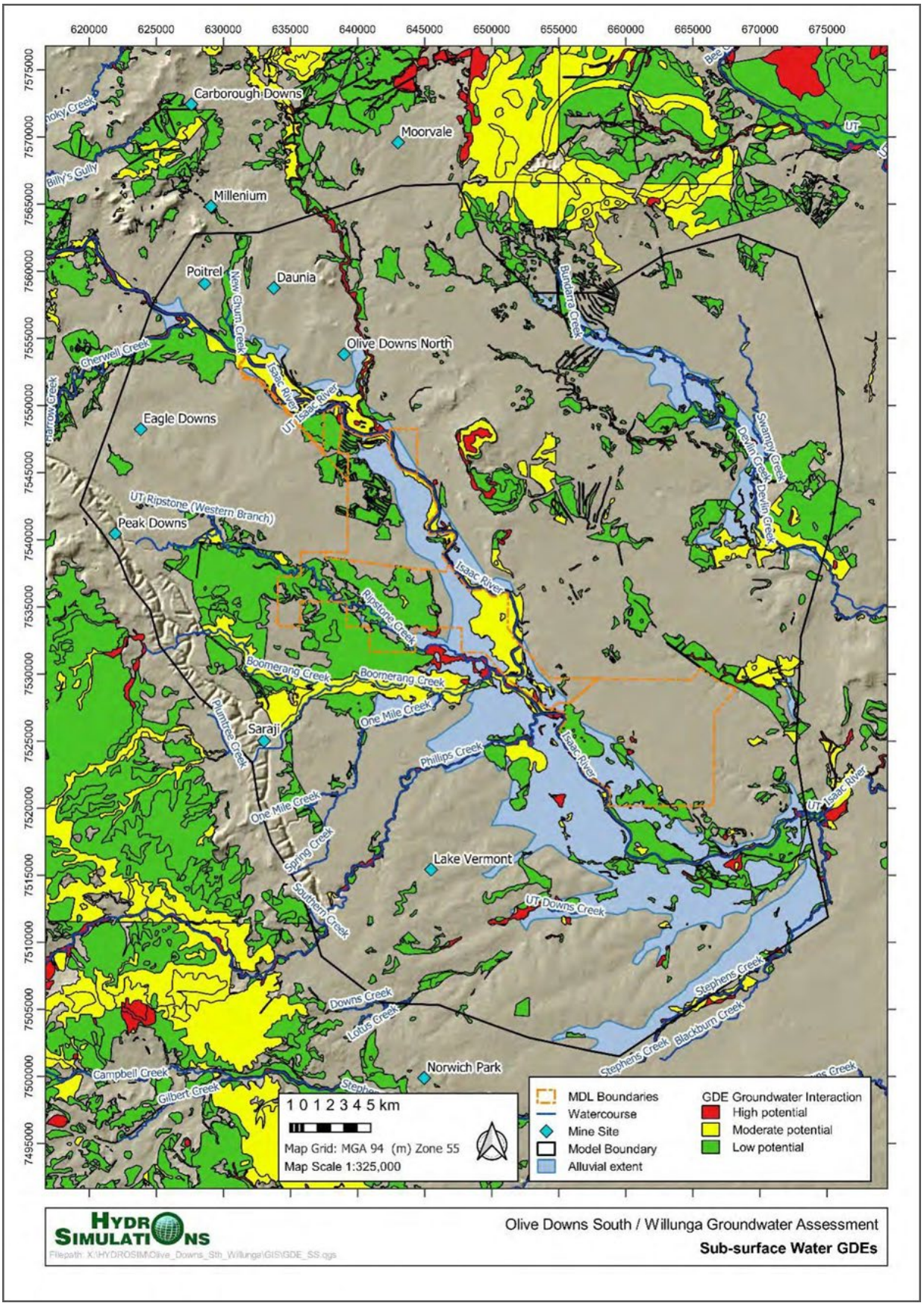


FIGURE 20 SUB-SURFACE WATER GDES

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd



North Creek (DPM October 2017)



Cherwell Creek (DPM October 2017)



Isaac River (DPM October 2017)



Phillips Creek (DPM October 2017)

FIGURE 21 EXAMPLES OF AQUATIC HABITATS AT ODP

2.9 Land Use

Cattle grazing is the primary activity undertaken across the project site on the Olive Downs South and Willunga Domains and is the dominant land use in the Isaac-Connors catchment. No cropping activities were observed being undertaken within, or within the vicinity of the project site.

Other significant land uses in the 22,153 km^2 Isaac-Connors catchment include mining, dryland cropping and production forestry. Water use in the catchment is dominated by irrigated agriculture and mining. Stock and domestic use is important in the region (Department of Natural Resources and Water [DNRW] 2006). There are several existing coal mines in the upstream Isaac River catchment including Burton, North Goonyella, Grosvenor, Goonyella-Riverside, Broadmeadow, Broadlea, Isaac Plains, Carborough Downs, Caval Ridge, Peak Downs, Poitrel, Daunia, Millennium and Moranbah North.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

TABLE 8 LAND USE OF THE ISAAC-CONNORS SUB CATCHMENT (SOURCE DNRW, 2006)

LAND USE CLASSES	AREA(HA)	AREA(%)
Conservation and natural environments	55,013	2.48
Production from relatively natural environments	2,066,444	93.28
(Grazing natural vegetation)	(2,010,871)	(90.77)
Production from dryland agriculture and plantations	55,350	2.5
Production from irrigated agriculture and plantations	1,839	0.08
Intensive users	34,709	1.57
(Mining)	(31,588)	(1.43)
Water	1,921	0.09
TOTAL	2,215,276	100

Desktop review of the Queensland Government Development Assessment Mapping System confirmed that no Priority Agricultural Areas (PAAs) were located within the ODP site, and the nearest areas were situated approximately 100 km to the south (GT Environmental Pty Ltd [GTE] 2018).

Agricultural land classifications indicate the majority of the project area lies on C1 (sown pastures, and native pasture on high-fertility soils) and C2 (Native Pastures) class agricultural lands (Queensland Government 2016).

2.9.1 Land Suitability Classes

Review of the SMU indicates that overall, they are marginal to unsuitable for broadacre rainfed cropping. In general, this is due to limitations in plant available water capacity and nutrients, with some SMU specific limitations including salinity, topography and flooding. Beef cattle grazing is assessed as marginally to suitable land with moderate limitations, including moisture, nutrients and salinity. Nutrients limitation may be viewed as readily rectified with fertiliser and pasture management. Limitation levels may be viewed as marginal when assessing between unsuitable and suitable for a land use.

As the overall suitability class is usually determined by the most severe suitability subclass that applies in a particular SMU, moisture, nutrients and salinity limitations for SMUs C2, S1, R1, R2, L1, L2, B1 and B2 of grazing class four will be re-reviewed as marginal compared with other favourable attributes. This increases the grazing class to three, which reflects the SMUs beef cattle grazing potential. Table 9 outlines the SMU suitability assessment for cropping and grazing. Mapping is outlined in the EIS – Soil and Land Suitability Assessment (Appendix J) .

TABLE 9 SMUS SUITABILITY ASSESSMENTS AND AREAS FOR CLASSES OF CROPPING AND GRAZING

LAND SUITABILITY – CROPPING			LAND SUITABILITY - GRAZING		
CLASS	SMU	AREA (HA)	CLASS	SMU	AREA (HA)
1	-	-	1	-	-
2	-	-	2	-	-
3	-	-	3	C1, S2, C2, S1, R1, R2, L1, L2, B1, B2	15,796
4	C1, S1, S2, R1, R2, B1	8,985	4	A1, A2	471
5	C2, L1, L2, B2, A1, A2	7,283	5	-	-

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.9.2 Sensitive Receptors

In the process of soil and land suitability assessment, a preliminary risk assessment was conducted for nine selected points of interests. Generally, following receptors were identified by this risk assessment (GTE 2018):

- Groundwater
- Surface water
- Flora
- Fauna
- Residents; and
- Workforce.

Giving consideration to sensitive receptors in terms of residential properties, the region surrounding the project was sparsely populated with mostly mining and rural business/residential land users. There were seven homesteads not owned by Pembroke within 10 km of the closest ML or MLA areas, listed below and shown (Figure 22):

- Seloh Nolem 1 – 0.7 km North-East
- Vermont Park – 0.8 km East
- Seloh Nolem 2 – 1.2 km North-East
- Willunga – 3.4 km East
- Olive Downs – 5.7 km North-West
- Leichardt – 6 km South
- Old Bombandy – 6km South-East; and
- Winchester – 9.6 km West.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

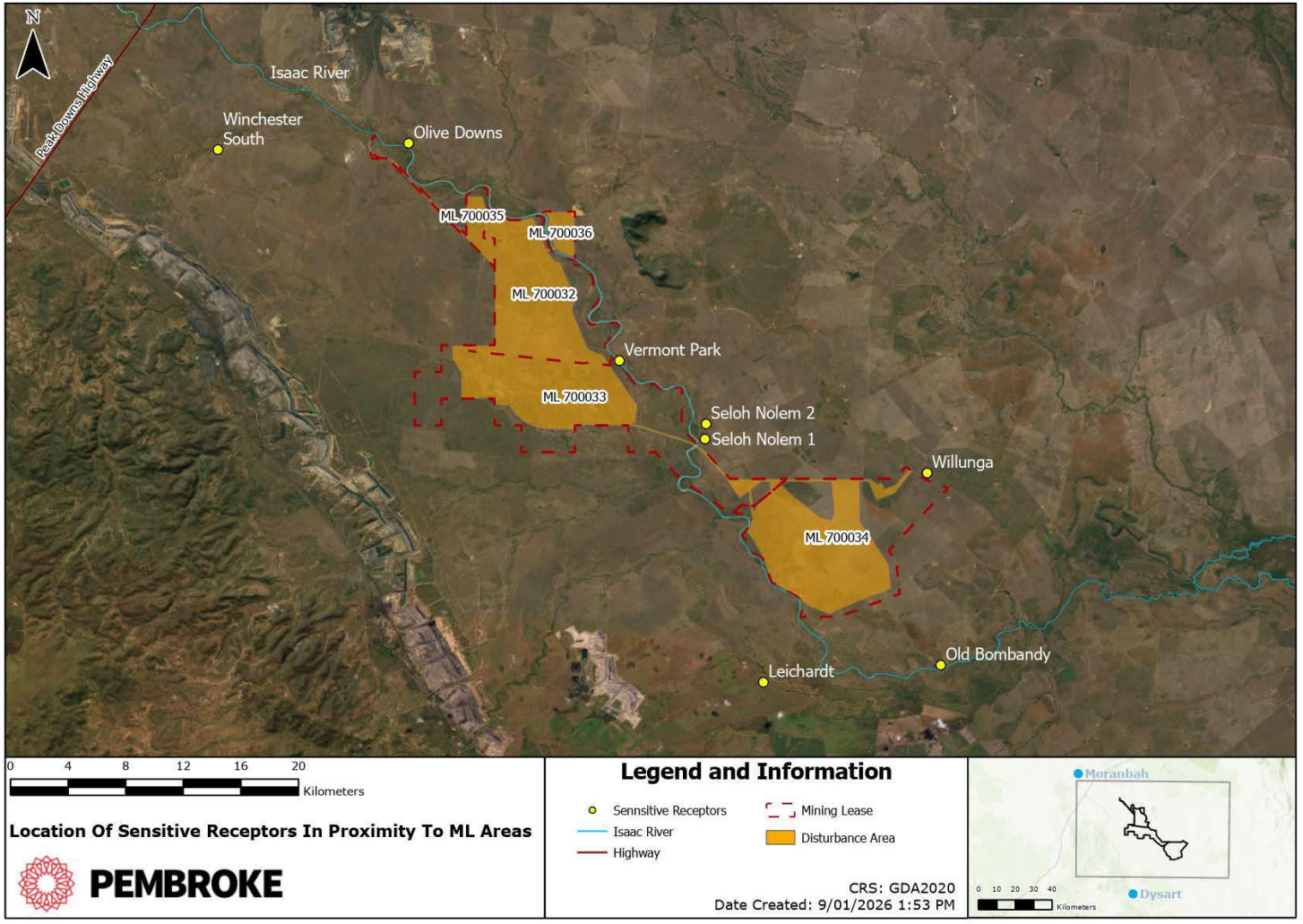


FIGURE 22 LOCATION OF SENSITIVE RECEPTORS IN PROXIMITY TO ML AREAS

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

2.9.3 Underlying Landholder/Overlapping Tenure

Pembroke owns the Iffley, Deverill and Twenty Mile properties (yellow in Figure 22). Whitehaven Coal owns the Wynette property (orange on Figure 23). All other properties intersecting the MLs, and MLAs (Table 10) are privately owned.

All properties within the ODP area have largely been cleared through historic agricultural practices, however, some sections of remnant vegetation remain, particularly along the riparian corridor of the Isaac River. Cattle grazing on native and improved pastures is conducted on these properties. As are dedicated legal biodiversity and conservation areas within suitable habitat areas.

TABLE 10 PROPERTIES WITHIN AND ADJACENT TO ODP ML AND MLA AREAS

PROPERTY NAME	APPROX. AREA OF PROPERTY (HA)	APPROX. AREA OF PROPERTY WITHIN DISTURBANCE FOOTPRINT (HA)	APPROX. PERCENTAGE OF PROPERTY WITHIN THE DISTURBANCE FOOTPRINT	APPROX. AREA OF PROPERTY WITHIN ML/ MLA (HA)	APPROX. PERCENTAGE OF PROPERTY WITHIN ML/ MLA
Wynette	5,851	471	8%	604	10%
Iffley	25,644	4,823	19%	5,931	23%
Vermont Park	16,623	4,455	27%	8,180	49%
Seloh Nolem	8,640	319	4%	1,205	14%
Willunga	18,200	5,112	28%	7,562	42%
Old Bombandy	11,036	527	5%	2,135	19%
Deverill	6,455	492	8%	55	1%
Winchester Downs	21,108	54	<1%	552	4%

2.9.4 Native Title and Cultural Heritage

The ODP is located within the Barada Barna People's Native Title Determination Area (QC2016/007) registered with the National Native Tribal Tribunal (NNTT) (2016). The background tenure of all land within and immediately surrounding the ODP is Freehold. Pembroke and the Barada Barna People have an established Indigenous Land Use Agreement (ILUA) ensuring engagement and active management of cultural heritage related matters associated with the ODP (Figure 24).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

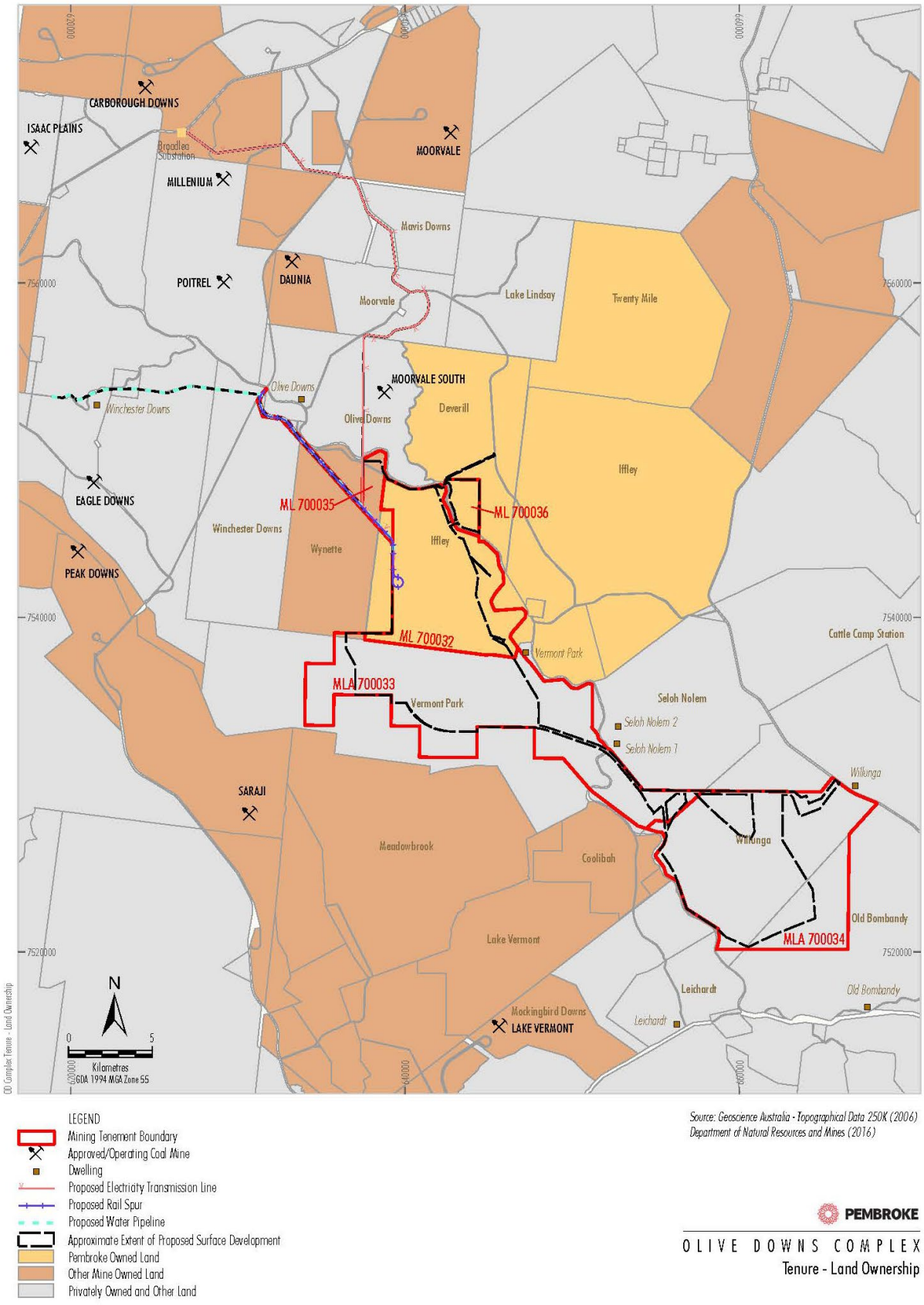
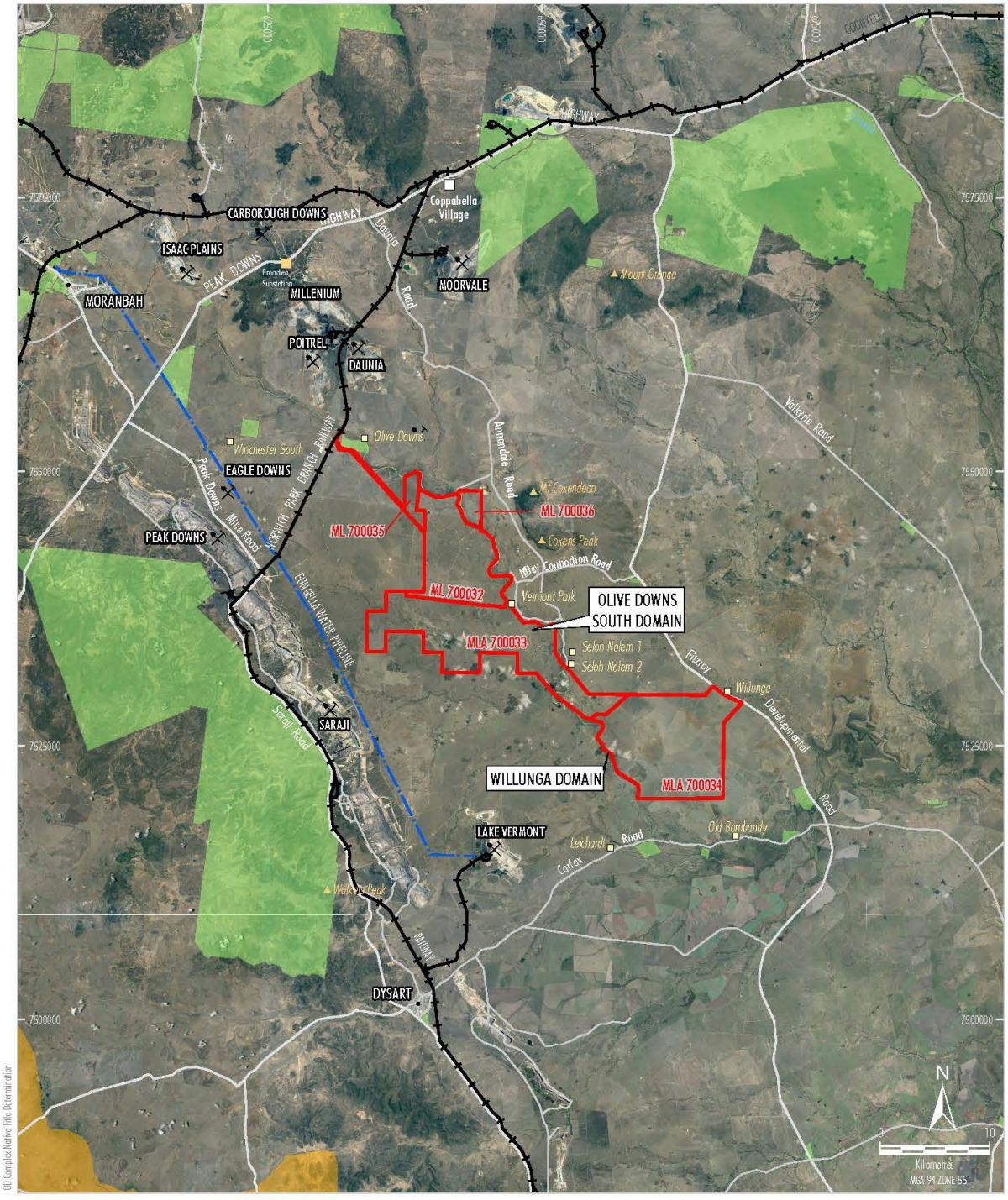


FIGURE 23 TENURE – BACKGROUND LAND OWNERSHIP

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd



LEGEND
- Mining Tenement Boundary
- Registered Native Title Applications
- Native Title Area
- Eungella Pipeline Network
- Railway
- Approved/Operating Coal Mine
- Dwelling

Source: Geoscience Australia - Topographical Data 250K (2006)
Department of Natural Resources and Mines (2016)
Orthophotography: Google Image (2016)

PEMBROKE

OLIVE DOWNS COMPLEX
Native Title Determination and
Indigenous Land Use Agreement

FIGURE 24 NATIVE TITLE DETERMINATION AND INDIGENOUS LAND USE AGREEMENT

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

3 Project Description

3.1 Mining Tenements

The ODP operates under EA0001976 on the following mining leases (MLs) ML700032, MLA700033, MLA700034, ML700035 and ML700036. The area of the ODP MLs and their grant status is provided below in Table 11. and their location is presented within Figure 25. Collectively, the area covered by the ML's is referred to as the 'Project Area' in the PRCP and EIS documentation (except where otherwise defined for a specific purpose).

TABLE 11 ODP MINING LEASE TENEMENTS

ML NUMBER	NAME	DATE GRANTED	AREA (HA)
ML700032	Olive Downs South	29 September 2020	5,785
ML700033	Olive Downs South	Application lodged 17 May 2018	9,474
ML700034	Willunga	Application lodged 17 May 2018	8,441
ML700035	Olive Downs South	29 September 2020	745
ML700036	Olive Downs South	29 September 2020	585
TOTAL AREA			25,030

NOTE: Tenement areas as provided by GeoResGlobe (https://georesglobe.information.qld.gov.au), 1/12/2025

3.2 Environmentally Relevant Activities

Table 12 lists the environmentally relevant activities (ERAs) that are approved under EA0001976.

TABLE 12 ENVIRONMENTALLY RELEVANT ACTIVITIES

ENVIRONMENTALLY RELEVANT ACTIVITY	LOCATION(S)
Resource Activity, Schedule 3, 13 - Mining black coal	ML700032, ML700033, ML700034, ML700035, ML700036
Resource Activity, Ancillary 08 - Chemical Storage, 3: Storing more than 500 cubic metres of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c)	ML700032, ML700033, ML700034, ML700035, ML700036
Resource Activity, Ancillary 31 - Mineral processing, 2: Processing, in a year, the following quantities of mineral products, other than coke, (b) more than 100,000t	ML700032, ML700033, ML700034, ML700035, ML700036
Resource Activity, Ancillary 63 - Sewage Treatment, 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of, (b-i) more than 100 but not more than 1500 EP if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	ML700032, ML700033, ML700034, ML700035, ML700036

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

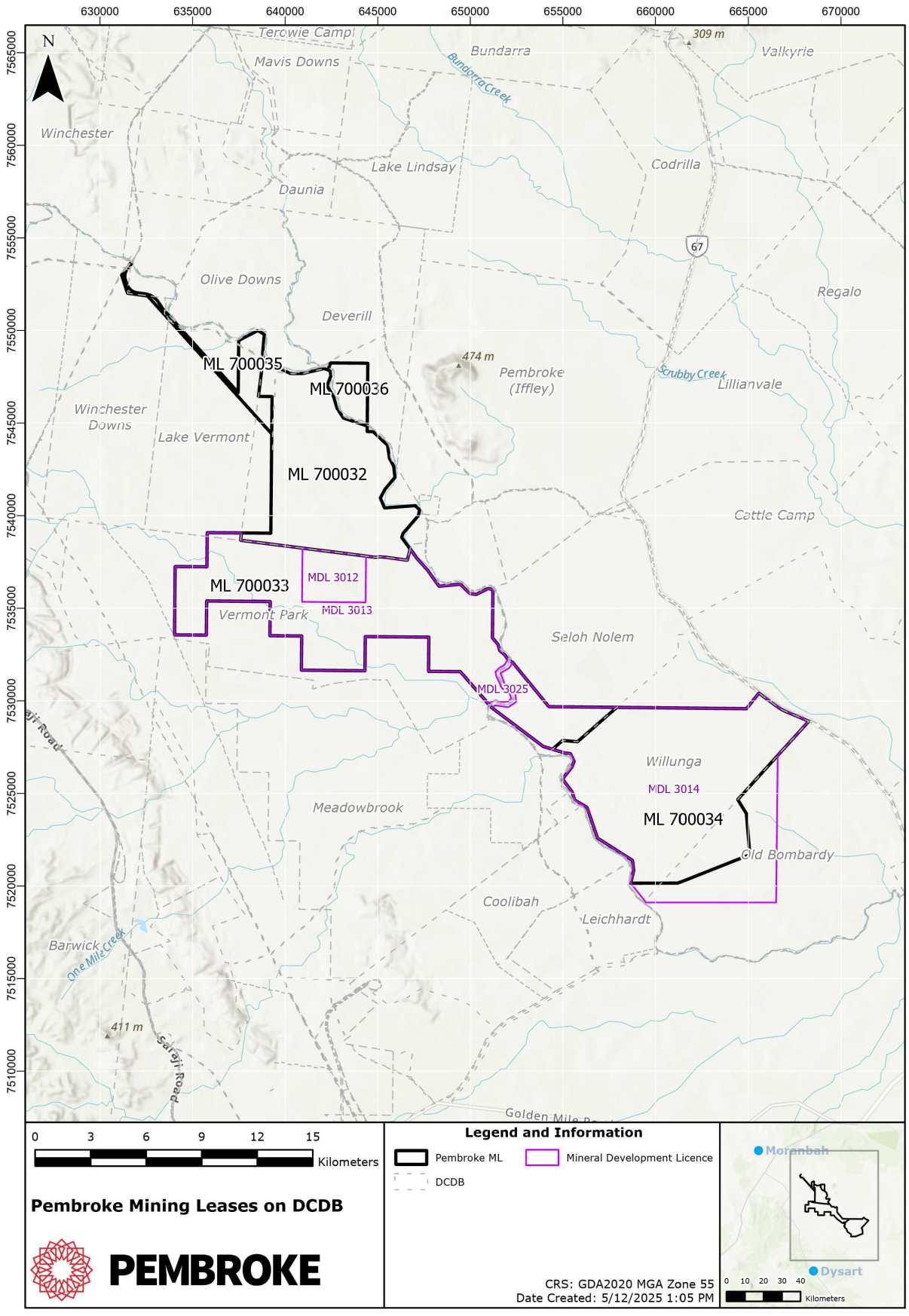


FIGURE 25 ODP MINING TENURE

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

3.3 Type of Mining Operations

The ODP is an open cut mine using conventional truck and shovel mining methods which target metallurgical coal seams of the Rangal Coal Measure. The operation has been designed in a staged approach (Figure 26 to Figure 34), with the level of detail increasing for each stage as its execution approaches the planning horizon.

To avoid confusion with regards to staging, the stages referred to here are mine development related and are unrelated to references regarding the staging of clearing and offset establishment as set out in the (Cth) *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval and related MNES Management Strategy (Appendix D)

3.3.1 Mine Development & Progressive Rehabilitation Stages

Stage 1 (2023 – 2033)

Initial establishment of operations to 6 Mtpa ROM coal production at the ODS domain within Pits ODS1, ODS2 and later (post 2030) ODS3. The two out-of-pit waste rock emplacements in the north of the ODS domain would be constructed and rehabilitation underway, and backfilling of Pits ODS1 and ODS2 would have commenced. The northern section of the permanent highwall emplacement would have been constructed to isolate the open cuts from the Isaac River (Figure 28).

Stage 2 (2034 – 2043)

Stage 2 of operations consists of 6 to 12 Mtpa (peak) ROM coal production at the ODS domain (Figure 29), as well as the initial establishment of operations at the Willunga domain (Figure 30) up to 8 Mtpa (peak) ROM coal production. All pits in the ODS domain (except Pits ODS7 and ODS8) are anticipated to be operating by this stage of operations. The Ripstone Creek diversion would be constructed prior to development of the ODS Pit 9. The remaining southern section of the permanent highwall emplacement would have been constructed, isolating the open cuts from the Isaac River floodplain.

Stage 3 (2044 – 2053)

Continued peak total ROM coal production up to approximately 20 Mtpa (total) from the ODS and Willunga domains, before production reduces towards 10 Mtpa. The final voids in Pits ODS1 and ODS2 would be backfilled in this stage, and the western faces of the out-of-pit waste rock emplacements would be rehabilitated.

Stage 4 (2054 – 2063)

Steady ROM coal production at approximately 8 to 9 Mtpa from the ODS and Willunga domains. Mining within Pits ODS1, ODS2, ODS3, ODS4 and ODS9 within the ODS domain will be completed. Rehabilitation activities for the ODS3 residual void would be underway.

Stage 5 (2064 – 2075)

Continued steady ROM coal production at approximately 5 to 7 Mtpa from the ODS (Figure 31) and Willunga domains (Figure 32), before reducing production to approximately 2 Mtpa as mining within the ODS domain Pits ODS5 and ODS6 is completed.

Stage 6 (2076 – 2088)

Steady ROM coal production of approximately 2 to 3 Mtpa from the PDS domain (Figure 33) Pits ODS7 and ODS8 (operating during daytime hours) and Willunga domain (Figure 34) Pits WIL4 and WIL5. ODS domain pits ODS5 and ODS6 and Willunga domain Pits WIL1, WIL2 and WIL3 will be backfilled.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Stage 7 (2089 – 2101)

Mining within the Willunga domain completed, with rehabilitation of the WIL5 residual void commenced. ROM coal production at the ODS domain will steadily decline as mining in Pits ODS7 and ODS8 is completed.

Full Closure Execution (2102 – 2119)

Backfilling of all voids to natural ground surface will be completed, except for the three residual voids in Pits ODS3, ODS7/8 and WIL5, with those voids and their setback areas being treated to support native fauna and woodland vegetation. Rehabilitation of all disturbed areas will have been completed in line with the PRCP, with maintenance and monitoring to continue beyond this stage until all improvement activities and rehabilitation milestone criteria have been accepted as completed.

Early mining activities are occurring consistent with the EIS proposed staging and scheduling for the ODP. Mining schedules will continue to be refined based upon JORC resource requirements and customer requirements but are generally anticipated to occur in keeping with the indicative mining schedule in future years of operation.

TABLE 13 INDICATIVE MINE SCHEDULE

PROJECT STAGE	STAGE YEARS	WASTE ROCK(MBCM)	ROM COAL MINED (MTPA)	PRODUCT COAL (MTPA)
Stage 1 - Current	2023 - 2033	12.2 – 116.3	1.0 – 6.0	0.8 – 4.5
Stage 2	2034 - 2043	189.0 – 297.2	11.0 – 20.0	7.8 – 15.0
Stage 3	2044 - 2053	199.3 – 298.3	13.7 – 20.0	10.2 – 15.0
Stage 4	2054 - 2063	123.0 – 148.6	6.4 – 10.8	4.9 – 8.4
Stage 5	2064 - 2075	48.9 – 115.2	0.8 – 6.9	0.7 – 5.3
Stage 6	2076 - 2088	47.5 – 49.3	1.6 – 3.3	1.2 – 2.6
Stage 7	2089 - 2101	6.3 – 19.4	0.4 – 1.8	0.3 – 1.4
Closure	2102-2119	n.a.	n.a.	n.a.
	Totals (Stages 1 – 7)		612 Mt	459 Mt

3.4 Proposed Duration

In keeping with the mine development stage outlined in section 3.3.1, construction activities for the purposes of major infrastructure development commenced in 2022 which was followed by operational mining commencement in 2023 within the ODS domain as, with the first coal produced in 2024. As outlined within the EIS approvals documentation and subsequent CG's Report the current approved areas are planned to be mined over a total life of mine of 79 years with ROM coal production increasing up to a peak of 20 Mtpa per annum.

3.5 Mine Infrastructure

Mine support infrastructure includes Coal Handling and Processing Plant (CHPP), mine offices, crib facilities, bathhouse, warehouse, workshops and re-fuelling facilities, ETLs, communication facilities and other associated amenities at the ODS domain and within the Willunga domain. These facilities will continue to develop over life of mine to support the mine's progression.

Access to the respective domains would be provided by two local access roads:

- Barada Barna Road to the ODS domain infrastructure area (including a crossing of the Isaac River); and

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- Fitzroy Developmental Road to the Willunga infrastructure facilities.

The Isaac River divides the ODS and Willunga domains. The two domains will be connected by crossings of the Isaac River for vehicular access and transfer of crushed ROM coal via overland conveyor. A separate crossing of the Isaac River would also be utilised (subject to weather permitting) for waste rock emplacement and vehicular access in the north-east of the ODS domain.

3.5.1 Olive Downs South Domain

The mine infrastructure area is located to the west of the open cut pits within the ODS domain, as shown in Figure 26. This area was chosen for the mine infrastructure area, as it is located on high ground and provides appropriate clearance for blasting operations. The mine infrastructure area at the ODS domain is comprised by:

- Administration buildings (including toilets, kitchen, reception, conference room and first aid room), covered muster area and bathhouse (including showers, toilets/urinals, basins and change rooms).
- CHPP.
- In-line flocculant tailings drying cell facilities (ILF cells).
- Rail loadout facility and rail loop.
- Maintenance facilities (including heavy vehicle workshop with multiple bays and maintenance bay concrete aprons, hydraulic hose room, fitter and turner workshop, electrical workshop, tool room, multiple offices, toilets and crib room), fenced store yard, heavy vehicle wash down bay and fuel and lubricant facility (including self-bunded storage units and bunded concrete fill-point slabs).
- Potable water treatment plant.
- Sewage treatment plant.
- Treated effluent disposal areas.

The buildings, maintenance and fuel and lubricant facilities will be expanded (e.g., additional building floor area, additional bays, additional storage tanks, etc.) as the production increases over the life of the project.

3.5.2 Willunga Domain

The mine infrastructure area at the Willunga domain will be a satellite operation from the mine infrastructure area facilities at the ODS domain. The Willunga domain mine infrastructure area would be located to the east of the open cut pit, adjacent to the Fitzroy Developmental Road (Figure 27) in an area which has good road access and provides appropriate clearance for blasting operations.

The mine infrastructure area at the Willunga domain will include administration buildings, maintenance facilities, potable water treatment plant, a sewage treatment plant and treated effluent disposal areas (similar to the ODS domain mine infrastructure area).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

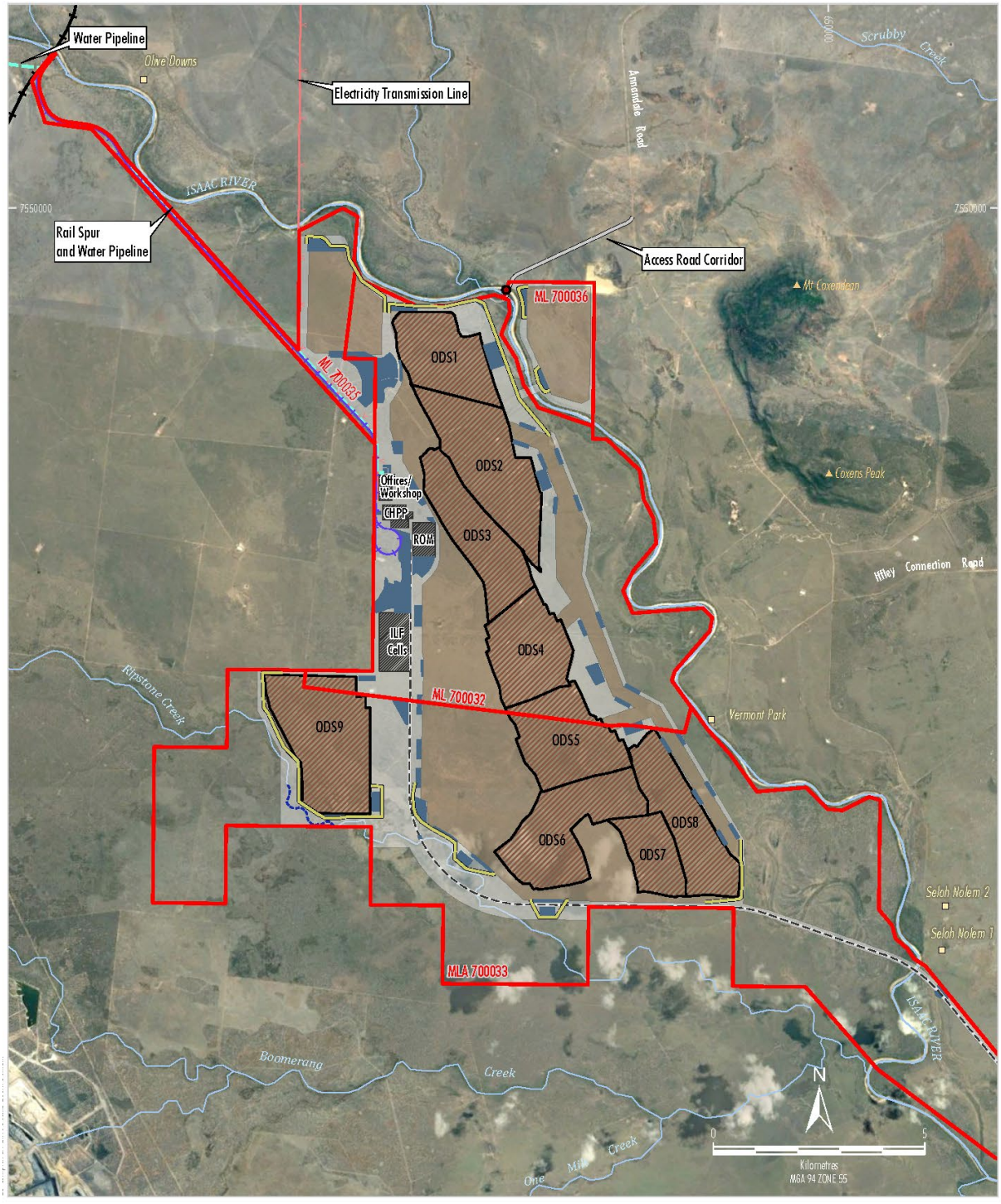
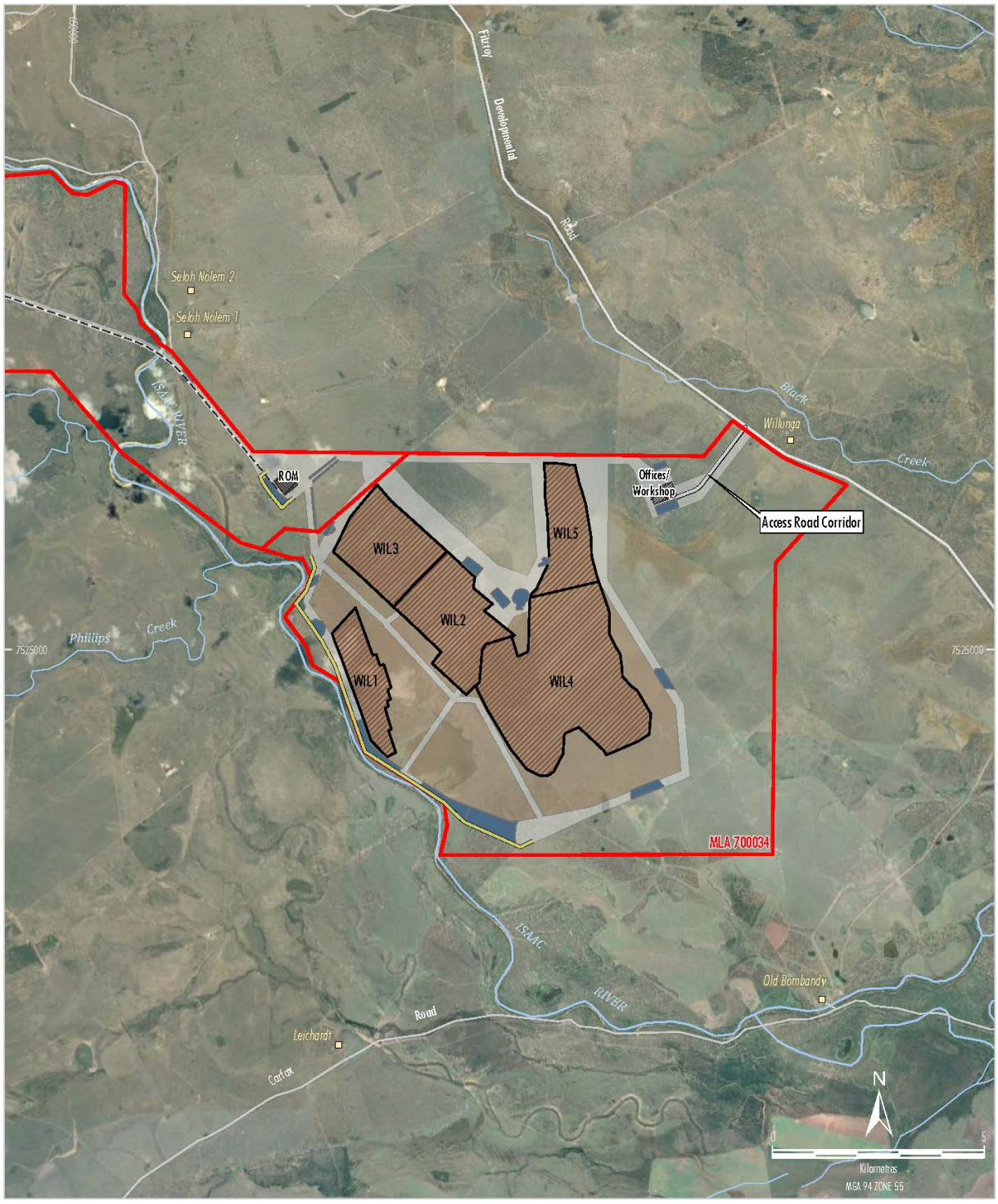


FIGURE 26 ODS DOMAIN GENERAL ARRANGEMENT AND MINE PITS

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd



LEGEND
- Mining Tenement Boundary
- Dwelling
- Open Cut Pit Extent (and Pit Numbering)
- Out-of-Pit and In-Pit Waste Rock Emplacement
- Infrastructure Area
- Temporary Levee
- Water Storage
- Overland Conveyor
- Key Infrastructure Component

Source: Geoscience Australia - Topographical Data 250K (2006)
Department of Natural Resources and Mines (2016)
Orthophotography: Google Image (2016)

PEMBROKE
OLIVE DOWNS COMPLEX
General Arrangement - Willunga Domain

FIGURE 27 WILLUNGA DOMAIN GENERAL ARRANGEMENT AND MINE PITS

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

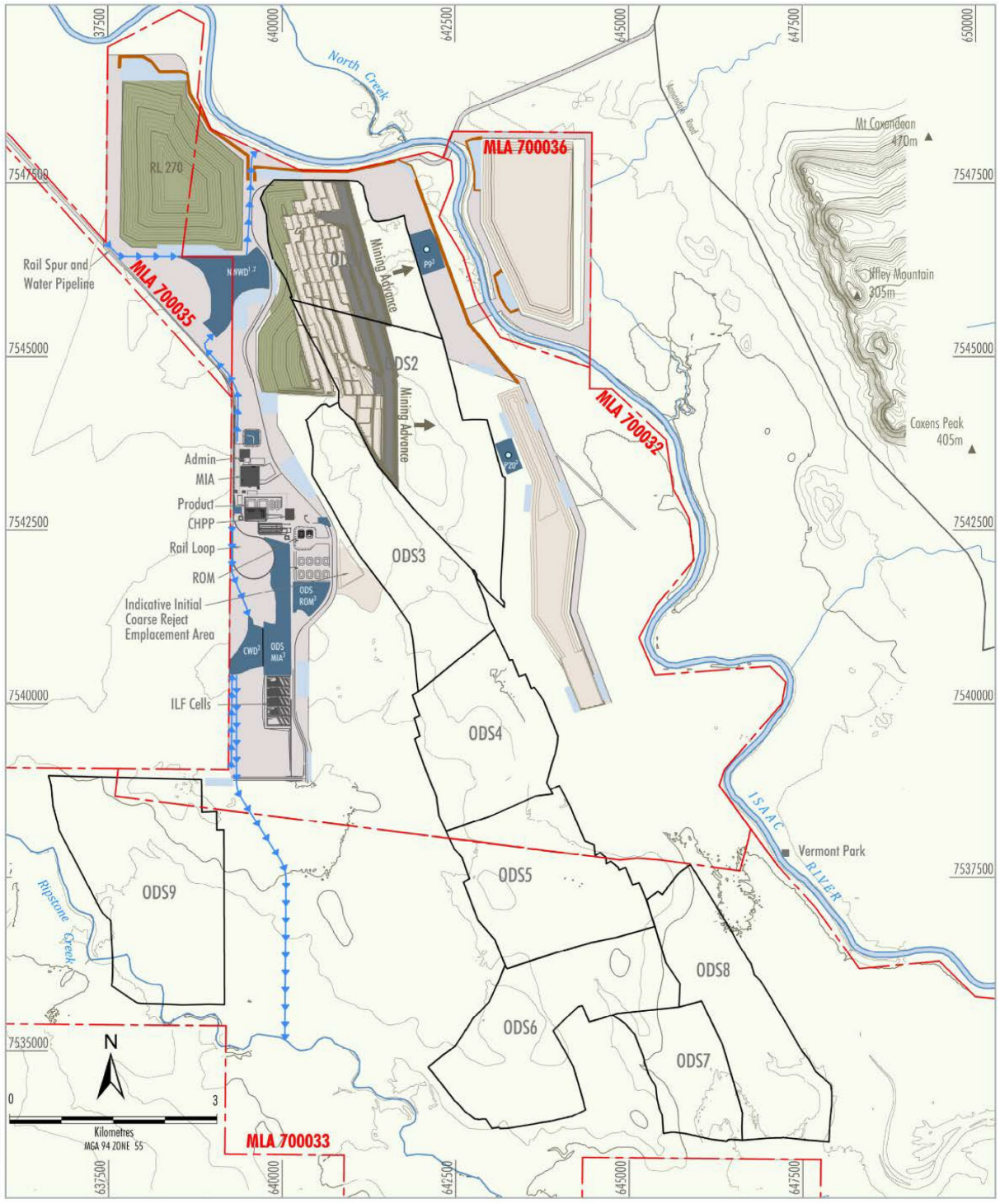


FIGURE 28 ODS DOMAIN GENERAL ARRANGEMENT – 2027 (STAGE 1)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

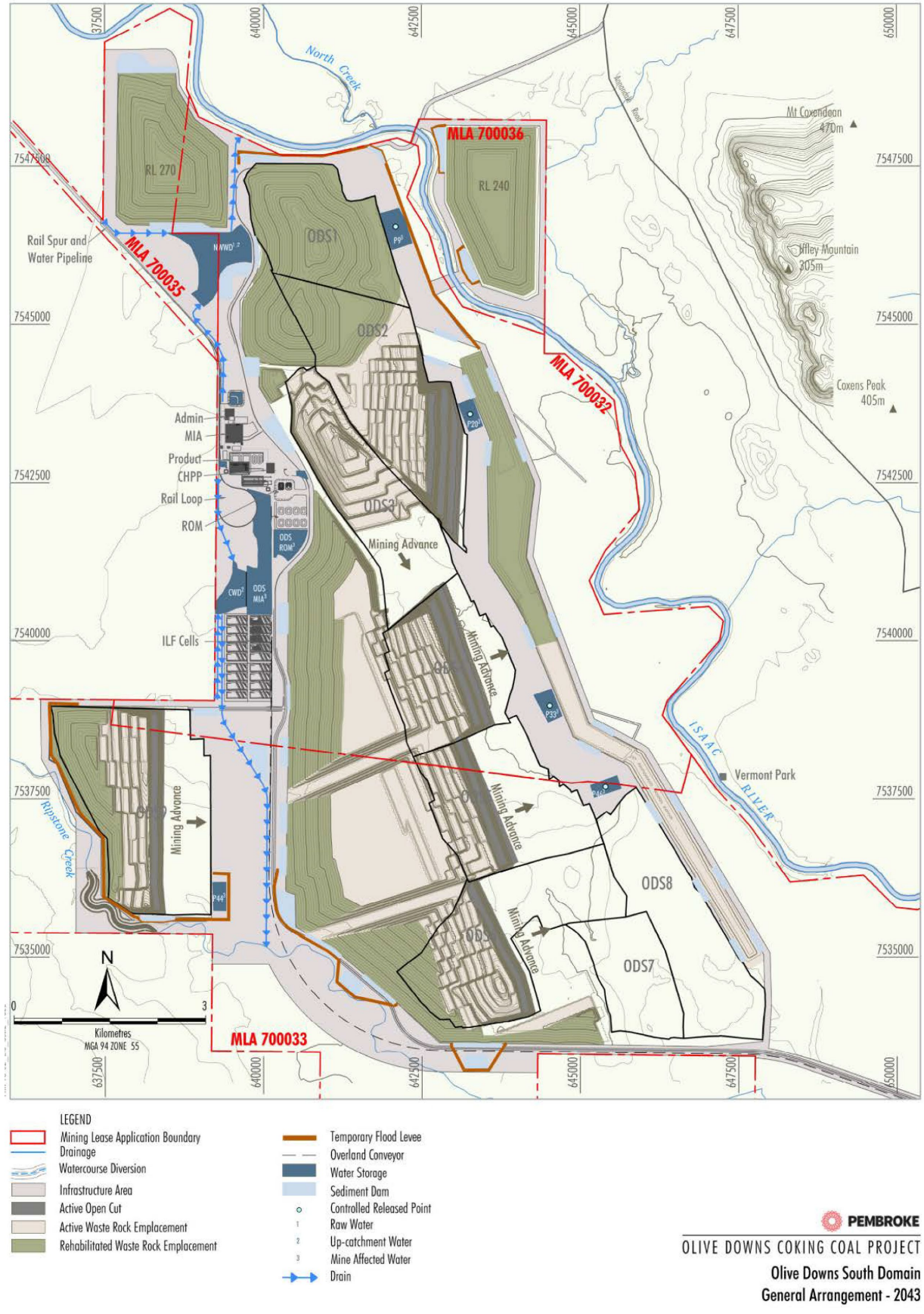


FIGURE 29 ODS DOMAIN GENERAL ARRANGEMENT – 2043 (STAGE 2-3)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

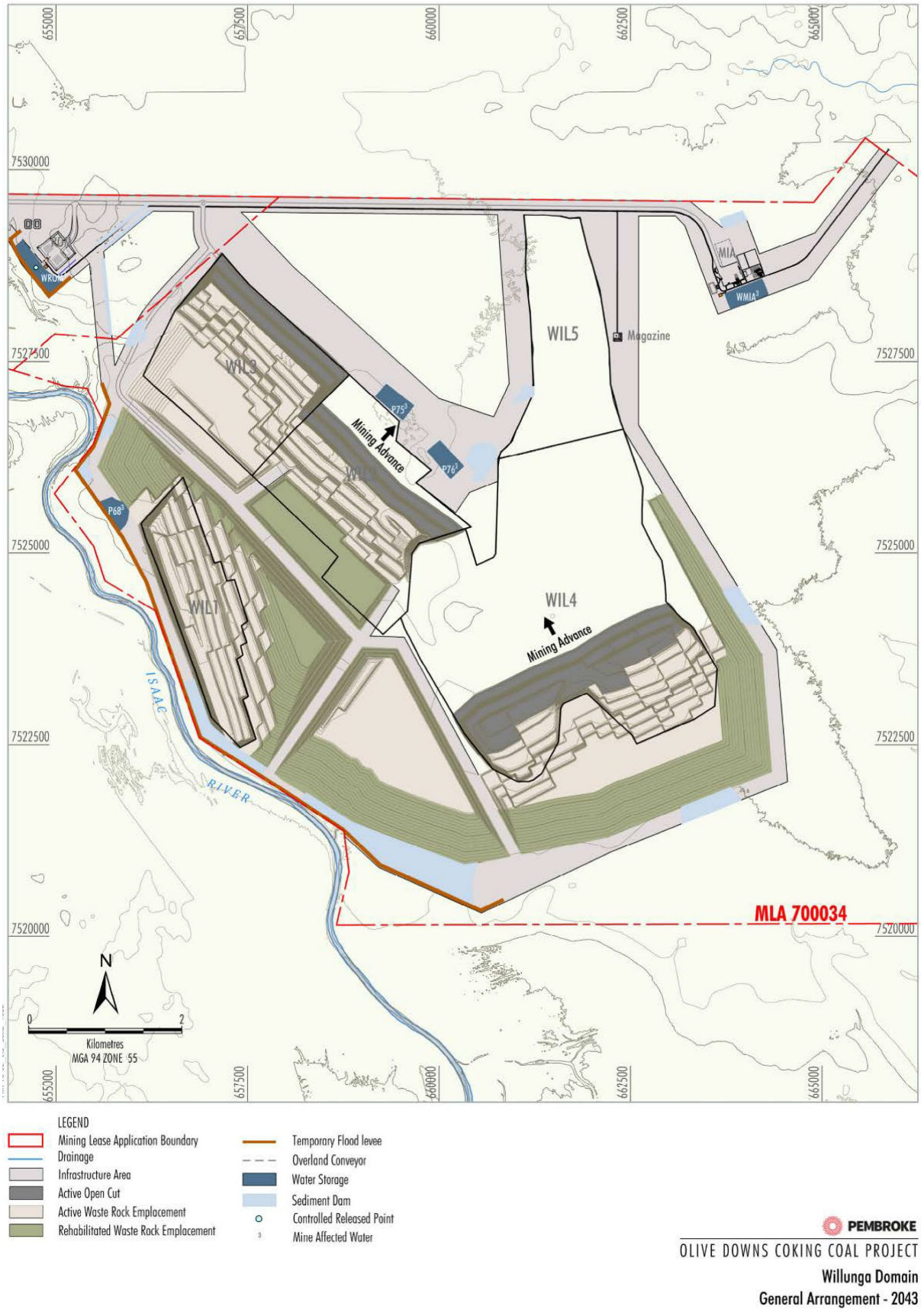


FIGURE 30 WILLUNGA DOMAIN GENERAL ARRANGEMENT – 2043 (STAGE 2 – 3)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

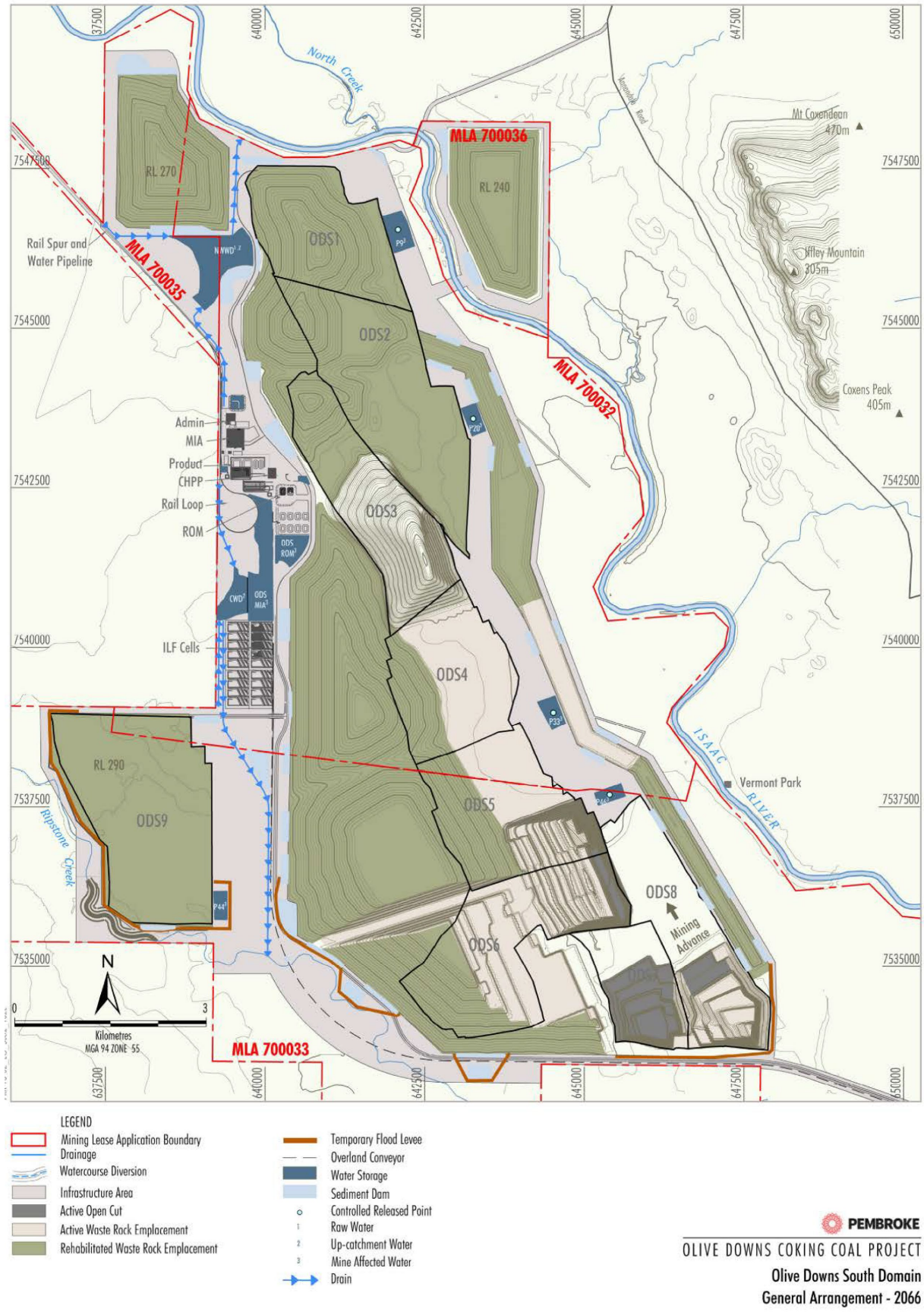


FIGURE 31 ODS DOMAIN GENERAL ARRANGEMENT – 2066 (STAGE 5)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

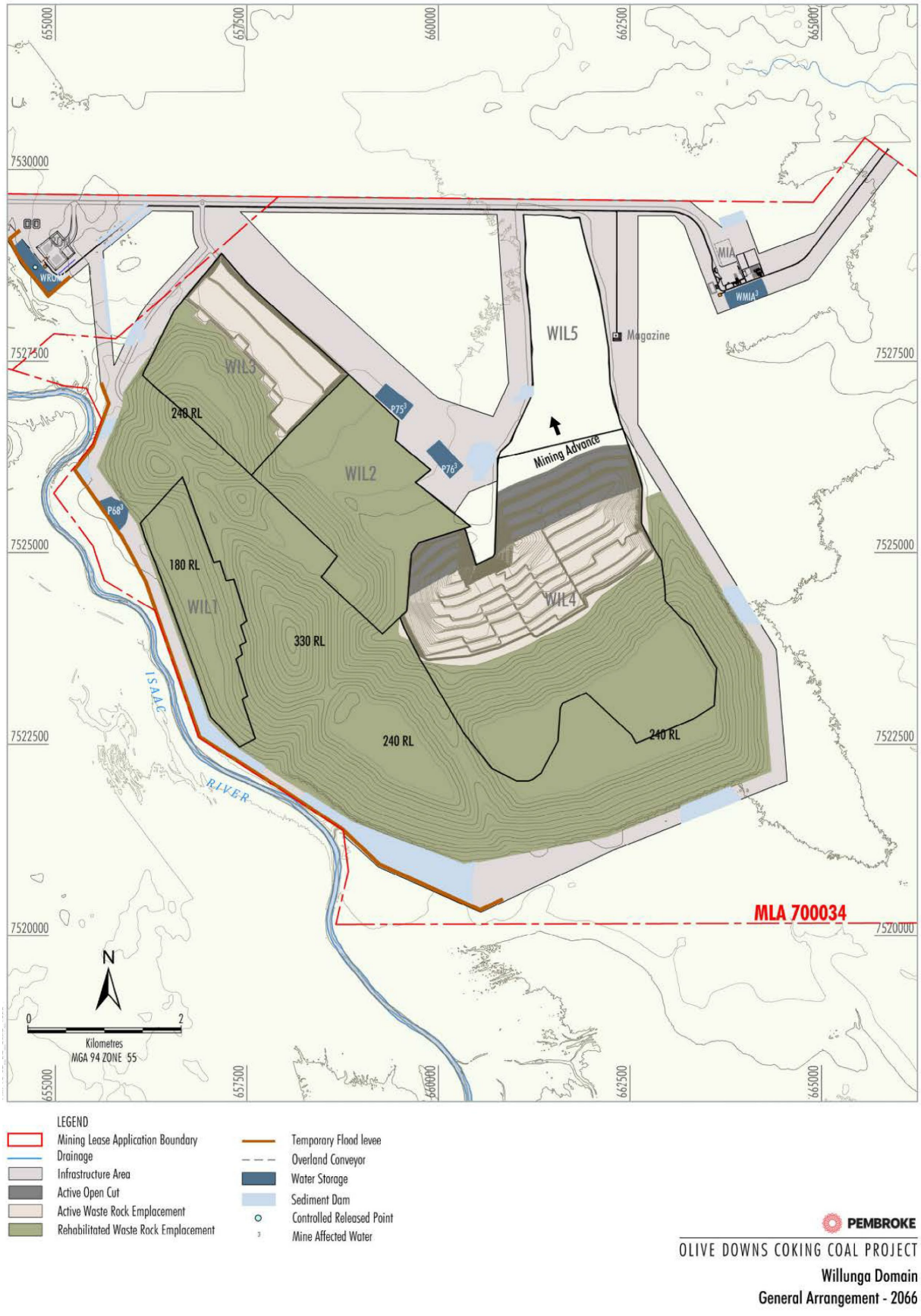
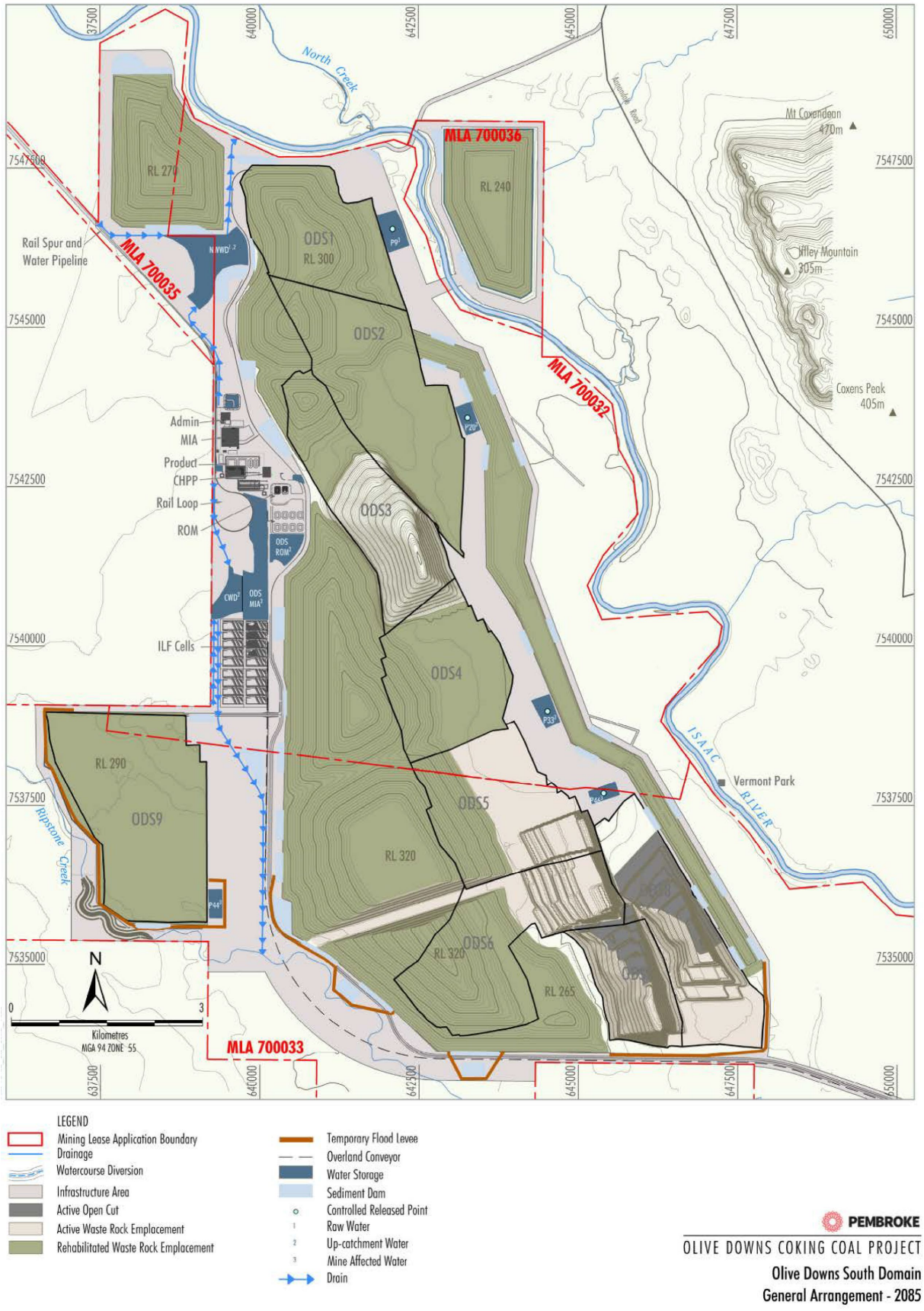


FIGURE 32 WILLUNGA DOMAIN GENERAL ARRANGEMENT – 2066 (STAGE 5)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd



LEGEND

- Mining Lease Application Boundary
- Drainage
- Watercourse Diversion
- Infrastructure Area
- Active Open Cut
- Active Waste Rock Emplacement
- Rehabilitated Waste Rock Emplacement
- Temporary Flood Levee
- Overland Conveyor
- Water Storage
- Sediment Dam
- Controlled Released Point
- Raw Water
- Up-catchment Water
- Mine Affected Water
- Drain

PEMBROKE
OLIVE DOWNS COKING COAL PROJECT
Olive Downs South Domain
General Arrangement - 2085

FIGURE 33 ODS DOMAIN GENERAL ARRANGEMENT – 2085 (STAGE 6)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

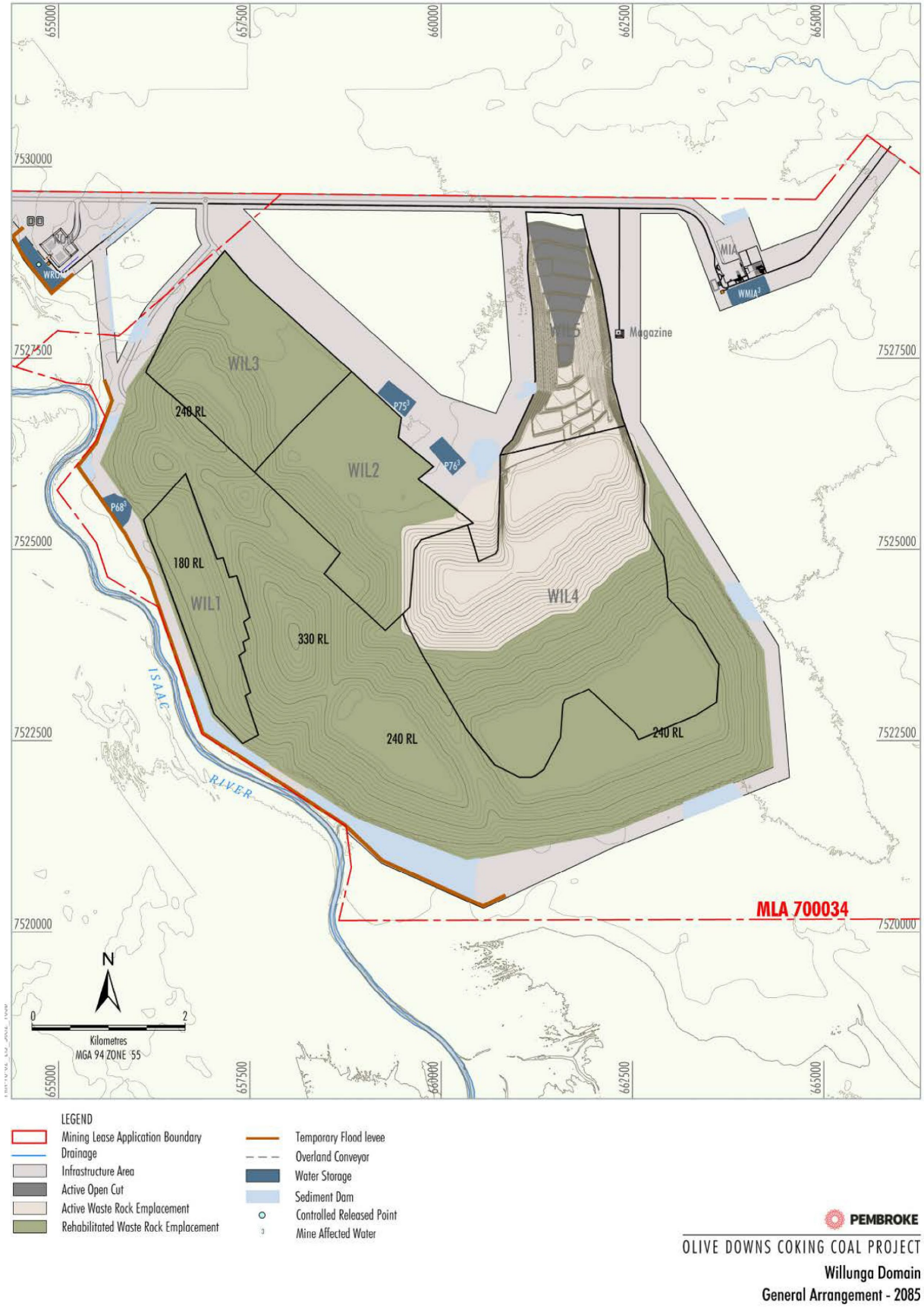


FIGURE 34 WILLUNGA DOMAIN GENERAL ARRANGEMENT – 2085 (STAGE 6)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

3.6 Design for closure

Whilst transitional PRCPs are not required to demonstrate how approved disturbance has been designed for closure, and there is no expansion forming part of this application, Pembroke notes that closure was a key focus during the EIS process.

As such closure outcomes were an integral part of the mine's design and is considered within the LODs. In addition, the consideration of progressive rehabilitation and its connection to closure outcomes is considered within the various statutory environmental management plans associated with both the mine's EA and Commonwealth licencing associated with the EPBC Act. Ensuring that as the operation progresses, the progressive rehabilitation and closure requirements are consistently incorporated into detailed mine planning and scheduling.

As a result, the ODP has progressive backfill of the nominated mining pits incorporated into life of mine and short term mine planning schedules from the outset and as a result the number and size of residual voids has been significantly minimised.

3.7 Rehabilitation/Improvement Planning

3.7.1 Planning

A Rehabilitation Strategy for the ODP (Appendix E) was presented as part of the final EIS, which provided detailed information in response to submissions received during the Agency and public review period (refer section 5.2). As such, it has been considered in the CG's Report and relevant conditioning pertaining to rehabilitation practices and outcomes was made via granted EA.

The Rehabilitation Strategy addressed the QLD Mined Land Rehabilitation Policy (DES, 2018) which establishes the expectation that land disturbed by mining activities will be rehabilitated progressively when it becomes available. Land is considered available for rehabilitation under section 126D (5) of the EP Act when the land:

- Is no longer being mined
- Is no longer being used for operating infrastructure or machinery for mining including dams or water storages
- Is not needed for mining of a probable or proved ore reserve; or
- Contains permanent infrastructure.

In keeping with these requirements, the Rehabilitation Strategy established the following overarching rehabilitation design objectives for the final voids and other mine areas (domains):

- Be rehabilitated to a safe and stable landform:
    - Waste rock emplacements have been designed with shallow slopes (approximately 7 degrees) that will be revegetated to enhance erosion protection
    - Waste rock emplacements have been located, or set back, an adequate distance (minimum of 50 m) from open cut pits to avoid potential interactions with them; and
    - Final void highwalls will be designed to remain stable in the long term, based on site specific geological data and geotechnical modelling.
- Not cause environmental harm:

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- Permanent rehabilitated flood protection landform will surround the final voids at ODS Domain area and isolate them from all flood events, up to and including a Probable Maximum Flood (PMF) event[4];
- Final landforms have been designed to minimise changes to flood characteristics;
- Final voids act as groundwater sinks into perpetuity, preventing the migration of potentially saline pit water into adjacent aquifers and watercourses; and
- Final void water bodies will equilibrate well below the point at which they would spill to the surrounding environment.

- Sustain post-mining land uses:
  - Mine scheduling has maximised opportunities for progressive backfilling of open cut pits to improve final land use outcomes. Significant volumes of overburden material are proposed to be hauled to backfill the majority of the open cut pits; and
  - The areas proposed to be disturbed by the project will be rehabilitated to sustain low intensity cattle grazing and native woodland/fauna habitat. The final voids will provide habitat for native fauna, and the associated water bodies would act as groundwater sinks into perpetuity.

*Does not apply for Willunga which is outside of mapped flooding areas.

3.7.2 Existing Rehabilitation

Section 126C(1)(j) of the EP Act requires that transitional PRCP's include the following details about an existing rehabilitation completed at the time of the submissions of the proposed PRCP:

- A description of the rehabilitation works previously carried out
- When the rehabilitation works commenced and were completed; and
- Whether the rehabilitation has been applied for or approved as progressively certified under the EP Act.

As a newly established operation no progressive rehabilitation has commenced, however, as noted within section 3.3.1 of this document the mining operation is currently in Stage 1 which includes progressive backfill of ODS Domain, Pit 1 and formation of final waste rock dumps in keeping with that outlined within the Part B PRCP Schedule component of this document. Preparations for rehabilitation trials have commenced with works currently anticipated to occur in 2026.

4 Post Mining Land Use

The Mined Land Rehabilitation Policy sets out the Queensland Government's expectations that mine operators will identify suitable land uses following consideration of the surrounding landscape, community views and the objectives of any local and regional planning strategies.

In accordance with section 126C(1)(d) of the EP Act, this transitionary PRCP must set forward the extent to which each post-mining land use for land identified within the PRCP schedule for the plan is consistent with:

- The outcome of community consultation with the community in development the plan; and
- Any strategies or plans for the land of a local government, the State or the Commonwealth.

[4] The residual void at Willunga (WIL5) is outside of the Isaac River floodplain, so does not require flood protection.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

4.1 Transitionary Provisions

This PRCP must set forward the LODs and in keeping with the approved change request for the ODP PRCP ensure that there is demonstrated administrative alignment to contemporary classification of PMLUs and NUMAs.

4.1.1 Contemporary Definitions of PMLUs and NUMAs

The LODs, being the CG's Report and the EA, resulted from the EIS process which was guided by the *Terms of reference for an environmental impact statement: Olive Downs Project (2017)*:

- Provision of detailed progressive rehabilitation schedule and including maps at suitable scales showing the location of disturbance areas, relevant ERA infrastructure and associated disturbance areas and the sequence of mining and progressive rehabilitation (i.e. the method and timing of restoration of areas disturbed during construction); and
- The proposed schedule of site decommissioning and submission of closure plans.

In keeping with the statutory assessment processes, extensive stakeholder feedback (refer section 5) was obtained which informed the final EIS documentation and subsequent issuing of the LODs by the relevant Administering Authorities in 2019 – 2022.

In that time the PRCP Guideline, its governing legislation and supporting technical guidelines have introduced the concepts of PMLU and NUMA classification of land use outcomes as a mechanism to address potentially challenging areas of rehabilitation and management (Qld Gov, 2025). Whilst this term is not specific to residual voids, being those final voids resulting from open cut mining that are to remain after the cessation of mining, this is the most common type of NUMA within the PRCP regime (Qld Gov, 2025).

As highlighted in section 1.3 a change request for the PRCP was made to transition the approved rehabilitation methodologies and outcomes consistent with the contemporary requirements of the PRCP. Further information on the LODs and their transition into the regime is provided below.

The contemporary definitions are as follows:

PMLU

A PMLU as defined in section 112 of the EP Act (for land the subject of a PRCP) means the purpose for which the land will be used after all relevant activities for the PRCP carried out on the land have ended. A PMLU must meet the definition of stable condition.

Land is in stable condition if:

(a) The land is safe and structurally stable; and

(b) There is no environmental harm being caused by anything on or in the land; and

(c) The land can sustain a post-mining land use.

The EP Regulation requires that each post-mining land use –

(a) Is viable, having regard to the use of land in the surrounding region; and

(b) Satisfies at least 1 of the following –

(i) The use is consistent with how the land was used before a mining activity was carried out on the land;

(ii) The use is consistent with a development approval relating to the land;

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

(iii) The use is consistent with a use of the land, other than a use that is mining, permitted under a State or Commonwealth Act, including, for example, a planning instrument under the Planning Act; and

(iv) The use will deliver, or is aimed at delivering, a beneficial environmental outcome.

NUMA

A non-use management area (NUMA) is defined by section 112 of the EP Act as *an area of land the subject of a PRC plan that can not be rehabilitated to a stable condition after all relevant activities for the PRC plan carried out on the land have ended*.

EP Act section 111A defines the concept of land as being *in a stable condition if* –

(a) The land is safe and structurally stable

(b) There is no environmental harm being caused by anything on or in the land; and

(c) The land can sustain a post-mining land use.

Information pertaining to the transitionary PMLUs and NUMAs for the ODP is provided within sections 4.3 and 4.4 respectively.

4.1.2 Final Land Use Outcomes

As per the requirements of section 3.2 and 6.4 of the PRCP Guidelines this section identifies the final land use within all relevant tenures and presents the pertinent information from the CG's Report and EA (LODs).

The overarching rehabilitation goals, methods and scheduling included within these LODs have been reviewed and determined as suitable to inform and develop this PRCP.

The CG's Report states the expectation that over 90 per cent of the mining disturbance area would be returned to post mining land uses which are consistent with pre-mining land uses, although any changes or developments in legal and policy requirements for determining post-mining land uses since the report may still need to be considered. In keeping with this guidance and engagement with the Department the change in categorisation of the residual void and highwall to a NUMA has been made. The perimeter bund setback areas have additionally been introduced by recent technical guidance materials released in 2025 (Office of the Queensland Rehabilitation Commissioner, 2025). In keeping with section 6.3.2 of the PRCP Guideline these designated NUMAs are treated as pre-approved due to the land outcome remaining the same or substantially similar (refer section 4.4).

Table 14 below provides an overview of the pre-approved final land use outcomes across both the CG's Report and the EA and the application within this PRCP.

TABLE 14 LOD REHABILITATION & CLOSURE OUTCOMES

MINING DOMAIN/ FEATURES (PRCP)	LOD FINAL LAND USE		PRCP FINAL LAND USE	
	CG'S REPORT	EA CONDITION H1, TABLE H1 REHABILITATION DOMAINS AND POST-MINING LAND USE	PMLU/NUMA	RA/IA
Waste rock emplacements	Agriculture (low intensity cattle grazing)	Agriculture (low intensity cattle grazing)	PMLU – Agriculture (low intensity cattle grazing)	RA1

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

MINING DOMAIN/ FEATURES (PRCP)	LOD FINAL LAND USE		PRCP FINAL LAND USE	
	CG'S REPORT	EA CONDITION H1, TABLE H1 REHABILITATION DOMAINS AND POST-MINING LAND USE	PMLU/NUMA	RA/IA
	Native vegetation (woodland)	Native vegetation (woodland)	PMLU - Native vegetation (woodland)	RA2
Residual voids	Final void - Low wall – Native vegetation (predominantly native grasses)	No reference	PMLU – Fauna habitat	RA9
	Final void - Highwall – Native vegetation upper shallow slope areas (slopes <20 degrees. Habitat for nesting native birds and cave-dwelling bats on steep slopes	No reference	NUMA – Residual void highwalls NUMA – Setback areas and perimeter bund	IA2
	Final void - Void water body -	Residual voids[1] ODS3, ODS 7/8, WIL5 – Fauna habitat	NUMA – Residual void lakes	IA1
Infrastructure areas	Agriculture (low intensity cattle grazing)	Agriculture (low intensity cattle grazing)	PMLU – Agriculture (low intensity cattle grazing)	RA3
	Native vegetation (woodland)	Native vegetation (woodland)	PMLU - Native vegetation (woodland)	RA4
Water management infrastructure	Agriculture (low intensity cattle grazing)	Agriculture (low intensity cattle grazing)	PMLU – Agriculture (low intensity cattle grazing)	RA5
	Native vegetation (woodland)	Native vegetation (woodland)	PMLU - Native vegetation (woodland)	RA6
ILF cells	Agriculture (low intensity grazing)	Agriculture (low intensity grazing)	PMLU – Agriculture (low intensity cattle grazing)	RA7
Ripstone Creek Diversion	Native vegetation (woodland)	Native vegetation (woodland)	PMLU - Native vegetation (woodland)	RA8
Progressive rehabilitation	Undertaken in accordance with progressive rehabilitation schedule (Appendix Q)	No reference	*N.B. Resultant Part A: Rehabilitation Planning and Part B: Rehabilitation Schedule are consistent with the CG's Report requirements*	

The overarching rehabilitation goal for the ODP remains unchanged, with the intent to create a post-mining landform across all domains that is safe, non-polluting, stable and able to sustain a post-mining land use. The EIS indicated that the preferred post-mining land use for the ODP is to reinstate land that would be suitable for cattle grazing as well as woodland and other fauna habitats, which is consistent with the pre-mining land use of the ODP site. Woodland vegetation would be established in areas which would benefit from enhanced stability effects including watercourses, drainage lines and areas surrounding final voids. Very high or steep areas would be revegetated to the best extent where possible and its use by nesting birds such as the Peregrine Falcon would be encouraged through the establishment of suitable habitats.

The consistency in the objectives and approach is detailed within the following PMLU and NUMA sections of this PRCP.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

4.2 Final Landform Design

Landform design and planning for the ODP is based on contemporary guidance and best practice, and has considered multiple components, including:

- Landform stability and erosion minimisation
- Landform and landscape compatibility with the surrounding environment
- Flood protection, as well as minimising impacts to the Isaac River catchment
- Integration with regional drainage lines and key fauna habitats
- Availability for progressive rehabilitation; and
- Rehabilitation goals and completion criteria (Appendix A).

Final landform design will continue to be refined and optimised over the course of mining, informed primarily through trials as well as the performance of progressive rehabilitation of waste rock landforms and backfilled voids, for example. These optimisations will be presented in future updates to the PRCP and therefore subject to approval under the EP Act.

4.2.1 Residual Mine Voids

The project would create 13 mining pits over life of the mine, 10 of which would be completely backfilled, leaving only three final voids:

- Two final voids in the ODS domain (ODS3 and ODS7/ODS8) (refer Figure 47)
- One final void proposed in the Willunga domain (WIL5) (refer Figure 48).

As described in the CG evaluation report (Appendix B), Pembroke has developed a mining schedule which has maximised the opportunity for progressive backfilling of the open cut pits at the expense of production rate, but will "result in improved final land-use outcomes when compared to other mines in the region" (p. 53). In developing that mining schedule, Pembroke examined the feasibility of totally backfilling the remaining three voids to natural surface but determined that the costs associated with this (approximately $3 billion) would make the project unviable. This factor, as well as finding that the remaining voids would meet the rehabilitation goals of being safe (with access restrictions), stable and non-polluting, was considered by the CG as valid reasons for approving the three final voids (CG's Report, p. 55).

In support of the PRCP transitionary process a void closure study was undertaken to develop the overarching closure methodology and post-closure management of the residual voids that will remain within the mining disturbance areas. PRCP Appendix F provides the full void closure study report which details the following:

- Proposed final dimensions of the residual voids
- Pit wall geotechnical and geochemical stability
- Water quantity and quality predictions
- 3D void design plan; and
- Rehabilitation strategies.

The final residual void geometry is presented within Table 15.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

TABLE 15 RESIDUAL VOID GEOMETRY

Residual Void	Max Length (m)	Max Width (m)	Max Depth (m)	Volume (Approx.) (Mm^3)	Depth to Waterbody (approx.) (mbgl)	Overall Highwall Angle		Immune from 0.1% AEP
						Cenozoic overburden	Weathered/ fresh Permian	
ODS3	2,800	1,400	275	360	100	20°	45°	Yes
ODS7/8	3,400	2,200	289	670	145	20°	45° to 55°	Yes
WIL5	5,100	1,800	227	720	90	20°	55°	Yes

Source: PRCP Appendix F, Table 2-2

Flood and Catchment Protection

The final voids will be entirely or partially within the bounds of the Isaac River floodplain. To ensure the voids are isolated from the Isaac River during flood events, including up to the probable maximum flood level (PMF), permanent highwall emplacements will remain to ensure isolation from potential flood extents for the ODS3 and ODS7/8 voids. Residual void WIL5 will be protected from any overland flows by a void perimeter bund only as modelling shows that flood waters from the Isaac River will not reach WIL5 (refer section 6.2).

Groundwater Recovery in Voids

The final voids will receive water due to rainfall and inflow from recovered groundwater levels. The final void water level was modelled by balancing the direct rainfall, rainfall runoff from the surrounding catchment and groundwater inflow against the evaporation loss from the lake surface (Hatch, 2018a). Equilibrium conditions in groundwater levels occur between 90 to 200 years post-mining, resulting in long- term pit lake levels in the voids of:

- 80 mAHD within ODS3 void (around 80 m below the pit overflow level) after approximately 180 years;
- 25 mAHD within ODS7/8 void (around 130 m below the pit overflow level) after approximately 170 years; and
- 63 mAHD within WIL5 void (around 80 m below the pit overflow level) after approximately 90 years.

The final void modelling indicates that the voids will not overtop and will continue to act as sinks rather than sources for groundwater and thus they do not pose a risk to the surrounding environment.

Void Water Quality

Two studies have been conducted to predict final water quality in the three residual void lakes, namely the development of a Water Balance Model (Hatch 2018) and a lake stratification study (SLR 2025b). By removing all basement coal from the three voids at the end of mining and prior to closure, the rate of salinisation of the voids is slowed considerably:

- ODS3 remains brackish (<10,000 mg/L TDS) for approximately 150 – 200 years and is expected to become hypersaline (>35,000 mg/L TDS) at some point after the end of the 600-year modelling period;
- ODS7/8 and WIL5 remain brackish for approximately 300 – 550 years and are expected to remain considerably below hypersalinity for at least the 600-year monitoring period.

In addition, there will be cycles of seasonal thermal stratification within the voids, with transitional mixing in the cooler months, as well as possible long-term haline stratification particularly in the deeper WIL5 pit lake (VCP, Appendix F).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Stability and Safety of Partially Backfilled Areas and Void Walls

The WIL5 void will be partially backfilled to a level above the pit lake recovery level, so will remain free from permanent inundation; however, such areas are commonly associated with the potential for subsidence and could be classed as unstable without appropriate management (section 6.4), as for all of the backfilled open cut pits.

All three residual voids will include low walls, highwalls and ramps constructed to meet or exceed the requirements set out in Table 15 to ensure they will be geotechnically stable over the long-term. Where appropriate, exclusion bunds and fencing will be installed to prevent access by members of the public and large fauna (refer section 4.4).

4.3 Transitional PMLUs

Based on the land outcomes derived from the LODs, the following PMLUs are proposed for the ODP. This PRCP does not need to fulfill information requirements described in section 126C(1)(i) of the EP Act because the EA and CG's Report identifies PMLUs which can be transitioned directly to the PRC plan schedule.

Notwithstanding, legislative requirements of section 126c(1)(d) of the EP Act still apply. That is, the extent to which PMLUs are consistent with:

- Community consultation outcomes as per sections 5; and
- Strategies or plans for land belonging to local, state or federal governments as per section 4.5.

4.3.1 Agriculture (Low Intensity Cattle Grazing)

Area Definition

The disturbed areas that will be rehabilitated to the PMLU of Agriculture (Low Intensity Cattle Grazing) will consist of:

- Waste rock emplacements (RA1);
- Infrastructure areas (RA3);
- Water management infrastructure (RA6); and
- ILF cells (RA7).

Priority has been given to establishing Agriculture (Low Intensity Cattle Grazing) PMLU on disturbed areas that:

- Are less suited to the objectives of the Native Vegetation (Woodland) PMLU;
- Have slopes less than 8.5° (15%); and
- Have access to stock drinking water resources.

The areas planned for rehabilitation to Agriculture (Low Intensity Cattle Grazing) PMLU are shown in Figure 47for the ODS domain and Figure 48for the Willunga domain. Approximately 10,386 ha will be rehabilitated to Agriculture (Low Intensity Cattle Grazing) PMLU (Table 16).

Rehabilitation Objectives

In addition of meeting the definition of a stable condition, the Agriculture (Low Intensity Cattle Grazing) PMLU rehabilitation will aim to establish a productive grazing landform that has characteristics and productivity (i.e. stock production minus management inputs) comparable to relevant reference sites (i.e. similar sites that have not been disturbed or otherwise affected by mining) and can achieve a stocking rate of 0.22 adult equivalents per hectare.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Consistency with Approved Land Outcomes

The Agriculture (Low Intensity Cattle Grazing) PMLU represents the same land outcome/s as described in the ODP EIS and evaluated and approved under the CG report and subsequent EA, as set out in section 1.4 of this document.

4.3.2 Native Vegetation (Woodland)

Area Definition

The disturbed areas that will be rehabilitated to the PMLU of Native Vegetation (Woodland) will consist of:

- Waste rock emplacements (RA2)
- Infrastructure areas (RA4)
- Water management infrastructure (RA5); and
- Ripstone Creek diversion (RA8).

Priority has been given to establishing Native Vegetation (Woodland) PMLU on disturbed areas that:

- Can provide linages across the rehabilitated site that connect to undisturbed vegetation remnants and corridors, including the Isaac River buffer;
- Protect the quality of water resources, e.g. drainage lines and sedimentation ponds; and
- Are unsuitable for grazing by cattle due to slope, presence of rock armour, etc.

The areas planned for rehabilitation to Native Vegetation (Woodland) PMLU are shown on Figure 47for the ODS domain and Figure 48for the Willunga domain. Approximately 3,832 ha will be rehabilitated to Native Vegetation (Woodland) PMLU (Table 16Table 16).

Rehabilitation Objectives

In addition of meeting the definition of a stable condition, the Native Vegetation (Woodland) PMLU rehabilitation will aim to establish self-sustaining woodland vegetation that has characteristics comparable to relevant reference sites.

Remnant native vegetation in the project area largely comprises woodland ecosystems adapted to alluvial and sand plains. Regional Ecosystems (RE) 11.3.2 (Poplar Box [*Eucalyptus populnea*] +/- Silver- leaved Ironbark [*E. melanophloia*] +/- Clarkson's Bloodwood [*Corymbia clarksoniana*] woodland on Cenozoic sand plains and / or remnant surfaces) and RE 11.3.2 (Poplar box [*Eucalyptus populnea*] woodland on alluvial plains). Changes in the landform and substrate characteristics post-mining mean that rehabilitating other pre-mining RE (including RE 11.5.3, RE11.5.9 and RE 11.3.2) will be more challenging; however, ongoing research, reviews, and trials will include a focus on the successful restoration of those less widespread ecosystems. As an interim measure, framework species from these RE's (Poplar Box, Silver-leaved Ironbark and Clarkson's Bloodwood) and from RE's occurring on analogous elevated landforms in the region would be established in the woodland post-mining land use area. Rehabilitated woodland areas will be of importance to native fauna and will include habitat elements important to koala and glider species, as per the MNES Management Plan (Appendix D), as well as other native fauna likely to use the site. To promote native fauna recolonising the rehabilitated woodlands, all opportunities to link up with existing remnants will be pursued, particularly where associated with movement corridors and key refuge habitat areas.

For the native vegetation (woodland) post-mining land use areas surrounding the Ripstone Creek Diversion, it is proposed to be rehabilitated using framework species from RE 11.3.2, RE 11.5.3 and RE 11.3.25 (Queensland Blue Gum [*Eucalyptus tereticornis*] or River Red Gum [*E. camaldulensis*] woodland fringing drainage lines). These areas of riparian vegetation would provide suitable habitat for a range of native fauna, including species recorded within the Project area by DPM Envirosciences (2018a), such as the Eastern

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Snapping Frog (*Cyclorana novaehollandiae*), Broad-palmed Rocket Frog (*Litoria latopalmata*), Blue-winged Kookaburra (*Dacelo leachii*) and Brown Falcon (*Falco berigora*).

Land use in these areas would include periodic grazing to manage biomass accumulation (bushfire fuel) and provide increased nutrient cycling, as is common practice in areas of pre-existing remnant vegetation on ODP and adjacent properties.

Consistency with Approved Land Outcomes

The Native Vegetation (Woodland) PMLU represents the same land outcome/s as described in the ODP EIS and evaluated and approved under the CG report and subsequent EA, as set out in section 4.1 of this document.

4.3.3 Fauna Habitat

Area Definition

The disturbed areas that will be rehabilitated to the PMLU of Fauna Habitat will consist of:

- Residual void low walls with a slope < 20% that are considered reasonably safe to access of the purposes of establishing, monitoring and maintaining the PMLU (RA9).

The areas planned for rehabilitation to Fauna Habitat PMLU are shown on Figure 47for the ODS domain and Figure 48for the Willunga domain. Approximately 395 ha will be rehabilitated to Fauna Habitat PMLU (Table 16).

Rehabilitation Objectives

The PRCP recognises that all rehabilitated areas will be able to provide some level of habitat for native fauna, including those considered to be conservation significant or otherwise important to the area. The final landform design has prioritised linking key fauna habitats (native vegetation) and movement corridors (drainage lines) with those of the surrounding unmined landscape.

The EIS Rehabilitation Strategy (Appendix E) proposed that the final voids, including the pit lakes, would be rehabilitated to provide a range of habitats for different fauna; however, at this time only suitable low walls within the three residual voids are considered with certainty as being able to support a stable (i.e. self-sustaining) Fauna Habitat PMLU.

The rehabilitation objectives for the PMLU, in addition to being in a stable condition, are to establish native vegetation as appropriate for the fauna species present in the area while ensuring weeds and pest animals do not impact the sustainability of the PMLU. As set out in section 6.8.1, Pembroke will prepare a designated rehabilitation prescription for all areas within the residual voids, informed by research and preliminary trials.

Consistency with Approved Land Outcomes

The Fauna Habitat PMLU represents the same land outcome/s as described in the ODP EIS and evaluated and approved under the CG report and subsequent EA, as set out in section 4.1 of this document.

4.3.4 Undisturbed Areas

Approximately 40% of the project area (approximately 9,576 ha) will not be disturbed by the mine and will continue to be managed as per its pre-mining land use, except for a 200 m-wide buffer (minimum) that Pembroke is establishing along the banks of the Isaac River (other than vehicle crossing points) to protect riparian vegetation from mining and grazing impacts. Pembroke will fence the buffer zone and actively manage as habitat for conservation significant native fauna.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

4.3.5 Extents of PMLUs

The areas designated as PMLU are shown in the PRCP, as well as their spatial extents within the ODP disturbance boundary, which are reproduced in Table 16 for information purposes.

TABLE 16 TOTAL AREA OF PMLU'S FOR ODP

NATIVE VEGETATION PMLUS	CATTLE GRAZING PMLUS	FAUNA HABITAT PMLUS	UNDISTURBED AREAS	TOTAL EXTENT
4,656.9 ha	9,717 ha	370 ha	9,576.1	24,320 ha

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

4.4 Transitional NUMA

Based on the land outcomes derived from the LODs, the following NUMAs are proposed for the ODP. They are areas that have been identified as being unable to (or possibly unable to) sustain a PMLU, with reference to current policy and guidelines, including the *Practice Note for the Management of Coal Mine Voids as Non-Use Management Areas* (Qld Gov, 2025). As per section 1.3.1, the LOD's contained residual voids and associated highwalls.

The CG's Report states the following with respect to the approved final voids which formed the basis of those subsequently conditioned with EA0001976, Schedule H:

The EIS states that the post-mining land use for final voids would be fauna habitat. The void waterbodies and surrounding vegetation would provide fauna habitat over the long term. The low walls of final voids would be revegetated and would provide fauna habitat. The high walls of final voids will be revegetated where slopes are shallow and are also likely to support fauna communities. The EIS notes that steep or cliff habitat on the high walls may support nesting birds such as Peregrine Falcons and cites supporting literature which supports this contention. I accept that the proposed low walls and high walls of final voids would provide fauna habitat.

In relation to void waterbodies, the EIS notes that the air space above final void waterbodies is likely to be used by foraging insectivorous bats. The WIL5, ODS7/8 and ODS3 waterbodies are predicted to remain below 4,000 mg/L TDS for approximately 420, 280 and 140 years respectively. I accept that during this period the void waterbodies are likely to be used by a wide range of fauna.

Beyond 600 years, the ongoing use of void waterbodies by native flora and fauna is less clear. I do accept however, that there are fauna groups which are adept at exploiting highly saline environments (such as ducks) and any plant species can flourish in such conditions. As such, it is reasonable to conclude that the void waterbodies would continue to be used by wildlife once they become hypersaline.

The Department's correspondence in the lead up to the 3 July 2025 change request acknowledged that while some flora and fauna may exploit hypersaline environments in the long term, the residual voids are unlikely to meet the requirements of section 111A of the EP Act for sustaining a healthy, functioning, and resilient ecosystem. Accordingly, it was agreed that Pembroke would submit a change to the PRCP Application under section 132 of the EP Act to reflect a NUMA outcome for the residual voids and the associated rehabilitation and improvement areas.

As a result of the above, the Improvement Area (IA) 1 Residual void lakes and IA2 Residual void highwalls and setback bunds areas have been reclassified as NUMAs. The following discussion upon the transitionary NUMAs demonstrates that the proposed land outcomes remain consistent with the LODs whilst incorporating the technical requirements for residual void areas.

Pembroke remains committed to delivering progressive rehabilitation and in keeping with the PRCP Guideline, management milestones for these designated improvement areas will still be implemented to ensure sufficient improvement of the disturbed land is achieved.

4.4.1 Residual Void Waterbodies (IA1)

Area Definition

The residual void waterbodies, as shown in Figure 35 to Figure 37, will form in response to the recovery of groundwater after the cessation of mining (further details are provided in section 4.2.1), ultimately occupying a combined area of approximately 503 ha after 200 years (Table 17). The waterbodies are predicted to become hypersaline (TDS greater then 35,000 mg/L) after 500 – 600 years due to the

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

waterbodies acting as a groundwater sink, so the naturally saline groundwater will become more concentrated within the void lakes as a result of evaporation over the extended time period.

Proposed NUMA

The ODP EIS proposed a post mining land use of the three waterbodies as 'Fauna habitat', with the following native fauna resources being described:

- The air space above the final void water bodies can be used by native insectivorous microbats for foraging on aerial flying insects. Studies have found multiple bat species foraging over made-made saline and hypersaline environments at mine sites (Griffiths et al. 2014; Griffiths, 2013). It is also possible that some bats drink brackish water (Griffiths et al. 2014).
- The final void water bodies will increase in salinity over time. A water body with a salinity level <4,000 mg/L total dissolved solids (TDS) is able to provide habitat for a variety of freshwater aquatic plants and invertebrates in shallower edge areas (after Hart et al, 1991, Proctor and Grigg, 2006 and Richardson, 2012). The WIL5, ODS7/8 and ODS3 water bodies are predicted to remain below 4,000 mg/L TDS for approximately 420, 280 and 140 years respectively.
- Based on simulations by WRM (2019), the salinity of the ODS3 final void water body is expected to remain brackish <5,000 mg/L TDS) for at least the first 150 years. The ODS7/8 and WIL5 final void water bodies will remain brackish for an even longer time (300 and 550 years, respectively). Some plants (such as the Common Reed [Phragmites australis] recorded on site by DPM [2018b]) can grow in brackish water (Hart et al, 1991). Brackish water is potable to most (if not all) terrestrial wildlife (Griffiths et al. 2014). Some ducks, such as the Australian Grey Teal recorded on-site by DPM (2018a), are known to use permanent brackish and saline habitats, particularly as a dry season refuge (Lavery, 1972).
- Although the final void water bodies are not predicted to become hypersaline for at least the duration of the modelling exercise (600 years), it is known that ducks are able to live in hypersaline environments by also drinking fresh water from elsewhere (Hart et al, 1991). Halophytic plants grow around the edges of water bodies under hypersaline conditions (after Hart et al, 1991).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

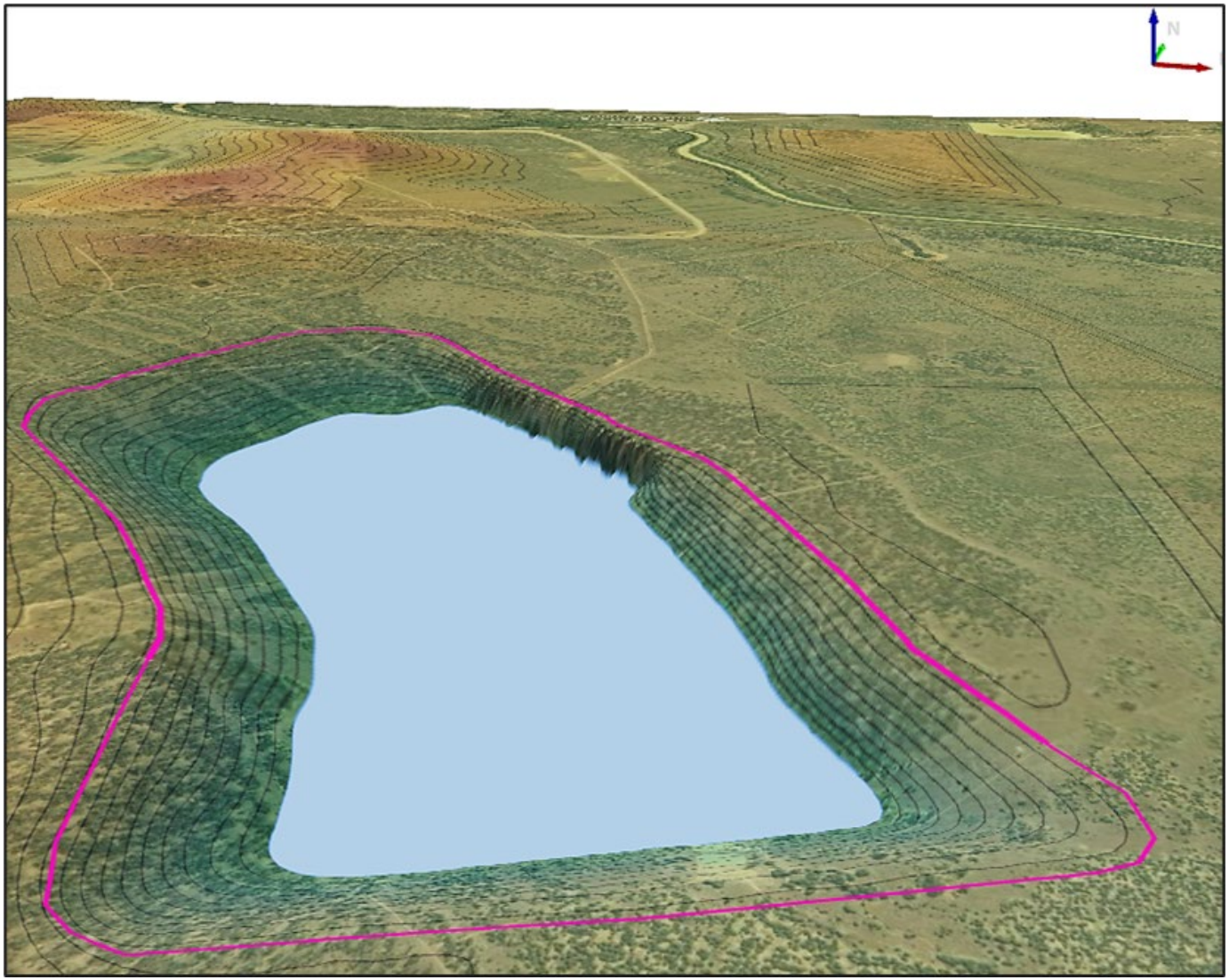


FIGURE 35 ODS3 RESIDUAL VOID 3D REPRESENTATION AND POSITION OF SAFETY BUND AT EDGE OF SET-BACK AREA

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

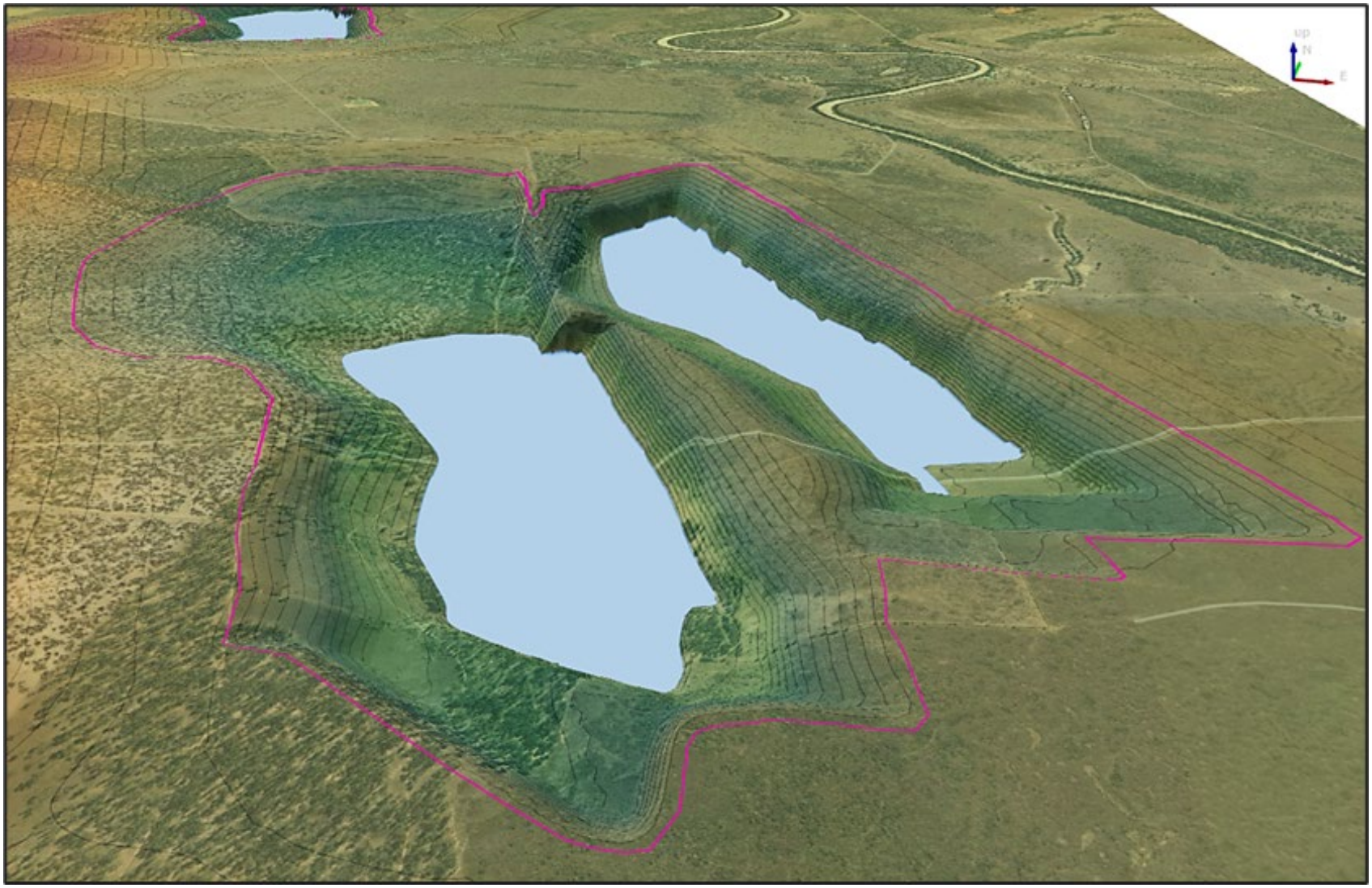


FIGURE 36 ODS7/8 RESIDUAL VOID 3D REPRESENTATION AND POSITION OF SAFETY BUND AT EDGE OF SET-BACK AREA

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd



FIGURE 37 WIL5 RESIDUAL VOID 3D REPRESENTATION AND POSITION OF SAFETY BUND AT EDGE OF SET-BACK AREA

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Risk Assessment

Even with the conclusions in the CG assessment report (Appendix B), it remains possible that the final void water bodies may not be able to support a PMLU of fauna habitat in perpetuity, particularly as the void water quality approaches or becomes hypersaline. While some plants and animals are able to flourish in hypersaline conditions, such conditions are typically episodic or seasonal (e.g. tidal marshes and inland salt lakes) and similar habitats do not exist in the region.

Assessment of Alternative PMLU

In identifying alternative PMLUs for the void water bodies, Pembroke has duly considered the *Leading practice approaches to select post-mining land uses for residual mine voids: Technical paper* (Qld Government, 2023), including its 'Five Capital Framework'. At this point in time, no feasible alternative PMLUs for the long-term hypersaline void water bodies have been able to be identified.

Long-term Management

Despite the long-term limitation in achieving the PMLU of fauna habitat, Pembroke will manage and rehabilitate the residual voids so that the resulting waterbodies will remain at levels less than hypersaline for as long as practicably possible, including the removal of residual uneconomic coal material from the pit floors prior to closure. The rehabilitation of the base of the voids, which are expected to fill over multiple decades, will include the progressive planting of fringing and riparian vegetation native to the area and placement of habitat structures such as logs. Further details are provided in section 6.6 as well as the Void Closure Plan (VCP; Appendix F). Monitoring of pit lake water quality will commence once the water bodies start to establish, which is expected to take between 5 and 10 years, and will continue over the life of mine and then 10 years post-closure to verify or refine the modelled water quality predictions (section 8.1.1).

Consistency with Approved Land Outcomes

The residual pit lakes NUMA represent the same land outcome/s as described in the ODP EIS and evaluated and approved under the CG report and subsequent EA, as set out in section 4.1 of this document.

4.4.2 Highwalls and Set-back Areas (IA2)

Area Definition

The residual void highwall areas have been defined as follows:

- Walls within the residual voids with final slopes of 20% or greater that would represent potential stability or safety issues if worked on for the purposes of establishing or maintaining a PMLU; and
- Walls within the residual voids with final slopes less than 20%, but for which no safe or direct access can be reasonably provided or maintained.

The void set-back areas have been defined as:

- The exclusion zones around the residual voids with an increased risk of geotechnical stability, which is the distance defined by the furthest Factor of Safety (FoS) greater than 20 m back from the void crest that satisfies a long-term stability FoS of 1.5;
- The perimeter safety bund; and
- Other minor areas within the voids themselves that cannot be considered as reasonably safe for the purposes of establishing or maintaining a PMLU, such as close to the base of steeper highwalls.

These areas are shown in Figure 35 to Figure 37, and will occupy up to an estimated 1,107 ha (Table 17).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Risk Assessment

Highwalls within alluvium and tertiary clays (Cenozoic overburden) are required to be 20° or less and as such could be accessible to conduct low-level rehabilitation activities under the correct safety systems, including the monitoring of geotechnical stability. In instances or areas where access is deemed unsuitable or unsafe, only basic rehabilitation, such as aerial seeding, may be all that can be achieved. For steeper highwalls (i.e. all other geologies), physical access for rehabilitation treatment, maintenance and monitoring, will not be possible with existing practicable technologies.

Assessment of Alternative PMLU

Pembroke has reviewed mining operations in the Bowen Basin and elsewhere for options to improve the chance of successful outcomes in terms of rehabilitating highwalls to productive fauna habitat but accepts that it is likely that it cannot guarantee all of the highwalls etc. will be recolonised by fauna in the long-term.

Long-Term Management

Pembroke will treat and manage the highwall and set-back areas as habitat for native flora and fauna, with the expectation that a steep, rocky ecosystem will establish as per the LODs that can used by nesting native birds and cave-dwelling bats. For example, Peregrine Falcon has a wide distribution across Qld (DES, 2018a) and have been previously recorded nesting in mine pit walls (Potts and Donato, 2008; CBC, 2011; DeBeers Group, 2017) and other man-made structures (DES, 2018a). Various cave dwelling microbats (such as the Hoary Wattled Bat [*Chalinolobus nigrogriceus*] recorded on site by DPM Envirosciences [DPM] [2018a]) can roost in rock fissures and crevices (Churchill, 2008).

As set out in section 6.8 and discussed in the VCP, Pembroke will develop a rehabilitation and management plan for the NUMA prior to the establishment of the first residual void ODS3. The company will use the closure of ODS3 residual void to test rehabilitation options and monitor fauna use, so that learnings can be applied to the remaining two residual voids.

Consistency With Approved Land Outcomes

The highwall and set-back areas as NUMA represent the same land outcome/s as described in the ODP EIS and evaluated and approved under the CG report and subsequent EA, as set out in section 4.2 of this document.

4.4.3 Extents of NUMAs

The areas designated as NUMA are shown in the PRCP section 4.2.1, as well as their spatial extents within the ODP disturbance boundary, which are reproduced in Table 17 The total extents of the NUMA are less than the total area of the void extents authorised under the LODs.

TABLE 17 TOTAL AREA OF NUMAS FOR ODP

RESIDUAL VOID	PIT LAKES IA1	HIGHWALLS AND SET-BACK AREAS (IA2)	TOTAL NUMA	AUTHORISED VOID EXTENT
ODS3	160 ha	164 ha	324 ha	317 ha
ODS7/8	174 ha	405 ha	581 ha	671 ha
WIL5	167 ha	538 ha	705 ha	660 ha
Totals	**503 ha**	**1,107 ha**	**1,610**	**1,648 ha**

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

4.5 Strategies and Plans

Section 126C of the EP Act requires the PRCP to state the extent to which the PMLU and NUMA are consistent with any strategies or plans for the land of local government, the State, or the Commonwealth. Relevant plans and strategies have been identified below; noting that the CG evaluation report (Appendix B) included assessment of land outcomes against relevant State and Commonwealth planning instruments.

Water Resources (Fitzroy Basin) Plan 2011

The Water Plan (Fitzroy Basin) 2011 (current as of 2 September 2017) provides a framework for sustainably managing water and taking water from overland flows and Groundwater while considering existing water users including the environment. Mine closure planning including final landforms and drainage (e.g., water diversions) has considered the protection of flows (e.g., prevention of impounding waters, connection of base flows, etc.), water quality and groundwater recovery for surrounding ecosystems and users in accordance with this plan.

The Queensland Plan

The Queensland Plan is an aspirational 30-year community vision with nine foundation areas which include the following relevant areas to mine closure planning for this project: Regions – building thriving communities, Environment – achieving balance, and Infrastructure – being connected. Mine closure planning is required to consider goals of capitalising on unique regional opportunities and assets, environmental protection, effective natural resource management, and connectivity and accessibility across the state. The PMLU of grazing, woodland and fauna habitat land uses, as well as the long-term goals for the NUMA are considered consistent with this plan.

Mackay, Isaac and Whitsunday Regional Plan

The Mackay, Isaac and Whitsunday (MIW) Regional Plan (Queensland Government, 2012) has been developed as a planning instrument under the Sustainable Planning Act 2009. The MIW Regional Plan provides regional strategies via a framework to produce the desired outcomes, it includes consideration for sustainability, climate change, regional landscapes, biodiversity, water quality and health, along with natural resource management. Grazing land is identified as an important economic value for the area. A post mining land use of grazing is consistent with the plans principle "Further develop and diversify existing and potential primary production and rural industries to enhance the contribution to the regional economy and regional landscape."

Isaac 2035, Isaac Regional Council's Community Plan

The Isaac 2035 Community Plan developed under the *Local Government Act 2009* provides a long term 'road-map' setting out the future vision and aspirations of the community and steps for achievement. One of the opportunities identified in the plan includes "increased beef, agricultural, fisheries and aquacultural opportunities due to global food shortages and changing consumption patterns" which is consistent with the proposed post-mining land use of grazing.

Isaac Regional Planning Scheme

ODP mining leases are zoned as "rural" under the Isaac Regional Planning Scheme (February 2021). These areas are used primarily for agriculture, grazing and complementary tourism and agribusiness activities. Other activities may be found in rural areas where they are in keeping with the character, amenity, and natural resources of the area. These areas also contain localities which provide small scale community facilities which serve as a focal point for the surrounding community. The proposed PMLU of grazing is consistent with the current land use zoning, with the Woodland PMLU being reflective of the area's natural condition.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Conclusion

The designated PMLU and NUMA for the ODP, which are the same as or substantially similar to the land outcomes approved by the Qld and Commonwealth governments, are not inconsistent with strategies or plans for the land of a local government, the State or the Commonwealth.

4.6 Final Milestone Criteria

Final milestone criteria relevant to the approved land outcomes and stated rehabilitation and management objectives are proposed in Section 9.4.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

5 Community Consultation

5.1 Overview

Community consultation is a critical and mandated component of mine closure planning in Queensland. Pembroke has been engaged with the landholders and wider community stakeholders surrounding the ODP since the project's early feasibility studies commenced in 2017, demonstrating an ongoing commitment to engage with our key stakeholders within our community.

The EIS process, undertaken in accordance with the SDPWO Act considered progressive rehabilitation, closure and life of mine community consultation. In accepting the EIS (May 2019), saw Pembroke develop a Social Impact Management Plan (SIMP; Appendix G) which sets out the detailed mechanics for community engagement including for matters relating to environment.

The following subsections address how community consultation has been conducted since 2018 in keeping with the above and the following PRCP Guideline requirements.

Section 126 C(1)(c)(iii) and (iv) of the EP Act, the rehabilitation planning part of the PRCP plan must include details of:

- The consultation undertaken by the applicant in developing the proposed PRC plan and
- How the applicant will undertake ongoing consultation in relation to the rehabilitation to be carried out under the plan.

The supporting guideline 'Progressive rehabilitation and closure plans' (DES, 2019), states that a community consultation plan must include details of:

- The objectives for community consultation plans (refer to Section 5.3.1)
- The proposed consultation frequency (refer to Section 5.3.1)
- What information will be released for community consultation (refer to Section 5.3.2); and
- How feedback and comments will be considered (refer to Section 5.3.1).

5.2 EIS Consultation Process

Pembroke released its draft EIS for public and agency comment from 10 September to 10 October 2018, and presented the following post-mining land outcomes:

- The areas proposed to be disturbed by the Project would be rehabilitated to sustain low intensity cattle grazing and native fauna habitat.
- The (three) final voids would provide habitat for native fauna, and the water bodies would act as groundwater sinks into perpetuity.

A conceptual final landform design which included final void extents was included for the ODS (ODS3 and 7/8) and Willunga (WIL5) domains. The landforms including the residual voids areas allocated have remained consistent since that time and have formed part of ongoing community engagement and consultation processes when life of mining is discussed (outlined below).

The draft EIS provided information on the scope of the stakeholder consultation process that informed its development, to the requirements in *Preparing an Environmental Impact Statement - Guideline for Proponents* (Department of State Development, Infrastructure and Planning [DSDIP], 2015).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

A total of 37 submissions were received in response to the draft EIS, with 24 of those in favour of the Project. The most prominent issues raised included the rehabilitation of mining areas to a safe and stable post-mining land use.

The final revised EIS was lodged on 21 March 2019, with additional information on the proposed mine rehabilitation strategy (Appendix E of this document), including progressive rehabilitation requirements. The final EIS was issued to agencies and landholders, with nine submissions received, including one from a private individual; the remaining submissions were from Commonwealth, state and local advisory agencies.

All submissions received on the draft and final EIS, including those pertaining to rehabilitation and closure outcomes were considered as part of the development of the CG evaluation report (Appendix B).

The full EIS and the resultant approvals, which include matters pertaining to rehabilitation strategy and post mining land uses which is inclusive of the areas now classified as NUMAs under the PRCP guideline, remains publicly accessible via the Office of the Coordinator-Generals website:

www.coordinatorgeneral.qld.gov.au/projects/find-a-project/completed-projects/olive-downs-project

5.3 Life of Mine Community Engagement

As outlined in section 5.1 the SIMP (Appendix G) forms a key approval document required in keeping with both the SWPDO Act and the *Strong and Sustainable Resources Communities Act 2017* (SSRC Act).

The SIMP provides the framework and mechanics which includes the establishment community and stakeholder engagement plan (CSEP). Community and stakeholder consultation and engagement have been embedded since commencement of Olive Downs to deliver mutually beneficial social outcomes. The three strategic pillars of social outcomes are the management of environmental impacts, the management of social impacts and the provision of support for local community opportunities.

The SIMP is currently undergoing a review in accordance with the review cycle specified within the document. The update is being made based upon social impact assessment works conducted during 2025.

The full current SIMP is available within Appendix G.

5.3.1 Community and Stakeholder Engagement Plan (CSEP)

The CSEP is designed to meet the requirements of Section 126C(1)(c)(iv) of the EP Act, and the PRCP Guideline. The CSEP outlines the proposed measures for ongoing engagement with communities and stakeholders during construction and ongoing operations of ODP, which includes rehabilitation to be carried out under the PRCP.

The CSEP objectives are as follows:

- Identification of stakeholders, issues and information requirements, and the establishment of a clear forward program for engaging stakeholders.
- Ensuring a range of engagement opportunities between ODM and stakeholders is provided on an ongoing basis.
- Providing a framework for developing strong and co-operative relationships with local communities and stakeholders.
- Ensuring project planning and delivery, including progressive rehabilitation and closure outcomes, are informed by stakeholder views.
- Ensuring engagement supports adaptive management of identified social impacts over life of mine.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- To ensure transparent and inclusive community and stakeholder engagement with a view to informing the SIMP and our other relevant licensing, such as the PRCP.

The CSEP outlines the approaches applied by Pembroke for communication, consultation and other cooperative arrangements with key stakeholders and communities, and in conjunction with the SIMP provides for:

- Stakeholder engagement
- Ongoing engagement planning
- An established complaints management process
- Mechanism for ongoing progressive rehabilitation and closure engagement; and
- Management of an established community consultation register.

The key stakeholders and their nominated areas for ongoing consultation as identified during the assessment process is documented within the CSEP and a summary is provided in section 5.3.2 below.

The established community consultation register will continue to inform ongoing development of progressive rehabilitation and closure planning, which will capture discussions with relevant stakeholders featuring information relevant to the mine stage and closure objectives and outcomes as outlined within the approved PRCP and schedules. Examples of the relevant topics of these discussions are as follows:

- Proposed post-mining land uses
- Rehabilitation methods
- Rehabilitation timeframes and scheduling; and
- Proposed amendments to the PRCP schedule.

5.3.2 Community Consultation Outcomes

The SIMP sets forward a range of commitments which are reported upon annually. Of relevance to the PRCP are the following established practices:

- Nominated and locally known community liaison representatives
- Established project website that provides for transparent and easily accessible project information, including accessible enquiries and feedback mechanisms
- Continued engagement and progress updates with local landholders through formal and informal channels of communication; and
- Established regular engagement with the Isaac Regional Council, the Office of the Coordinator General and DETSI.

Since the commence of formal approval processes for the ODP Pembroke has undertaken significant consultation which has included life of mine discussions that incorporate progressive rehabilitation and post mining outcomes. These engagements have occurred via assessment processes, legal proceedings and continue through the established community consultation and engagement processes outlined.

Table 18 below provides a summary from the community consultation register of engagements undertaken to date. In keeping with the SIMP requirements the communications register is reviewed on a six-monthly basis to review the following KPIs:

- Number of communication events recorded

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- Establishment of communications lines and stakeholder preferences (if provided); and
- Consistency with CSEP specified complaints and feedback protocols and timeframes.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

TABLE 18 COMMUNITY CONSULTATION REGISTER

CATEGORY	ENTITY	DESCRIPTION	CONSULTATION RECORDS	ENGAGEMENT FORMATS
Landholders	Various	Landholders within and adjacent to the mining lease footprint/s	Land use Bore census Baseline and seasonal surveys Property impacts – mitigation and compensation matters	Written correspondence Phone calls Face to face meetings Land Court processes
Adjoining Landholders	Various	Landholders adjacent to meeting footprint	Land use Bore census Baseline and seasonal surveys Property impacts – mitigation and compensation matters	Written correspondence Phone calls Face to face meetings
Tenement Holders	Various	Tenure holders within and surrounding mining leases	Data sharing agreements Access agreements Local planning agreements	Written correspondence Phone calls Face to face meetings
First Nations Groups	Barada Barna Aboriginal Corporation	Recognised Native Title Party with Indigenous Land Use Agreement (ILUA) in place	Employment opportunities Business capacity and opportunity Biodiversity Land stewardship	Employment Committee Meetings Annual Board meetings
Local Community Members	Various	Local community/township residents within the Isaac Regional Council boundaries	Employment opportunities Training opportunities Housing impacts Impacts/benefits to community values including rehabilitation and closure planning Access to community and health services Local supply issues Road safety	Public events Surveys & interviews Website and local community forums Face to face meetings
Local Government	Isaac Regional Council	ODP is entirely within the IRC boundaries	Workforce recruitment, management and accommodation Community values, trends and issues including progressive rehabilitation and closure outcomes	Regular formal and informal meetings Written correspondence

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

CATEGORY	ENTITY	DESCRIPTION	CONSULTATION RECORDS	ENGAGEMENT FORMATS
			Changes to the housing market Impacts on community facilities and service access Local employment and training needs	Public events Working groups
Government Agencies	Various	State and Federal Departments and Agencies	Social and environment performance including compliance	Regular reporting Face to face meetings Working groups Formal assessment engagement processes

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

6 Rehabilitation Methodology

In accordance with section 126C(1)(e) and (i), the following must be provided for within a PRCP:

- For each proposed post-mining land use for land, proposed methods or techniques for rehabilitating the land to a stable condition in way that supports the rehabilitation milestones under the proposed PRCP schedule.
- For each non-use management area, state the proposed methodology for achieving best practice management of the area to support the management milestones under the proposed PRCP schedule for the area.

6.1 Hydrogeology

Section 2.8 describes the baseline hydrogeological setting for the ODP, including groundwater sources and uses.

This section focusses on the predicted recovery (i.e. rates and levels) of the various aquifers related to the final landform. The formation of the three residual voids and resultant pit lakes were discussed in section 4.3.1, using the results from the modelling work outlined below.

A hydrogeological recovery model was developed by HydroSimulations (2018) on the basis of a conceptual groundwater model to identify and determine the sources that may impact groundwater 200 years post-mining.

The model was developed using Geographic Information Systems (GIS) in conjunction with MODFLOW-USG. The model is roughly 55 km x 70 km at its widest extents and comprises 91,806 cells per layer. The model domain was discretised into 14 layers representing key geological units within the alluvium, regolith (Tertiary sediments), Rewan Group, Rangal Coal Measures, Fort Copper Coal Measures and Moranbah Coal Measures.

The predicted equilibrium void water levels (at 200 years) for unconsolidated lithologies and the Leichhardt Seam (Layer 7) are shown in Figure 38 and Figure 39, respectively. As shown, alluvial groundwater levels show a localised flow towards the two voids in the ODS domain. Adjacent to the pits, groundwater levels at the northern end of ODS1 recover back towards pre-mining levels at approximately 167 mAHD, while groundwater levels south of ODS8 recover to approximately 130 mAHD. Groundwater levels within the alluvium surrounding Willunga recover back towards pre-mining levels at approximately 140 mAHD to 146 mAHD.

Figure 39 shows the recovered groundwater levels within the Permian coal measures (Leichhardt Seam), final voids and spoil material within the backfilled pits. A general flow direction towards the mine area from the surrounding Permian coal measures is shown and groundwater within the ODS rehabilitated pits would flow in a general south-easterly direction towards the ODS7/ODS8 final void. This includes flow through the ODS3 final void towards the downgradient ODS7/ODS8 final void. Within the rehabilitated pits, groundwater levels at the northern end of ODS1 would recover to approximately 140 mAHD to 161 mAHD, while groundwater levels south of ODS8 would recover to approximately 25 mAHD to 100 mAHD. In localised areas at the northern end of ODS1, recovered groundwater levels are expected to be close to alluvial groundwater levels and the base of alluvium, indicating potential interaction in localised areas. Groundwater levels within the Permian coal measures at Willunga would recover back to between 63 mAHD to 110 mAHD in the main pit area (WIL2 to WIL5), while groundwater levels within the fully backfilled pit (WIL1) would recover back towards 143 mAHD. Predicted levels within WIL1 are in line with the predicted alluvial groundwater levels and the base of alluvium at this location, indicating potential interaction in this area.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

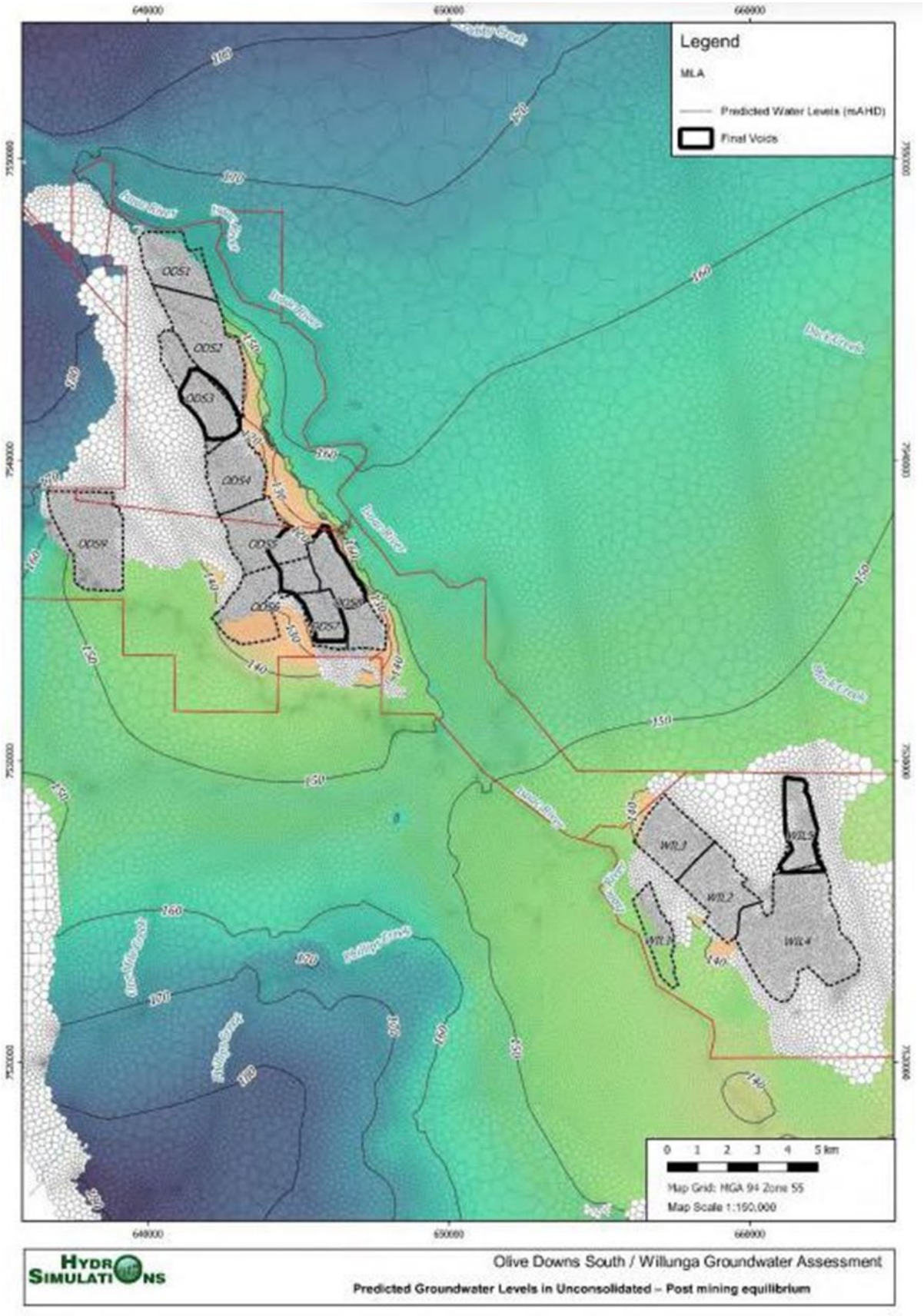


FIGURE 38 PREDICTED GROUNDWATER LEVELS IN UNCONSOLIDATED SEDIMENTS (LAYER 1 AND 2) – POST MINING EQUILIBRIUM

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

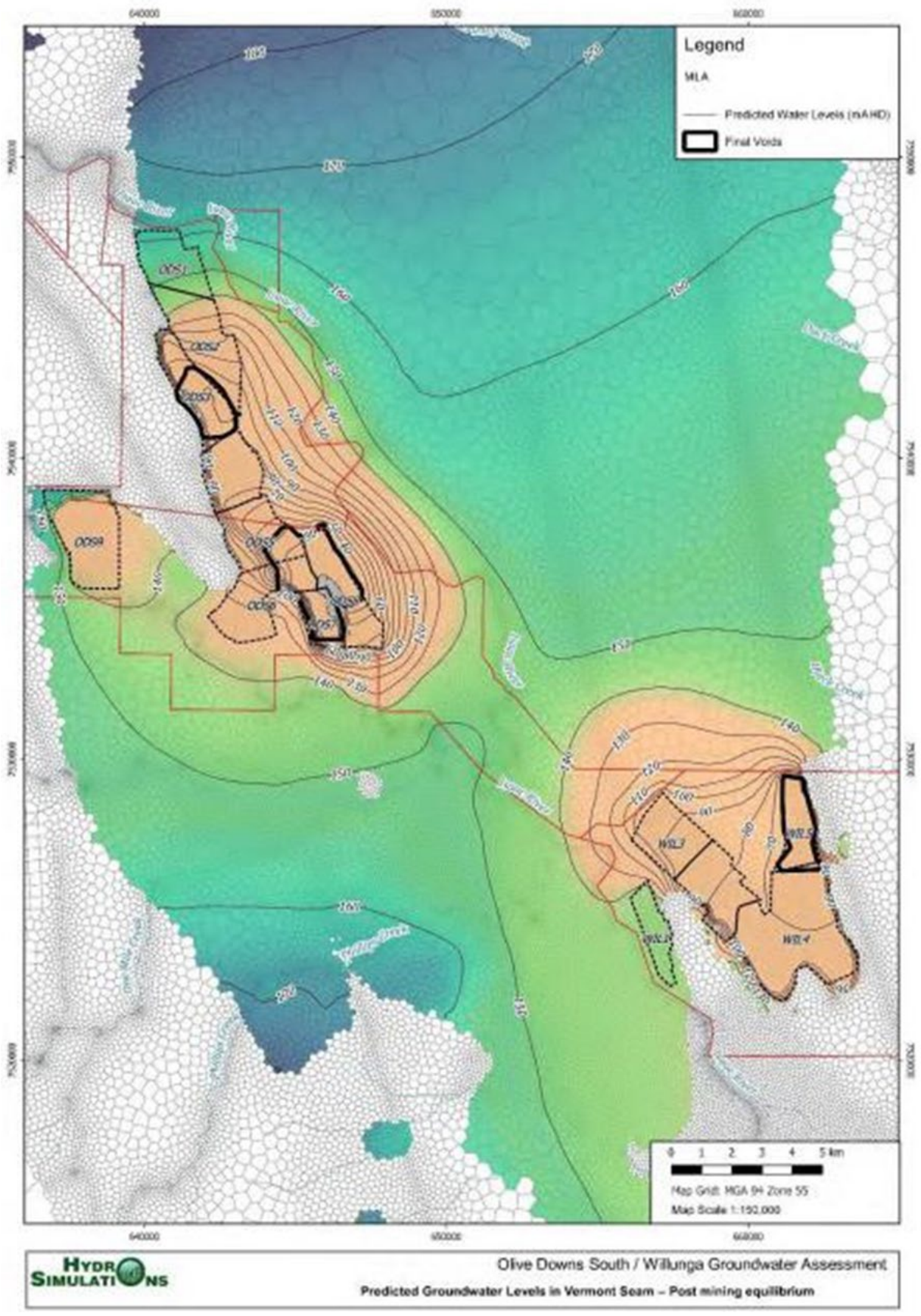


FIGURE 39 PREDICTED GROUNDWATER LEVELS IN THE VERMONT SEAM (LAYER 7) – POST MINING EQUILIBRIUM

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

6.1.1 Relevant Milestones

There are no RM or IM associated with the recovery of groundwater levels or the extent of pit lakes over time. Milestones associated with groundwater quality are discussed in Section 6.11.3 (Contamination) and Section 8.1.2 (Groundwater Monitoring).

6.2 Flood Risk Assessment and Management

6.2.1 Flood Risk Assessment

A flood assessment was undertaken to support the development of ODP EIS and considered both pre-and post-mining flood levels and extents, as well as flood water velocities within the floodplain. To evaluate the effect of flooding conditions, flood modelling of the Isaac River and associated tributaries was undertaken. Consideration was given to the location of the domains in relation to the potential flood levels, the alteration of flow upstream and downstream, flood levels and the development of a flood risk profile. This was achieved through hydrologic and hydraulic modelling (Hatch, 2018b).

Climate Change Implications

The flood assessment took climate change into account by applying a sensitivity analysis to its flood modelling. The approach involved adjusting key climate variables in the hydrological models to simulate future climate scenarios, primarily focusing on increased rainfall intensity.

- Design Event Uplift: For the 0.1% Annual Exceedance Probability (AEP) flood event (often referred to as the 1 in 1000-year flood), the design rainfall in the model was increased by 12%.
- Basis for Uplift: This 12% increase was based on guidelines such as the Australian Rainfall and Runoff (AR&R) 2019, using a 30-year planning horizon and adopting a high Representative Concentration Pathway (RCP), which estimated a temperature increase between 1.5°C and 3.0°C.
- Climate Change Scenario: The study adopted the sensitivity analysis approach, which involved running the flood model with a baseline observed climate dataset and then re-running it with the data modified to represent 'best,' 'worst,' and 'maximum consensus' climate change scenarios. The Representative Concentration Pathway 4.5 (RCP4.5) emissions scenario was adopted for the final landform flood assessment.

6.2.2 Flood Protection

Several temporary flood protection levees are required for the safe operation of the project these will be removed as determined by operational progression. Where required for ensuring no potential for flooding extents and residual voids highwall emplacements will be designed as flood protection landforms.

Temporary Flood Levees

As a part of the mining activity, several temporary levees are proposed to protect the active pits, infrastructure and active waste landforms (refer to Figure 26 to Figure 34) during a 0.1% AEP flood event, if such an event was to occur over the life of the project. The temporary flood levees will be installed progressively and in advance of the areas they would protect. The temporary levees will be managed as Regulated Structures and will be designed, constructed, managed and decommissioned in accordance with an approved design and management plans, as per the Manual for assessing consequence categories and hydraulic performance of structures (ESR/2016/1933) and other relevant planning and approval requirements, including EA conditions.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

All temporary levees, as Regulated Structures, will be designed and constructed appropriately, including being armoured withstand to predicted flood levels and water velocities. A flood model was established at the time of the EIS and is updated as required to information operational or closure related planning activities.

The configuration (i.e. design heights) of temporary flood levees would vary across the Project depending on the location in the landscape. By way of example, the temporary flood levees in the north-east of the ODS domain could range from 0.5 m to 6.0 m, whereas in the southern areas the temporary flood levees could range from 0.5 m to 4.7 m. Similarly, the temporary flood levees at the Willunga Domain could range from 0.5 m to 6.0 m (Hatch, 2018b).

The temporary flood levee in the north-east of the ODS domain will be removed once the open cut pits are backfilled and rehabilitated. Similarly, the temporary flood levees in the south and the southwest of the ODS domain adjacent to Ripstone Creek will be removed once the waste rock emplacements are stabilised rehabilitated. The temporary flood levee in the west of the Willunga domain will also be removed once the satellite pit is backfilled and the waste rock emplacements stabilised and rehabilitated.

Permanent Highwall Emplacements

The construction of permanent highwall emplacements to the east and south-east of the proposed ODS domain open cut pits adjacent to the Isaac River floodplain are required to provide immunity to flood levels up to at least a 0.1% AEP flood event (refer Figure 40 and 41). The permanent highwall emplacements would generally be approximately 300 m to 400 m wide and approximately 25 m high. In contrast, PMF event flood level in the vicinity of the permanent highwall emplacements would generally be below 6 m.

Specific erosion protection measures on the permanent highwall emplacement outer batters will be required and will be designed by a suitably qualified person, and no potentially dispersive or mine waste materials such as tailings will be buried within the surface 3 m of the waste landforms associated with flood protection.

No permanent highwall emplacements are proposed for the Willunga domain, as the final void (WIL5) is outside of the PMF floodplain (refer Figure 40 and 41).

6.2.3 Final Landform Assessment

All temporary levees will be removed at the end of operations, and permanent highwall emplacements will remain in place. Final voids will be isolated from flooding by permanent highwall emplacements, therefore the flood risk to the final landform is low (Hatch, 2018b). As can be seen in the final landform flood assessment (Figure 40 and Figure 41) the permanent highwall emplacements fully protect the voids.

Higher velocities and stream power are likely near highwall emplacements and stockpile locations, and lower velocities and stream power on the east bank of the Isaac River. Although the velocities of flood waters along the permanent highwall emplacements adjacent to the Isaac River are generally predicted to be below 2.5 m/s (Hatch, 2018b), the lower slopes of the flood protection landform adjacent to the Isaac River will be protected (e.g., placement of erosion-resistant material such as competent rock) to ensure minimised erosion potential where floodwaters interact with flood protection landform adjacent to the Isaac River. Modelling demonstrates that final voids are beyond the post-mining flood extents and are protected from flooding.

A secondary flood modelling assessment is required to confirm flood immunity to the residual voids upon completion of the detailed design parameters for final landforms and permanent highwall emplacements, to ensure requirements of the EA are met (conditions H15 to H17).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Modelling determined that generally, flood characteristics will remain unchanged in the final landform compared to pre-existing conditions.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

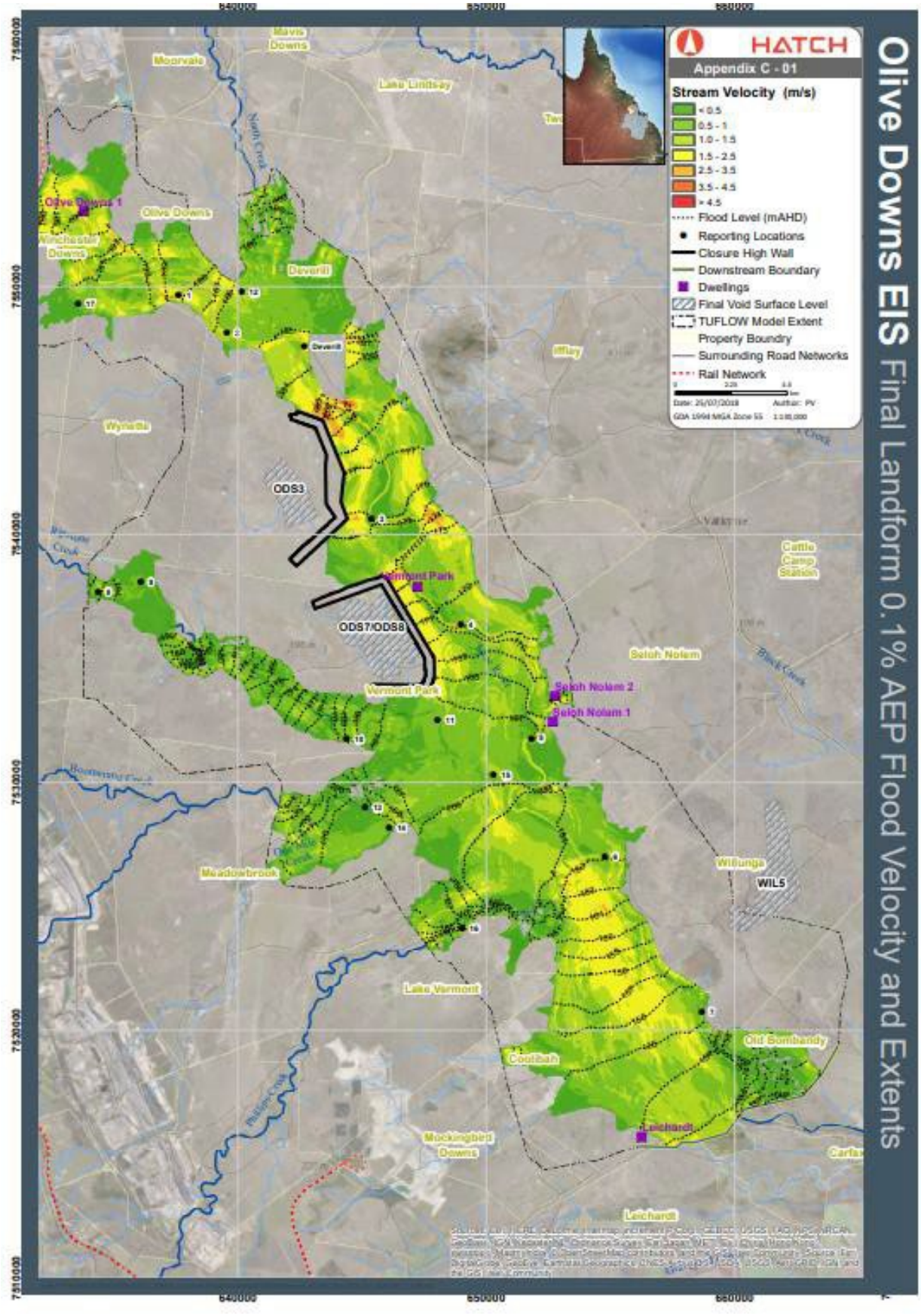


FIGURE 40 FINAL LANDFORM 0.1% AEP FLOOD VELOCITY AND EXTENTS (HATCH 2018B)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

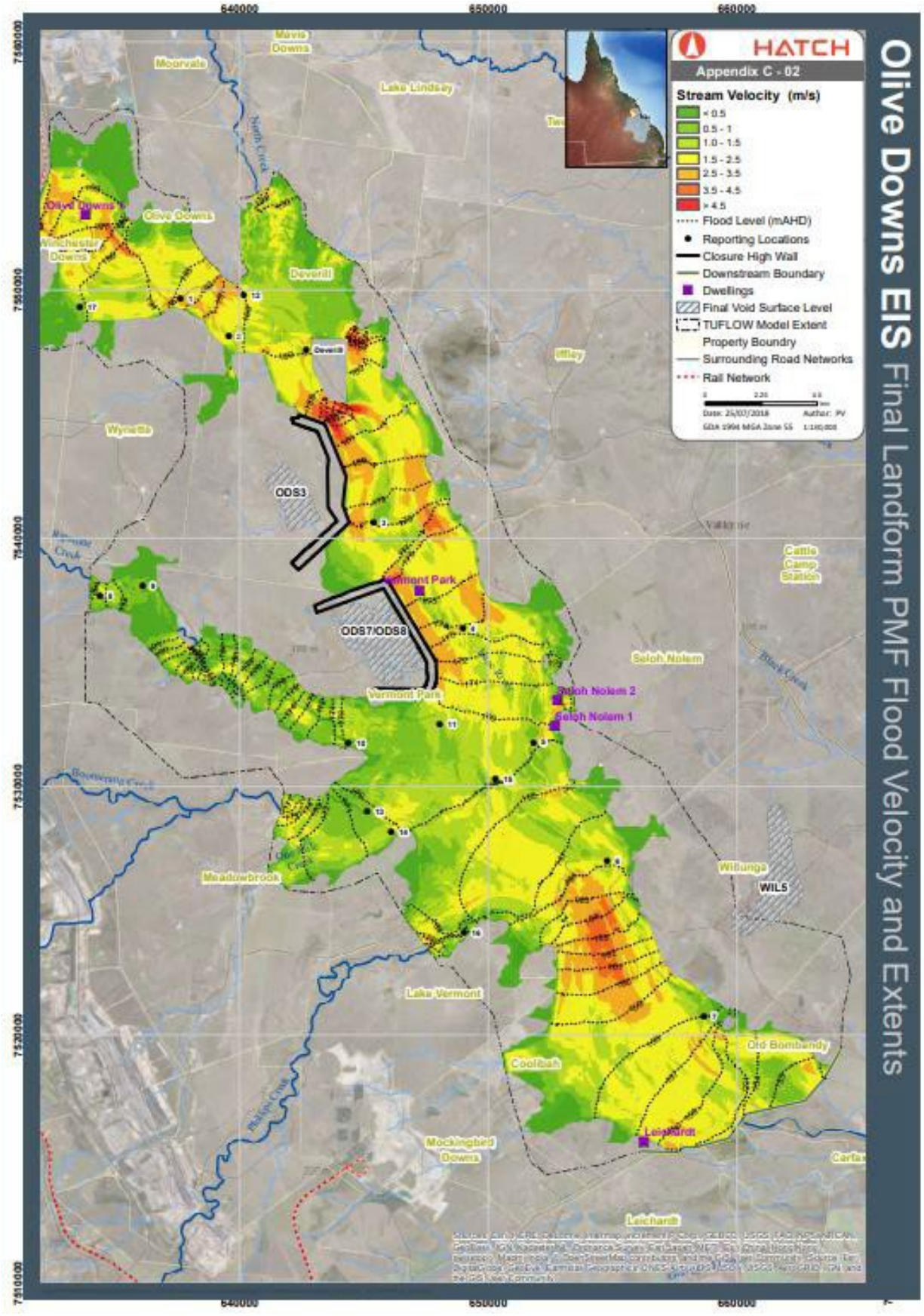


FIGURE 41 FINAL LANDFORM PMF FLOOD VELOCITY AND EXTENTS (HATCH 2018B)

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

6.2.4 Relevant Milestones

RM3 Landform Development and Shaping is relevant to the protection of the final landform from excessive flood impacts and contains the following milestone criteria:

- The final landform design and engineering specifications have been tested to ensure that any flood protection features are safe, will achieve geotechnical and erosional stability, and be appropriate for the prevention of entry of flood waters into non-use management area, with regard to the material properties and local conditions, during any flood event up to and including Probable Maximum Flood (PMF).
- All major earthworks completed to final landform design by appropriately qualified person (AQP), including permanent flood protection landforms.
- All flood protection landforms to be constructed only from competent overburden/interburden (no waste materials, including tailings) or other competent and non-polluting materials.
- Waste rock emplacements with a flood protection role will be appropriately armoured to prevent erosion during flood events to PMF.
- Erosion and sediment control systems, including armouring, are installed as per the construction design and verified by an AQP.
- No evidence of erosion classified as 'moderate' or 'severe' (as defined by PRCP Schedule Attachment 3 - Erosion classification framework).

6.3 Waste Characterisation

The coal mining and processing activities include the production of waste rock (including overburden and interburden) and reject (coal partings and fine and course reject from the CHPP) materials. The waste rock and reject materials may contain salts and sulphides, that when exposed to air and water mobilise and or oxidise and potentially result in saline and or acid and metalliferous drainage.

In 2018, as a part of the EIS Terranus Earth Sciences undertook a geochemical characterisation and assessment of overburden and reject material at ODP from within the ODS domain. Geochemical characterisation was undertaken on 200 samples as a part of this process, which comprised:

- 166 potential waste rock samples
- 42 weathered overburden samples (predominantly highly to extremely weathered)
- 51 unweathered overburden samples (from base of weathering to top coal); and
- 73 interburden samples (unweathered, between seams).

34 potential coal reject samples, comprising roof, parting and/or floor samples from all seams between the Leichardt Upper (LU) coal seam to the Vermont Upper (VU) coal seam, inclusive.

Sampling and geochemical assessment of materials from the Willunga domain was not undertaken. However, assessment of potential mining waste materials will be undertaken in the Willunga domain during development of ODP. Notwithstanding, the geology and stratigraphy (lithology) at the Willunga domain is broadly consistent with the Olive Downs South domain and, as such, it is expected that the geochemical characteristics of potential spoil and coal reject materials from the Willunga domain would be consistent with (very similar to) those from the Olive Downs.

Findings from the geochemical characterisation and assessment are summarised below.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

6.3.1 ODS – Potential Spoil Characterisation

Waste rock, as a bulk material, is expected to generate pH-neutral to alkaline, low- to moderate-salinity surface run-off and seepage following surface exposure. Fresh (unweathered) overburden can be expected to have similar pH and salinity to fresh interburden, however weathered overburden is expected to be slightly more saline than fresh waste rock materials.

The total sulphur concentration of waste rock was very low and almost all waste rock samples (164 out of 166 samples) were classified as NAF. Most (93 %) NAF samples were further classified as 'barren' with respect to sulphur concentrations. One sample was classified as Potentially Acid Forming (PAF) and one sample had an 'Uncertain' classification with respect to potential to generate acid.

Total metal and metalloid concentrations in spoil samples were very low compared to average element abundance in soil in the earth's crust. Two fresh waste rock samples (out of 27 samples) were moderately enriched in barium and/or antimony with respect to average crustal abundance in soil.

Soluble multi-element results indicated that some waste rock materials could produce leachate containing slightly elevated concentrations of some soluble elements (such as aluminium, arsenic and selenium) compared to applied Australian and New Zealand Environment and Conservation Council (ANZECC) (2000) aquatic ecosystem water quality guideline concentrations.

Of note is the results presented in the assessment report represented an 'assumed worst case' scenario as the samples were pulverised prior to testing, and therefore had a very high surface area (increasing reactivity opportunity) compared to materials that will be produced by the mining activities in practice. Individual materials would also be well mixed at dumping/ storage locations. The results therefore suggested that the concentration of metals/metalloids in surface run-off and seepage from waste rock materials in the field would be less than the recorded laboratory water extract concentrations.

The applied guideline values are provided for context and are not intended as 'trigger values' or 'maximum permissible concentrations' with respect to total and soluble metals/ metalloids in waste rock materials. Due to a number of factors in the field (compared to the laboratory), including scale-up and dilution, any direct comparison of soluble multi-element concentrations from waste rock is not strictly valid and should be used with caution.

Waste rock samples had a wide range of cation exchange capacity (CEC) values and associated exchangeable sodium percentage (ESP) values. As such, bulk waste rock is expected to have mixed sodicity and dispersion potential (non-sodic through to strongly sodic). Generally, the interburden samples had higher ESP values (and assumed greater potential for dispersion) compared to fresh overburden samples.

6.3.2 ODS – Potential Reject Characterisation

Potential coal reject material is expected to generate pH-neutral to alkaline, low-salinity run-off and seepage following initial surface exposure.

About 71 % of potential coal reject samples were classified as NAF and about 9 % were classified as PAF – with a 'Low Capacity' to generate significant acidity. All PAF samples were from the Leichhardt Lower (LL2) and VU seams. The remaining 21 % (approximately) of samples (all from the LL2 and VU seams) were classified as Uncertain – primarily due to uncertainty around the availability of sufficient neutralising material. Overall, the sulphur concentration in potential coal reject materials was considered relatively low, with 65 % of samples having total sulphur concentration below 0.2 % and 83 % of samples having total sulphur concentration below 0.4 %.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Therefore, coal reject (as a bulk material) was regarded as relatively low risk, but has some potential to generate weak acidity and relatively low concentration of sulphate in an unmitigated environment (i.e., prior to management methods being adopted).

Total metal and metalloid concentrations in coal reject samples were generally low compared to average element abundance in soil in the earth's crust. Two coal reject samples (out of 8 samples) [one LL2 sample and one VU sample] were moderately enriched in one or more of barium, mercury and/or antimony with respect to average crustal abundance in soil.

The soluble multi-element results indicated that some coal reject materials may produce leachate containing slightly elevated concentrations of some soluble elements (such as aluminium, arsenic and selenium) compared to applied ANZECC (2000) aquatic ecosystem water quality guideline concentrations. Of these elements, only selenium was present in one water extract sample at a concentration marginally greater than the livestock drinking water quality guideline concentration for this element. The results therefore suggested that the concentration of metals/metalloids in surface run-off and seepage from coal reject materials in the field would be less than the recorded laboratory water extract concentrations.

6.4 Waste Rock and Rejects Management

Mine waste will be emplaced across the life-of-mine generally as described below.

6.4.1 Waste Rock

Waste rock landform cover designs at the ODP have been designed to ensure long-term stability, minimise environmental harm (including erosion), and support the agreed sustainable post-mining land uses of cattle grazing and native woodland vegetation. The designs focus on two main aspects: the landform shape and the cover system materials.

As outlined in the previous section, characterisation of the waste rock and reject material at ODP indicated that the materials were relatively benign and primarily non-acid forming; however, some materials were classed as having moderate to high dispersive qualities (see section 6.4 for testing and management).

Overburden dumps (in-pit and out of pit) will be developed using truck dumping and dozing methods. Completed overburden dumps will be profiled using heavy machinery such as dozers and graders. The geotechnical stability of in-pit waste dumps (i.e. backfilled mine voids) will be ensured through material specification and compaction; management of internal and external drainage systems, and other controls and checks as appropriate to ensure the remade ground meets the agreed land outcomes and rehabilitation requirements.

The geometry of the regraded landform will be in accordance with the criteria contained within the PRCP. Drainage will be established to direct water from the regraded landform to sediment control structures and erosion control measures will be incorporated.

The waste rock dumps will be covered in 0.2 m of growth medium (topsoil) in order to establish vegetation and reduce the risk of erosion of any dispersive material encountered.

Flood protection landforms will be formed within the ODS complex, adjacent to the Isaac River floodplain, as a flood mitigation measures. These landforms will be formed to widths of between 300 and 400 m and heights up to 20 m and therefore provide considerable mine waste storage capacity. These landforms will only be made from competent waste rock (overburden and interburden, or offsite materials) (refer section 6.2).

Out-of-pit emplacements will be formed during initial phases of mining within each complex. In the ODS domain, the out-of-pit emplacement will be located to the north-west and east of the northern pit, and west

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

of the central and southern pits. The eastern emplacement is proposed at a location across the Isaac River and will be accessed only during dry season periods (under low flow conditions within the Isaac River). At Willunga, the out-of-pit emplacement will be formed to the south and south-west of the pit.

The balance of waste rock mined will be transferred within the open cut and contained within in-pit emplacements. These emplacements will be accessed when sufficient space is available to facilitate the backfilling operation, which will progress to create an elevated final landform.

Small quantities of waste rock will also be used in construction associated with mine development and for rehabilitation purposes. These materials will be selectively sourced, depending on material requirements.

6.4.2 Coarse Reject

Coarse reject will report as a dry waste product from the CHPP. The material will be coarse grained, with a low moisture content. During the initial 2-3 years of operation (approximately, until in-pit emplacement areas become available) coarse reject will be trucked from the CHPP and disposed within an out-of-pit emplacement. Once the permanent in-pit emplacement of the coarse reject is complete the facility will be covered with an appropriate capping layer and rehabilitated. After approximately year 3, when in-pit emplacement areas become available, coarse reject will be trucked from the CHPP and disposed within the in-pit emplacement area (below existing ground level) and buried by spoil.

6.4.3 Management of Out-of-Pit Coal Reject Emplacements

During operations, coal reject (whether fine or coarse) in out-of-pit emplacement areas will be buried by at least 10 m (unshaped cover thickness) of spoil within generally three months of placement. Run-off and seepage from out-of-pit emplacement areas will be directed to the mine water management system. All operational works will be conducted in accordance with EA conditions C2 and C4.

6.4.4 Management of In-Pit Coal Reject Emplacements

During operations, coal reject in in-pit emplacement areas will be placed below the expected final (post-closure) groundwater level and buried by at least 5 m (unshaped cover thickness) of spoil generally within three months of placement.

6.4.5 Fine Reject (Tailings)

The proposed strategy for disposal of fine rejects is for the ex-CHPP thickened slurry to be pumped to the ILF cells in the infrastructure area, where flocculants would be added to liberate water for return to the CHPP. Dewatered and dried fine rejects will be excavated and trucked for co-disposal with waste rock/coarse reject within the in-pit emplacement. The timeframe from production to emplacement is expected to be three months.

Following appropriate dewatering, the fine reject will be suitable for truck haulage without liquifying and will be buried in in-pit waste rock emplacements at least 10 m below the surface of the emplacement. Pembroke will remove and rehabilitate the ILF cells at the end of mine life including completion of a contaminated land assessment for the area. The rehabilitated ILF cells will include application topsoil and seeding with grasses to achieve a postmining land use of grazing for the area.

6.4.6 Relevant Milestones

RM2 Remediation of Contaminated Land contains the following criteria relevant to ensuring the final landform is stable and does not cause environmental harm:

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- Contaminated land assessment completed by an SQP indicates that no contamination unsuitable for the post-mining land use remains or is occurring. If required, a site investigation report including a site suitability statement must be prepared and submitted in accordance with the provisions of Chapter 7, Part 8 of the EP Act.
- Contaminated and hazardous material either remediated in-situ or removed/transported to a facility lawfully able to accept the material.
- A site suitability statement from a SQP confirms the uses or activities for which the land is suitable, align to the PMLU.

RM3 Landform Development and Reshaping also includes the following relevant criteria:

- Materials prone to spontaneous combustion and dispersion or are susceptible to erosion have been covered and/or appropriately managed.
- For RA7 (ILF Cells):
    - all reject material is encapsulated in waste rock emplacements;
    - no TSF (i.e. ILF cells) will remain; and
    - co-disposal material will be buried at least 5m below the surface.

RM8 Achievement of Stable Condition (Surface and Groundwater Quality) contains two key criteria relevant to ensuring waste rock and rejects do not cause environmental harm:

- Surface water quality results monitored monthly during flow at, but not limited to, downstream locations specified in Attachment 6 - Surface water monitoring locations, must not exceed the limits in PRCP Schedule: Attachment 7 - Surface water quality limits, for a minimum of five (5) consecutive years.
- Groundwater quality results monitored quarterly at, but not limited to, bore locations specified in PRCP Schedule: Attachment 8 - Groundwater monitoring bores, must not exceed the limits in PRCP Schedule: Attachment 9 - Groundwater quality limits, for a minimum of five (5) consecutive years.

6.5 Growth Material Assessment

6.5.1 Soil Materials Balance

GTE (2018) completed a preliminary soil balance to determine the quality and quantity of soil available for rehabilitation over the project disturbance footprint. The assessment identified the potential limitations of each of the soil management units and recommended topsoil and subsoil stripping depths. All the topsoil reserves across the Project area are considered suitable for supporting native vegetation and grasses in rehabilitation activities (GTE, 2018). Subsoil reserves were considered suitable for capping materials and supporting material for topsoil, by either selectively placing below the topsoil to increase total soil depth or mixing with topsoil to increase soil fertility and increasing the topsoil reserves.

Recommended topsoil stripping depths varied across ODP area (based on the soil management units) and generally ranges from 0.1 m to 0.5 m. Additional subsoil resources were identified that could be stripped and used for rehabilitation purposes, if required. GTE (2018) recommended a topsoil application depth of 0.2 m to 0.3 m for rehabilitation. The estimated volume of soil required for rehabilitation activities at the project, was calculated to range from approximately 31,000,000 m^3 to 46,000,000 m^3, based on application depths of 0.2 m and 0.3 m respectively.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

The topsoil balance (Table 19) indicates that sufficient topsoil will be available for rehabilitation, using an application depth of 0.2 m. Where the final landform will support more productive grazing (e.g., in flatter areas adjacent to existing grazing areas), additional topsoil will be applied (e.g. up to 0.2 m depth) to improve the final land use outcome. Subsoil may also be selectively stockpiled to make up any unexpected shortfalls.

TABLE 19 SOIL STRIPPING DEPTHS AND VOLUMES

SMU	ASC	TOPSOIL STRIP (M)	SUBSOIL STRIP (M)	SMU AREA (HA)	TOPSOIL (M^3)	SUBSOIL (M^3) FOR USE AS TOPSOIL IN REHAB	SUBSOIL (M^3) FOR USE AS SUBSOIL IN REHAB	SUBSOIL (M^3) FORCAPPING OVERBURDEN IN REHAB
C1	Vertosol	0.2	0.8	4,540	9,080,600	-	36,322,400	-
C2	Vertosol	0.2	0.8	3,081	6,162,200	-	24,648,800	-
S1	Sodosol	0.3	0.7	2,889	8,666,100	-	20,220,900	-
S2	Dermosol	0.5	0.5	1,572	7,860,000	7,860,000	-	-
R1	Rudosol	0.35	0.65	892	3,122,000	5,798,000	-	-
R2	Chromosol	0.5	0.5	783	3,915,500	-	3,915,500	-
L1	Sodosol	0.1	0.25	178	178,300	-	445,750	1,158,950
L2	Sodosol	0.3	0.7	272	816,000	-	-	1,904,000
B1	Sodosol	0.2	0.7	1,179	2,357,200	-	8,250,200	-
B2	Sodosol	0.2	0.3	470	939,400	-	1,409,100	2,348,500
B2 DV2	Sodosol	0	0.3	30	0	-	90,300	-
A1	Kandosol	0.4	0.6	92	368,400	552,600	-	-
A2	Sodosol	0.15	0.85	380	569,550	-	3,227,450	-
Total				16,358	44,035,250	14,210,600	98,530,400	5,411,450

Soil types within ODP area were surveyed during 2017 by GT Environmental to determine land suitability, topsoil depth and subsoil depth (to equipment refusal or 1.0 m). The surveyed Australian Soil Classification (ASC) soil types are listed below with a short description of the soil type and its suitability for rehabilitation following. The distribution of ASC soil types within ODP area is shown (Figure 42).

Vertosols

Vertosols are clay soils with shrink-swell properties that exhibit strong cracking when dry and at depth have slickensides and/or lenticular structural aggregates. Vertosols have a minimum of 35% clay in the A horizon. Due to their high clay content and shrink swell properties Vertosols have low erosivity and are very suitable for use rehabilitation and the successful development of grazing and woodland PMLUs.

The Vertosols within ODP area are suited to being stripped to 0.2 m for topsoil. The subsoil may be used as a topsoil “replacement”, amelioration with gypsum may be required to reduce exchangeable sodium percentage (ESP) to minimise dispersion as well as to assist in supporting and maintaining vegetative cover, particularly in areas with a grazing PMLU.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Sodosols

Sodosols are soils with a strong texture contrast between the A horizons and a sodic B horizon which is not strongly acidic (pH is greater than 5.5). The strongly sodic nature of the B horizon in Sodosols leave them prone to dispersion and tunnel erosion if left exposed for prolonged periods to water movement or rainfall.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

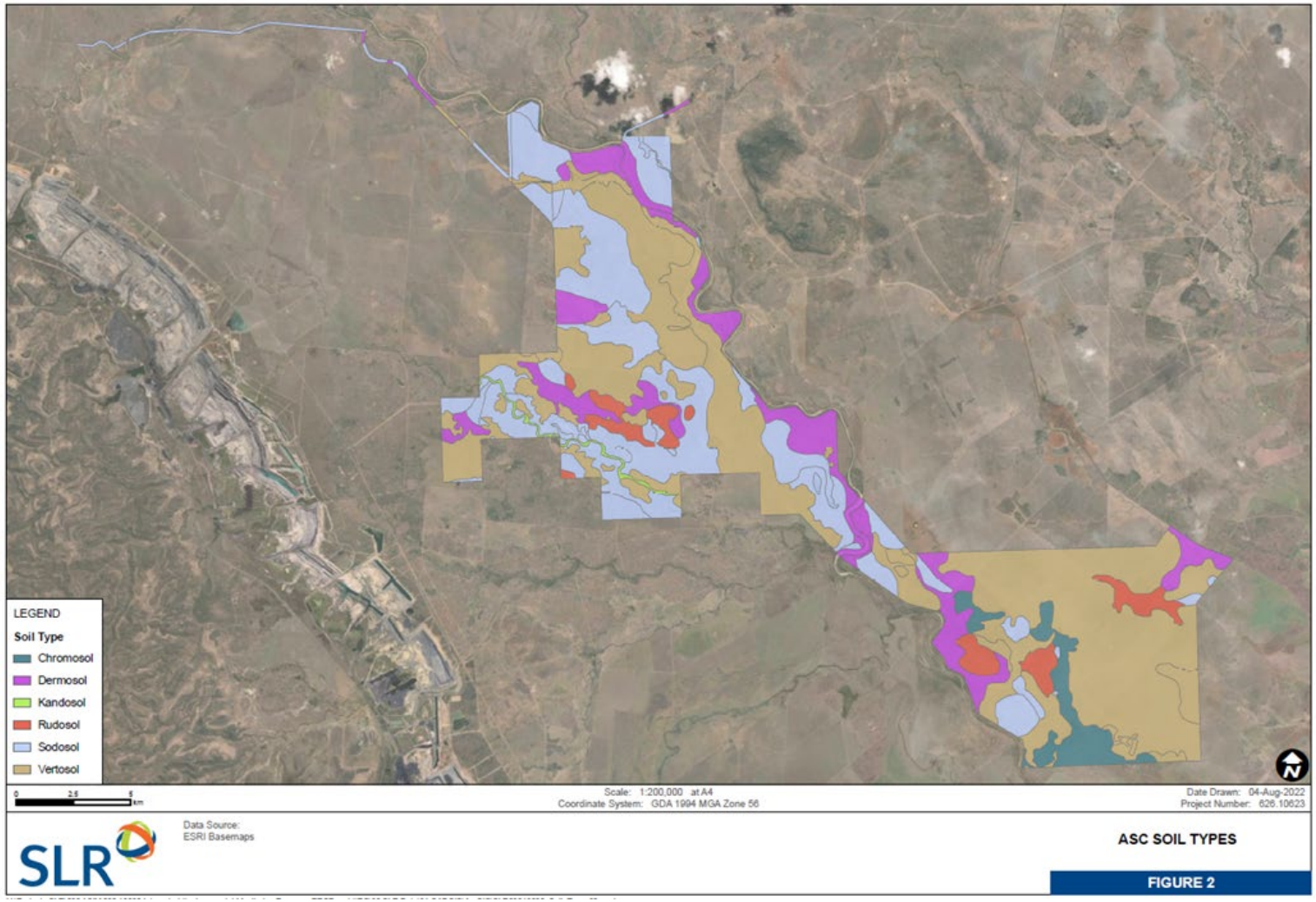


FIGURE 42 ASC SOIL TYPES

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

These soils are suited to being stripped. The topsoil stripping depths for Sodosols within ODP area ranges from 0.1 to 0.3 m. There was 30 ha of Sodosol (SMU B2 DV2) area which had no topsoil due to previous erosion. The subsoil for the Sodosols can be utilised to cap waste rock prior to placement of topsoil.

To support the grazing PMLU and due to the high ESP of sodic soils, amelioration and cultivation will be utilised to reduce the dispersity and erosive potential of sodic B horizon. These soils will be preferentially directed away from sections of the rehabilitated landform with steeper slopes where possible. Where use on steeper sections of the landform is unavoidable, mulching immediately following seeding will be considered to reduce erosion. The use of bentonite will also be considered where applicable to increase water storage capacity if required. Application of fertiliser may be used to improve the nutrient availability and establish vegetation cover.

Dermosols

Dermosols are soils with structured B2 horizons and lacking strong texture contrast between the A and B horizons. The Dermosols within ODP area are suited to being stripped to a depth of up to 1.0 metre for re-use as topsoil, they have very low ESP and are not prone to dispersion. If the entire profile is to be utilised as topsoil, amelioration with organic material such as composted cow manure may be considered to enhance rehabilitation outcomes.

Rudosols

Rudosols are soils with negligible pedologic organisation, often characterised by very sandy texture. They are generally young soils which have not had time form structurally. The Rudosols within ODP are suited to being stripped to a depth of up to 1.0 metre for re-use as topsoil, they have very low ESP and are not prone to dispersion. If the entire profile is to be utilised as topsoil, amelioration with organic material such as composted cow manure may be considered to enhance rehabilitation outcomes. Due to the sandy texture of Rudosols, water storage may be low. If low water storage capacity is identified, bentonite may be added to increase water storage capacity.

Chromosols

Chromosols are soils with a strong texture contrast between the A and B horizons, where the B horizon is not strongly acidic or sodic. The Chromosols within ODP area are suited to being stripped to a depth of up to 0.5 metres for topsoil re-use.

Chromosols can be cultivated and scarified, if required, towards a reasonably fine tilth. Bio-stimulants, and organic material can be incorporated into the soil along with slow-release general fertiliser, dependent up-on progressive soil testing, to improve the nutrient capacity of the soil. Once spread the soil will preferentially be seeded immediately with species adapted to neutral sandy soils in semi-arid areas in order to support the associated PMLUs.

Kandosols

Kandosols are soils which lack strong texture contrast between the A and B horizons, have massive or only weakly structured B horizons and are not calcareous throughout. Kandosols have a maximum clay content in some part of the B horizon which exceeds 15 %.

The Kandosols within ODP area are suited to being stripped to a depth of up to 1.0 m for re-use as topsoil, they have very low ESP and are not prone to dispersion. If the entire profile is to be utilised as topsoil, amelioration with organic material such as composted cow manure may be considered to enhance rehabilitation outcomes and to increase the nutrient capacity of the soil. Slow-release fertiliser may also be utilised if soil testing indicates a lack of nutrients within the soil. Once spread the soil will preferentially be seeded immediately with species adapted to neutral sandy soils in semi-arid areas in order to support the associated PMLUs.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

6.5.2 Surface Preparation

The purpose of the surface preparation phase is to ensure the soil profile (subsoil and topsoil) is suitable for the target vegetation establishment, being either for the grazing, woodland or fauna habitat PMLU's. It will start prior to the placement of topsoil and involve testing for dispersive or sodic subsoils that may exacerbate erosion or inhibit plant growth. If identified such soils will be buried with suitable cover material at a depth where the risk of subsequent exposure (e.g. through erosion or deep ripping) is minimal.

Compacted surfaces will be deep ripped to a depth of approximately 300 mm, along the contour. Final surfaces will be covered the approximately 200 mm of the most suitable topsoils available (depending on PMLU), with a preference given to direct relocation of fresh topsoil. Prior to seeding, a soil health and suitability assessment will be conducted to ensure that any necessary treatments (e.g. the addition of fertilizer, gypsum and/or organic matter) are undertaken, and that topsoil meets the following suitability targets, as per the agreed completion criteria:

- pH in the range of 6.0 and 8.5;
- Electrical Conductivity ≤1,500 µS/cm; and
- Exchangeable sodium percentage (ESP) (%) < 6.

6.5.3 Topsoil/ Subsoil Management

Soil stripping and handling measures will be undertaken in accordance with the Topsoil Management Plan developed by SLR in accordance with the requirements of the PRCP Guideline, (Appendix H). A topsoil/ subsoil inventory will be maintained during the life of ODP. The inventory will account for the volumes and locations of topsoil/ subsoil to be progressively stripped, stockpiled and reapplied.

The Topsoil Management Plan contains measures to ensure the stability of topsoil/ subsoil and minimise release of material from stockpiles. Measures include installation of sediment fences up-catchment diversions of runoff, minimising the stockpile heights (i.e. < 3 m), maintaining stockpile slopes (i.e. < 1:3), vegetating stockpiles and re-using materials as soon as possible. The management plan also outlines specific limitations of all Soil Mapping Units (SMUs) on site and provides amelioration recommendations and requirements for each.

6.5.4 Relevant Milestones

RM3 Landform Development and Reshaping and RM4 Surface Preparation include the following criteria relevant to the above objectives and methodologies:

- Materials prone to spontaneous combustion and dispersion or are susceptible to erosion have been covered and/or appropriately managed.
- Soil health and suitability is assessed and documented by an AQP to confirm soil is suitable for target vegetation establishment.
- Deep ripping of compacted surfaces, at least 300 mm into soil/subsoil profile along contour of slopes.
- An assessment of the need for soil amelioration undertaken and soil ameliorants including, but not limited to, fertilizer, gypsum and/or organic matter have been applied at rates determined by an AQP.
- The Topsoil Management Plan has been implemented, including topsoil placement of ≥200 mm.
- Topsoil to meet the following suitability targets:

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- pH in the range of 6 to 8.5;
- Electrical Conductivity ≤1,500 µS/cm; and
- Exchangeable sodium percentage (ESP) (%) < 6 (at 0-10cm depth)

- LFA monitoring demonstrates (for a period of at least five years post-mining):
  - Physical, chemical and biological properties of the growth media are similar to relevant rehabilitation monitoring reference sites.

6.6 Revegetation Objectives

Short-term revegetation objectives –

- Stabilise new infrastructure disturbance areas (e.g., roads and dam embankments) as soon as possible by placement of soil and seeding
- Salvage vegetation and habitat resources during clearing activities and re-use in rehabilitated areas to provide habitat resources for fauna (e.g., tree hollows and logs); and
- Plant cover crops as appropriate on newly rehabilitated mine landform areas (and soil stockpiles) within two years of becoming available, to minimise the potential for soil erosion.

Long-term revegetation objectives –

- Establish woodland vegetation in areas of the rehabilitated final landform which would benefit from enhanced stability effects and support managed grazing for biomass/ fire management
- Provide self-maintaining, geotechnically stable and safe landforms that complement existing surrounding landforms in terms of slope, geomorphological characteristics, vegetation, and land use; and
- Rehabilitate the mine infrastructure areas and mine landforms with either groundcover (e.g. grass species) and scattered trees that would return these areas to land suitable for grazing and/ or native woodland.

Clearing of vegetation will be undertaken progressively, with the area of native remnant vegetation cleared at any particular time generally being limited to only that required to accommodate development activities for the following 12 months.

Woody vegetation salvaged from clearing may be opportunistically placed on rehabilitated areas to assist natural regeneration, erosion control and provide habitats for native fauna, as per the MNES Management Plan (Appendix D). Vegetation salvaged for use in rehabilitation will be stored adjacent to active rehabilitation or in the footprint of future mining areas.

Following rehabilitation landform profiling and surface preparation, vegetation will be established as soon as practicable to minimise erosion. Consistent with the vegetation currently present on-site, the areas of the final landform that are proposed to be revegetated to grazing land will comprise a combination of appropriate grass species, with a focus on native species.

Species to be used in establishment of woodland areas (i.e., along the highwall emplacements, near final voids and near watercourses) would include available species such as Poplar Box (*Eucalyptus populnea*), Clarkson's Bloodwood (*Corymbia clarksoniana*) and Broad-leaved Ironbark (*Eucalyptus fibrosa*).

Seeding activities will be timed to ensure best possible germination rates are achieved (i.e., not prior to heavy rainfall and not during winter when rainfall is generally low). Seed selection will include species which are suitable for the growth in the area. Pembroke would either harvest seed locally or purchase

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

commercially with priority placed on locally sourced product where possible. Revegetation will exclude grazing until well established. Priority areas may be included additional tubestock planting to further enhance early stabilisation, e.g., between the mining areas and the Isaac River and along the riverbanks where localised areas of increased velocity are predicted during flood events.

Germination and weed cover will be assessed within 2-3 months of seeding and weed treatment undertaken where required. Areas with less than 60% seedling strike rate will be re-seeded if conditions allow, or in the next seeding window.

6.6.1 Relevant Milestones

RM5 Revegetation contains the following criteria relevant to the re-establishment of native woodland species as well as plant species suitable for grazing, as per the above objectives and the Revegetation Plan:

- The following seed mixes will be applied to rehabilitated areas:
    - For Grazing rehabilitation, the seed mix will contain only those species listed in PRCP Schedule: Attachment 2 - Table 1: Grazing Seed Mix.
    - For Native Woodland rehabilitation, the seed mix will contain only those species listed in PRCP Schedule: Attachment 2 – Table 2: Woodland Seed Mix according to the R.E. specified in the Revegetation Plan.
    - For void low walls rehabilitated to native fauna habitat, the seed mix will contain only those species listed in PRCP Schedule: Attachment 2 - Table 3: Low wall Seed Mix.
- Seed mix applied at a rate of 4 kg/ha for trees/shrubs and 10 kg/ha for grasses.
- Stock exclusion fencing has been established to prevent stock from grazing newly seeded areas.
- Ripstone Creek diversion will be planted at a rate of at least 6 plants per m^2 along the banks of the diversion.
- Areas where seeding achieves a strike rate of <60 % are reseeded.

RM6Achievement of Surface Requirements

- Vegetation groundcover ≥50%.
- The presence of weeds is ≤5% of total vegetative groundcover confirmed by an AQP in annual wet season monitoring. Weed management recommendations to be provided in annual reports.
- With respect to erosion:
    - No evidence of erosion classified as ‘moderate’ or ‘severe’ as defined by the erosion classification framework PRCP Schedule: Attachment 3.
    - Average erosion rate of <5t/ha/y with the maximum erosion rate at any point on the landform of <10t/ha/y.
    - Any erosion present will not compromise the achievement of a PMLU to a stable condition
    - Erosion requiring intervention has been remediated and does not impact achieving the PMLU.
- Corrective action arising from the routine inspections program have been undertaken, including weed control, erosion repair and livestock management.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- Surface water runoff collected from representative areas of rehabilitation when surface flow occur complies with PRCP Schedule: Appendix 3.
- Independent AQP certifies achievement of RM6.1 to RM6.8 inclusive.

Additional PMLU specific criteria for Native Vegetation (Woodland) and Native Fauna Habitat:

- A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual' which determines that the PMLU has reached an overall modified BioCondition score of >20/60 based on attribute benchmarks for the target RE in Appendix 4 – BioCondition Benchmark Criteria.
- Additionally, for Ripstone Creek Diversion (RA8) and watercourse crossings:
    - Erosion and sediment control systems installed on slopes of more than 30% such as sediment control socks, hydro-mulching, and open weave jute matting; and
    - Watercourses provide for habitat features to support aquatic and terrestrial fauna species recorded in historical site-specific survey.

6.7 (Erosion Management

A Water Erosion Prediction Project (WEPP) model was completed to ensure that the final landform would achieve a stable condition for PMLUs of Woodland and Grazing. This assessment demonstrated at a 12.5% (1V:8H) slope, an average soil loss stability class of Very Low (<5 tonne/ha/year) and Low (5 – 12 tonne/ha/year) across all soil types surveyed on site for PMLUs. This was modelled on the basis of 75% Grass Cover Grazing PMLU and Woodland PMLU with a range of 50 – 70% ground cover. Results for bare soil and 30% grass cover are also provided for Grazing PMLU for comparison (Table 20). Information on soil mapping units was taken from the EIS – Soil and Land Suitability Assessment (GT Environmental, 2018) (Appendix J). The specific soil loss rates by SMU per PMLU are shown below.

TABLE 20 WEPP MODELLING OUTCOMES FOR GRAZING AND WOODLAND PMLUS

			SOIL LOSS (AVG. OF NET DETACHMENT AREAS) TONNE/HA				MAX. SOIL LOSS (TONNE/HA)			
SAMPLE NO	TEXTURE	SLOPE %	BARE SOIL	30% GRASS	75% GRASS	WOODLAND	BARE SOIL	30% GRASS	75% GRASS	WOODLAND
2	Loamy Coarse Sand	12.5	56.9	26.3	0.6	1.1	82.1	39.1	0.8	1.6
8	Loamy Coarse Sand	12.5	69.8	33.8	1.4	1.8	108.9	53.9	23.7	2.6
12A	Clay	12.5	71.1	42.8	4.5	2.6	145.6	89.0	9.1	4.0
12B	Clay	12.5	69.7	43.9	5.8	2.7	144.4	92.3	11.8	4.2
17	Loamy Coarse Sand	12.5	59.3	27.5	0.7	1.3	93.3	44.4	1.1	2.0
25A	Clay	12.5	115.3	71.2	6.4	3.1	219.3	137.8	13.0	5.2
25B	Clay	12.5	116.7	72.8	6.6	3.1	225.2	142.7	13.9	5.3
49	Loamy Coarse Sand	12.5	60.1	28.5	0.9	1.4	93.6	45.5	1.4	2.0
60	Coarse Sandy Loam	12.5	66.3	33.4	1.8	1.9	109.1	56.0	3.0	2.8
62	Loamy Coarse Sand	12.5	53.2	31.4	1.1	1.7	87.2	50.4	1.7	2.4

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

SAMPLE NO	TEXTURE	SLOPE %	SOIL LOSS (AVG. OF NET DETACHMENT AREAS) TONNE/HA				MAX. SOIL LOSS (TONNE/HA)			
			BARE SOIL	30% GRASS	75% GRASS	WOODLAND	BARE SOIL	30% GRASS	75% GRASS	WOODLAND
68	Coarse Sandy Loam	12.5	48.3	29.6	1.6	1.8	87.5	52.5	2.7	2.8
96	Coarse Sandy Loam	12.5	35.3	20.4	1.0	1.2	60.7	34.2	1.5	1.8
106	Coarse Sandy Loam	12.5	68.7	34.4	1.8	2.0	117.0	59.9	3.1	3.0
131	Loamy Coarse Sand	12.5	60.1	28.2	0.8	1.4	92.2	44.3	1.2	2.0

6.7.1 Erosion and Sediment Control Plan

Erosion and sediment control works will be conducted in accordance with management methods described in the Erosion and Sediment Control Plan for ODP. Elevated landforms (i.e. waste rock emplacements) will be rehabilitated and revegetated as soon as practicable and include construction of graded banks, rock-lined waterways, and/or diversion banks as required to minimise potential for release of sediment-laden surface runoff. Exposed surfaces will be ripped to encourage infiltration and minimise erosion.

Surface runoff from the waste rock emplacements will be directed to dedicated sediment dams. If necessary, perimeter drains would be installed around the toe of the waste rock emplacements. During mine operations, erosion and sediment control structures will be designed and installed in accordance with the Best Practice Erosion and Sediment Control (International Erosion Control Association Australasia, 2008) and Soil Erosion and Sediment Control Engineering Guidelines for Queensland Construction Sites (IE Aust [Qld], 1996).

Erosion and sediment control structures will not be removed until areas have been stabilised, and ground cover has established and when runoff has similar water quality characteristics to areas that are undisturbed by mining activities.

The Erosion and Sediment Control Plan for the project is included (Appendix I).

6.7.2 Relevant Milestones

The management of erosion from surface runoff is addressed in RM3 Landform Development and Reshaping, as well as RM7 Achievement of Surface Requirements, which include the following relevant criteria:

- Erosion and sediment control systems are installed as per the construction design and verified by an appropriately qualified person (AQP).
- Maintain sediment transport and water quality regimes that minimise any impacts to upstream and downstream water quality, geomorphology, or vegetation.
- There is no evidence of erosion classified as ‘moderate’ or ‘severe’ as defined by PRCP Schedule Attachment 3 – Erosion classification framework.
- Average erosion rate of <5 t/ha/y with the maximum erosion rate at any point on the landform of <10 t/ha/y.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

6.8 Voids

The ODP VCP (Appendix F) sets out how Pembroke will manage the closure of the three final voids to meet best or leading practice and to ensure the voids meet the minimum requirements of the EA, including:

- Residual voids must not cause any serious environmental harm to land, surface waters or any recognised ground water aquifer, other than the environmental harm constituted by the existence of the residual void itself, and subject to any other condition within this environmental authority
- Be left as stable structures with the competency certified by an appropriately qualified third party (e.g. an engineer listed on the National Professional Engineers Register);
- Be fenced or bunded appropriately to restrict human, stock and other fauna in areas representing a potential hazard; and
- Comply with the approved void design specifications, as set out in Table 15 of this document.

The following information is summarised from the VCP, noting that many of the design characteristics of the final voids, including geotechnical and geochemical stability, have been described in previous sections.

6.8.1 Void Rehabilitation Strategies

A key rehabilitation objective is that the residual voids overall provide positive land outcomes for as long as possible. To this end, they will be rehabilitated with the aim of providing habitat for native fauna, as detailed previously (e.g. section 4.5). Principle constraints to achieving this aim have been previously described and include:

- The salinity levels in the void lakes will eventually become too elevated (hypersaline) to support most aquatic fauna and plants; and
- Safe access restrictions will apply to void wall slopes >11° and designated set-back areas, which may limit the ability to fully establish or sustain native habitat values.

For the low walls (i.e. slopes ≤ 11°), safe access constraints can be managed through appropriate designs and controls, and these will be established in the final landform design process (section 4.3). This will allow the PMLU of fauna habitat to be established and maintained, as per the rehabilitation milestones and criteria set out in the PRCP schedule.

Prior to rehabilitation of the voids, an ecological assessment will be undertaken to determine suitable native species and fauna habitat structures that could be introduced to the residual void lakes, walls, crests, setback areas and bunds. This assessment will consider water quality in the voids based on monitoring data, suitability of native soils and rock walls and safety of access for rehabilitation works and monitoring. It will also take into consideration information available from contemporary research and trials, including that conducted by Pembroke. The assessment will be used as the basis for the development of rehabilitation prescriptions specific to the different RA and IA within the voids and their set-back areas, including:

- Requirements for safe access and zone restrictions
- Topsoiling, amelioration (where required) and ripping (where possible)
- Seeding, using a similar mix and rate as Native Vegetation (Woodland) PMLU, but with no tall trees; and
- Monitoring the progress of flora and fauna establishment using similar criteria as Native Vegetation (Woodland) PMLU but suited to the practical limitations of the area.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Parameter bunds are proposed on highwall sections in conjunction with fauna friendly fencing to ensure unsafe access is prevented whilst allowing for fauna movement to occur in connectivity areas (refer PRCP Appendix F). The proposed perimeter bund is outlined in Figure 43below.

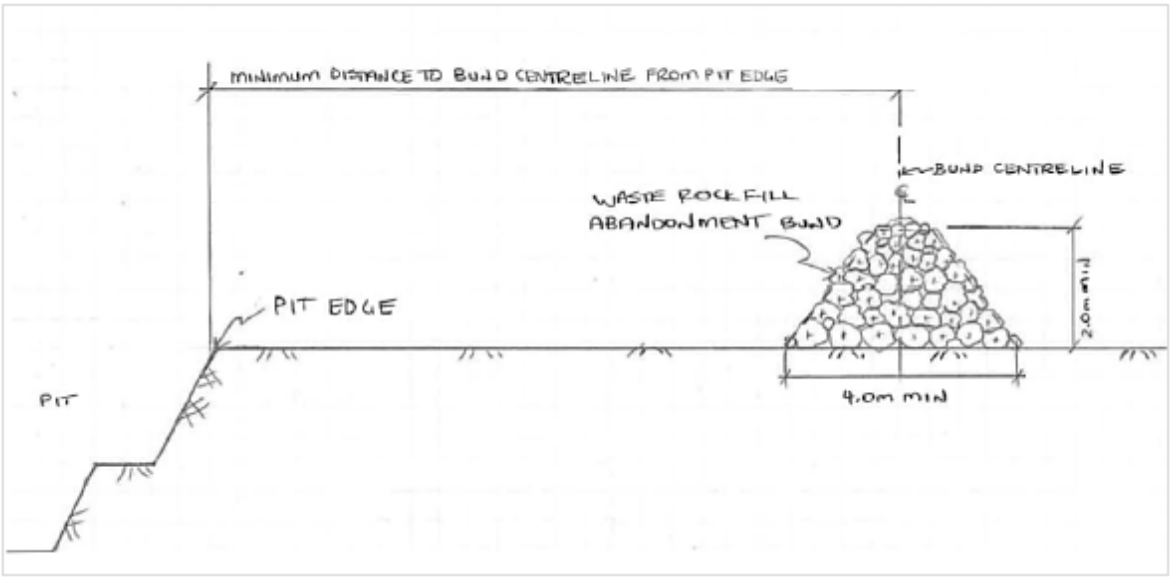


FIGURE 43RESIDUAL VOID PERIMETER BUND TYPICAL DETAIL (NOT TO SCALE)

6.8.2 Void Geotechnical Reports

The VCP includes a geotechnical assessment study based on available information; however, the study is not exhaustive as some normally required information was not available at the time of its development (refer PRCP Appendix F). To address this, as well as to comply with the requirements of the EA (Condition H4f), five years prior to the establishment of each final void, Pembroke will update the geotechnical assessment using a suitably qualified and experienced professional to, among other things, confirm the following:

- Suitability of proposed slope criteria for pit walls with competent and incompetent rock
- Proposed final surface area of the void; and
- Confirm the location of the safety perimeter bunding and size of set-back areas.

The completion of partial backfilling of pit ODS3 is scheduled for completion in Stage 4 (2054 – 2063). Accordingly, the EA condition is expected to apply five years prior to that event.

6.8.3 Void Water Quality

As per the EA (Condition H4g), Pembroke will provide a Final Void Water Quality Management Plan at least three years prior to the development of the first final void. The plan will include:

- Modelling and assessment of the quality of void water between cessation of mining and the post mining equilibrium level
- Modelling and assessment of practicable management measures (including flushing) to mitigate salinity increases; and

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- A monitoring program both during and after mining, to assess the performance of any management measures required.

6.8.4 Supervision and Verification of Final Design

As per the VCP, to ensure the structural stability and integrity of the ODP highwalls, low walls and end walls associated with each residual void, sign off from an AQP will be undertaken after any landform reshaping. Annual inspections of highwalls using remote sensing (e.g., drones, aerial imagery and/or LiDAR) will then be undertaken for the first three years from completion of reshaping / reprofiling, to report on- and facilitate management of:

- Excessive cracking or slumping
- Erosion
- Water run-off; and
- Void creep.

6.8.5 Relevant Milestones

For the final void low walls (RA9), RM7 Achievement of a post mining land use to a stable condition (Native Fauna Habitat) provides the site wide PMLU requirements and sets out the following specific to final void low walls: is specific to the requirements of the void RA and will be achieved after the other relevant RM are completed. RM7contains the following criteria specific to

Additional criteria applicable to Native Vegetation (Woodland) and Native Fauna Habitat PMLUs (RA2, RA4, RA6, RA8 and RA9):

- Landscape Function Analysis (LFA)[5] monitoring demonstrates that the following characteristics are comparable to relevant rehabilitation monitoring reference sites for a period of at least five years prior to the completion of this milestone:
    - vegetation cover, types and densities;
    - nutrient cycling/ accumulation;
    - infiltration; and,
    - stability.
- A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual' which determines that the PMLU has reached an overall modified BioCondition score of >40/60 based on the attribute benchmarks for the target RE in PRCP Schedule: Attachment 4 – BioCondition Benchmark Criteria.
- Native fauna identified on the ML prior to mining are present, or habitat to support those species is developing, and indicators of these species have been recorded. Fauna survey observation provides evidence of native fauna utilisation (i.e., fauna spotting, scats, and tracks recorded).

[5] Tongway, D. J., & Hindley, N. L. (2004). Landscape Function Analysis: Procedures for Monitoring and Assessing Landscapes with Special Reference to Minesites and Rangelands. CSIRO Sustainable Ecosystems, Canberra, Australia. ISBN: 0-643-06969-0.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

For the NUMA related areas (IA1 and IA2) MM1 achievement of final landform design and MM3 Establishment of Interim Post-Mining Land Use (Fauna Habitat) contain criteria relevant to the above methodologies so as to achieve best practice management of the area and to minimise risks to the environment:

- All earthworks completed to final landform design.
- Materials prone to spontaneous combustion have been covered and/or appropriately managed.
- Basement coal removed from the floor of the ODS3, ODS7/8 and WIL5 open cut pits at the end of mining.
- Final void highwall slopes are 20 degrees or lower where located within alluvium and tertiary clays (Cenozoic overburden).
- Final void highwall slopes are 45 degrees or lower where located within a fault fractured zone, and 55 degrees where they are located away from fault zones.
- An overall angle of 55 degrees or less is achieved including:
    - 50 m high or less batters
    - Intermediate benches 10 m wide; and
    - 65 degree maximum batter angle between benches.
- Final voids must comply with PRCP Schedule Attachment 1 - Final void design.
- Residual voids are protected from all possible flood events.
- Groundwater and void lake modelling/monitoring confirms that the voids act as the sink; and saline water will be contained within the void.
- A geotechnical assessment concludes the final landforms are safe and stable, and achieved a factor of safety of ≥ 1.5.
- Highwalls will not be accessible.
- Low wall slopes are stable.
- Rehabilitation is geotechnically stable to a factor of safety of > 1.5 or higher.
- Absence of active rill/gully erosion >0.3 m.
- The safety assessment concludes that the risks associated with other potential safety risks are low. The safety assessment identifies ongoing maintenance and risk management requirements for the post-mining land use.
- A rehabilitation plan has been prepared for the Improvement Areas and implemented.
- To the safest extent practicable, LFA monitoring demonstrates:
    - Aerial seeding completed of void walls, safety setback, and perimeter bund in accordance with the target RE species mix and seeding rates as recommended by an AQP. Species must, as a minimum, include a selection of those listed in Table 2 – Native Vegetation (Woodland) and Fauna Habitat PMLU Seed Mix of Appendix 1 – Seed Mix Species List Tables as appropriate for the target RE.
    - Sustainable fauna usage (e.g. Stripe- faced Dunnart, Hoary Wattled Bat and Australian Grey Teal) of the residual voids.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

  - Weed diversity and abundance is comparable to relevant rehabilitation monitoring reference sites.
  - No restrictive matter (plants) as prescribed by the Biosecurity Act 2014 are present.
  - Pests do not occur in substantial numbers.
- A risk assessment of the residual void landforms by an SQP concludes there is a low risk of environmental harm.

6.9 Surface Drainage

Erosion and sediment controls will be constructed after final profiling of the landform to contain and treat potentially sediment laden runoff. These controls may include, contour banks, rock lined waterways and sediment dams and they be designed and constructed to manage runoff from a 1:20 year ARI 'time of concentration' flow from the catchment. Once rehabilitation has established it is expected that vegetation will manage erosion and sedimentation so that sediment dams will not be required post-closure.

Permanent drainage diversions will be constructed to ensure that they:

- Incorporate natural features (including geomorphic and vegetation aspects) present at the location of the diversion
- Maintain the pre-existing hydrologic characteristics of surface water and groundwater system for the area in which the drainage feature diversion is located
- Maintain the hydraulic characteristics of permanent drainage feature diversion that are equivalent to other local watercourses and are suitable for the area in which the diversion is located without using artificial structures that require on-going maintenance
- Maintain sediment transport and water quality regimes that allow the diversion to be self-sustaining, while minimising any impacts to upstream and downstream water quality, geomorphology, or vegetation; and
- Maintain equilibrium and functionality in all substrate conditions at the location of the diversion.

All levees will be rehabilitated to form part of the general post mining landform and support grazing and or woodland.

6.9.1 Relevant Milestones

RM3 Landform Development contains the following milestone criteria relevant to the design, installation and management of surface drainage features in the final landform:

- The final landform design ensures that surface water runoff effectively drains from the rehabilitated areas in a manner similar to pre-mining and is integrated with natural drainage systems.
- Erosion and sediment control systems are installed as per the construction design and verified by an appropriately qualified person (AQP).
- Drainage systems effectively convey peak storm flows without overtopping or breaching, as per design.
- No evidence of gully erosion or excessive rill erosion in drainage lines after significant (1 in 2-year ARI) rainfall events.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- An AQP has certified that all watercourses being retained in the landform continue to achieve the following:
    - Incorporate natural features (including geomorphic and vegetation)
    - Maintain the pre-existing hydrologic characteristics of surface water and groundwater systems for the area;
    - Maintain the hydraulic characteristics of the local watercourse; and
    - Maintain sediment transport and water quality regimes that minimise any impacts to upstream and downstream water quality, geomorphology, or vegetation.

6.10 Ripstone Creek Diversion

The final landform includes the permanent diversion of Ripstone Creek. A flood assessment was performed as a part of the EIS which comparted the hydraulic modelling results of the existing Ripstone Creek channel and the Ripstone Creek diversion. The key results included:

- The mean stream velocity, stream power and bed shear stress are comparable for the 1 in 2 year average recurrence interval (ARI);
- The mean stream velocity, stream power and bed shear stress are higher for the 1 in 50 year ARI event, however, the 1 in 50 year ARI hydraulic characteristics for the proposed diversion remain within the ACARP design guidelines (DNRM, 2014); and
- The diversion will have the same catchment type and similar catchment area to the section of Ripstone Creek that is being replaced making the catchment water quality and sediment regime draining to the proposed diversion the same for the section of Ripstone Creek that is being replaced.

The diversion will have similar geomorphic and hydraulic characteristics (e.g. length, sinuosity and cross section) as that of Ripstone Creek and therefore will have the same sediment transport regime. A Functional Diversion Design is provided in Section 13.7 of Hatch 2018b (Appendix R).

Further detailed design will be completed prior to construction of the diversion and in accordance with Section 1.5.4 of the DNRM Guideline: *Works that interfere with water in a watercourse – watercourse diversion* (the DNRM Guideline). The design plan will provide Plans and specifications sufficient to complete construction and revegetation to the required design including:

- Engineering drawings showing physical attributes and dimensions of the watercourse diversion
- The location, function and description of geomorphic and riparian vegetation features within the proposed watercourse diversion; and
- A specific revegetation management plan (a revegetation plan).

If required, an appropriate water licence will be secured for the diversion as part of its design process and prior to construction, as per the requirements of the *Water Act 2000* (Qld).

6.10.1 Relevant Milestones

The various rehabilitation milestones for Ripstone Creek Diversion and watercourse crossings (RA8) are embedded within the following items:

- Relevant EA and PRCP schedule conditioning for the development of a functional design report prepared under the Ripstone Creek Diversion Program providing diversion alignment and final landform design that achieves a stable condition.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- RM5 Revegetation.
- RM6 Achievement of Surface Requirements.
- RM7 Achievement of post-mining land use to a stable condition.

The proposed RMs contain the following milestone criteria to ensure the management objectives and committed processes and outcomes are implemented and achieved:

- Vegetation groundcover > 75 %.
- The presence of weeds (introduced plant species excluding exotic pasture grasses) is a maximum of 10% of total vegetative groundcover confirmed by an AQP in annual monitoring. Weed management recommendations to be provided in annual reports.
- No areas of active rill or gully erosion.
- Certification from an AQP that the permanent diversion has achieved a stable condition.
- Diversion constructed in accordance with design plans.
- Species used in revegetation remain present and showing evidence of natural recruitment.
- A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'
- Certification from an AQP that attributes determined through the assessment required by RM9(i) achieve a modified BioCondition score of >40/60 based on the benchmark criteria in Attachment 6 – BioCondition Benchmark Criteria.
- Aquatic ecology (i.e., macroinvertebrates, aquatic habitat and riparian vegetation) health monitoring is undertaken annually in December and May which shows a progressive improvement, or is similar to, other ephemeral waterways in the region.
- The safety assessment concludes that the risks associated with other potential safety risks are low. The safety assessment identifies ongoing maintenance and risk management requirements for the post-mining land use.

6.11 Built Infrastructure

At the completion of key mining activities, Pembroke will undertake the necessary works for the decommissioning and removal of all mine infrastructure, ensuring the site is returned to a safe and stable condition (Section 6.11.5).

The scope covers the dismantling and offsite removal of all buildings and associated infrastructure, machinery, and equipment. This begins with the disconnection, termination, and removal of all site services (water, electricity, gas) and the draining and removal of all pipelines.

Crucially, all environmental hazards are addressed through the decommissioning of all drillholes, bores, sediment ponds, and sumps. For site dams, the program mandates the removal of liners and contaminated sediment, followed by earthworks to decommission the walls. Finally, all hardstand areas, roads, and non-PMLU fencing are removed, and all waste is appropriately disposed of at a licensed facility, leaving the site ready for the next stage of progressive rehabilitation.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

6.11.1 Water Management Structures

The post mining land use is generally to reinstate land to the existing land uses, namely low intensity cattle grazing and woodland. In consultation with the future land user, Pembroke will selectively decommission water storages not required following mine closure.

6.11.2 Ancillary Disturbances

Tracks, roads, topsoil stockpile footprints and laydown areas will be rehabilitated as follows:

- Contaminated land assessment if necessary
- Minor earthworks, final trim, and deep ripping; and
- Topsoil placement, amelioration and seeding with pasture grasses and trees.

Dams will be rehabilitated as above following recontouring of walls.

All exploration disturbance will be rehabilitated in accordance with the latest version of the Eligibility criteria and Standard Conditions for Exploration and Mineral Development Projects (ESR/2016/1985).

6.11.3 Remediation of Contaminated Land

The Contaminated Land Management and Validation Program is designed to ensure all land impacted by mining activities is successfully remediated and validated to be suitable for the approved end land use. The program begins with a suitably qualified person (SQP) completing a thorough contaminated land investigation to identify all contamination. Following this, contaminated and hazardous materials will either be remediated on-site (in-situ) or removed and transported to an approved landfill, with detailed waste tracking information recorded and submitted. Validation testing is then conducted to confirm that all such materials have been successfully removed or treated to acceptable levels. Finally, the SQP completes a final contaminated land assessment, confirming that no contamination unsuitable for the land use remains. If required, a comprehensive site investigation report, including a site suitability statement, must be prepared and submitted in accordance with Chapter 7, Part 8 of the EP Act. A final site suitability statement from the SQP is required to confirm the land's suitable uses align directly with the approved PRCP, ensuring the site is safe and compliant for its future use.

6.11.4 Removal or Treatment of Safety Risks

For each RA or IA, Pembroke will conduct a safety assessment (including risk assessment) prepared by a suitably qualified and experienced person. The assessment will be used to determine which risks are unacceptable and require removal, isolation or other treatment, as recommended by the assessor, so that all residual risks are as Low As Reasonably Practicable (ALARP).

6.11.5 Relevant Milestones

RM1 Infrastructure Decommissioning and Removal and RM2 Remediation of Contaminated Land are relevant to the outcomes of being safe, stable and non-polluting, and contains the following milestone criteria:

- All services (water, electricity, gas, etc.) disconnected, terminated and removed.
- All buildings and associated infrastructure dismantled and removed offsite.
- All hardstand, concrete areas and roads (bitumen, blue metal, aggregate etc.) removed.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- All fencing that is not part of post-mining requirements removed.
- All pipelines drained and removed.
- All waste removed and disposed of at a licensed facility.
- All drillholes, bores, sediment ponds and sumps decommissioned.
- All machinery and equipment removed from site.
- All dams comply with the following:
    - Where present, liners removed
    - All mine-affected water and contaminated sediment removed; and
    - Earthworks to decommission dam walls completed.
- Contaminated land assessment completed by a Suitably Qualified Person (SQP) indicates that no contamination unsuitable for the post-mining land use remains or is occurring. If required, a site investigation report including a site suitability statement must be prepared and submitted in accordance with the provisions of Chapter 7, Part 8 of the EP Act.
- A site suitability statement from a SQP confirms the uses or activities for which the land is suitable align to the PMLU.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

7 Mine Closure Risk Assessment

The overall objective of the closure and rehabilitation risk assessment (the risk assessment) is to identify risks of land not achieving stable condition and to describe how Pembroke intends to manage or mitigate identified risks in accordance with Section 126C(1)(f) of the EP Act.

Risk assessment was initially developed in 2022 and has been subsequently reviewed and updated in conjunction with this current PRCP. Risks and opportunities were identified for all activities throughout the various phases of progressive rehabilitation, decommissioning and closure for the ODP.

The risk assessment process is conducted using AS ISO 31000:2018 Risk Management – Guidelines and Pembroke's Risk Management Framework which is consistent with this requirement.

The risk management process adhered to is as follows:

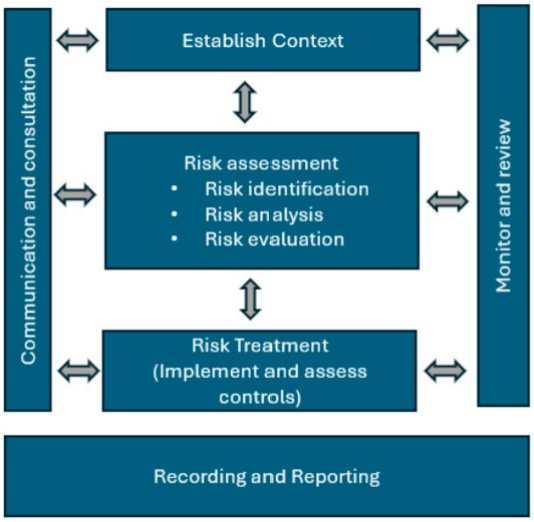


Table 21 below presents an overview of the progressive rehabilitation and closure risk assessment process.

TABLE 21 PROGRESSIVE REHABILITATION & CLOSURE RISK ASSESSMENT OVERVIEW

PROCESS	DESCRIPTION
Risk dentification, analysis and evaluation	Risk identification involved reviewing the proposed rehabilitation and closure planning to define and identify: • Risks that might affect land being safe and structurally stable across all aspects of the site • The risks that have the potential to adversely impact upon environmental values; and • The potential for risks to land sustaining a post mining land use. This process was further supported by a peer and localised PRCP scan to identify additional closure risks which may be emerging.
Risk Analysis	The Pembroke Risk Matrix was used to assess the level of risk with certain events. The risk matrix considers the consequence and likelihood of each risk

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

PROCESS	DESCRIPTION
	with current control measures in place. Using the following each risk was analysed: • Consequence categories and associated criteria (Appendix L) • Likelihood 'environment' category which determine risk rankings (Appendix L).
Risk Evaluation	Using the risk assessment tools an evaluation of the risk ranking (Appendix L) was undertaken to determine where additional action is required. Additional actions may include: • Considering risk treatment options available • Undertaken further analysis and investigation of the risk • Maintaining existing controls; and • Reconsidering the objectives – where other measures are determined as unviable.
Risk Treatment	Includes options evaluation for management or mitigation or identified risks. Suitability is determined through a multi lens approach which considers cost benefit analysis, regulatory compliance, environmental performance objectives and social performance. The necessary actions and resourcing to support these requirements has been included.
Prioritising Closure Risks	Pembroke's holds a Material Risk Register for the ODP which incorporates those risks identified as major or higher. Which ensures that should any significant risk occur this will be escalated and managed accordingly within the organisation.
Risk Monitoring and Review	Pembroke's Risk Management Framework requires biennial reviews to determine whether changes in risk circumstances affect prioritisation. Residual risks, their treatment plans and controls must also be evaluated biennially to ensure their effectiveness and confirm their ongoing suitability.

7.1 Summary of Key Closure Risks

The risk assessment outcomes are shown in Appendix L. A total of 44 risks were identified and assessed. There were no residual risks identified as High or above; 16 risks were rated as Medium, with the remainder rated as Low.

Closure risks with a final rating of Medium are summarised below, according to general themes:

- Revegetated areas do not achieve cover, diversity, density or productivity criteria, potentially as a result of the following:
  - Ongoing unsuitable weather conditions or bushfire;
  - issues with topsoil quality/quantity;
  - issues with seed quality/quantity; or
  - excessive weed competition, soil erosion/scouring or waterlogging.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- Surface and groundwater quality is not able to achieve water quality criteria, potentially as a result of the following:
    - unidentified or inadequately treated contamination, reactive materials (waste rock) or dispersive soils;
    - excessive soil erosion from rehabilitated catchment and/or stream diversions; and
    - migration of hypersaline groundwater from final void waterbodies.

All other closure risks, including the capacity of the final landform to withstand the effects of floods as well as keep the final voids isolated from floodwaters, were considered to be treatable using measures and approaches that are previously established as effective.

7.2 Risk Treatment Plan

A Risk Assessment and Treatment Plan (Appendix L) has been developed for the risks identified in the risk assessment. The Risk Treatment Plan includes:

- Proposed treatments for each risk
- Reason for the proposed treatment
- Performance measures and constraints
- Reporting and monitoring requirements
- Potential corrective actions
- Resource requirements
- Timing; and
- Responsibility.

7.3 Rehabilitation Trials

Rehabilitation trials provide an established mechanism for derisking progressive rehabilitation and closure outcomes and their delivery over time.

ODP will be progressively rehabilitated, with the early rehabilitated areas acting as rehabilitation trials from which results will be used to inform future rehabilitation. It is anticipated that the western waste rock dump will be the first area that undergoes trial rehabilitation, anticipated to commence in 2026. Initial rehabilitation trials will test a variety of seed mixes applicable to the target post mining land use (low intensity cattle grazing) in different plots to determine which species and treatments are best suited for these landscape elements and soil characteristics. Grazing trials will be implemented to verify grazing on rehabilitated land is comparable to reference areas. Assessment of rehabilitation success would be determined by evaluating performance of cattle growth at reference and rehabilitates areas. Grazing trials will be performed with input from appropriate specialists to ensure rehabilitation trials are on par with typical management of stock (e.g., stocking rates and timings) and will be dynamic to allow for new strategies to be developed as needed.

In addition, ODS3 which is located within lands held by Pembroke offers an opportunity to conduct trials targeted to residual voids, highwall and set-back treatments which will support our position of delivering stable landforms.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

8 Monitoring and Maintenance

8.1 Rehabilitation Monitoring

Pembroke has prepared a Rehabilitation Monitoring Program (RMP; Appendix M) that addresses the following requirements:

- Condition H3 of EA0001976 (Appendix A), whereby the RMP must include:
    - a schedule for gathering baseline data from agreed reference sites;
    - rehabilitation trials to support the agreed rehabilitation outcomes and completion criteria; and
    - with both occurring at a frequency suitable for certification of progressive rehabilitation and the ultimate surrender of the EA.
- Section 3.8 of the PRCP Statutory Guidelines (2024).

Pembroke lodged the RMP with the Department in 2022, prior to commencement of mining activities for Stage 1 mining operations.

The objective of the RMP is to determine whether PRCP milestones and milestone criteria are being achieved, rehabilitation methods are effective, and rehabilitation is trending towards milestone criteria. The RMP details the methodology and criteria by which rehabilitation will be assessed and progressively certified and is summarised below in Table 22.

TABLE 22 REHABILITATION MONITORING PROGRAM FOR ODP MILESTONE CRITERIA

MONITORING ACTIVITY	YEAR 0	YEAR 1 – 5	YEAR 6 – 10	MILESTONE CRITERIA
Safe to Humans, Wildlife and Stock				
Risk Assessment				1. Long-term safety aspects of the mine have risk controls implemented. 2. Risk assessment review indicates that risk ratings are maintained, adequateand equivalent to or lower than previous assessment.
Inspections of Highwalls	Annual	Annual	Bi-annual	3. Certification from an appropriately qualified person that void highwalls are stable and associated controls in place to make safe for humans, wildlife, and stock.
Stable				
Inspection of Highwalls	Annual	Annual	Bi-annual	4. Final void highwalls of 20 degrees or less where located within alluvium and tertiary material (Cenozoic overburden)to achieve a factor of safety of 1.5 or higher; 5. Final void highwall slopes are 45 degrees or less where located within a fault fractured zone, and 55 degrees or less where located away from fault zones. An overall angle of 55 degrees orless is achieved by 50 m high batters at a maximum 65 degrees incorporating 10 m wide intermediate benches.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

MONITORING ACTIVITY	YEAR 0	YEAR 1 – 5	YEAR 6 – 10	MILESTONE CRITERIA
Event inspection	Wet Season	Wet Season	Wet Season	1. No maintenance actions required.
Erosion monitoring - General	Annual	Annual	Bi-annual	1. Absence of active rill/gully erosion over1 m deep.
Erosion monitoring – Ripstone Creek Diversion	Annual	Annual		1. Erosion monitoring meets requirements for Ripstone CreekDiversion five years post-mining.
No Environmental Harm				
Surface water quality monitoring	Wet Season	Wet Season	Wet Season	Receiving water quality monitoring results comply with EA surface water criteria post-mining.
Self-sustaining Post-Mining Land Use				
Topsoil depth	After topsoil spreading	After topsoil spreading		Topsoil is spread to > 200 mm where topsoil stripping has occurred; Amelioration products have been applied to topsoil where appropriate or required.
Ecological monitoring	Annual	Annual	Bi-Annual	Open Woodland Percentage groundcover (including flora, litter and rocks) > 50 %; Species shrub richness > 3 of those recorded at relevant reference sites; Tree species richness > 2 of those recorded at relevant reference sites; Infiltration index and nutrient index score > 29. Grassland Vegetation cover > 50%; Infiltration index score > 35 %; Nutrient cycling index > 33 %. Fauna Habitat > 10 native fauna species observed annually utilising the highwall and void water habitat.
Weed Control	Annual	Annual	Annual	Introduced plant species excluding exotic pasture grasses

8.1.1 Surface Water Monitoring

Over the life of the PRCP, surface water monitoring will occur as part of the following programs:

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

1. To address the requirements of EA0001976 where they relate to surface water management and monitoring
2. To ensure rehabilitated landforms are stable by monitoring sediment levels and water quality in any seepage or stormwater runoff from rehabilitated areas
3. To ensure the water in all water storages, such as cattle watering points, is fit for the designated purpose; and
4. To track water quality and levels in the three residual voids.

Relevant Requirements of EA0001976

Conditions F1 to F40 of EA0001976 (Appendix A) relate directly to the monitoring and management of surface waters, including the specification of mine-affected water (including water from rehabilitated areas) and stormwater release points and water quality requirements (release limits and receiving waters investigation trigger levels).

Surface water monitoring reporting is conducted to ensure that:

- Compliance with the EA throughout progressive rehabilitation and closure
- The relevant water management activities are well documented and understood
- Trigger levels and actions are documented and understood; and
- The relevant management and record keeping occurs to support the surrender of the relevant MLs.

The conditions are applicable until such time as the surrender of the relevant MLs occurs. Further information pertaining to surface water management is available within the following appendices:

- Erosion and Sediment Control Plan (Appendix I).
- Receiving Environment Monitoring Program (Appendix N); and
- Water Management Plan (Appendix O).

These plans outline the detailed practices pertaining to surface water management.

Monitoring Stormwater Runoff from Rehabilitated Areas

RM 7 and RM 8 (Achievement of Stable Condition) both include the requirements that surface waters downstream of rehabilitated areas meets water quality criteria derived from values recorded in the Upper Isaac River Catchment upstream of the project, or the Australia & New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018).

A number of existing monitoring locations are prescribed in the milestones; however, additional locations will be needed as rehabilitation areas become progressively available and integrated with the site drainage network and mine-area sub catchments (refer to the Water Management Plan, which is updated every five years).

Monitoring of PMLU Water Storages

At this stage of planning, there are no requirements to retain any surface water storage features or to construct additional features as part of the PMLU, although it is foreseeable that water points may be considered for stock watering or firefighting. Prior to including any such watering points in the post-mining landscape, use-specific water quality objectives will be provided and a monitoring and water quality schedule will be specified.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Monitoring of Residual Voids

In terms of the residual voids, the VCP (Appendix F) provides additional information on the likely interim and final water quality within the voids, and discusses preliminary objectives and scope for a future monitoring program, such as the collection of time-series water quality data to improve predictions of void water quality and the impacts of trends on any established ecosystems (as discussed in section 6). The VCP is an iterative document.

Summary of all surface water monitoring requirements

Surface water monitoring and reporting shall continue post-closure until it can be demonstrated that the final landform is stable and non-polluting and in keeping with the rehabilitation milestones and definitions set out within the PRCP Schedule (refer section 9). During operations monitoring locations are to be reviewed as part of the annual reporting processes for surface water management and reporting as per EA conditions F1 to F4 to ensure that the locations are adequate for monitoring progressive rehabilitation and closure progression.

In keeping with the established REMP process upstream and downstream monitoring must occur at the following locations outlined in Table 23 and Figure 44below.

TABLE 23 SURFACE WATER MONITORING LOCATIONS

Monitoring Locations ^	Receiving waters location description	Latitude (decimal degree, GDA94) ^	Longitude (decimal degree, GDA94) ^
Upstream monitoring locations			
SW1 (REMP 1)	Isaac River – upstream of Project	-22.1530	148.3284
SW2 (REMP 2)	Isaac River – upstream of North Creek confluence	-22.1686	148.3670
SW3 (REMP 3)/ Deverill Gauge No. 130410A	Isaac River - upstream of RP1 and RP2	-22.1675	148.3823
SW4 (REMP 4)	Ripstone Creek	-22.2629	148.3277
Downstream monitoring locations			
ODC IRGS1	Isaac River - downstream of RP1 and RP2, upstream of Boomerang Creek confluence.	-22.2236	148.4165
ODC IRGS2	Isaac River upstream of Phillips Creek confluence.	-22.3384	148.4722
SW5 (REMP 5)	Isaac River – downstream of RP1, upstream of Boomerang Creek confluence	-22.3308	148.4738

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

SW6 (REMP 6)	Ripstone Creek - downstream of Project, upstream of Boomerang Creek confluence	-22.3125	148.3995
SW7 (REMP 7)	Isaac River – downstream of Boomerang Creek, upstream of Phillips Creek confluence	-22.3453	148.4836
SW8 (REMP 8)	Boomerang Creek - downstream of Ripstone Creek, upstream of Isaac River confluence	-22.3261	148.4558
SW11 (REMP 9)	Isaac River - downstream of Phillips Creek, upstream of Downs Creek confluence	-22.4502	148.5563
SW12 (REMP 10)/ODC IRGS3	Isaac River at Fitzroy Development Road	-22.4197	148.6993

Monitoring is to occur on a monthly basis when there is flow present at each of the monitoring locations. Table 23 outlines the water quality characteristics and limits were nominated prior to operations (i.e. included in the EA) to protect Environmental Values (refer Appendix N). The objectives are based on ANZG (2018) aquatic ecosystem protection levels for Slightly to Moderately Disturbed (SMD) ecosystems, water quality data obtained during site-specific baseline studies and regional limits consistent in nearby operations.

The approach to utilise the ANZG (2018) is in keeping with the National Water Quality Management Strategy (NWQMS, 2018) which sets forward the process for identification of environmental values and determining suitable water quality objectives as per the requirements of the EP Act.

TABLE 24 SURFACE WATER QUALITY LIMITS

Quality characteristic (units)	Limit	Comment on limit
pH	6.5-8.5	Upper Isaac River catchment waters WQO
Electrical Conductivity (µS/cm)	340	95th percentile of upstream data
Total Suspended Solids (TSS) (mg/L)	baseflow: <55	Upper Isaac River catchment waters WQO
Turbidity (NTU)	50	Upper Isaac River catchment waters WQO
Sulphate (mg/L)	25	Upper Isaac River catchment waters WQO
Fluoride (mg/L)	0.2	95th percentile of upstream data
Aluminium - dissolved (µg/L)	55	ANZG 2018
Antimony – dissolved (µg/L)	9	ANZG 2018
Arsenic - dissolved (µg/L)	13	ANZG 2018
Barium – dissolved (µg/L)	93	National Institute for Public Health and the Environment, Netherlands, 2020 (Proposed limit for aquatic organisms)
Boron - dissolved (µg/L)	80	95th percentile of upstream data
Cadmium - dissolved (µg/L)	0.2	ANZG 2018
Chromium - dissolved (µg/L)	1	ANZG 2018
Cobalt - dissolved (µg/L)	1.4	ANZG 2018
Copper - dissolved (µg/L)	1.4	ANZG 2018
Iron - dissolved (µg/L)	310	95th percentile of upstream data
Lead - dissolved (µg/L)	3.4	ANZG 2018

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Manganese - dissolved (µg/L)	480	95th percentile of upstream data
Mercury – dissolved (µg/L)	0.6	ANZG 2018
Molybdenum - dissolved (µg/L)	34	ANZG 2018
Nickel - dissolved (µg/L)	11	ANZG 2018
Selenium - dissolved (µg/L)	5	ANZG 2018
Silver - dissolved (µg/L)	0.05	ANZG 2018
Uranium - dissolved (µg/L)	0.5	ANZG 2018
Vanadium - dissolved (µg/L)	6	ANZG 2018
Zinc - dissolved (µg/L)	8	ANZG 2018
Ammonia (µg/L)	900	ANZG 2018
Nitrate (µg/L)	1,100	For aquatic ecosystem protection, based on ambient Qld WQ Guidelines (2006) for Total Nitrate
Total recoverable hydrocarbons (C6-C9) (µg/L)	20	For aquatic ecosystem protection, based on LOR for GCMS
Total recoverable hydrocarbons (C10-C36) (µg/L)	100	For aquatic ecosystem protection, based on LOR for GCMS
Major ions (mg/L) - Calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate	For interpretation purposes	-
Hardness (mg/L)	For interpretation purposes	-

Notes:

- All metals and metalloids must be measured as 'dissolved' (from analysis of a field filtered sample) and total (unfiltered).
- Major Ions to include calcium, chloride, potassium, magnesium, sodium, bicarbonate, carbonate
- Limits for metals and metalloids apply to dissolved results.
- LOR (limit of reporting) – typical reporting for method stated.
- ICPMS/CV FIMS/GCMS – analytical method required to achieve LOR.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

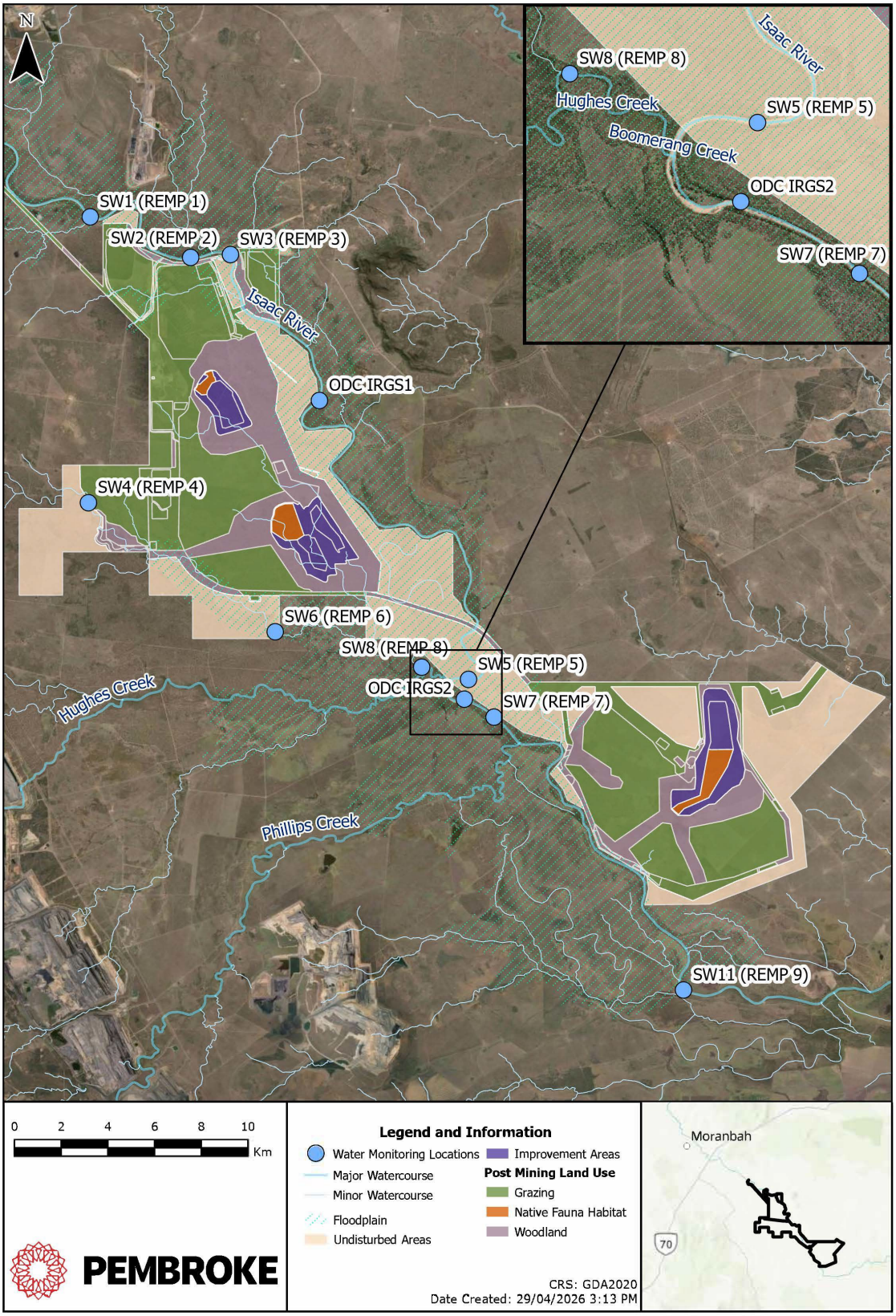


FIGURE 44. SURFACE WATER MONITORING LOCATIONS

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

8.1.2 Groundwater Monitoring

Similarly to surface water, groundwater will also be monitored across the project as a requirement of, or under the guidance of, several different programs:

1. To address the requirements of EA0001976 where they relate to groundwater management and monitoring
2. To ensure rehabilitated landforms are non-polluting by monitoring groundwater quality and levels underlying and down-gradient from rehabilitated areas; and
3. To monitor post-mining groundwater recovery, including the role of residual voids as groundwater sinks.

Relevant Requirements of EA0001976

Conditions E1 to F21 of EA0001976 (Appendix A) set out the requirements for the protection and monitoring of groundwater. The conditions specify the placement and depth of 28 monitoring bores and vibrating wire piezometers (VWB), the monitoring schedule and analytical suite, trigger values for groundwater levels and quality, and what actions Pembroke is required to undertake if the triggers are exceeded. The EA further requires that the following plans be developed and implemented for the protection of groundwater resources and groundwater-dependent ecosystems:

- Groundwater Monitoring Program (E2); and
- Groundwater Dependent Ecosystems and Wetland Monitoring Program (E18).

The implementation of these plans will extend into the closure phase, but both plans will be routinely revised and updated prior.

In regard to closure aspects, Conditions E16 and E17 set out the requirements for removing and decommissioning groundwater bores, including monitoring bores.

Monitoring Groundwater under Rehabilitated Areas

RM 8(Achievement of Stable Condition) both include the requirements that surface waters downstream of rehabilitated areas meets water quality criteria derived from values recorded in the Upper Isaac River Catchment upstream of the project, or the Australia & New Zealand Guidelines for Fresh and Marine Water Quality (ANZG 2018).

A number of existing monitoring locations are prescribed in the milestones; however, additional locations will be needed as rehabilitation areas become progressively available and integrated with the site drainage network and mine-area sub-catchments (refer to the Water Management Plan, which is updated every five years).

Summary of all groundwater monitoring requirements

Groundwater monitoring is to occur in keeping with the EA requirements with the following locations outlined in Figure 45below.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

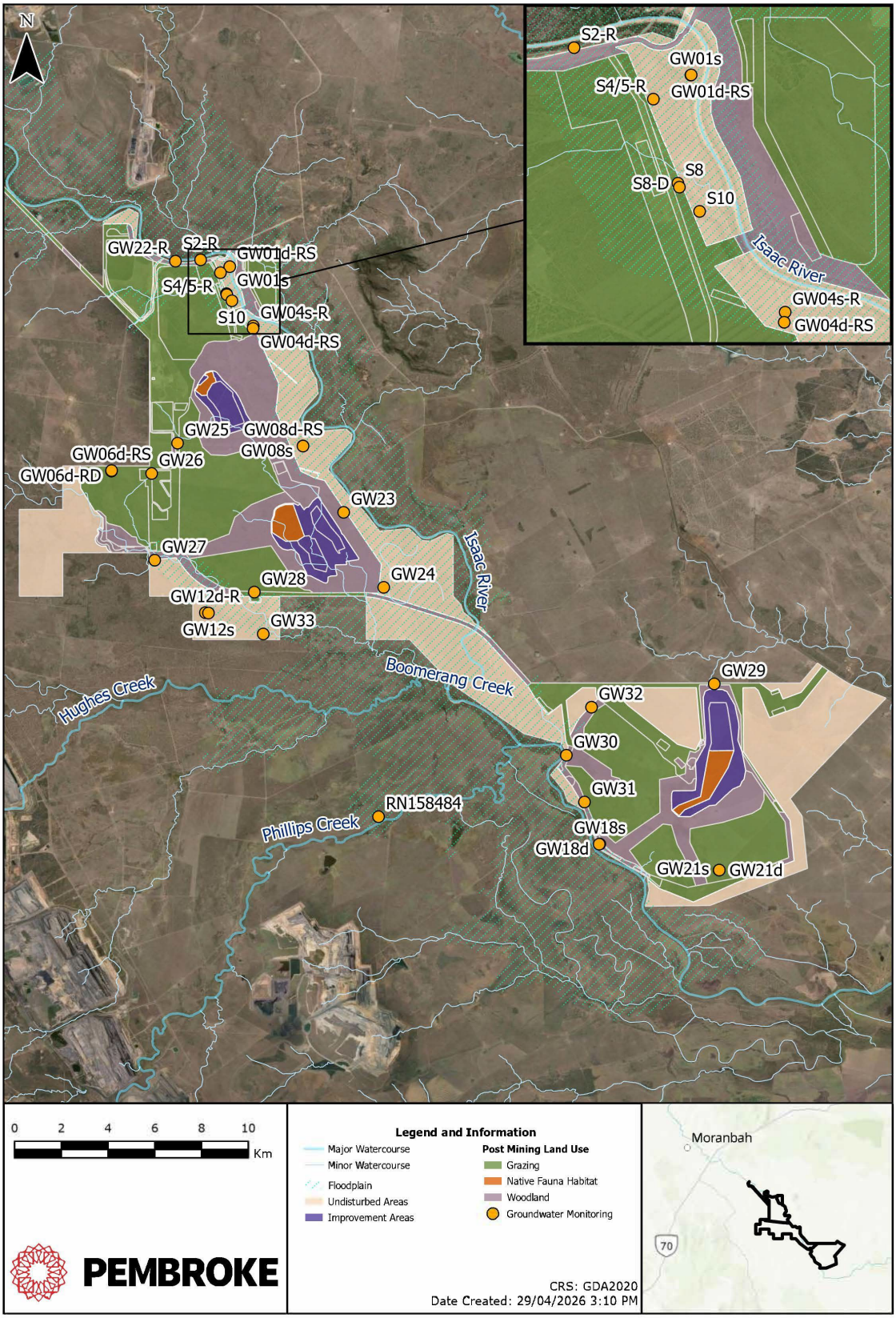


FIGURE 45GROUNDWATER MONITORING LOCATIONS

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

After mine closure, groundwater monitoring will be undertaken on a quarterly basis, in accordance with EA requirements and specialist groundwater advice from an AQP. Samples will be collected at the locations in Table 25by a suitably qualified person and dispatched to a National Association of Testing Authorities (NATA) accredited laboratory. for analysis of physio-chemical characteristics, major ions, total alkalinity, and total and dissolved metals.

TABLE 25 GROUNDWATER MONITORING LOCATIONS

MONITORING POINT	LATITUDE (GDA94)	LONGITUDE (GDA94)
GW01d-R^#	-22.171957	148.381907
GW04s-R#	-22.194713	148.390961
GW04d-R^#	-22.195684	148.390871
GW06d-R^#	-22.25042	148.33649
GW06s-R#	-22.249888	148.336548
GW08d-R^#	-22.240769	148.410068
GW08s	-22.240832	148.410068
S2-R#	-22.16933	148.370725
S4/5-R#	-22.174267	148.378342
S8	-22.182337	148.38066
S8-D#	-22.182714	148.380802
S11	-22.191459	148.381865
GW22-R#	-22.169836	148.361059
GW12d-R^#	-22.304768	148.372548
GW12s	-22.30493	148.373747
GW23	-22.2662755	148.425685
GW24	-22.2950609	148.441069
GW27	-22.2846328	148.353093
GW28	-22.2968869	148.391362
GW21d	-22.403602	148.56977
GW21s	-22.403593	148.569819
GW29	-22.3321256	148.567891
GW31	-22.3774639	148.518191
GW32	-22.341068	148.5209

8.1.3 Soil Assessment

To address the requirements of the EA and section 6.5.2, the RMP (section 3.4) provides a program for characterisation of soils at both rehabilitation and reference sites, using the sediment quality assessment guidelines outlined in Simpson et al. (2005). Samples will be analysed of pH, EC/Salinity, cation exchange capacity (CEC), total organic carbon (TOC), key nutrients and exchangeable sodium (ESP). Assay result s will be compared against applicable criteria and between rehabilitation and reference sites.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

8.1.4 Landform Function Analysis (LFA)

As described in section 3.5 of the RMP (Appendix M), LFA monitoring technique is commonly used to determine landform stability under regular and irregular climatic events. Replicated transects will be used to determine landscape function using LFA techniques described in 'Landscape Function Analysis: Procedures for monitoring and assessing landscapes with species reference to mine sites and rangelands' (Tongway & Hindley, 2004). These assessments determine how resilient the landscape is when presented with possible disturbance, high rainfall events or various climatic conditions.

An LFA assessment will be conducted at each site along permanent transects to obtain averages for each vegetation community to determine the extent of rehabilitation progress toward the prescribed land capability class. Parameters recorded will be those used to calculate nutrient cycling, infiltration and stability, which include:

- Rain splash protection
- Perennial Vegetation Cover
- Litter
- Cryptogram cover
- Crust brokenness
- Soil erosion type and severity
- Deposited materials
- Soil surface roughness
- Surface nature
- Slake test; and
- Texture.

8.1.5 Erosion Monitoring

Erosion data will be collected from a 50 m cross-section along the centre of a Landform Function Analysis (LFA) transect. Erosion will be recorded and provided a rating within 10 m either side of the transect. Each erosion area will be categorised as either: no erosion (0), sheet erosion (1), minor rill erosion (2, < 0.1 m deep), rill erosion (3, < 0.3 m deep), minor gully erosion (4, > 0.3 m < 1 m deep) or gully/major tunnel erosion (5, > 1 m deep). The scores will be averaged for each site. Additional erosion parameters will be measured through the LFA as described in the RMP (Appendix M).

Where erosion rills or gullies greater than 1 m deep remain active, action will be taken to mitigate erosion which may include one or more of the following:

- The addition of contour drainage to disburse and distribute water above the gully
- Reprofiling the gully
- Rock armouring the gully
- Establishment of stabilising vegetation; and
- The installation of sediment fencing.

The final landform will not have >0.3 m active rill or gully erosion as per Rehabilitation Criteria.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

8.1.6 Revegetation Monitoring

Vegetation will be monitored to determine development of a stable vegetation complex applicable to the PMLU of the area. Vegetation methodology is adapted from processes described by Queensland Herbarium (Neldner et al, 2017 and Eyre et al, 2014) and Commonwealth of Australia (2013). Vegetation monitoring will be undertaken at each reference and rehabilitation site.

Transects

To consistently and repeatedly measure the indicators listed below, up to three permanent 50 m transect will be established at each reference and rehabilitation site. Two transects are considered ideal at each site to account for spatial variation within sites; however, some reference sites (and likely some rehabilitation sites) are spatially restricted and thus the appropriate number for each site will depend on size and variability. Transects within each site will not overlap. The transect-based approach is currently considered most suitable as they are easily established, are scientifically robust, simple to execute and readily comparable between rehabilitation and reference sites. A permanent marker will be placed at the 0 m and 50 m mark of the transect to ensure consistent temporal placement. Multiple indicators (see below) will be measured within 2.5 m each side of the transect, and succession of trees and shrubs will be measured within 10 m of the transect. A quadrat will be laid down on alternating sides of the transect to measure ground cover indices (Figure 46).

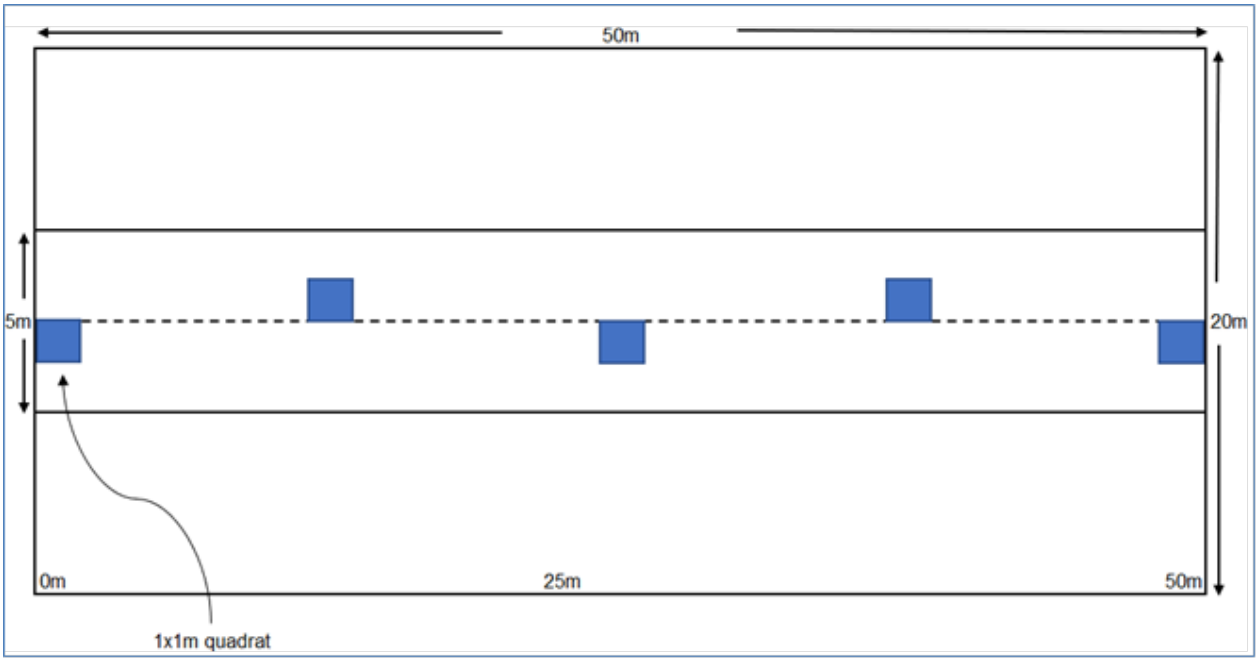


FIGURE46 TRANSECT LAYOUT SHOWING DIMENSIONS AND QUADRATS

Transect Photographs

Photographic monitoring is a useful tool for providing records of site conditions and allows for qualitative comparisons of vegetation progress over time. Photographs will be taken from each end of the transect facing the alignment of the transect. At the 25 m interval, four photographs will be taken, along and at 90 degrees to the alignment of the transect. Photographs showing the general area surrounding the transect will also be taken for additional reference value.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Tree and Shrub Canopy Cover

Tree and shrub canopy cover will be measured for each vegetation layer along the transect using the canopy intercept method. Data will be extrapolated, and a percent cover determined.

Tree and Shrub Species Richness

Tree and shrub species richness will be recorded within 2.5 m of each transect. Species lists will be developed inclusive of endemicity, weed status and form/habit. Weed status will be recorded, including if the species is classified as a weed of national significance (WoNS) or listed as declared, prohibited or restricted invasive plants under the *Biosecurity Act 2014*.

Tree and Shrub Height

A minimum of three tree and shrub individuals from each vegetation strata will be measured for height. Heights will then be averaged for each layer.

Tree and Shrub Stem Count

Each tree within 10 m either side of the transect will be counted with results extrapolated to density per hectare.

Groundcover Richness and Cover

Five 1 m x 1 m quadrats will be placed along the transect on alternating sides, starting on the right side at 0 m. These will be placed at 0 - 1 m, 12 – 13 m, 25 – 26 m, 37 – 38 m and 49 - 50 m. Within these quadrats, groundcover richness and cover will be recorded. Groundcover will include total cover inclusive of rock, bare ground, live vegetation and dead vegetation/litter which will each be separately measured and recorded.

Vegetation Monitoring Analysis

Statistical analysis of indices will be undertaken at each sampling period to determine if reference and rehabilitation after establishment if the data is suitable. Most of the environmental parameters being measured will likely be suitable for a Two-sided T-test. To compare indices over time, an ANOVA will be performed if the data is suitable. If data prohibits the above tests, nonparametric tests will be utilised. Statistical analysis of data will be dynamic and may require fluidity dependent on collected data. If a significant difference ($P \leq 0.05$) between reference and rehabilitation sites is calculated, this may indicate additional measures need to be undertaken to ensure rehabilitation develops towards reference site metrics.

Revegetation Inspections

Site staff will regularly inspect revegetation to ensure that rehabilitation is progressing as expected, as well as confirming erosion and sediment issues are being managed effectively. Inspections will be event based and will occur predominantly after rainfall events that may impact surface water runoff quality and erosion.

8.1.7 BioCondition Assessment

For rehabilitation areas with the PMLU of Nature Conservation – Woodland, a BioCondition assessment will be completed by an appropriately qualified person using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'. This is a quantitative, site-based, and repeatable procedure that evaluates the capacity of a terrestrial ecosystem to maintain biodiversity values at a local scale. The method involves measuring a suite of defined vegetation attributes within a fixed plot such as native plant species richness across different life forms, tree canopy cover, coarse woody debris, and non-native plant cover. These measured attributes are then compared to established benchmarks that

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

in this case are quantitative values representing the expected condition of the same Regional Ecosystem (RE) in its "reference state" (or best-on-offer condition) (Attachment 5 of the PRCP Schedule). The comparison yields a final numeric score (typically out of 100) that reflects the condition state, which is a critical criterion for demonstrating successful rehabilitation and moving towards mine closure sign-off.

8.1.8 Rehabilitation and Closure Maintenance and Management

A range of maintenance and or management activities may be required in rehabilitated areas to facilitate achievement of defined success criteria. Rehabilitation areas should be monitored at an early stage and results compared to success criteria. Areas not trending towards defined success criteria may require maintenance or management activities to facilitate progress towards success criteria. These activities may include one or more of those shown in Table 26.

TABLE 26 MAINTENANCE AND MANAGEMENT ACTIONS

ASPECT	MANAGEMENT ACTION	MAINTENANCE ACTION
Vegetation	Identify vegetation cover and compare with success criteria or natural bare areas. Sample and analyse soil characteristics. Fence off areas to control grazing. Utilise areas to prevent overgrazing, i.e., correct stocking ration/ rotational system depending on maturity of system. Check for dormancy. Vegetation assessment to determine if success criteria (cover, diversity, vitality, etc.) are being progressed towards.	Increase roughness of surface or mulch layer to retain seed. Apply follow-up fertiliser based on soil analysis. Re-seed areas by hand if soil quality is addressed. Re-seed with selected species if diversity is not acceptable. Control and stimulate growth, biomass management and nutrient cycling, with controlled grazing.
Erosion	Monitor extent and severity of erosion and determine causes – do not repair erosion if activity will cause excessive additional disturbance – allow another season to monitor the progression or stabilisation of small-scale erosion. Identify footpath creation during utilisation of area. Identify unwanted concentration of runoff over large areas.	Unstable gullies – reprofile (reduce slope), or backfill with course material, or re-develop as a defined water way (rock lined drain). Reinstate / upgrade water control structures. Dissipate upstream runoff where concentration occurs. Improve vegetation cover.
Sediment Control	Monitor and inspect sediment control structures. Evaluate the need for de-silting in view of stabilisation of rehabilitated areas and buffer capacity of sediment control structures. Inspect sediment control structures after intense rain events and increased erosion.	De-silt sediment control structures where capacity has been compromised – place silt on adjacent areas not subject to erosion, ameliorate and vegetate. Construct new sediment control structures where required. Re-route runoff based on evaluation of drainage pattern after rehabilitation. Repair upstream erosion. Improve vegetation cover.
Water Control Structures (e.g., berms, graded banks)	Identify reduced capacity due to sedimentation. Check for uneven settlement or consolidation causing low areas. Check for long-term stability, e.g., scouring. Check condition of low-lying areas constructed on the top of dumps and other flat areas.	Remove sediment from sediment traps. Repair damage to berms or channels. Revise Surface Water Management Plan evaluating drainage patterns following rehabilitation and construct

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

ASPECT	MANAGEMENT ACTION	MAINTENANCE ACTION
		additional structures where required or remove those no longer required/functional.
Weed Management	Implementation of the Weed and Pest Management Plan (Appendix P). Annual weed inspections and mapping as part of the rehabilitation monitoring program.	Weed control with selected herbicides appropriate to area concerned (e.g., rehabilitated areas vs. firebreaks). Bush encroachment control follow up on previously cleared areas. Thin out undesirable species where it may impact/affect grass cover. Managed grazing, Mowing/slashing periodically as repeatedly doing so removes biomass and reduces vigour in many weed species. Use in combination with herbicides. Physical weed removal.
Feral Animal Management	Identify feral animals that can affectrehabilitated areas.	Implement feral animal control plan. Liaise with neighbouring stakeholders, where needed, to address the cause of the problem.
Fire Management	Maintain firebreaks.	Maintaining firebreaks on boundaries. Vegetation control along firebreaks. Clear firebreaks mechanically where required.
Land Stability	Monitor land stability.	Erosion and sediment control structures are appropriately maintained.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Part B: PRCP Schedule

9 PRCP Schedule

The PRCP Schedule is attached as Appendix Q and provides the details on the following matters, as per the PRCP Guideline:

- The PMLU or NUMA for all land within the relevant resource tenures, including undisturbed land
- Identification of when land becomes available for rehabilitation or improvement
- Rehabilitation or management milestones to achieve the PMLU or NUMA outcomes
- Milestone criteria that demonstrate when each milestone has been completed
- Completion dates for each milestone to be achieved; and
- Any conditions considered necessary or desirable.

9.1 Final Site Design

The purpose of the final site design is to show clearly what the site will look like post-surrender. The final design must be consistent with the LODs (Section 1.4), show all PMLUs, including for undisturbed areas within the resource tenure boundaries, NUMAs and mapped floodplain extent. The design also considers outcomes from the closure risk assessment (Section 7) as well as feedback from DETSI on previous versions of the PRCP.

The final site designs for the ODS and Willunga project domains are shown in Figure 47andFigure 48, respectively.

9.2 Rehabilitation and Improvement Areas

The PRCP Guidelines (DESI 2024) advises the following regarding Rehabilitation areas (RA) and Improvement Areas (IA):

- The purpose of breaking down the site into RA and IA is to allow for progressive rehabilitation and closure of the site over the life of the mine
- Only areas of disturbance need to be included
- PMLUs identified in the final site design must be broken down into RA, which are defined as an area or areas of land in the PMLU to which a rehabilitation milestone for the PMLU relates; and
- NUMAs identified in the final site design must be broken down into IA, which are defined as an area or areas of land in the NUMA to which a management milestone for the NUMA relates.

The proposed rehabilitation and improvement areas are listed in Table 27 and shown in Figure 47(ODS) and Figure 48(Willunga).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

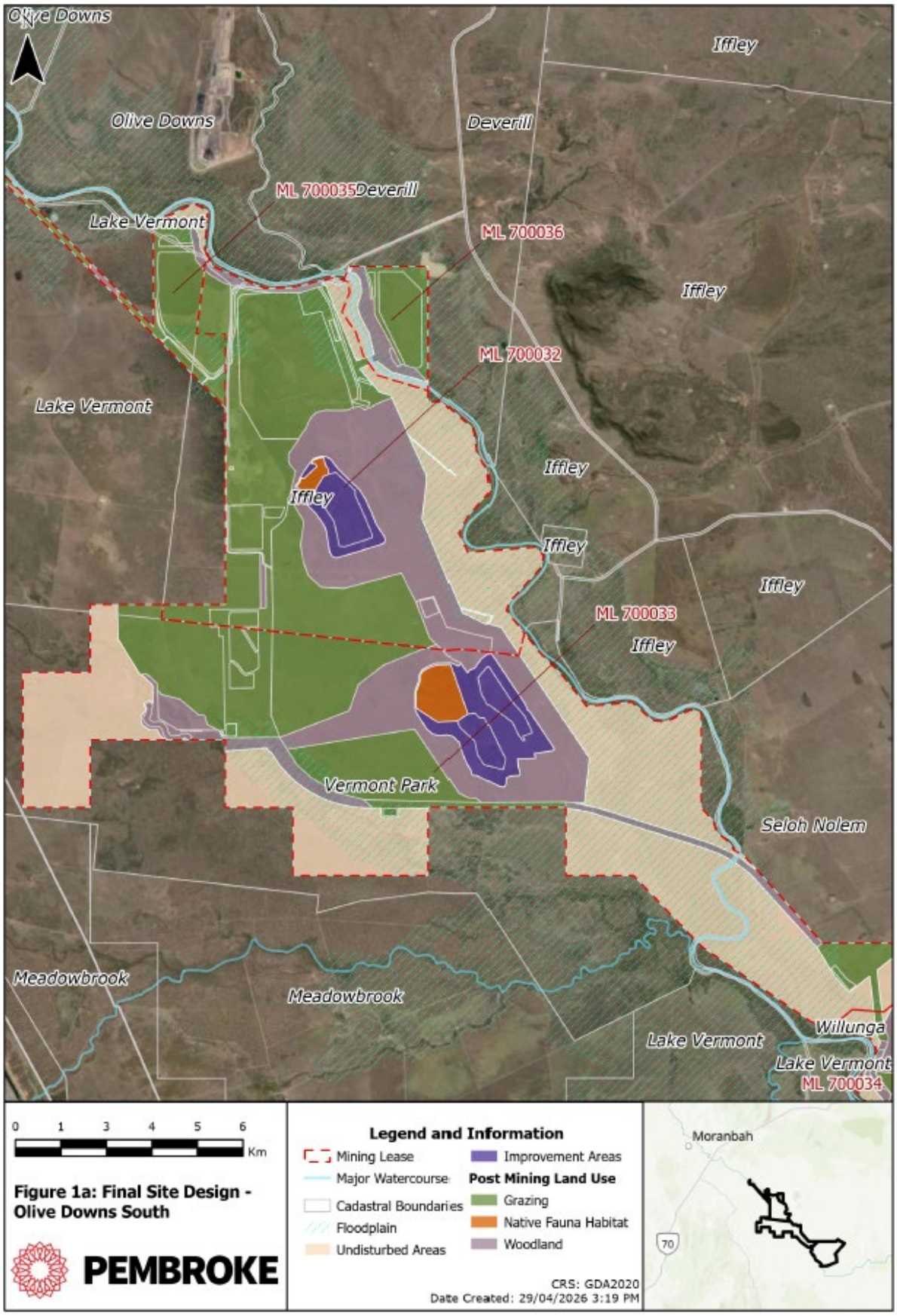


FIGURE 47 FINAL SITE DESIGN FOR ODS PROJECT DOMAIN

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

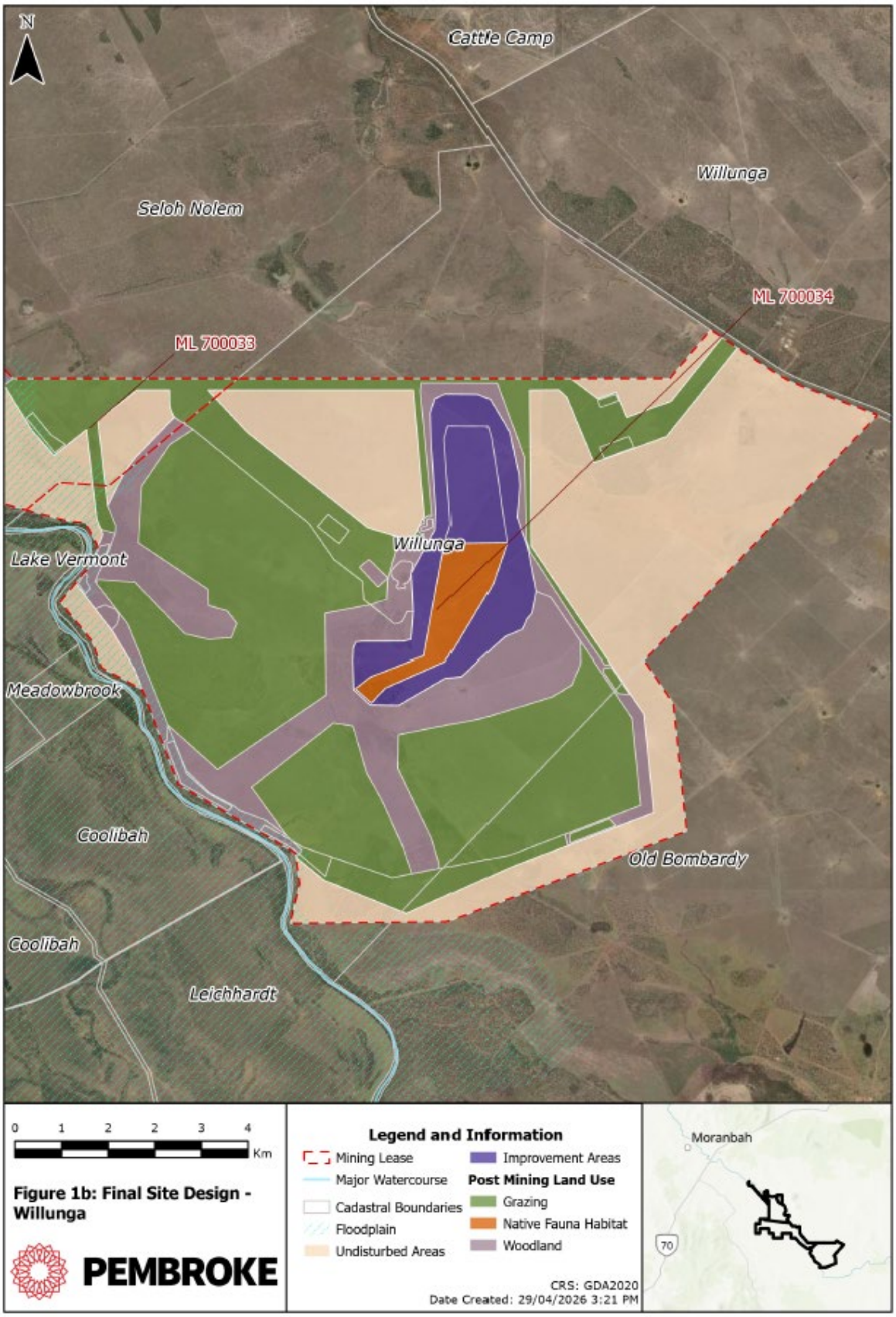


FIGURE48 FINAL SITE DESIGN FOR WILLUNGA PROJECT DOMAIN

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

TABLE 27 PROPOSED REHABILITATION AND IMPROVEMENT AREAS

RA AND IA	RELEVANT ACTIVITIES	TOTAL SIZE (HA)	PMLU/NUMA
RA1	Waste Rock Emplacements	6,764	Agriculture (low intensity cattle grazing)
RA2	Waste Rock Emplacements	3,511	Native vegetation (woodland)
RA3	Infrastructure Areas	2,515	Agriculture (low intensity cattle grazing)
RA4	Infrastructure Areas	1,025	Native vegetation (woodland)
RA5	Water Management Infrastructure	338	Agriculture (low intensity cattle grazing)
RA6	Water Management Infrastructure	94.9	Native vegetation (woodland)
RA7	ILF Cells	100	Agriculture (low intensity cattle grazing)
RA8	Ripstone CreekDiversion	26	Native vegetation (woodland)
RA9	Residual Void Low Walls	370	Fauna Habitat
IA1	Residual Void Lakes	498	Residual Void (Fauna habitat)
IA2	Residual Void Highwalls, Setback Areas and Perimeter Bunds	981	Residual Void (Fauna habitat)

9.3 Rehabilitation and Improvement Timeframes

9.3.1 Published Timeframes

As per ODP Rehabilitation Strategy (Section 3.6), the LODs listed in Section 3.6 include requirements, text, tables and maps relevant to the timing of commencing rehabilitation and improvement activities across ODP. Those requirements or expectations are summarised here (Table 28) as the basis of the commencement and completion dates provided in the PRCP Schedule.

TABLE 28 SUMMARY OF PRIOR-SPECIFIED TIMEFRAMES FOR REHABILITATION AND IMPROVEMENT AREAS/ACTIVITIES

LAND OUTCOME DOCUMENT	SPECIFIED REHABILITATION TIMEFRAMES
EA0001976	No timeframes specified
Rehabilitation Monitoring Program (EAH3) v5	No timeframes specified (Oct 2022 version)
Coordinator General's EIS Assessment Report	Rehabilitation of **625 ha** of waste rock emplacements would commence in **2027** (4.5 years after start of operations) – p 51.
	Rehabilitation of **155 ha** of residual voids would commence in **2072** – p 51.
	Rehabilitation of **430 ha** of infrastructure areas would commence in **2098** – p 51.
	Decommissioning activities would be complete by 2100, with all domains available for rehabilitation, as per the below (p 51-52).:

PMLU/ NUMA	Waste Rock Empl's	Res. Voids	Infrastructure Areas	Water M'gement Infrastructure	ILF Cells	Ripstone Creek Diversion
AREA	9955 ha	1105 ha	4120 ha	570 ha	145 ha	26 ha

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

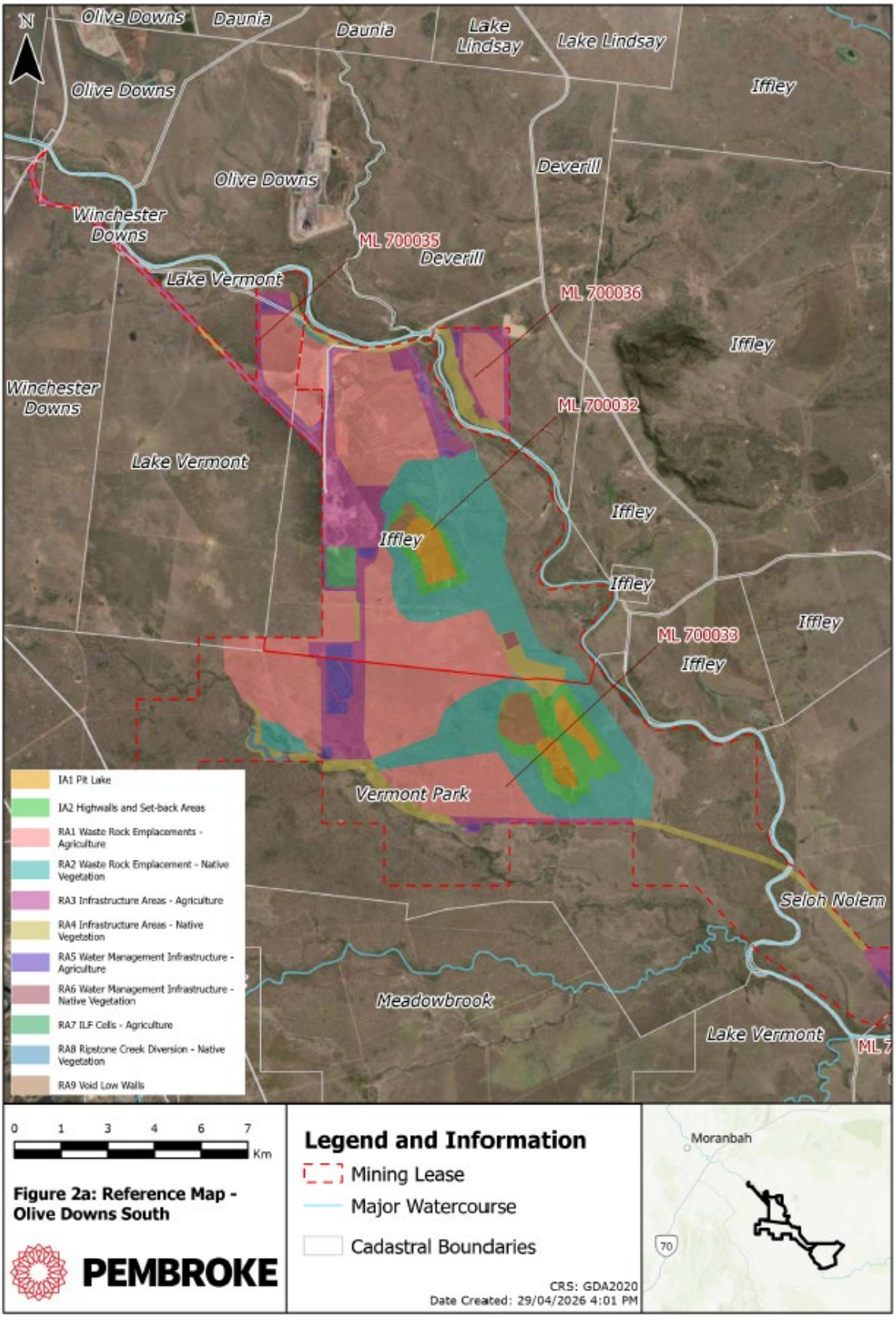


FIGURE49 REHABILITATION AND IMPROVEMENT AREAS - ODS

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

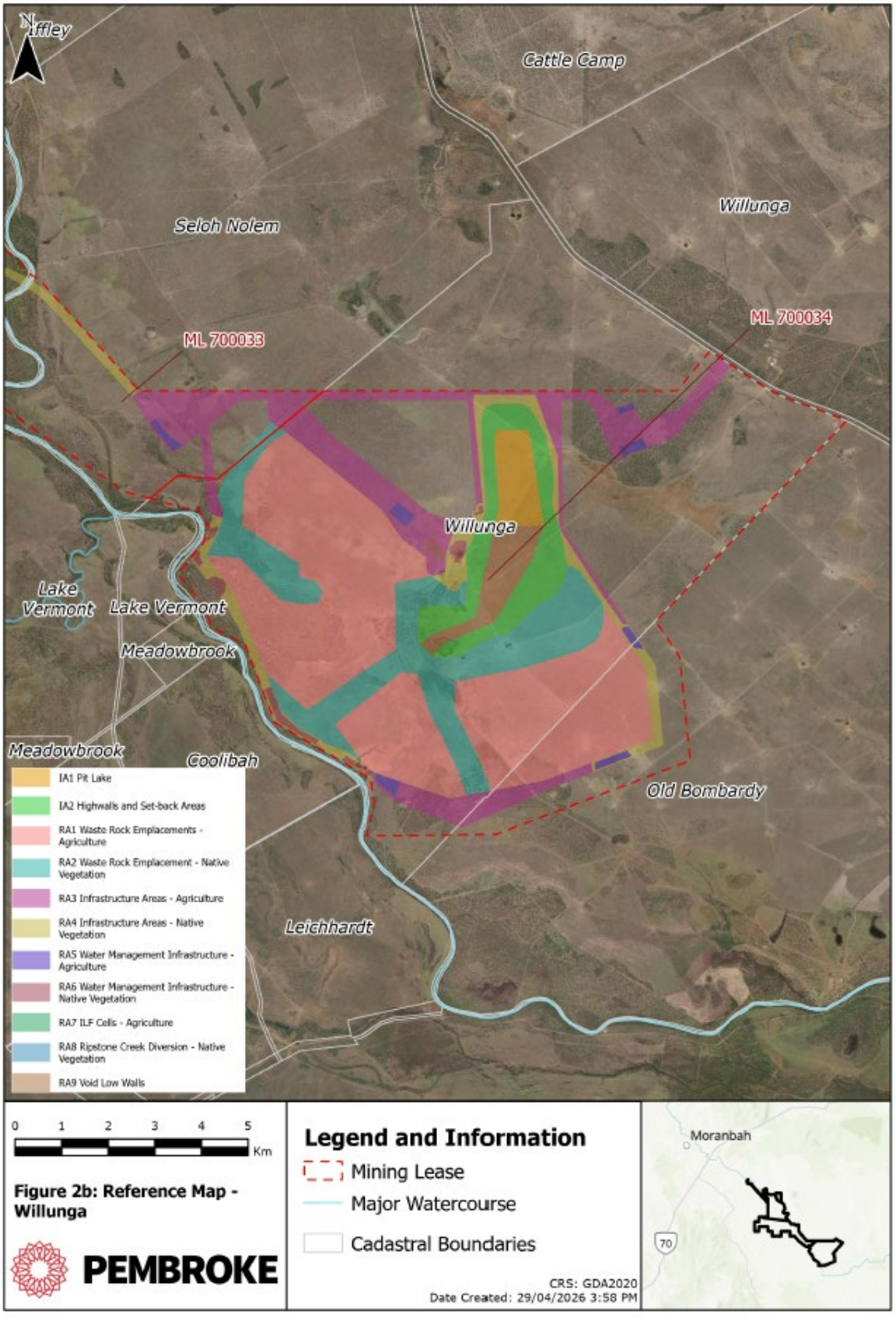


FIGURE50 REHABILITATION AND IMPROVEMENT AREAS – WILLUNGA

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

The EIS Rehabilitation Strategy (Appendix E) includes a map series showing the progressive rehabilitation of the ODS and Willunga project domains over the period 2030 – 2100, which is the date set for completion of all decommissioning activities. These maps have been overlaid with the RA/IA maps to produce the progressive rehabilitation and improvement schedule by area and domain and is the basis for the PRCP Schedule (Appendix Q). The final areas are less than those in the CGR EIS Evaluation Statement apart from the total area of the Final Void domain as a result of including the Zones of Instability and perimeter abandonment bunds (sections 5 and 6) and all other stated requirements have been achieved. There has also been some refinement in the timing of the progressive rehabilitation due to increased resolution in the mining schedule since the EIS.

The total area of rehabilitation and improvement activities shown in comes to 16,222.9 ha, which is within the 16,300 ha estimate that was presented in the EIS. Importantly, only the 607 ha of residual voids (~4 % of the final landform) won't achieve a final land-use of grazing or native vegetation, confirming that the expectations of the Coordinator General that over 90 per cent of the project site would be returned to post mining land uses which are consistent with pre-mining land uses.

9.3.2 Continuous Improvement

As noted in the EIS Rehabilitation Strategy (Appendix E), the Project would be progressively rehabilitated to achieve the rehabilitation objectives established for each domain, and that rehabilitation progress and rehabilitation activities would regularly be re-evaluated and the results would inform future progress schedules and practices. Consistent with this, Pembroke will focus on the following areas of the Schedule with the aim of increasing the rate and improving the outcomes of progressive rehabilitation:

- Infrastructure areas (RA3 and RA4), specifically bringing forward the progressive rehabilitation of roads, laydown areas and stockpiles that are known to be no longer required over the life of the project;
- The Zone of Instability associated with the residual voids (IA2), specifically developing a program of activities that can ensure the area can be safely managed in perpetuity as native woodland; and
- Identifying factors to increase the long-term success of revegetating rehabilitated landforms to restricted pre-mining REs, including endangered REs, to the extent that they can be incorporated into the Revegetation Management Plan (Appendix K).

These improvements will be incorporated into future iterations of the PRCP.

9.4 Milestones and Milestone Criteria

9.4.1 Justification for Milestones

Rehabilitation milestones, improvement milestones and respective milestone criteria presented in the PRCP Schedule (Appendix Q) have been derived from the following sources:

- Relevant conditions within EA0001976 (Appendix A), including the rehabilitation requirements set out in Appendix 3 of the EA, and requirements of any management plans required as conditions of the EA;
- Expectations regarding the rehabilitation or improvement of mined landforms as presented in the CG assessment report of ODP EIS (Appendix B), as well as from the EIS itself (Appendix E);
- Feedback from DETSI on previous draft versions of the PRCP Schedule and consultation associated with the finalisation of the Schedule; and

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

- The closure legal review and closure risk assessment (Section 7).

The PRCP Schedule milestones and criteria are listed in Table 29 below, along with their basis for inclusion in the current Schedule. Additionally, Table 30 lists the rehabilitation requirements from the EA and compares against relevant rehabilitation and management milestones.

9.4.2 Milestone Completion Dates

To determine the completion dates for the milestones in the PRCP schedule, some general guidance regarding the timing of milestones to complete have been developed (Table 31). These rules have been adapted in the PRCP schedule with consideration to overall delivery.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

TABLE 29 REHABILITATION MILESTONES AND ASSOCIATED CRITERIA

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION
RM1	Infrastructure Decommissioning andRemoval	1.1. With the exception of any infrastructure to remain as part of the post-mining land use (PMLU) or where infrastructure is agreed to be retained by the landholder as evidenced by a signed landholder agreement, the following are complete: (a) All services disconnected, terminated and removed. (b) All buildings and associated infrastructure dismantled and removed offsite. (c) All hardstand, concrete areas and roads (bitumen, blue metal, aggregate etc.) removed. (d) All fencing and associated foundations removed. (e) All pipelines drained and removed. (f) All machinery and equipment, not required for rehabilitation works, removed from site. (g) All waste that is not authorised to be disposed of on-site under EA EA0001976 removed and disposed of at a licensed facility. (h) All surface water drainage infrastructure that does not form part of a non-use management area (NUMA) is removed. (i) All drillholes, bores, sediment ponds and sumps decommissioned. (j) Watercourse crossings and culverts removed. (k) All rail infrastructure including lines and rail loud-out facility decommissioned and removed. (l) Electricity transmission line (ETL) infrastructure decommissioned and removed. 1.2. All dams comply with the following: (a) All dams dewatered and desilted. (b) Where present, liners removed; (c) Earthworks to decommission dam walls completed. 1.3. Below-ground infrastructure and services deeper than 0.5m in relation to the final landform surface may be retained provided: (a) All pipelines have been drained and capped or filled with inert material; (b) All below-ground infrastructure to be retained is mapped; (c) The intended PMLU is not compromised; and (d) There is no ongoing risk of environmental harm.	Successful achievement of all milestone criteria will ensure that the RA does not contain unnecessary safety and/or pollution issues, that access arrangements (e.g. tracks, fences and gates) are consistent with long-term planning, and that the achievement of other milestones can proceed unimpeded.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION
		1.4. Independent AQP certifies achievement of RM1.1 to RM1.3 inclusive.	
RM2	Identification, Remediation and Removal of Contaminated Land	2.1. Contaminated land investigations (investigation, remediation and validation) completed by an SQP in accordance with appropriate guidance, including but not limited to, the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (the ASC NEPM) and National Remediation Framework (NRF). 2.2. Contaminated and hazardous material either remediated in-situ or removed/transported to a facility lawfully able to accept the material. 2.3. Contaminated Land Auditor certifies that that no contamination unsuitable for the PMLU remains or is occurring.	Successful achievement of this milestone will ensure all potentially contaminated areas are remediated and are safe, and suitable for the PMLU.
RM3	Landform Development (Reshaping/ Reprofiling)	3.1. Relevant structures developed and/or reshaped, such that they are consistent with the landform closure design report required under PRCP15 to PRCP17, and the remainder of disturbed land is reshaped to approximate original contours. 3.2. All major earthworks (including reshaping, pushing/trimming) are completed in accordance with the landform closure design specification provided by an AQP. 3.3. An "As-Constructed Report" prepared which details and justifies all variations to the design, including an AQP certification that such variations will not affect the design performance. 3.4. Constructed landform achieves geotechnical stability with a Factor of Safety (FoS) ≥1.5 which includes consideration of flood stress. 3.5. Materials prone to spontaneous combustion and dispersion or are susceptible to erosion have been covered and/or appropriately managed. 3.6. Disturbed slopes reshaped to the following gradients: (a) For RA1, RA2, RA3, RA4, RA6, RA6 and RA7, overall final landform not steeper than 12.5% and; (1) for Agriculture (low intensity cattle grazing) PMLUs, never steeper than 15% (2) for Native Vegetation (Woodland) PMLUs, never steeper than 20%. (b) For the watercourse crossings disturbed natural watercourse bed and banks are returned to a profile similar to the pre-disturbance condition. (d) For the Residual Void Low Wall (RA9), not steeper than 20%. 3.7. Erosion and sediment control systems are installed as per the construction design and verified by an AQP. 3.8. Drainage systems effectively convey peak storm flows without overtopping or breaching, as per design, and there is no evidence of gully erosion or excessive rill erosion in drainage lines after significant (1 in 2-year ARI) rainfall events. 3.9. Disturbed natural watercourse bed and banks returned to a natural condition with profile similar to the predisturbance condition.	Successful achievement of this milestone will ensure the final landforms are geotechnically safe and stable.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION
		3.10. Independent AQP certifies achievement of RM3.1 to RM3.19 inclusive. Additional criteria for permanent highwall emplacements/flood protection landforms 3.11. Selective placement of non-erosive materials to ensure landform stability. 3.12. Flood protection, diversion construction, erosion control and associated stability measures are installed and functioning in accordance with the flood risk assessment prepared under PRCP18 and PRCP19, and constructed in accordance with the design plans required under PRCP20, such that the final landform does not cause serious environmental harm. 3.13. Mitigative measures are in place for outer landform slopes that interact with flood waters up to 0.1% AEP and high-energy flow (≥2.5m/s). Additional PMLU specific landform criteria for Native Vegetation (Woodland) and Native Fauna Habitat (RA2, RA4, RA6, RA8 and RA9): 3.14. Where possible habitat features salvaged during clearing (e.g. hollows, boulders, course woody debris) are distributed across the rehabilitation site. Additional criteria for Waste Rock Emplacements (RA1 and RA2): 3.15. The toe of the out-of-pit waste rock emplacements standoff the crest of the final voids by at least 50m. 3.16. All reject and co-disposal material is placed below the expected encapsulated by at least 5m of compacted non-acid forming (NAF) material within the waste rock emplacements, unless an alternative is recommended by an AQP. 3.17. Cover surfaces: (a) are water shedding and free from surface ponding. (b) are erosionally and geotechnically stable and support the PMLU. (c) are effective in mitigating the potential for migration of contaminants to the receiving environment. 3.18. Geotechnical assessment undertaken by an AQP confirms that the landform design will achieve long-term stability, meaning there is a low likelihood of mass failure. Additional criteria for Infrastructure Areas (RA3 and RA4) and ILF Cells (RA7): 3.19. All reject and co-disposal material is removed to the waste rock emplacements and encapsulated as per RM3.16.	
RM4	Surface Preparation	4.1. Growth media health and suitability is assessed and documented by an AQP to confirm if soil is suitable for the PMLU and target vegetation establishment. 4.2. The development of an amelioration and physical treatment plan is completed by an AQP. 4.3. Deep ripping of compacted surfaces, at least 300mm into soil/subsoil profile along contour of slopes.	Successful achievement of this milestone will ensure soils and soil profile are suitable to

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION
		4.4. Topsoil placement to a depth of at least 200mm. 4.5. Ameliorant and physical treatments such as fertiliser, lime, gypsum and/or organic matter are applied as identified in RM4.2. 4.6. Following amelioration as per RM4.2 and RM4.5, representative soil testing of growth media confirms: (a) pH in the range of 6 to 8.5; (b) Electrical Conductivity (saturated extract) ≤1,500µS/cm; (c) Exchangeable sodium percentage (ESP) (%) <6; and. (d) Emerson aggregate class: >3 at 10cm depth. 4.7. The surface and groundwater monitoring is underway (at least one year of sampling undertaken). 4.8. Independent AQP has certified the achievement of RM4.1 to RM4.7 inclusive.	support revegetation outcomes (criteria in RM4(c) are from baseline soil assessments – see section 2.5).
RM5	Revegetation	5.1. Exclusion fencing has been established to prevent stock from grazing newly seeded areas. 5.2. Non-native seed must not be used for the revegetation (except when sterile cover crops are used). 5.3. Independent AQP certifies achievement of RM5.1 to RM5.11 inclusive. Additional criteria for the Agriculture (low intensity cattle grazing) PMLU (RA1, RA3, RA5 and RA7): 5.4. Seeding completed in accordance with the pasture mix listed in Table 1 – Grazing Seed Mix of Appendix 1 – Seed Mix Species List Tables, including at least 4 species of 3P native pasture species, 2 native legumes and 2 native shade tree species. 5.5. Minimum seeding rates of at least 12kg/ha of pasture seed, 3kg/ha of uncoated legume seed and 0.5 kg/ha native shade tree species seed are applied, unless adjusted by an AQP. Additional criteria for the Native Vegetation (Woodland) PMLU (RA2, RA4 and RA6): 5.6. Seeding completed in accordance with the target regional ecosystem (RE) species mix and seeding rates as recommended by an AQP. Species must, as a minimum, include a selection of those listed in Table 2 – Native Vegetation (Woodland) and Fauna Habitat PMLU Seed Mix of Appendix 1 – Seed Mix Species List Tables as appropriate for the target RE. 5.7. Seed mix applied at a rate of 4kg/ha for trees/shrubs and 10kg/ha for grasses unless adjusted by an AQP. Additional criteria for Ripstone Creek diversion (RA8) and watercourse crossings: 5.8. Seeding completed in accordance with the species mix and seeding rates as recommended by an AQP. Species must, as a minimum, include a selection of relevant watercourse species for RE 11.3.25 as listed in Table 2 – Native Vegetation (Woodland) and Fauna Habitat PMLU Seed Mix of Appendix 1 – Seed Mix Species List Tables.	Successful achievement of this milestone will ensure revegetation returns appropriate plant species at rates to achieve a final plant density and diversity that is suitable for the PMLU.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION
		5.9. Supplementary tubestock planting completed at a rate of at least 6 plants per square metre along the banks of the diversion. Additional criteria for the Native Fauna Habitat PMLU (RA9 only): 5.10. Seeding is completed with a selection of native vegetation species listed in Table 2 – Native Vegetation (Woodland) and Fauna Habitat PMLU Seed Mix of Appendix 1 – Seed Mix Species List Tables for RE 11.5.3, excluding tree species.). 5.11. Seed mix applied at a rate of 4kg/ha for trees/shrubs and 10kg/ha for grasses unless adjusted by an AQP.	
RM6	Achievement of Surface Requirements	6.1. Vegetation groundcover ≥50%. 6.2. The presence of weeds is ≤5% of total vegetative groundcover confirmed by an AQP in annual wet season monitoring. Weed management recommendations to be provided in annual reports. 6.3. With respect to erosion: (a) No evidence of erosion classified as 'moderate' or 'severe' as defined by Appendix 2 – Erosion classification framework. (b) Average erosion rate of <5t/ha/y with the maximum erosion rate at any point on the landform of <10t/ha/y. (c) Any erosion present will not compromise the achievement of a PMLU to a stable condition (d) Erosion requiring intervention has been remediated and does not impact achieving the PMLU. 6.4. Corrective action arising from the routine inspections program have been undertaken, including weed control, erosion repair and livestock management. 6.5. Surface water runoff collected from representative areas of rehabilitation when surface flow occur complies with Appendix 3 – Surface water quality limits. 6.6. Independent AQP certifies achievement of RM6.1 to RM6.8 inclusive. Additional PMLU specific criteria for Native Vegetation (Woodland) and Native Fauna Habitat: 6.7. A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual' which determines that the PMLU has reached an overall modified BioCondition score of >20/60 based on attribute benchmarks for the target RE in Appendix 4 – BioCondition Benchmark Criteria. 6.8. Additionally, for Ripstone Creek Diversion (RA8) and watercourse crossings: (a) Erosion and sediment control systems installed on slopes of more than 30% such as sediment control	Successful achievement of this milestone will ensure the final landform is stable and non-polluting, and the vegetation cover is self-sustaining and supports the PMLU.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION
		socks, hydro-mulching, and open weave jute matting; and (b) Watercourses provide for habitat features to support aquatic and terrestrial fauna species recorded in historical site-specific survey.	
RM7	Achievement of postmining land use to a stable condition	Criteria applicable to all RAs: 7.1. Vegetation groundcover ≥75%. 7.2. The landform is free draining and there is no evidence of any of the following: (a) Vegetation die-back localised in low points on the landform surface; or (b) Salt rise as evidenced by salt deposition at the landform surface. 7.3. There is no evidence of saline, metalliferous or acid mine drainage from landforms to the receiving environment. 7.4. Any seepage from rehabilitated landform complies with Appendix 3 – Surface water quality limits. 7.5. No evidence of scouring, overtopping, sedimentation or destabilisation in, or associated with, erosion and sediment control and engineered drainage structures. 7.6. Species used in revegetation remain present and showing evidence of natural recruitment. Evidence of flora recruitment from rehabilitation monitoring data. 7.7. Evidence of generational succession of trees and shrubs (for example presence of reproductive structures, lignotubers). 7.8. Pests do not occur in substantial numbers or visibly affect the development of target species. 7.9. Risk assessment demonstrates risks in the rehabilitation area are similar to risks in neighbouring unmined landscapes subject to a similar PMLU. 7.10. The safety assessment concludes that the risks associated with other potential safety risks are low. The safety assessment identifies ongoing maintenance and risk management requirements for the PMLU. 7.11. The final landform is geotechnically stable and achieves a FoS ≥1.5. 7.12. Final landform survey confirms no built structures, or other infrastructure identified in RM1.1, remain other than those that form part of a landholder agreement. 7.13. The growth media physical, chemical and biological properties does not limit vegetation cover performance or restrict the potential effective depth of rooting. 7.14. Independent AQP certifies achievement of RM7.1 to RM7.29 inclusive. Additional criteria applicable to Residual Void Low Walls (RA9) 7.15. The RA has been surveyed, physically demarcated and assessed as safe to access by an AQP. Additional criteria applicable to Native Vegetation (Woodland) and Native Fauna Habitat PMLUs (RA2, RA4, RA6, RA8 and RA9):	Criteria 1, 2, 3, 4 and 5 have been determined from the Revegetation Plan. Criteria 6, 7, 8 and 9 have been transitioned from EA conditions.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION

7.16. Landscape Function Analysis (LFA)1 monitoring demonstrates that the following characteristics are comparable to relevant rehabilitation monitoring reference sites for a period of at least five years prior to the completion of this milestone:

(a) vegetation cover, types and densities;
(b) nutrient cycling/ accumulation;
(c) infiltration; and,
(d) stability.

7.17. A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual' which determines that the PMLU has reached an overall modified BioCondition score of >40/60 based on the attribute benchmarks for the target RE in

Appendix 4 – BioCondition Benchmark Criteria.

7.18. Native fauna identified on the ML prior to mining are present, or habitat to support those species is developing, and indicators of these species have been recorded. Fauna survey observation provides evidence of native fauna utilisation (i.e., fauna spotting, scats, and tracks recorded).

Additional criteria applicable to Agriculture (low intensity cattle grazing) PMLUs (RA1, RA3, RA5 and RA7):

7.19. At least 4 species of 3P native pasture species and 2 native legumes per hectare. At least 10 native shade trees/ha of at least 2 species over the rehabilitation area.

7.20. Grazing trials, land condition monitoring and/or modelling demonstrates:

(a) Landform is stable when grazed during a variety of climatic conditions
(b) Cattle stocking rate monitoring demonstrates the long-term carrying capacity of a stocking rate of 0.22 adult equivalents per hectare is achievable.
(c) Evidence that stock have access to water sources.
(d) Evidence that the area is safe for cattle access and use.

7.21. A land suitability assessment of rehabilitated grazing areas, with reference to Queensland Government's Guidelines for Agricultural Land Evaluation in Queensland (2015)[2], by an AQP confirms that the areas are Class 3 or better.

Additional criteria applicable to Ripstone Creek Diversion (RA8) and Watercourse Crossings

7.22. Certification from an AQP that the permanent diversion has achieved a stable condition.

7.23. Diversion constructed in accordance with Design Plans prepared under conditions PRCP22 and PRCP23.

7.24. A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION
		7.25. Certification from an AQP that attributes determined through the assessment required by RM7.24 achieve an overall modified BioCondition score of >40/60 based on the published benchmark condition for Regional Ecosystem 11.3.25 (or other target RE as recommended by an AQP). 7.26. Aquatic ecology (i.e., macroinvertebrates, aquatic habitat and riparian vegetation) health monitoring (undertaken annually in December and May) shows a progressive improvement, or is similar to, other ephemeral waterways in the region. 7.27. Diversion has an Index of Diversion Condition (IDC) score >10 as defined in the *Criteria for functioning river landscape units in mining and post-mining landscapes* (ACARP Project number C20017). 7.28. AQP certifies that the diversion and watercourse crossings: (a) incorporate natural features (including geomorphic and vegetation); (b) maintain the pre-disturbance hydrologic characteristics of surface water and groundwater systems for the area; (c) maintain the hydraulic characteristics that are equivalent to other local watercourses and are suitable for the area in which the diversion is located without using artificial structures that require ongoing maintenance; (d) integrate with the area's natural drainage systems; (e) maintain sediment transport and water quality regimes that allow the diversion/watercourse to be selfsustaining, while minimising any impacts to upstream and downstream water quality, geomorphology, or vegetation; (f) maintain equilibrium and functionality in all substrate conditions; (g) are geotechnically and erosionally stable, and, (h) allow the free passage of fish both upstream and downstream in a safe manner. 7.29. Any decommissioned diversion drains will not cause detrimental impact to other PMLUs (e.g. vegetative growth criteria or erosion goals).	
RM8	Achievement of Stable Condition (Surface and Groundwater Quality)	8.1. Surface water quality is monitored monthly during flow at, but not limited to, downstream locations specified in Appendix 6 – Surface water monitoring locations, for all quality characteristics listed in Appendix 3 – Surface water quality limits, for a minimum of 5 consecutive years. 8.2. The water quality of surface water monitored under RM8.1 must not exceed the limits specified in Appendix 3 – Surface water quality limits within the five-year period immediately prior to achievement of this milestone.	Establish agriculture (low intensity cattle grazing) land use. Criteria a - d have been determined from the Revegetation Plan.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION
		8.3. If the surface water quality exceeds criteria **RM8.2**, the applicable upstream location must be compared to the downstream location result; and quality result measured at a downstream location must be equal to or less than the quality result measured at the applicable upstream location[3]. 8.4. For a minimum of 5 consecutive years, groundwater must be monitored quarterly at, but not limited to, the monitoring locations specified in **Appendix 7 – Groundwater monitoring bores**, for all quality characteristics listed in **Appendix 8 – Groundwater quality limits** and the water level (mAHD) listed in **Appendix 7 – Groundwater monitoring bores**. 8.5. Groundwater quality results must not exceed the limits in **Appendix 8 – Groundwater quality limits**, for 3 consecutive sampling events within the five-year period immediately prior to surrender. 8.6. Independent AQP certifies achievement of **RM8.1** to **RM8.5** inclusive.	Criteria have been transitioned from EA conditions.
MM1	Achievement of final landform design	1.1. All Infrastructure and services removed from the NUMA extents. 1.2. The final design must be completed by an AQP based on the latest flood modelling and materials data prior to construction. 1.3. NUMA landforms must: a) prevent surface or seepage flow of floodwater into the void; b) be geotechnically stable when floodwater is against the creek-side batter; and, c) not be constructed with dispersive material. 1.4. Materials prone to spontaneous combustion have been covered and/or appropriately managed. 1.5. Basement coal has been removed from the floor of the open cut pits. 1.6. Void landform slopes achieve an overall angle of ≤55 degrees and ≤65 degree batter angle between benches. 1.7. Void landform batters and benches achieve the following: a) ≤50m high batters; b) ≤10m wide intermediate benches; and 1.8. The pit walls achieve a FOS ≥1.5 within the NUMA extents, as certified by an AQP. 1.9. Residual voids will not overtop in events up to and including a 0.1% AEP rainfall event. 1.10. The final landform has been constructed in accordance with the closure landform design report (**PRCP15** to **PRCP17**) and final landform flood risk assessment (**PRCP18** to **PRCP20**). 1.11. Residual voids are not subject to inundation from floodwaters up to and including the probable maximum flood (PMF) event as confirmed through flood modelling completed by an AQP. 1.12. Groundwater and void lake modelling/monitoring confirms that the voids act as the sink and saline water will be contained within the voids.	Criteria have been transitioned from EA conditions with the study brought forward and included within this plan, as per PRCP Guideline requirements.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION
MM2	Achievement of safety requirements	2.1. Competent safety bund or equivalent landform in place to prevent human and livestock access to the residual void, whilst allowing fauna usage. 2.2. Bunds established under MM2.1 do not restrict native fauna access. 2.3. A minimum distance of 50m is to be designed between the residual void low-wall crest within the NUMA and the safety bund or equivalent landform in MM2.1. 2.4. Fencing erected, where required to prevent human and livestock access to the residual void, whilst allowing fauna usage, around the perimeter of the safety bund. 2.5. Fencing established under MM2.4 does not restrict fauna access along the low wall and is constructed to the following specifications: a) No barbed wire top strand. b) Fencing is highly visible to prevent animal injury. c) Bottom gap of any fencing is ≥300mm above ground to enable wildlife passage. 2.6. The safety bund and flood levee are constructed from non-weathered, non-dispersive, non-acid forming (NAF) and low salinity material in accordance with engineering requirements. 2.7. The safety bund is in accordance with engineering requirements including: a) a minimum 2m in height; b) a minimum of 4m base width; and c) 1 (V) in 3 (H) batters. 2.8. Safety signage (designed and installed in accordance with Australian standard) is erected at 100m intervals along the fence.	Criteria have been transitioned from EA conditions.
MM3	Establishment of Interim Use (Fauna Habitat)	3.1. Highwalls will not be accessible; 3.2. Aerial seeding completed of void walls, safety setback, and perimeter bund in accordance with the target RE species mix and seeding rates as recommended by an AQP. Species must, as a minimum, include a selection of those listed in Table 2 – Native Vegetation (Woodland) and Fauna Habitat PMLU Seed Mix of Appendix 1 – Seed Mix Species List Tables as appropriate for the target RE. 3.3. Seed mix applied at a rate of 4kg/ha for trees/shrubs and 10kg/ha for grasses unless adjusted by an AQP. 3.4. Completed topsoiling and planting of fringing and riparian vegetation native to the area, and placement of habitat structures such as logs. 3.5. Safety assessment completed by an AQP which: a) concludes that the risks associated with other potential safety risks are low.	Criteria have been transitioned from EA conditions.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

RM/IM#	MILESTONE	MILESTONE CRITERIA	JUSTIFICATION
		b) identifies ongoing maintenance and risk management requirements for the interim use of Fauna Habitat, and adjacent PMLUs. 3.6. Sustainable fauna usage (e.g. Stripe- faced Dunnart, Hoary Wattled Bat and Australian Grey Teal) of the residual voids is demonstrated through surveys undertaken by an AQP in accordance with appropriate methods (including bat detectors) and documented. 3.7. The presence of weeds is ≤5% of total vegetative groundcover confirmed by an AQP in annual wet season monitoring. Weed management recommendations to be provided in annual reports. 3.8. No restricted matter (plants) as defined in the *Biosecurity Act 2014* or Weeds of National Significance are present. 3.9. Pests do not occur in substantial numbers.	
MM4	Achievement of sufficient improvement	4.1. Appropriate safety infrastructure at the geotechnical set-back distance has been installed to prevent access to the NUMA for humans and livestock. 4.2. The NUMA is safe to humans, livestock and wildlife. 4.3. The NUMA will not present an unacceptable risk of environmental harm. 4.4. The water level and quality in the void do not and will not cause environmental harm to the receiving environment, as demonstrated by groundwater level, surface water and groundwater quality monitoring and modelling. 4.5. An AQP demonstrates with water quality, water level and modelling data, that the residual voids act as groundwater sinks post-closure with no water from the residual voids migrating off lease or to GDEs. 4.6. NUMA retains flood immunity, supported by flood modelling re-run at end of life and calibrated against the final landform. 4.7. Erosion of the landform within the NUMA area will not negatively impact on the stability of any adjacent rehabilitation areas, or their ability to sustain their PMLU. 4.8. Independent AQP certifies achievement of MM1.1 to MM4.7 inclusive.	Criteria have been transitioned from EA conditions.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

TABLE 30 EA REHABILITATION CRITERIA, WITH RELEVANT MILESTONES

CLOSURE ASPECT/RISK	CLOSURE OBJECTIVES	DOMAIN	COMPLETION CRITERIA	APPLICABLE REHABILITATION OR MANAGEMENT MILESTONE
Geotechnical instability	Final landforms are geotechnically stable and safe.	Waste rock emplace-ments	Final landforms are designed and constructed to the following specifications: • Waste rock emplacement final landform slopes are approximately 7 degrees (1V:8H) or lower. • The toe of out-of-pit waste rock emplacements standoff the crest of the residual voids by at least 50 metres (m). • Materials prone to spontaneous combustion have been covered and/or appropriately managed. The geotechnical assessment concludes the waste rock emplacement final landforms are stable and safe.	RM3 Landform development (reshaping and reprofiling) The final landform design for the progressive rehabilitation area meets prescribed criteria and relevant benchmarks, addresses flooding and erosion risks, and is approved. All earthworks completed to final landform design.A geotechnical assessment concludes the final landforms are safe and stable, and achieved a factor of safety of ≥ 1.5. Materials prone to spontaneous combustion and dispersion or are susceptible to erosion have been covered and/or appropriately managed. For RA1 and RA2 (Waste rock emplacements): (i) All waste rock emplacement final landform slopes are equal to or less than seven (7) degrees (1V:8H); and (ii) The toe of the out-of-pit waste rock emplacements standoff the crest of the final voids by at least 50 metres (m).

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

CLOSURE ASPECT/RISK	CLOSURE OBJECTIVES	DOMAIN	COMPLETION CRITERIA	APPLICABLE REHABILITATION OR MANAGEMENT MILESTONE
		Residual voids	Residual void final landforms are designed and constructed to the following specifications: • Final void highwalls slopes are 20° or lower where located within alluvium and tertiary clays (known as the Cenozoic overburden) to achieve a factor of safety of 1.5. • Final void highwall slopes are 45° or lower where located within a fault fractured zone, and 55° where they are located away from fault zones. An overall angle of 55° is achieved by 50m high batters at 65° incorporating 10m wide intermediate benches. • Low wall slopes are stable. • The toe of out-of-pit waste rock emplacements standoff the crest of the residual voids by at least 50m. • Perimeter bunding formed and security fencing installed. The geotechnical assessment concludes the final void final landforms are stable and safe.	RM3 Landform development (reshaping and reprofiling) For RA1 and RA2 (Waste rock emplacements): (ii) The toe of the out-of-pit waste rock emplacements standoff the crest of the final voids by at least 50 metres (m). MM1 Achievement of final landform design All earthworks completed to final landform design. RM3(e) Final void highwall slopes are 20 degrees or lower where located within alluvium and tertiary clays (Cenozoic overburden). Final void highwall slopes are 45 degrees or lower where located within a fault fractured zone, and 55 degrees where they are located away from fault zones. An overall angle of 55 degrees or less is achieved including: (i) 50 m high or less batters; (ii) Intermediate benches 10 m wide; and (iii) 65 degree maximum batter angle between benches. Final voids must comply with Attachment 1 - Final void design. A geotechnical assessment concludes the final landforms are safe and stable, and achieved a factor of safety of ≥ 1.5. Highwalls will not be accessible.
	Retained management infrastructure is appropriately designed and in a safe and operable state.	Water management infrastructure	A geotechnical assessment concludes that the retained water management infrastructure is stable and safe and in an operable state.	RM3 Landform development (reshaping and reprofiling) A geotechnical assessment concludes the final landforms are safe and stable, and achieved a factor of safety of ≥ 1.5. RM3(c) Erosion and sediment control systems are installed as per the construction design and verified by an appropriately qualified person (AQP). For RA5 and RA6 (Water management infrastructure), batter slopes are to be no greater than 1 (H):4 (V).
Contamination	Potentially contaminated areas are remediated and are safe.	All	The contaminated land assessment concludes that the domain site is suitable for the proposed post-mining land use, consistent with the requirements of Chapter 7, Part 8 of the EP Act, subordinate legislation and NEPM.	RM2 Identification, Remediation and Removal of Contaminated Land Contaminated land assessment completed by an SQP indicates that no contamination unsuitable for the post-mining land use remains or is occurring. If required, a site investigation report including a site suitability

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

CLOSURE ASPECT/RISK	CLOSURE OBJECTIVES	DOMAIN	COMPLETION CRITERIA	APPLICABLE REHABILITATION OR MANAGEMENT MILESTONE
			Evidence that all waste and hazardous material has been removed.	statement must be prepared and submitted in accordance with the provisions of Chapter 7, Part 8 of the EP Act. A site suitability statement from a SQP confirms the uses or activities for which the land is suitable, align to the PMLU/long-term land use.
Unsafe areas/features	Other potential safety risks to humans and fauna (e.g. falls from height) are identified and appropriately addressed so the site is safe.	All	The safety assessment concludes that the risks associated with other potential safety risks are low. The safety assessment identifies ongoing maintenance and risk management requirements for the post-mining land use.	RM7 Achievement of post-mining land use to a stable condition Risk assessment demonstrates risks in the rehabilitation area are similar to risks in neighbouring unmined landscapes subject to a similar PMLU. The safety assessment concludes that the risks associated with other potential safety risks are low. The safety assessment identifies ongoing maintenance and risk management requirements for the post-mining land use.
Cause environmental harm or pollution	Runoff and seepage from rehabilitated areas are a low risk of causing environmental harm.	All	Receiving water quality monitoring results comply with the Environmental Authority surface and groundwater quality criteria, for a period of at least five years post-mining. The environmental risk assessment concludes that there is a low risk of environmental harm.	RM8 Achievement of stable condition (Surface and groundwater quality) Surface water quality results monitored monthly during flow at, but not limited to, downstream locations specified in Attachment 6 - Surface water monitoring locations, must not exceed the limits in Attachment 7 - Surface water quality limits, for a minimum of five (5) consecutive years. Groundwater quality results monitored quarterly at, but not limited to, bore locations specified in Attachment 8 - Groundwater monitoring bores, must not exceed the limits in Attachment 9 - Groundwater quality limits, for a minimum of five (5) consecutive years.
	Residual voids are isolated from the Isaac River. Residual voids are a low risk of causing environmental harm.	Residual voids	The flood assessment concludes that the residual voids are isolated from all flood events, up to and including a PMF event. The groundwater assessment concludes that the residual voids are acting as groundwater sinks, preventing the migration of potentially saline water into adjacent aquifers and watercourses. The final void balance concludes that the final void water bodies would equilibrate well below the point at which they would spill to the surrounding environment.	MM4 Achievement of sufficient improvement Residual voids are protected from possible flood events. Groundwater and void lake modelling/monitoring confirms that the voids act as the sink and that saline water will be contained within the void. A risk assessment of the residual void landforms by an SQP concludes there is a low risk of environmental harm. RM8 Achievement of stable condition (Surface and groundwater quality) Surface water quality results monitored monthly during flow at, but not limited to, downstream locations specified in Attachment 6 - Surface water monitoring locations, must not exceed the limits in Attachment 7 - Surface water quality limits, for a minimum of five (5) consecutive years.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

CLOSURE ASPECT/RISK	CLOSURE OBJECTIVES	DOMAIN	COMPLETION CRITERIA	APPLICABLE REHABILITATION OR MANAGEMENT MILESTONE
			Receiving water quality monitoring results comply with Environmental Authority surface and groundwater quality criteria, for a period of at least five years post-mining. The environmental risk assessment concludes that there is a low risk of environmental harm.	Groundwater quality results monitored quarterly at, but not limited to, bore locations specified in Attachment 8 - Groundwater monitoring bores, must not exceed the limits in Attachment 9 - Groundwater quality limits, for a minimum of five (5) consecutive years. MM5(g)
	Rehabilitated landform achieves appropriate erosion rates.	All	Erosion monitoring data demonstrates the following for five years post-mining: • Limited erosion (presence of sheets, rills and gullies) observed. • Soil loss rates are comparable to relevant rehabilitation monitoring reference sites. • Evidence that the landform is stable under regular and irregular climatic events. • Erosion maintenance requirements are comparable to relevant rehabilitation monitoring reference sites.	RM3 Landform development (reshaping and reprofiling) Erosion and sediment control systems are installed as per the construction design and verified by an appropriately qualified person (AQP).An AQP has certified that all watercourses being retained in the landform continue to achieve the following: (i) Incorporate natural features (including geomorphic and vegetation); (ii) Maintain the pre-existing hydrologic characteristics of surface water and groundwater systems for the area; (iii) Maintain the hydraulic characteristics of the local watercourse; and (iv) Maintain sediment transport and water quality regimes that minimise any impacts to upstream and downstream water quality, geomorphology, or vegetation. RM6 Achievement of surface requirements, RM7 Achievement of post-mining land use to a stable condition No evidence of erosion classified as 'moderate' or 'severe' as defined by Attachment 3 - Erosion classification framework. Average erosion rate of <5 t/ha/y with the maximum erosion rate at any point on the landform of <10 t/ha/y. Corrective action arising from the routine inspections program have been undertaken to include weed control, erosion repair, livestock management. No areas of active rill or gully erosion. [Ripstone Creek diversion] Absence of active rill/gully erosion >0.3 m.
	Ripstone Creek diversion is appropriately designed and constructed.	Ripstone Creek diversion	The Ripstone Creek diversion has been constructed and rehabilitated in accordance with the Detailed Design Plan	RM7 Achievement of post-mining land use to a stable condition Diversion constructed in accordance with design plans. For all rehabilitated watercourses:

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

CLOSURE ASPECT/RISK	CLOSURE OBJECTIVES	DOMAIN	COMPLETION CRITERIA	APPLICABLE REHABILITATION OR MANAGEMENT MILESTONE
				(i) Erosion and sediment control systems installed on slopes of more than 30% such as sediment control socks, hydro-mulching, and open weave jute matting; and (ii) Watercourses provide for habitat features to support aquatic and terrestrial fauna species recorded in historical site-specific survey. Certification from an AQP that the permanent diversion has achieved a stable condition .
PMLU	Establish agriculture (low intensity cattle grazing) land use.	Waste rock emplace-ments, Infrastructure areas, Water management infrastructure , ILF cells.	LFA monitoring demonstrates (for a period of at least five years post-mining): • Physical, chemical and biological properties of the growth media are similar to relevant rehabilitation monitoring reference sites. • Vegetation consistent with grass species suitable for grazing (e.g. including Buffel Grass (*Cenchrus ciliaris*), Wiregrass (*Aristida* sp.) and Kangaroo Grass (*Themeda triandra*) comparable to relevant rehabilitation monitoring reference sites. • Vegetation cover and densities are comparable to relevant rehabilitation monitoring reference sites. • Weed diversity and abundance is comparable to relevant rehabilitation monitoring reference sites. • Pests do not occur in substantial numbers or visibly affect the development of pasture grass species. • Evidence of generational succession of trees and shrubs (for example presence of reproductive structures, lignotubers).	RM7 Achievement of post-mining land use to a stable condition LFA monitoring demonstrates (for a period of at least five years post-mining): (i) Physical, chemical and biological properties of the growth media are similar to relevant rehabilitation monitoring reference sites. (ii) Vegetation consistent with grass species suitable for grazing (e.g. including Buffel Grass (Cenchrus ciliaris), Wiregrass (Aristida sp.) and Kangaroo Grass (Themeda triandra) comparable to relevant rehabilitation monitoring reference sites. (iii) Vegetation cover and densities are comparable to relevant rehabilitation monitoring reference sites. (iv) Weed diversity and abundance is comparable to relevant rehabilitation monitoring reference sites. (v) Pests do not occur in substantial numbers or visibly affect the development of pasture grass species. (vi) Evidence of generational succession of trees and shrubs (for example presence of reproductive structures, lignotubers).
			Grazing trials, land condition monitoring and/or modelling demonstrates: • Landform is stable when grazed during a variety of climatic conditions • Cattle stocking rate monitoring demonstrates the long-term carrying capacity of a stocking rate of 0.22 adult equivalents per hectare is achievable.	Grazing trials, land condition monitoring and/or modelling demonstrates: (i) Landform is stable when grazed during a variety of climatic conditions (ii) Cattle stocking rate monitoring demonstrates the long-term carrying capacity of a stocking rate of 0.22 adult equivalents per hectare is achievable. (iii) Evidence that stock have access to water sources. (iv) Evidence that the area is safe for cattle access and use.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

CLOSURE ASPECT/RISK	CLOSURE OBJECTIVES	DOMAIN	COMPLETION CRITERIA	APPLICABLE REHABILITATION OR MANAGEMENT MILESTONE
			• Evidence that stock have access to water sources. • Evidence that the area is safe for cattle access and use.	A land suitability assessment of rehabilitated grazing areas, with reference to Queensland Government's Guidelines for Agricultural Land Evaluation in Queensland (2015), by an appropriately qualified person confirms that the areas are Class3 or better.
	Establish self-sustaining nature conservation (woodland) land use.	Waste rock emplace-ments, Infrastructure areas, Water management infrastructure, Ripstone Creek diversion.	LFA monitoring demonstrates that the following characteristics are comparable to relevant rehabilitation monitoring reference sites, for a period of at least five years post-mining: • vegetation cover, types and densities • nutrient cycling/ accumulation • infiltration • stability Woodland vegetation contains a species diversity comparable to relevant rehabilitation monitoring reference sites (e.g. Poplar Box [*Eucalyptus populnea*] +/- Silver-leaved Ironbark [*E. melanophloia*] +/- Clarkson's Bloodwood [*Corymbia clarksoniana*]). Evidence of generational succession of trees and shrubs (for example presence of reproductive structures, lignotubers). Weed diversity and abundance is comparable to relevant rehabilitation monitoring reference sites. No restrictive matter (plants) as prescribed by the *Biosecurity Act 2014* are present. Pests do not occur in substantial numbers or visibly affect the development of native plant species.	RM7 Achievement of post-mining land use to a stable condition Weed (introduced plant species excluding exotic pasture grasses) diversity and abundance is comparable to relevant rehabilitation monitoring reference sites. Weed management recommendations to be provided in annual reports. LFA monitoring demonstrates that the following characteristics are comparable to relevant rehabilitation monitoring reference sites, for a period of at least five years post-mining: (i) vegetation cover, types and densities (ii) nutrient cycling/ accumulation (iii) infiltration (iv) stability Woodland vegetation contains a species diversity comparable to relevant rehabilitation monitoring reference sites (e.g. Poplar Box [Eucalyptus populnea] +/- Silver-leaved Ironbark [E. melanophloia] +/- Clarkson's Bloodwood [Corymbia clarksoniana]). Evidence of generational succession of trees and shrubs (for example presence of reproductive structures, lignotubers). Pests do not occur in substantial numbers or visibly affect the development of native plant species.
	Establish self-sustaining (fauna habitat) land use.	Residual voids (low walls)	LFA monitoring demonstrates: • Sustainable fauna usage (e.g. Stripe- faced Dunnart, Hoary Wattled Bat and Australian Grey Teal) of the residual voids. • Weed diversity and abundance is comparable to relevant rehabilitation monitoring reference sites. • No restrictive matter (plants) as prescribed by the *Biosecurity Act 2014* are present.	RM7 Achievement of post-mining land use to a stable condition For suitable low walls (slope < 11°; safe to access), LFA monitoring demonstrates: (i) Sustainable fauna usage (e.g. Stripe- faced Dunnart, Hoary Wattled Bat and Australian Grey Teal) of the residual voids. (ii) Weed diversity and abundance is comparable to relevant rehabilitation monitoring reference sites.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

CLOSURE ASPECT/RISK	CLOSURE OBJECTIVES	DOMAIN	COMPLETION CRITERIA	APPLICABLE REHABILITATION OR MANAGEMENT MILESTONE
			• Pests do not occur in substantial numbers.	(ii) No restrictive matter (plants) as prescribed by the Biosecurity Act 2014 are present. (iv) Pests do not occur in substantial numbers.
NUMA	Establish self-sustaining (fauna habitat) land use.	Residual voids (Lakes, highwalls and set-backs)	LFA monitoring demonstrates: • Sustainable fauna usage (e.g. Stripe- faced Dunnart, Hoary Wattled Bat and Australian Grey Teal) of the residual voids. • Weed diversity and abundance is comparable to relevant rehabilitation monitoring reference sites. • No restrictive matter (plants) as prescribed by the *Biosecurity Act 2014* are present. • Pests do not occur in substantial numbers.	MM3 Establishment of interim use (Fauna habitat) LFA monitoring demonstrates: (i) Sustainable fauna usage (e.g. Stripe- faced Dunnart, Hoary Wattled Bat and Australian Grey Teal) of the residual voids. (ii) Weed diversity and abundance is comparable to relevant rehabilitation monitoring reference sites. (iii) No restrictive matter (plants) as prescribed by the Biosecurity Act 2014 are present. (iv) Pests do not occur in substantial numbers.

TABLE 31 MILESTONE COMPLETION DATES

MILESTONE REFERENCE	MILESTONE	APPROXIMATE TIMEFRAME FOR COMPLETION	COMMENTS
RM1	Infrastructure Decommissioning and Removal	2 years	The removal and decommissioning of all infrastructure and services are included in this timeframe. Landholder consultation will take place to ensure that any infrastructure to be retained is identified. This time allows for interruptions due to weather and limited workforce.
RM2	Identification, remediation and removal of contaminated land	2 years	This timeframe allows for a suitably qualified person to visit site and conduct preliminary contaminated land investigations. This includes any sampling and analysis of material, as well as action required for remediation works. This timeframe applies only in cases where material is being removed from site, if on site treatment is adopted the completion timeframe will be longer.
RM3	Landform Development and Reshaping/Reprofiling	1 year	Major earthworks will be completed as land becomes available. To ensure that major earthworks are completed, a timeframe of one year has been allocated. This ensures work can still occur if interruptions such as weather occur. It also allows for an appropriately qualified person to certify erosion and sediment control systems. This will be seasonally contingent.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

MILESTONE REFERENCE	MILESTONE	APPROXIMATE TIMEFRAME FOR COMPLETION	COMMENTS
RM4	Surface Preparation	2 years	This timeframe allows for spreading of topsoil prior to seeding (seasonally contingent).
RM5	Revegetation	2 years	Seeding will take place directly after topsoil application. This timeframe ensures that seeding takes place during the correct time of year and accounts for re-seeding, if required. This will be seasonally contingent.
RM6	Achievement of Surface Requirements	3 years	This timeframe has been allocated to ensure the correct monitoring and maintenance can be undertaken (seasonally contingent).
RM7	Achievement of post-mining land use to a stable condition	5-10 years	To ensure successful rehabilitation has been established, a monitoring program of 5 - 10 years for agriculture and woodland habitats respectively (additional to any other monitoring and maintenance) is proposed.
RM8	Achievement of Stable Condition (Surface and Groundwater Quality)	5Years	To ensure successful rehabilitation has been established, a monitoring program of 5 years is proposed.
MM1	Achievement of final landform design	5 years	Requires the development and implementation of a final void technical report to ensure relevant requirements of EA and NUMA policy with regards to residual voids., as well as a Void Rehabilitation Plan to maximise rehabilitation outcomes of the challenging environs of the void waterbodies, highwalls and set-back areas. Major earthworks will be completed as land becomes available. To ensure that major earthworks are completed, a timeframe of one year has been allocated. This ensures work can still occur if interruptions such as weather occur. It also allows for an appropriately qualified person to certify erosion and sediment control systems. This will be seasonally contingent.
MM2	Achievement of safety requirements	2 years	The removal and decommissioning of all infrastructure and services are included in this timeframe. Landholder consultation will take place to ensure that any infrastructure to be retained is identified. This time allows for interruptions due to weather and limited workforce.
MM3	Establishment of interim use (Fauna habitat)	10 years	To ensure successful revegetation and establishment of fauna habitat, a monitoring program of 10 years (additional to any other monitoring and maintenance) is proposed.
MM4	Achievement of sufficient improvement	1 year	Allows time for final inspections and sign offs by relevant independent parties (as previously discussed).

Note: the above has been used only as general guidance for completing the PRCP schedule. The timing of when these milestones will be achieved must also be considered for rehabilitation to be completed effectively. For example, seeding will typically take place at the end of the year before the wet season and ideally

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

completed soon after the application of topsoil. Milestones will be aligned to maximise efficiency, where possible. Seasonal and or extreme event considerations may prevent milestones being completed within the nominated timeframes for some areas.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

10 References

Australian and New Zealand Minerals and Energy Council and the Minerals Council of Australia (2000) Strategic Framework for Mine Closure.

Bureau of Meteorology (2017) Weather Station Directory. Australian Government. Website: http://www.bom.gov.au/climate/data/stations/ ate accessed: 2017.

Bureau of Meteorology (2018) National Atlas of Groundwater Dependent Ecosystems. Viewed: April 2018. Website: http://www.bom.gov.au/water/groundwater/gde.

CABI (2019). Invasive Species Compendium. (CAB International: Wallingford, UK). Available from: www.cabi.org/isc Website accessed 5 August 2019.

CBC (2011) Rare Falcons Move into Sudbury Mine Sites.

Churchill, S. (2008) Australian Bats: Second Edition. Allen & Unwin, Crows Nest NSW.

Clark, D., McPherson, A. and Collins, C. (2011). Australia's seismogenic neotectonic record. Geoscience Australia record 2011/11.

Commonwealth Department of Industry, Innovation and Science (2016a) Leading Practice Sustainable Development Program for the Mining Industry: Mine Rehabilitation.

Commonwealth Department of Industry, Innovation and Science (2016b) Leading Practice Sustainable Development Program for the Mining Industry: Mine Closure.

Commonwealth Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (2018) Information Guidelines for Proponents Preparing Coal Seam Gas and Large Coal Mining Development Proposals.

Commonwealth of Australia, 2013. "Vegetation Assessment Guide". Retrieved from: http://www.nrm.gov.au/system/files/resources/600d1b92-c1ca-436e-8f83-23e7f15ca892/files/vegetation-assesment-guide.pdf

Commonwealth Scientific and Industrial Research Organisation (CSIRO) (2015) Soil and Landscape Grid of Australia – Depth of Regolith. Available at: http://www.clw.csiro.au/aclep/soilandlandscapegrid

Department of Environment and Heritage Protection (2013a) Guideline: Resource Activity - Mining: Model Water Conditions for Coal Mines in the Fitzroy Basin.

Department of Environment and Heritage Protection (2013b) Code of Environmental Compliance for Exploration and Mineral Development Projects.

Department of Environment and Heritage Protection (2014) Rehabilitation Requirements for Mining Resources Activities Guideline.

Department of Environment and Heritage Protection (2014) Rehabilitation Requirements for Mining Resources Activities Guideline.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Department of Environment and Heritage Protection (2016a) EIS Information Guideline – Land.

Department of Environment and Heritage Protection (2016b) EIS Information Guideline – Rehabilitation.

Department of Environment and Heritage Protection (2017) Application requirements for activities with impacts to land.

Department of Environment and Science (2018) Mined Land Rehabilitation Policy. https://environment.des.qld.gov.au/ data/assets/pdf_file/0035/87659/mined-land-rehabilitation-policy.pdf

Department of Environment and Science (2018) Wildlife Online database, DES, viewed 10 June 2018, available: https://www.qld.gov.au/environment/plants-animals/species-list/.

Department of Environment and Science (2018a) Peregrine Falcon. Website: https://environment.des.qld.gov.au/wildlife/livingwith/peregrine_falcon.html Date Accessed: November 2018

Department of Environment Science and Innovation (DESI) (2023). Statutory Guideline for Progressive Rehabilitation and Closure Plans.

Department of Infrastructure, Local Government and Planning (2016) Bushfire Hazard Mapping. DeBeers Group (2017) New Diamond Mine Recruits Scarecrows.

Department of Natural Resources and Mines (2014) Guideline: works that interfere with water in a watercourse - watercourse diversions.

Department of Natural Resources and Water (2006) Fitzroy Basin Water Resource Plan: Draft Amendment Isaac- Connors Catchment.

Department of Natural Resources, Mines and Energy (2017). Water Information Portal (https://water-monitoring.information.qld.gov.au.

Department of Science, Information Technology and Innovation (2015). Queensland Wetlands Map 2009.

Department of Science, Information Technology and Innovation (2018), Remnant regional ecosystem map and broad vegetation group map, version 10.0. DSITIA, Brisbane

Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP) (2019). Olive Downs Project Coordinator General's Evaluation Report on the Environmental Impact Statement

Department of the Environment and Energy (2017) Protected Matters Search Tool, Australian Government, Canberra, Available at http://www.environment.gov.au/epbc/pmst/index.html

Department of the Environment and Energy (2018a) Protected Matters Search Tool, Australian Government, Canberra, accessed 7 June 2018, available: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.

Department of the Environment and Energy (2018b) Weeds in Australia accessed 20 April 2018 at http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

DNRW (2006) Fitzroy Basin Water Resource Plan: Draft Amendment Isaac-Connors Catchment, Department of Natural Resources and Water, Brisbane QLD, 2006.

DPM Enviroscienses (2017). Olive Downs and Willunga Project - Baseline Aquatic Ecology Survey Report. Prepared for Pembroke Olive Downs Pty Ltd, March 2017.

DPM Enviroscienses (2018a) Olive Downs Coking Coal Project – Terrestrial Flora Assessment. Prepared for Pembroke Olive Downs Pty Ltd, August 2018.

DPM Enviroscienses (2018b) Olive Downs Project – Baseline Offset Survey Investigation Report. Prepared for Pembroke Olive Downs Pty Ltd, July 2018.

DPM Enviroscienses (2018c). Olive Downs Coking Coal Project - Aquatic Ecology Assessment. Prepared for Pembroke Olive Downs Pty Ltd, August 2018.

Esterle, J. and Sliwa, R. (2002). Bowen Basin Supermodel 2000. ACARP Project C9021, Exploration and Mining Report 976C, CSIRO Exploration & Mining.

Eyre, T.J., Ferguson, D.J., Hourigan, C.L., Smith, G.C., Mathieson, M.T., Kelly, A.L., Venz, M.F., Hogan, L.D. and Rowland, J. (2014) Terrestrial Vertebrate Fauna Survey Assessment Guidelines for Queensland. Department of Science, Information Technology, Innovation and the Arts, Queensland Government, Brisbane

Fluvial Systems (2018) Olive Downs Coking Coal Project Geomorphology Technical Study Report. GeoTek Solutions (2018) Olive Downs Project Preliminary Geotechnical Stability Assessment.

Green, P.M (1997) The Surat and Bowen Basins, south-east Queensland, Queensland Minerals and Energy Review Series, Queensland Geological Survey.

Griffiths, S. R. (2013) Activity of insectivorous bats at gold mining water bodies: risks associated with consumption of cyanide-bearing waste solutions.

Griffiths, S. R., Donato, D. B., Lumsden, L. F., & Coulson, G. (2014) Hypersalinity reduces the risk of cyanide toxicosis to insectivorous bats interacting with wastewater impoundments at gold mines. Ecotoxicology and environmental safety, Vol 99, Pg 28-34.

GT Environmental Pty Ltd (2018) Olive Downs Coking Coal Project – Soil and Land Suitability Assessment. Prepared for Pembroke Olive Downs Pty Ltd, July 2018.

Gunn, R.H., Story, R., Galloway, R.W. and Fitzpatrick, E.A. (1967) Lands of the Isaac-Comet Area, Queensland. Land Research Series No.19. CSIRO Publishing, Collingwood, Victoria.

Hart, B. T., Bailey, P., Edwards, R., Hortle, K., James, K., McMahon, A. & Swadling, K. (1991) A review of the salt sensitivity of the Australian freshwater biota. Hydrobiologia, Vol 210 No. 1-2, Pg 105-144.

Hatch (2018a) Olive Downs Coking Coal Project Environmental Impact Statement - Surface Water Assessment. Prepared for Pembroke Olive Downs Pty Ltd, August 2018.

Hatch (2018b) Olive Downs Coking Coal Project Environmental Impact Statement – Flood Assessment. Prepared for Pembroke Olive Downs Pty Ltd, July 2018.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

HydroSimulations (2018). Olive Downs Coking Coal Project - Groundwater Assessment. Prepared for Pembroke Olive Downs Pty Ltd, July 2018.

IMC Mining Group Pty Ltd (2012). Willunga Opencut Feasibility Study – Geotechnical Assessment, Prepared for Peabody Energy Ltd, Report IMC01398, February 2012.

IMC Mining Group Pty Ltd (2014). Olive Downs Opencut Conceptual Geotechnical Study (Updated). Prepared for Peabody Energy Ltd, Report IMC01421, February 2014.

Institute of Engineers Australia (1996) Soil Erosion and Sediment Control Engineering Guidelines for Queensland Construction Sites.

Institute of Engineers Australia (1996) Soil Erosion and Sediment Control Engineering Guidelines for Queensland Construction Sites.

International Council on Mining and Metals (2008) Planning for Integrated Mine Closure: Toolkit.

International Erosion Control Association (2008) Best Practice Erosion and Sediment Control.

Isbell, R. F. (2002) The Australian Soil Classification. Australian soil and land survey handbook. CSIRO Publishing.

JB Mining Services (2016). An estimate of the insitu resources in the Olive Downs South prospect within EPC688, EPC721 and EPC850. Prepared for Pembroke Olive Downs Pty Ltd, March 2016.

Lavery, H. J. (1972) The Grey Teal at saline drought-refuges in north Queensland. Wildfowl, Vol 23, No. 23, Pg 56-63.

Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S. and Butler, D.W. (2017) Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland. Version 4.0. Updated May 2017. Queensland Herbarium, Queensland Department of Science, Information Technology and Innovation, Brisbane. 124 pp.

Office of the Queensland Mine Rehabilitation Commissioner (2025) *Management of coal mine voids as non-use management areas: Practice note*.

Office of the Queensland Rehabilitation Commissioner 2025, *Management of coal mine voids as non-use management areas.* Queensland Government.

Pembroke Olive Downs Pty Ltd (2019). *Olive Downs Coking Coal Project, Additional Information to the Environmental Impact Statement.* Available at https://www.statedevelopment.qld.gov.au/coordinator-general/ assessments-and-approvals/coordinated-projects/completed-projects/olive-downs-project/eis-documents

Potts, Roger T and Donato, DB. (2008) Peregrine Falcon Falco peregrinus Breeding Success in a Disused Mining Pit While Taking Prey from Cyanide-bearing Tailings Dams [online]. Australian Field Ornithology, Vol. 25, No. 3, Sep 2008: Pg 132-135.

Proctor, H., & Grigg, A. (2006). Aquatic invertebrates in final void water bodies at an open-cut coal mine in central Queensland. Australian Journal of Entomology, Vol 45, No. 2, Pg 107-121.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Pusey B, Kennard M and Arthington A (2004). Freshwater Fishes of North-Eastern Australia. (CSIRO Publishing: Collingwood).

Queensland Government (2012). *Mackay, Isaac and Whitsunday Regional Plan*. https://www.mackay.qld.gov.au/ data/assets/pdf_file/0017/240416/14_Mackay_Isaac_Whitsunday_Region al_Plan_2012.pdf

Queensland Government (2016) Queensland Globe. Accessed via Google Earth. Website: https://www.business.qld.gov.au/business/su pport-tools-grants/services/mapping-dataimagery/queensland- globe Date accessed: September 2016.

Queensland Government (2024). *Information Sheet Environmental Protection Act 1994 Non-Use Management Areas*. 16 February 2024.

Queensland Government, September 2011 (Qld Gov 2011). *Environmental Protection (Water) Policy 2009 Isaac River Sub-basin Environmental Values and Water Quality Objectives Basin No. 130 (part), including all waters of the Isaac River Sub-basin (including Connors River)* September 2011. https://environment.des.qld.gov.au/ data/assets/pdf_file/0032/88817/fitzroy_isaac_river_wqo_290911.pdf, viewed 18 September 2022.

Richardson, D. L. (2012). Water in the void. Waste Management and Environment, 23(11), 48.

Richardson, D. L. (2021) Aquatic biodiveristy values of two non-acidic pit lates created by open-cut coal mining. Life of Mine Conference. Research Gate. https://www.researchgate.net/publication/351299110_Aquatic_biodiversity_values_of_two_non-acidic_pit_lakes_created_by_open-_cut_coal_mining.

Schubert H, Blindow I, Bueno N C, Casanova M T, Pełechaty M and Pukacz A, 2018. Ecology of charophytes – permanent pioneers and ecosystem engineers, Perspectives in Phycology, 5(1):61-74. Available from" DOI: 10.1127/pip/2018/0080.

WRM Water and Environment Pty Ltd (2020) Olive Downs Coking Coal Project - Water Management Plan. Prepared for Pembroke Olive Downs Pty Ltd, April 2020.

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Appendices

APPENDIX A ENVIRONMENTAL AUTHORITY EA0001976

APPENDIX B COORDINATOR GENERAL REPORT

APPENDIX C PRCP TRANSITION NOTICE

APPENDIX D MNES MANAGEMENT PLAN

APPENDIX E EIS REHABILITATION STRATEGY

APPENDIX F VOID CLOSURE PLAN

APPENDIX G SOCIAL IMPACT MANAGEMENT PLAN (SIMP)

APPENDIX H TOPSOIL MANAGEMENT PLAN

APPENDIX I EROSION AND SEDIMENT CONTROL PLAN

APPENDIX J EIS – SOIL AND LAND SUITABILITY ASSESSMENT

APPENDIX K REVEGETATION MANAGEMENT PLAN

APPENDIX L RISK ASSESSMENT

APPENDIX M REHBAILITATION MANAGEMENT PLAN

APPENDIX N RECEIVING ENVIRONMENT MONITORING PROGRAM (REMP)

APPENDIX O WATER MANAGEMENT PLAN

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

Appendices

APPENDIX P WEED & PEST MANAGEMENT PLAN

APPENDIX Q PRCP SCHEDULE

APPENDIX R EIS FLOOD ASSESSMENT

Uncontrolled when printed. This document is confidential and contains information proprietary to Pembroke Olive Downs Complex and the It is not to be shared outside the Pembroke Resources Group without prior authorisation .©2025 Pembroke Resources Pty Ltd

END OF DOCUMENT