



Amendment Report

for the

Copi Mineral Sands Project



Prepared by:

RWCorkery&co



**Development
Application
No. SSD-41294067**

August 2025



ACKNOWLEDGEMENT

R.W. Corkery & Co. acknowledge and pay our respects to the Traditional Custodians of the lands in NSW and Australia on which our projects are located. We value the knowledge, advice and involvement of the Elders and extended Aboriginal community that contribute to our Projects and extend our respect to all Aboriginal and Torres Strait Islander peoples.





Amendment Report

for the

Copi Mineral Sands Project

Prepared for:

RZ Resources Limited
ABN: 23 160 863 892

Level 8, 10 Eagle Street
BRISBANE QLD 4000

Telephone: 1300 735 368
Email: media@rzresources.com

Prepared by:

R.W. Corkery & Co. Pty Limited
Geological & Environmental Consultants
ABN: 31 002 033 712

Telephone: (02) 9985 8511
Email: admin@rwcorkery.com
Postal: PO Box 1796
CHATSWOOD NSW 2057

Sydney | Orange | Townsville

Sydney
Suite 12.01, 1-5 Railway Street
CHATSWOOD NSW 2067

Orange
62 Hill Street
ORANGE NSW 2800

Ref No. 928/15

August 2025

This Copyright is included for the protection of this document

COPYRIGHT

© R.W. Corkery & Co. Pty Limited 2025
and
© RZ Resources Limited 2025

All intellectual property and copyright reserved.

Apart from any fair dealing for the purpose of private study, research, criticism or review, as permitted under the Copyright Act, 1968, no part of this report may be reproduced, transmitted, stored in a retrieval system or adapted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without written permission. Enquiries should be addressed to R.W. Corkery & Co. Pty Limited.

Contents

	Page
SUMMARY	ES-1
1. INTRODUCTION.....	1-1
1.1 SCOPE.....	1-1
1.2 OVERVIEW OF THE PROJECT AS EXHIBITED.....	1-1
1.3 OVERVIEW OF PROPOSED AMENDMENTS.....	1-6
2. STRATEGIC CONTEXT	2-1
2.1 INTRODUCTION.....	2-1
2.2 GOVERNMENT STRATEGIES, POLICIES AND PLANS	2-1
2.3 ADDITIONAL STRATEGIES, POLICIES AND PLANS CONSIDERED	2-2
2.3.1 Regions at the Ready: Investing in Australia's Future	2-2
2.3.2 NSW Freight and Ports Plan 2018-2023.....	2-4
2.3.3 Far West Regional Economic Development Strategy 2023 Update	2-5
2.4 CUMULATIVE IMPACTS – LAKE VICTORIA WIND FARM.....	2-5
3. DESCRIPTION OF AMENDMENTS.....	3-1
3.1 INTRODUCTION.....	3-1
3.2 OVERVIEW OF PROPOSED AMENDMENTS.....	3-1
3.3 AMENDED PROJECT SITE	3-2
3.4 AMENDED INFRASTRUCTURE AREA LAYOUT.....	3-7
3.5 AMENDED MINING OPERATIONS.....	3-7
3.5.1 Amended Extraction Area	3-7
3.5.2 Amended Extraction Area Establishment.....	3-8
3.5.3 Amended Mining Schedule	3-9
3.6 AMENDED TRANSPORTATION OPERATIONS	3-9
3.6.1 Introduction.....	3-9
3.6.2 Site Access Road Linear Corridor.....	3-9
3.6.3 Anabranh Mail Road and Silver City Highway Intersection	3-12
3.6.4 Transportation of Monazite Product.....	3-12
3.7 AMENDED WATER MANAGEMENT	3-15
3.8 AMENDED LIFE OF THE PROJECT	3-16
3.9 AMENDED FINAL LANDFORM AND LAND USE	3-16
4. STATUTORY CONTEXT	4-1
4.1 AMENDMENT OF DEVELOPMENT APPLICATIONS	4-1
4.2 POWER TO GRANT APPROVAL.....	4-1
4.3 PERMISSIBILITY	4-1
4.4 OTHER APPROVALS.....	4-2
4.4.1 Approvals that Cannot be Refused if Consent is Granted	4-2
4.4.2 Approvals that are Not Required if Consent is Granted	4-2
4.4.3 Other Approvals	4-2
4.5 PRECONDITIONS TO EXERCISING THE POWER TO GRANT APPROVAL.....	4-3
4.6 MANDATORY MATTERS FOR CONSIDERATION	4-3

Contents

	Page
5. ENGAGEMENT.....	5-1
5.1 INTRODUCTION.....	5-1
5.2 COMMUNITY ENGAGEMENT AND VIEWS	5-1
5.3 GOVERNMENT AGENCY ENGAGEMENT	5-3
6. ASSESSMENT OF IMPACTS	6-1
6.1 INTRODUCTION AND ENVIRONMENTAL SETTING	6-1
6.1.1 INTRODUCTION.....	6-1
6.1.2 TOPOGRAPHY AND DRAINAGE	6-1
6.1.3 CLIMATE.....	6-2
6.2 GROUNDWATER	6-3
6.2.1 INTRODUCTION.....	6-3
6.2.2 EXISTING ENVIRONMENT	6-3
6.2.3 AMENDED MANAGEMENT AND MITIGATION MEASURES	6-4
6.2.4 AMENDED ASSESSMENT OF IMPACTS.....	6-4
6.2.5 PEER REVIEW CONCLUSIONS	6-11
6.2.6 AMENDED LICENCING.....	6-12
6.2.7 AMENDED MONITORING	6-12
6.2.8 CONCLUSION.....	6-12
6.3 BIODIVERSITY	6-14
6.3.1 INTRODUCTION.....	6-14
6.3.2 REGIONAL SETTING AND MAPPING.....	6-16
6.3.3 DESKTOP ASSESSMENT METHODOLOGY	6-17
6.3.4 FIELD SURVEY METHODOLOGY	6-18
6.3.5 RESULTS.....	6-23
6.3.6 ASSESSMENT OF IMPACTS.....	6-29
6.3.7 MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE	6-34
6.3.8 AVOIDANCE, MANAGEMENT AND MITIGATION MEASURES	6-37
6.3.9 OFFSETTING OF RESIDUAL IMPACTS	6-40
6.3.10 CONCLUSION.....	6-42
6.4 SOILS AND LAND CAPACITY	6-43
6.4.1 INTRODUCTION.....	6-43
6.4.2 GUIDELINES.....	6-43
6.4.3 ASSESSMENT METHODOLOGY	6-43
6.4.4 SOIL PROPERTIES	6-43
6.4.5 SOIL STRIPPING AND PLACEMENT RECOMMENDATION.....	6-46
6.4.6 AVOIDANCE, MANAGEMENT AND MITIGATION MEASURES	6-51
6.4.7 ASSESSMENT OF IMPACTS.....	6-51
6.4.8 MONITORING	6-52
6.4.9 CONCLUSION.....	6-52
6.5 ABORIGINAL HERITAGE.....	6-54
6.5.1 INTRODUCTION.....	6-54
6.5.2 AMENDED ASSESSMENT OF IMPACTS.....	6-54
6.5.3 ABORIGINAL STAKEHOLDER CONSULTATION SINCE EXHIBITION.....	6-61
6.5.4 CONCLUSION.....	6-61

Contents

	Page
6.6 TRAFFIC AND TRANSPORTATION	6-62
6.6.1 INTRODUCTION	6-62
6.6.2 ASSESSMENT METHODOLOGY	6-62
6.6.3 EXISTING ENVIRONMENT	6-62
6.6.4 ASSESSMENT OF IMPACTS	6-67
6.6.5 AMENDED MITIGATION MEASURES	6-68
6.6.6 CONCLUSION	6-68
6.7 SURFACE WATER	6-69
6.7.1 INTRODUCTION	6-69
6.7.2 AMENDED EXISTING ENVIRONMENT	6-69
6.7.3 AMENDED MITIGATION MEASURES	6-71
6.7.4 AMENDED ASSESSMENT OF IMPACTS	6-71
6.7.5 CONCLUSION	6-72
6.8 NOISE	6-73
6.8.1 INTRODUCTION	6-73
6.8.2 ASSESSMENT CRITERIA	6-73
6.8.3 ASSESSMENT METHODOLOGY	6-73
6.8.4 AMENDED AVOIDANCE, MANAGEMENT AND MITIGATION MEASURES	6-78
6.8.5 AMENDED ASSESSMENT OF IMPACTS	6-78
6.8.6 AMENDED MONITORING	6-82
6.8.7 CONCLUSION	6-82
6.9 AIR QUALITY	6-83
6.9.1 INTRODUCTION	6-83
6.9.2 EXISTING ENVIRONMENT	6-84
6.9.3 POTENTIAL EMISSION SOURCES	6-86
6.9.4 ASSESSMENT CRITERIA	6-86
6.9.5 ASSESSMENT METHODOLOGY	6-87
6.9.6 ASSESSMENT OF IMPACTS	6-88
6.9.7 AVOIDANCE, MANAGEMENT AND MITIGATION MEASURES	6-96
6.9.8 MONITORING	6-96
6.9.9 CONCLUSION	6-96
6.10 GREENHOUSE GAS	6-97
6.10.1 INTRODUCTION	6-97
6.10.2 ASSESSMENT CONTEXT	6-97
6.10.3 GREENHOUSE GASES AND SCOPES	6-97
6.10.4 ASSESSMENT METHODOLOGY	6-98
6.10.5 AVOIDANCE, MANAGEMENT AND MITIGATION MEASURES	6-101
6.10.6 ASSESSMENT OF IMPACTS	6-101
6.10.7 EMISSIONS GOAL SETTING	6-103
6.10.8 CONCLUSION	6-105
6.11 AGRICULTURE	6-106
6.11.1 INTRODUCTION	6-106
6.11.2 EXISTING ENVIRONMENT	6-106
6.11.3 POTENTIAL IMPACTS	6-106
6.11.4 AVOIDANCE, MANAGEMENT AND MITIGATION MEASURES	6-107
6.11.5 ASSESSMENT OF IMPACTS	6-107

Contents

	Page
6.12 RADIATION.....	6-110
6.12.1 INTRODUCTION.....	6-110
6.12.2 STATUTORY SETTING.....	6-110
6.12.3 EXISTING ENVIRONMENT AND RADIATION SOURCES.....	6-112
6.12.4 ASSESSMENT METHODOLOGY.....	6-113
6.12.5 IMPACT ASSESSMENT.....	6-116
6.12.6 MANAGEMENT AND MITIGATION MEASURES.....	6-121
6.12.7 CONCLUSION.....	6-122
6.13 VISUAL AMENITY.....	6-123
6.13.1 INTRODUCTION.....	6-123
6.13.2 EXISTING ENVIRONMENT.....	6-123
6.13.3 POTENTIAL CHANGES TO VISUAL AMENITY.....	6-123
6.13.4 MANAGEMENT AND MITIGATION MEASURES.....	6-125
6.13.5 ASSESSMENT OF IMPACTS.....	6-127
6.14 SOCIAL IMPACTS.....	6-128
6.14.1 INTRODUCTION.....	6-128
6.14.2 ASSESSMENT METHODOLOGY.....	6-128
6.14.3 AMENDED ASSESSMENT OF IMPACTS.....	6-128
6.14.4 AMENDED MITIGATION MEASURES.....	6-130
6.14.5 CONCLUSION.....	6-131
6.15 ECONOMIC IMPACTS.....	6-132
6.15.1 INTRODUCTION.....	6-132
6.15.2 APPROACH TO THE ECONOMIC IMPACT ASSESSMENT.....	6-132
6.15.3 COST BENEFIT ANALYSIS.....	6-132
6.15.4 NET BENEFITS TO NSW.....	6-134
6.15.5 LOCAL EFFECTS ANALYSIS.....	6-135
6.15.6 ECONOMIC IMPACT ASSESSMENT.....	6-136
6.15.7 REGIONAL LABOUR MARKET IMPACTS.....	6-136
6.15.8 AMENDED MITIGATION MEASURES.....	6-136
6.15.9 CONCLUSION.....	6-137
7. JUSTIFICATION OF THE AMENDED PROJECT.....	7-1
7.1 INTRODUCTION.....	7-1
7.2 ACTIONS TAKEN TO AVOID / MINIMISE IMPACTS.....	7-1
7.3 CONSISTENCY WITH STRATEGIC CONTEXT.....	7-2
7.4 COMPLIANCE WITH STATUTORY REQUIREMENTS.....	7-2
7.4.1 Introduction.....	7-2
7.4.2 Environmental Planning and Assessment Act 1979.....	7-2
7.4.3 Wentworth Local Environmental Plan 2011.....	7-5
7.4.4 Broken Hill Local Environmental Plan 2013.....	7-7
7.5 CONSISTENCY WITH COMMUNITY VIEWS.....	7-7
7.6 SCALE AND NATURE OF ANTICIPATED IMPACTS.....	7-8
7.6.1 Introduction.....	7-8
7.6.2 Ecologically Sustainable Development.....	7-8
7.6.3 Biophysical Considerations.....	7-9

Contents

	Page
7.6.4 Soils and Land Capability	7-11
7.6.5 Aboriginal Heritage	7-12
7.6.6 Traffic and Transportation	7-12
7.6.7 Surface Water Resources	7-12
7.6.8 Noise	7-13
7.6.9 Air Quality	7-13
7.6.10 Greenhouse Gas	7-13
7.6.11 Agricultural Resources	7-13
7.6.12 Radiation	7-13
7.6.13 Visibility.....	7-14
7.6.14 Social Impacts	7-14
7.6.15 Economic Benefits.....	7-15
7.7 COMPLIANCE MONITORING AND COMMUNICATION	7-15
7.8 REMAINING UNCERTAINTIES	7-15
7.9 CONSEQUENCES OF NOT PROCEEDING.....	7-17
7.10 THE PUBLIC INTEREST	7-17
7.11 CONCLUSION	7-17
8. REFERENCES.....	8-1

APPENDICES

Appendix 1 Updated Project Description
Appendix 2 Updated Statutory Compliance Table
Appendix 3 Summary of Environmental Management and Monitoring Measures
Appendix 4 Groundwater Impact Assessment prepared by GEO-ENG
Appendix 5 Biodiversity Development Assessment Report
Appendix 6 Matters of National Environmental Significance (MNES) Significance Assessment
Appendix 7 Soil and Land Capability Assessment
Appendix 8a Amendment Aboriginal Cultural Heritage Assessment Report
Appendix 8b Amendment Historic Heritage Assessment Report
Appendix 9 Traffic Impact Assessment
Appendix 10 Updated Surface Water Assessment
Appendix 11a Noise Impact Assessment
Appendix 11b Cumulative Noise Impact Assessment
Appendix 12 Air Quality Impact Assessment
Appendix 13 Greenhouse Gas Assessment
Appendix 14a Public Radiation Risk Assessment
Appendix 14b Environmental Radiation Impacts (Non-Human Biota)
Appendix 15 Social Impact Assessment
Appendix 16 Economic Impact Assessment

Contents

	Page
FIGURES	
Figure S1 Locality Plan	1
Figure S2 Mine Site Layout – As Exhibited.....	2
Figure S3 Amended Mine Site Layout	3
Figure S4 Amended Final Landform and Final Land Use Domains	4
Figure S5 Predicted Groundwater Drawdown – Year 18.....	6
Figure S6 Plant Community Types	8
Figure 1.1 Locality Plan	1-2
Figure 1.2 Project Site Layout – as Exhibited	1-3
Figure 1.3 Mine Site Layout – as Exhibited	1-4
Figure 2.1 Proposed Lake Victoria Wind Farm	2-9
Figure 3.1 Amended Project Site Layout.....	3-3
Figure 3.2 Amended Mine Site Layout	3-4
Figure 3.3 Amended Project Site Land Titles	3-6
Figure 3.4 Amended Indicative Mine Schedule	3-10
Figure 3.5 Amended Anabranh Mail Road and Silver City Highway Intersection	3-13
Figure 3.6 Amended Transportation Routes	3-14
Figure 3.7 Amended Indicative Final Landform and Final Land Use Domains	3-17
Figure 6.2.1 Predicted Groundwater Drawdown – End Years 1 and 5	6-7
Figure 6.2.2 Predicted Groundwater Drawdown – End Years 10 and 15	6-8
Figure 6.2.3 Predicted Groundwater Drawdown – End Years 18 and 20	6-9
Figure 6.3.1 Assessment Area and Mitchell Landscapes	6-15
Figure 6.3.2 Biodiversity Survey Effort - Vegetation.....	6-21
Figure 6.3.3 Biodiversity Survey Effort - Fauna.....	6-22
Figure 6.3.4 Plant Community Types	6-24
Figure 6.3.5 Threatened Species Locations.....	6-30
Figure 6.4.1 Soil Associations	6-44
Figure 6.4.2 Land and Soil Capability – Pre Mining	6-47
Figure 6.4.3 Soil Associations – Post Mining	6-49
Figure 6.4.4 Land and Soil Capability – Post-mining	6-53
Figure 6.5.1 Aboriginal Heritage Survey Results – Northwest	6-56
Figure 6.5.2 Aboriginal Heritage Survey Results – Southeast	6-57
Figure 6.7.1 Mine Site Topography and Drainage	6-70
Figure 6.8.1 Scenario 1 – Year 5 Mining Operations	6-75
Figure 6.8.2 Scenario 2 – Year 16 Mining Operations	6-76
Figure 6.9.1 Off-site 24-hour Incremental Particulate Matter Concentrations	6-95
Figure 6.10.1 Summary of Scope 1 and Scope 2 Emissions	6-103
Figure 6.10.2 Emissions intensity comparison of Project and other mineral sands projects	6-104
Figure 6.10.3 Comparison of NSW net zero and Project Scope 1 emission trajectories (no abatement)	6-104
Figure 6.13.1 Visual Analysis	6-126

Contents

	Page
TABLES	
Table 2.1 Potential Cumulative Impacts.....	2-7
Table 3.1 Amended Project Summary Table	3-1
Table 3.2 Project Site Land Titles	3-5
Table 3.3 Extraction Area Design Comparison	3-8
Table 3.4 Amended Material Movement Schedule	3-11
Table 5.1 Community Engagement – June 2024 to June 2025.....	5-1
Table 6.1.1 Updated SILO Climate Data.....	6-2
Table 6.2.1 Predicted Project-related Groundwater Take.....	6-5
Table 6.3.1 Landscape Features.....	6-16
Table 6.3.2 Targeted Fauna Survey Methods.....	6-19
Table 6.3.3 Plant Community Type VI Scores	6-23
Table 6.3.4 Plant Community Types within the Assessment Area	6-25
Table 6.3.5 Endangered Ecological Communities	6-26
Table 6.3.6 Predicted Ecosystem Credit Species	6-26
Table 6.3.7 Predicted Species Credit Species.....	6-28
Table 6.3.8 Potential Indirect Impacts to Biodiversity Values	6-31
Table 6.3.9 Prescribed Impacts.....	6-32
Table 6.3.10 Ecosystem Credit Requirements and Trading Groups	6-40
Table 6.3.11 Species Credits for the Project.....	6-41
Table 6.4.1 Soil Associations and Chemical Properties.....	6-45
Table 6.4.2 Soil Stripping Depths and Total Available Volume.....	6-48
Table 6.4.3 Soil Placement Depths and Required Volume	6-48
Table 6.4.4 Annual Soil Balance	6-50
Table 6.4.5 Land and Soil Capability Areas – Pre and Post Mining	6-52
Table 6.5.1 Significance Assessment, Degree of Harm and Management Strategy for Identified Aboriginal Sites	6-58
Table 6.6.1 Historic and Projected Traffic Volumes	6-66
Table 6.6.2 Estimated Existing and Project-related Pavement Loadings	6-67
Table 6.8.1 Site-specific Meteorological Parameters.....	6-73
Table 6.8.2 Operational Phase Equipment Sound Power Levels	6-77
Table 6.8.3 Construction Noise Modelling Results – Site Establishment and Construction	6-79
Table 6.8.4 Operational Noise Modelling Results – Operational Worst-Case Scenarios 1 and 2	6-79
Table 6.8.5 Maximum Noise Level Assessment Results	6-80
Table 6.8.6 Combined Noise Predictions for Road and Intersection Upgrades.....	6-80
Table 6.8.7 Cumulative Noise Assessment Results	6-82
Table 6.9.1 AQIA Background Air Quality Data	6-86
Table 6.9.2 Project Operational Characteristics.....	6-88

Contents

	Page
Table 6.9.3 Predicted Annual Dust Deposition Rates	6-89
Table 6.9.4 Predicted Annual Particulate Matter Concentrations	6-90
Table 6.9.5 Predicted Maximum Incremental 24-hour Average PM10 and PM2.5 Concentrations	6-91
Table 6.9.6 Days with the Highest Predicted Cumulative and Incremental 24-hour Average PM10 Concentration.....	6-92
Table 6.9.7 Days with the Highest Predicted Cumulative and Incremental 24-hour Average PM2.5 Concentration.....	6-93
Table 6.10.1 Emission Factors.....	6-99
Table 6.10.2 Greenhouse Gas Emission Sources by Project Phase.....	6-99
Table 6.10.3 Assumptions Adopted in Activity Data Calculations.....	6-100
Table 6.10.4 Scope 1, Scope 2 and Scope 3 Emissions Summary.....	6-102
Table 6.11.1 Land Uses in the Wentworth Shire LGA	6-107
Table 6.11.2 Annual Value of Agricultural Production 2020/2021	6-108
Table 6.11.3 Estimated Stocking Rate for the Wentworth Shire LGA.....	6-108
Table 6.12.1 Radionuclide Content of In Situ and Produced Materials	6-112
Table 6.12.2 Summary of Calculated Maximum Annual Effective Dose.....	6-119
Table 6.12.3 Environmental Risk Assessment Results.....	6-121
Table 6.14.1 Potential to Change the Originally Assessed Social Impacts	6-130
Table 6.15.1 Overview of Cost Benefit Analysis Results	6-133
Table 6.15.2 Analysis Results for Project Net Benefits to NSW	6-134
Table 6.15.3 Economic Impacts on NSW.....	6-136
Table 6.15.4 Economic Impacts on Wentworth LGA	6-136
Table 7.1 Objects of the EP&A Act	7-3
Table 7.2 Wentworth LEP Zone Objectives	7-6
Table 7.3 Principles of Ecologically Sustainable Development.....	7-9
Table 7.4 Remaining Uncertainties and Proposed Mitigation Measures	7-16