

Thursday, 14 November 2024



Our Ref: P22.100A-LRP-NVCP Amendment-Cooloongup_0_FINAL

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ATTENTION: ██████████

SUBJECT: NATIVE VEGETATION CLEARING PERMIT AMENDMENT (CPS 10433-1) – ADDITION OF SITE #49 COOLOONGUP

Western Environmental Pty Ltd (WEPL) presents the following letter report to support a clearing permit amendment of CPS 10433/1.

UGL Engineering Pty Limited (the Client) was granted a Native Vegetation Clearing Permit (NVCP) (CPS 10433/1) on 27th May 2024 to undertake works required for Public Transport Authority (PTA) Radio Systems Replacement (RSR) Project.

CPS 10433/1 covers a total clearing extent of 0.57 ha, distributed over the following five sites:

- Joondalup Tunnel 2
- Kwinana Station
- Rockingham East
- Secret Harbour
- Canning Bridge

This amendment application aims to add Site # 49 Cooloongup, shown in Figure 1, to the previously granted CPS 10433/1.

Due to a delay with the development application for the site, Cooloongup could not be included in the initial NVCP application. The matter was discussed with the Department of Water and Environmental regulations (DWER) in a meeting on 19th March 2024. It was agreed that adding additional sites at a late point in time through a clearing permit amendment process would be the best approach given that all clearing will be undertaken for one overarching development project and all clearing will occur within one year. Given that the site has a clearing impact of less than 1 ha, this was considered appropriate.

There were two biological assessments undertaken over the Site. The first assessment in July 2023 included a desktop review of the environmental site conditions, relevant surrounding and historical land uses as well as a site survey to identify flora, vegetation and fauna values within the clearing footprint. The full report is provided in Appendix A.

A second biological survey was undertaken between 8th and 9th July 2024 to assess potential impacts on vegetation within the adjacent Bush Forever site No 356. The broader area had been identified to be potentially disturbed to create lay down areas while installing Western Power infrastructure. The purpose of the survey was to identify key environmental values for flora and fauna and to delineate which areas would have the least impact if cleared or disturbed. The full report is provided in Appendix B.



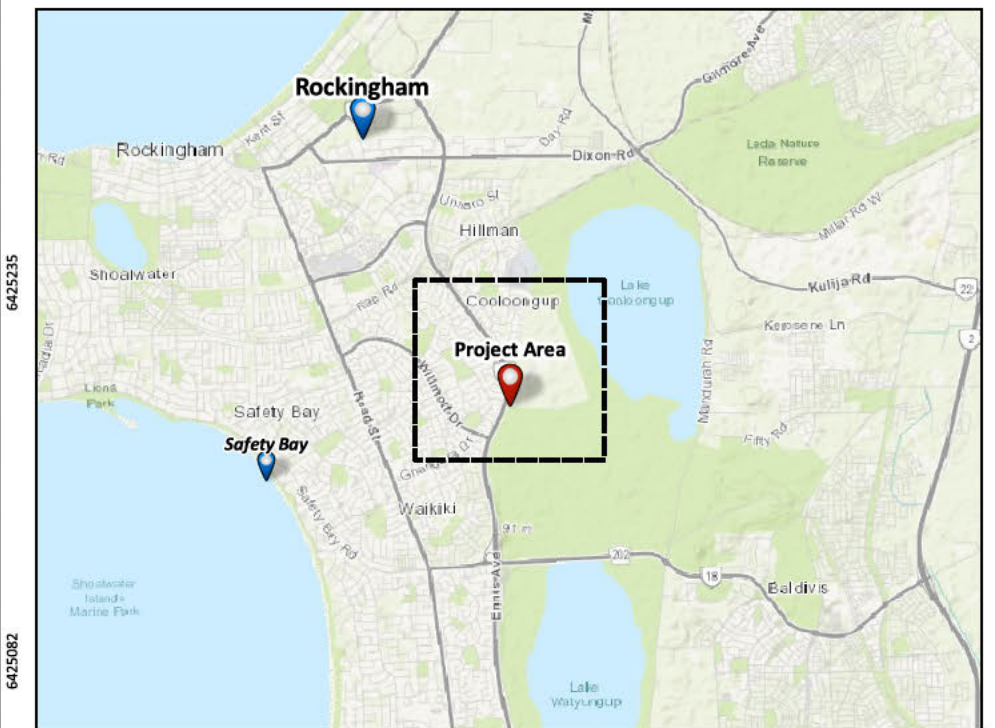
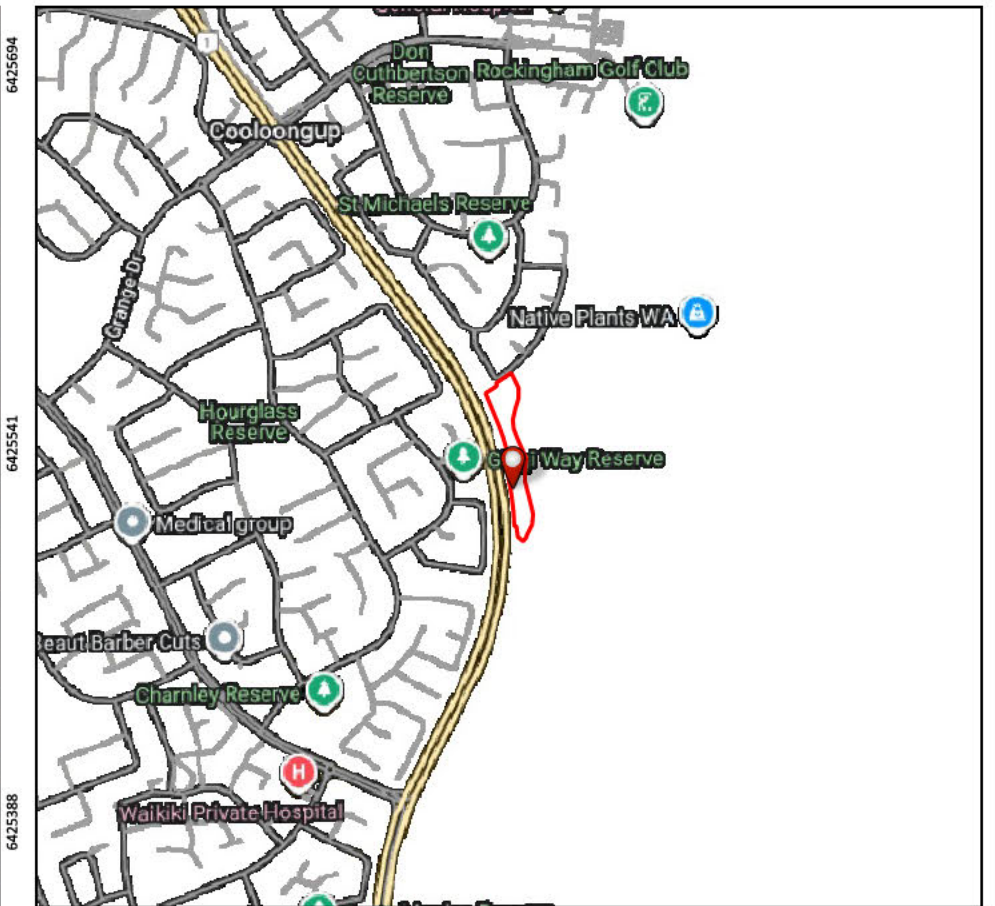
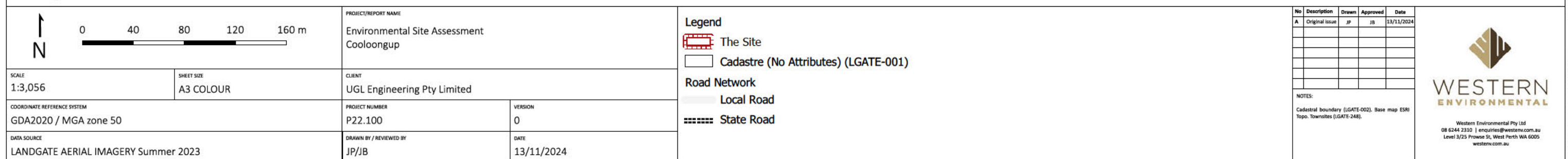


Figure 1: Site Location - #49 Cooloongup



Summary of Impacts

Table 1 provides a summary for the clearing impact identified during both surveys, as displayed in Figure 2.

Table 1: Summary of Survey Findings and Impacts at Site # 49 - Cooloongup

Report	Impacted property	Vegetation and habitat values	Footprint area (ha)	Clearing area (ha)
WEPL, 2023: 49 – Cooloongup Mandurah. Environmental Site Assessment	Lot 2730 on Plan 215879 (owned and managed by PTA) Land ID 3791392 (railway reserve) (managed by Main Roads WA)	Revegetation species mix and regrowth assessed as native vegetation: <i>Acacia rostellifera</i> , <i>Grevillea preissii</i> , <i>*Eragrostis curvula</i> and weedy grass understory. Condition: Completely Degraded	0.28	0.14
WEPL, 2024: PTA Radio Systems Replacement (RSR) Project – Biological Assessment, Site #49 Cooloongup	Lot 2730 on Plan 215879 (owned and managed by PTA)	Acacia woodland: Laydown 2 and 3: Native vegetation was characterised by <i>Acacia rostellifera</i> , <i>Acacia cyclops</i> and <i>Hakea prostrata</i> over <i>Acanthocarpus preissii</i> , <i>Lomandra maritima</i> and <i>*Asphodelus fistulosus</i> Laydown area 1: Cleared Condition of native vegetation: Good Vegetation is located within Bush Forever Site 356.	0.20	0.05
TOTAL				0.19





Figure 2: Cooalongup #49- Biological Assessment

0

10

20

30

40 m

N

SCALE

1:1,500

SHEET SIZE

A3 COLOUR

COORDINATE REFERENCE SYSTEM

GDA2020 / MGA zone 50

DATA SOURCE

LANDGATE AERIAL IMAGERY Summer 2023

PROJECT/REPORT NAME

Environmental Site Assessment
Cooalongup

CLIENT

UGL Engineering Pty Limited

PROJECT NUMBER

P22.100

VERSION

0

DRAWN BY / REVIEWED BY

JP / JB

DATE

13/11/2024

Legend

The Site

Impact Area

Cadastre (No Attributes) (LGATE-001)

Vegetation Types

Cleared

VT01

Revegetation Species Mix

No	Description	Drawn	Approved	Date
A	Original issue	JP	JB	13/11/2024

NOTES:
Cadastre boundary (LGATE-002). Label corresponds to the vegetation association number.

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Conclusions and Recommendations

The works required to be undertaken by UGL for the PTA RSR project at site #49 Cooloongup require the clearing of 0.19 ha, of which 0.05 ha is located within Bush Forever site No. 356.

The previously approved NVCP (CPS 10433/1) covered a clearing extent of 0.57 ha. An amendment is therefore required to account for the additional 0.19 ha. The updated total clearing impact of the Project is 0.76 ha of native vegetation.

This report should be read in conjunction with the Schedule - Statement of Limitations. Should you have any queries regarding the above, please contact the undersigned on (08) 6162 8980.

Yours sincerely,

Western Environmental Pty Ltd



Director

Schedule

- Statement of Limitations

Appendices

- Appendix A: WEPL (2023). 49 - Cooloongup. Environmental Site Assessment
- Appendix B: WEPL (2024). PTA Radio Systems Replacement (RSR) Project – Biological Assessment, Site #49 COOLOONGUP.



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Appendix A
WEPL (2023). 49 - Cooloongup.
Environmental Site Assessment





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49 – Coo loongup Mandurah

Environmental Site Assessment

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49 – Cooloongup Mandurah

Environmental Site Assessment

Report No:

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23-Oct-2023

Status

FINAL

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On all sites, varying degrees of non-uniformity of vertical and horizontal conditions in media (soil, water, air, waste or other media as described in the report) are encountered. Hence no monitoring, common testing or sampling technique can eliminate the possibility that monitoring or testing results/samples are not totally representative of media conditions encountered. The conclusions are based on the data and the environmental field monitoring and/or testing actually undertaken, and are therefore merely indicative of the environmental condition of the site at the time of preparing this report, including the presence or otherwise of contaminants or emissions. It should be recognised that site conditions, including the extent and concentration of contaminants, can change.

Within the limitations imposed by the scope of services, the monitoring, testing, sampling and preparation of this report have been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. To the maximum extent permitted by law, no other warranty, express or implied, is made.

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Executive Summary

Background

Western Environmental Pty Ltd (WEPL) was commissioned by UGL Engineering Pty Limited (the Client) to undertake an Environmental Site Assessment (ESA) assessment at **Site No 49 - Cooloongup, Mandurah Line (the Site)**. The Site is identified as Lot 2730 on Plan P215879 and is located approximately 40.03 km S of the Perth Central Business District (CBD) within the City of Perth. The Site is currently used for Parks and recreation (DPLH-023).

The Site is zoned unclassified (DPLH-071) under the Rockingham Local Planning Scheme (LPS) No. 80. WEPL understand that the future Site use will remain unchanged, with only the proposed construction associated with this project being considered in this assessment.

The purpose of this investigation is to provide a preliminary understanding of environmental risks and constraints associated with the site, to inform future management requirements.

Scope of Work

The scope of work completed as part of this assessment included a desktop review of the environmental site conditions and relevant surrounding and historical land uses. Where relevant, site assessments for flora, vegetation and fauna will be undertaken to define the site's natural values. Site inspections and interviews with persons of interest, and limited sampling of media onsite will be undertaken and for the purpose of contaminated site assessment and acid sulphate soils will be undertaken.

Assumptions and Uncertainties

This assessment has been undertaken on the basis of ongoing use of the Site in its current form (i.e. no change to site use or layout) and no groundwater abstraction occurring at the Site for any use. If any other change in land use is proposed (e.g. redevelopment for a more sensitive land use), further investigation may be warranted.

The conclusions drawn and recommendations made have been developed on the assumption that the data collected accurately represents the conditions at the Site. Assumptions and uncertainties pertaining to the data collected include the following:

- Historical information such as storage of any chemicals/fuels and/or spills that may have occurred on-site are not definitive.
- Gaps in historical aerial photography and government databases do not provide continuity of Site changes.
- A review of available land tenure does not always reveal potentially contaminating activities and land uses.

Summary of Findings

Following historical review and inspection of the Site, the following key outcomes have been identified:

- The Site has been vacant bushland until 1987 where the eastern portion was developed for use as a major road. The Site was developed for use as a railway line and railway corridor in 2006 terminating in 2008.
- A number of potential sources of contamination were identified in association with the Sites historical development with the uses of unknown fill material and its current and historical to use for railway purposes. A review of this information, in association with the site setting, indicates that any sub-surface impacts present at the Site, would likely occur within the vicinity of subsurface superficial soils.
- The overall risk of potential contamination at the site is considered to be low.
- The vegetation present is a landscaping mix partially representative of native vegetation with regrowth since 2008 and therefore considered native under the *Environmental Protection Act 1986*.
- The Project necessitates clearing of 0.14 ha of native vegetation. This is not considered a significant impact under the *Environment Protection and Biodiversity Conservation Act 1999*.

Recommendations

The following recommendations are made:

- Intrusive investigations should be undertaken to determine the presence or absence of ASS.
- While no further contamination assessment is recommended, if evidence of contamination is identified during construction the Unexpected Finds Sub-Plan should be adhered to.
- The clearing of native vegetation requires a Native Vegetation Clearing Permit. An exemption may however apply under Part V of the EP Act (DWER, 2019).

Summary of Environmental Management Requirements

Based on the findings of this ESA (and subsequent intrusive investigations, if proposed), the following management is likely to be required at the Site:

- Environmental Sub-Plan: Unexpected Finds.
- A Native Vegetation Clearing Permit or an exemption will be required.

Key Terms/Acronyms

Abbreviation	Full Title
°C	Degree Celsius
ACM	Asbestos Containing Material
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure 1999
ASS	Acid Sulfate Soil
BAM Act	Biosecurity and Agriculture Management Act 2007
BC Act	Biodiversity Conservation Act 2016
BTEXN	Benzene, Toluene, Ethyl-benzene, Xylenes and Naphthalene
CBD	Central Business District
CFCs	Chlorofluorocarbons
CoPC	Contaminant of Potential Concern
CR	Critically Endangered
CS Act	Contaminated Sites Act 2003
CSM	Conceptual Site Model
DBCA	Department of Biodiversity Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEWHA	Department of the Environment, Water Heritage and the Arts
DMIRS	Department of Mines, Industry Regulation and Safety
DoH	Department of Health
DotEE	Department of the Energy and Environment
DPLH	Department of Planning Lands and Heritage
DSEWPaC	Department of Sustainability Environment Water Population and Communities
DWER	Department of Water and Environmental Regulation
EDD	Environmental Due Diligence
EIA	Environmental Impact Assessment
EN	Endangered
EP Act	Environmental Protection Act 1986
EPA	Environmental Protection Authority
EPBC Act	Environment Protection Biodiversity and Conservation Act 1999
ESA	Environmentally Sensitive Area
GPS	Global Positioning System
ha	Hectares
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for Conservation of Nature
KL	Kilolitre
km	Kilometres

Abbreviation	Full Title
LPS	Local Planning Scheme
m	Metres
mAHD	Metres Above Australian Height Datum
mbgl	Metres Below Ground Level
mg/L	Milligrams/Litre
MNES	Matters of National Environmental Significance
MTBE	Methyl Ter-Butyl Ether
ND	No data
NEPC	National Environmental Protection Council
NEPM	National Environment Protection Measure
NVIS	National Vegetation Information System
OC/OP pesticides	Organochlorine/Organophosphorus Pesticides
P	Priority
PAH	Polycyclic Aromatic Hydrocarbons
PDWSA	Public Drinking Water Source Area
PEC	Priority Ecological Community
PF	Priority Flora
PFAS	Per- and Poly-Fluoroalkyl Substances
PMST	Protected Matters Search Tool
PSI	Preliminary Site Investigation
SVOC	Semi-volatile Organic Compounds
T	Threatened
TEC	Threatened Ecological Community
TPFL	Threatened and Priority Flora Database
TPFRF	Threatened and Priority Flora Report Forms
TRH	Total Recoverable Hydrocarbons
VOC	Volatile Organic Compounds
VU	Vulnerable
WA	Western Australia
WAH	Western Australian Herbarium
WC Act	Wildlife Conservation Act 1950
WEPL	Western Environmental Pty Ltd
WIR	Water Information Reporting

Table of Contents

1.	Introduction	1
1.1	Project Background	1
1.2	Objectives	1
1.3	Scope of Work	1
2.	Site Identification	3
3.	Site Environmental Conditions	1
4.	Site History and Characteristics	4
4.1	Review of Historical Aerials	4
4.2	Surrounding Land Use	6
4.3	Site Inspections.....	7
5.	Conclusions and Recommendations.....	9
5.1	Summary of Findings	9
5.1.1	Contamination	9
5.1.2	Recommendations.....	9
5.1.3	Ecology	9
5.2	Recommendations.....	10
5.3	Summary of Environmental Management Requirements	10
5.3.1	Contamination	10
5.3.2	Ecology	10
5.4	Assumptions and Uncertainties	10
6.	References	12

Tables (in text)

Table A: Site Characterisation	3
Table B: Summary of Existing Environmental Conditions of the Site and Surrounds	1
Table C: Observations from Review of Historic Aerial Imagery.....	4
Table D: Site Inspection Form – Contamination.....	7
Table E: Site Inspection Form –Ecology.....	8

Figures (end of text)

Figure 1 Site Location	16
Figure 2 Geology and Topography	17
Figure 3 Contaminated Site Database	18
Figure 4 Water Information Reporting.....	19
Figure 5 Acid Sulfate Soils and Groundwater Contours	20
Figure 6 Water Bodies Water Information Reporting.....	21
Figure 7 Geomorphic Wetlands, Swan Coastal Plain.....	22
Figure 8 Surrounding Land Use	23
Figure 9 Bush Forever Areas.....	24
Figure 10 Native Vegetation.....	25
Figure 11 Threatened Ecological Communities.....	26
Figure 12 Flora and Fauna	27
Figure 13 Black Cockatoo breeding and roosting sites.....	28
Figure 14 Aboriginal Places.....	29
Figure 15 Biological Assessment.....	30

Appendices

Appendix A Desktop Assessment - Supporting Documents (If Available).....	31
Appendix B Historical Aerials.....	32
Appendix C Site Photos – Contamination.....	33
Appendix D Site Photos – Ecology	36
Appendix E Species List.....	39

1. Introduction

Western Environmental Pty Ltd (WEPL) was commissioned by UGL Engineering Pty Limited (the Client) to undertake an Environmental Site Assessment (ESA) at Site No 49 - Cooloongup, Mandurah Line, Western Australia (the Site).

1.1 Project Background

The Site is identified as Lot 2730 on Plan P215879 and is located approximately 40.03km south of the Perth Central Business District (CBD) (Figure 1). The analysis buffer encompasses a total area of around 7725.4 square meters.

The Site is zoned unclassified (DPLH-071) under the Rockingham Local Planning Scheme (LPS) No. 80 WEPL understand that the future Site use will remain unchanged, with only the proposed construction associated with this project being considered in this assessment.

1.2 Objectives

The objectives of this ESA are as follows:

- Determine the environmental characteristics of the Site and surrounding land.
- Identify historical land uses and activities at the Site and/or off-site and assess the potential for these to have potentially contaminated the Site.
- To undertake Site Inspection to confirm the desktop data collected in relation to the site.
- To identify environmental and heritage constraints that are likely to require management during construction.

1.3 Scope of Work

The scope of work completed as part of the ESA comprised:

- Determining the environmental characteristics of the Site and surrounding land through a detailed desktop assessment (including topography, geology, ASS, groundwater, public drinking water source areas, surface water/hydrology, ecological values, Aboriginal heritage values, and non-Aboriginal heritage values).
- Reviewing available environmental reports and other historical information relating to the Site.
- Reviewing current and historical Site plans (where available).

-
- Reviewing publicly available historical aerial photographs to ascertain historical land use and development within and adjacent to the Site.
 - Determining the current registered contamination status of the Site and properties in the vicinity through a review of Government databases, including DWER's register of notices, pollution complaints and prosecutions, and the contaminated sites database (where available online).
 - Searching DWER Water Information Reporting (WIR) groundwater bore database.
 - Undertaking a Site Inspection to identify any contamination.
 - Undertaking a flora and vegetation assessment.
 - Interviewing relevant personnel with knowledge of current or historical land uses (where available).
 - Identifying and documenting any environmental risks and constraints that require management and, where relevant, any necessary avoidance and mitigation measures required to attain environmental approvals.
 - Preparation of an ESA report (this report).

2. Site Identification

Site identification details are summarised in Table A, and the location is shown on Figure 1.

Table A: Site Characterisation

Identifier	Details
Street Number, Street Name and Suburb	66 Elanora Dr, Cooloongup
Lot ID	2730
Plan	P215879
Land ID	1869067
Lot Area	110.0016 ha
Additional Land ID	R38812/Land ID: 3077354/110.00 ha)
Local Government Authority	Rockingham (LGATE-233)
Zoning	unclassified (DPLH-071)
Site Coordinates	384160.79, 6425278.83 (meter MGA 2020 Zone 50, EPSG: 7850) -32.303326, 115.769571 (WGS 84, EPSG: 4326)
Line	Portion 5 – Mandurah Line
Site Name	Cooloongup
Track KM	44.85
Monopole Site	Yes
Tunnel	No
OEC or IER	OEC
FO Link	No
AC Power	Yes
Electrical Upgrade	WPC

3. Site Environmental Conditions

The desktop assessment considered a broad range of published information, with the specific datasets interrogated presented in Table B. Table B provides a description of features identified, together with any relevant comments and a figure reference.

Table B: Summary of Existing Environmental Conditions of the Site and Surrounds

Dataset Name	Custodian	No. Features			Features within 50m Buffer Zone - Site (if Relevant)	Comments (if applicable)	Figure
		On-Site	within 50m buffer	within 100m buffer			
Topographic Contour Line	(LGATE-015)	-	3	5	From 6mAHD to 8mAHD	-	Figure 2 Figure 7
State linear structures layer	(DMIRS-015)	-	-	-	-	-	Figure 2
Geological Survey of Western Australia (GSWA)	(DMIRS)	1	1	1	S13	S13 – SAND – white, medium-grained, rounded quartz and shell debris.	Figure 2
Contaminated Sites Database	(DWER-059)	0	0	0	-	-	Figure 3
Water Information Reporting	DWER	0	0	0	-	-	Figure 4
Acid Sulfate Soil Risk Map, Swan Coastal Plain	(DWER-055)	0	0	0	-	No known ASS risk.	Figure 5
Groundwater Contours Maximum	(DWER-102) (DWER-100)	-	0	0	-	-	Figure 5
Hydrography Linear (Hierarchy)	(DWER-031)	0	0	0	-	-	Figure 6

Dataset Name	Custodian	No. Features			Features within 50m Buffer Zone - Site (if Relevant)	Comments (if applicable)	Figure
		On-Site	within 50m buffer	within 100m buffer			
Public Drinking Water Source Areas	(DWER-033)	0	0	0	-	-	Figure 6
Geomorphic Wetlands Swan Coastal Plain	(DBCA-019)	0	0	0	-	-	Figure 7
Region Scheme - Zones and Reserves	(DPLH-023)	1	2	3	Parks and recreation and Primary regional roads	-	Figure 8
Local Planning Scheme - Zones and Reserves	(DPLH-071)	0	0	2	-	-	Figure 8
Bush Forever Areas - 2000	(DPLH-019)	0	1	1	Bf_Site ID: 356	Eastern portion of the Site located within bush forever zone 356.	Figure 9
Native Vegetation Extent	(DPIRD-005)	0	1	1	ID: 375895	Eastern portion of the Site located within a Native vegetation extent zone.	Figure 10
Threatened Ecological Communities	(DBCA-038)	0	0	0	-	-	Figure 11
Threatened and Priority Flora	(DBCA-036)	-	-	-	-	-	Figure 12
Threatened and Priority Fauna	(DBCA-037)	0	0	0	-	-	Figure 12
Black Cockatoo Roosting Sites - Buffered	(DBCA-064)	1	1	1	ID: 285	Within the outskirts buffer of the Black Cockatoo Roosting Site.	Figure 13

Dataset Name	Custodian	No. Features			Features within 50m Buffer Zone - Site (if Relevant)	Comments (if applicable)	Figure
		On-Site	within 50m buffer	within 100m buffer			
Black Cockatoo Breeding Sites - Buffered	(DBCA-063)	0	0	0	-	-	Figure 13
Aboriginal Heritage Places	(DPLH-001)	0	0	0	-	-	Figure 14

4. Site History and Characteristics

4.1 Review of Historical Aerials

Historical aerial photographs of the Site and its surrounds were reviewed. Photographs were sourced from Landgate and are provided in Appendix B. A summary of observations is provided in Table C.

Table C: Observations from Review of Historic Aerial Imagery

Year	Available	Changes	Findings (see Figure in Appendix B)
1947	No	NA	NA
1953	No	NA	NA
1955	Yes	Yes	First image the Site is vacant bush land.
1961	No	NA	NA
1963	Yes	No	NA
1965	No	NA	NA
1970	Yes	No	NA
1974	Yes	No	NA
1977	Yes	No	NA
1979	Yes	No	NA
1981	Yes	Yes	Dirt road is visible transecting the Site from south to north.
1983	Yes	Yes	First colour image, directly to the west of the Site a major road is first visible. Dirt tracks are present traversing the centre of the Site.
1985	Yes	No	NA
1987	Yes	Yes	The road to the west is expanded and now extends to within the Site.
1989	No	NA	NA
1991	Yes	No	NA
1993	No	NA	NA
1995	No	NA	NA
1999	Yes	Yes	Minor road works were conducted and it appears development for residential land has occurred to the west beyond the Site.
2000	No	NA	NA
2001	Yes	No	NA
2002	Yes	No	NA

Year	Available	Changes	Findings (see Figure in Appendix B)
2003	Yes	No	NA
2004	Yes	No	NA
2005	Yes	No	NA
2006	Yes	Yes	Bush land at the centre of the Site has been cleared and ground flattened.
2007	Yes	Yes	Road has undergone some development with a wall now present, white/brown stockpiled soil is now present at the centre of the Site, for development into the rail corridor.
2008	Yes	Yes	Rail line is first present and the Site is within the rail corridor.
2009	Yes	No	NA
2010	Yes	No	NA
Feb/2011	Yes	No	NA
Aug/2011	Yes	No	NA
Feb/2012	Yes	No	NA
Sep/2012	Yes	No	NA
Jan/2013	Yes	No	NA
Sep/2013	Yes	No	NA
Feb/2014	Yes	No	NA
May/2014	Yes	No	NA
Aug/2014	Yes	No	NA
Nov/2014	Yes	No	NA
Feb/2015	Yes	No	NA
May/2015	Yes	No	NA
Sep/2015	Yes	No	NA
Nov/2015	Yes	No	NA
Feb/2016	Yes	No	NA
Jun-Oct-2016	Yes	No	NA
Aug/2016	Yes	No	NA
Nov/2016	Yes	No	NA
Jan/2017	No	NA	NA
Feb/2017	Yes	No	NA
Apr/2017	Yes	No	NA
Aug/2017	Yes	No	NA
Oct/2017	No	NA	NA

Year	Available	Changes	Findings (see Figure in Appendix B)
Nov/2017	Yes	No	NA
Jan/2018	Yes	No	NA
May/2018	Yes	No	NA
Aug/2018	Yes	No	NA
Dec/2018	Yes	No	NA
Feb/2019	Yes	No	NA
Apr/2019	Yes	No	NA
Aug/2019	Yes	No	NA
Nov/2019	Yes	No	NA
Jan/2020	Yes	No	NA
Apr/2020	Yes	No	NA
Aug/2020	Yes	No	NA
Dec/2020	Yes	No	NA
Jan/2021	Yes	No	NA
May/2021	Yes	No	NA
Winter-2021	Yes	No	NA
Summer-2022	Yes	No	NA
Winter – 2022	Yes	No	NA
Summer-2023	Yes	No	NA

4.2 Surrounding Land Use

The land uses surrounding the Site are identified below:

- North – Unclassified (DPLH-071) and Parks and recreation (DPLH-023)
- South – Unclassified (DPLH-071) and Parks and recreation (DPLH-023)
- East – Unclassified (DPLH-071) and Parks and recreation (DPLH-023)
- West – Unclassified (DPLH-071) and Primary regional roads (DPLH-023)

4.3 Site Inspections

The Site was inspected by WEPL Environmental Scientist Louis Grogan on 17 July 2023 by the Contaminated Land Team, and by WEPL Environmental Scientist Lovisa Thambert on 21 July 2023 by the Approvals Team.

The key observations from the Contaminated Land site inspection are summarised in Table D. Key observations from the Flora and Vegetation Survey are summarised in Table E.

Table D: Site Inspection Form – Contamination

Site Inspection Form – Western Environmental					
Date	17 July 2023	Site Name	49 – Coo loongup, Mandurah Line		
Coordinates (GDA2020-Z50)		384160.79, 6425278.83 (meter MGA 2020 Zone 50)		Portion No.	5
Environmental Scientist	Louis Grogan				
Current Land Use	Rail				
Presence of structures	Yes	Staining	No		
Accessibility	In fenced area.	Odours	No		
Site Surface					
Material	Open Ground	Condition	Good		
Topography in-situ					
Inclination	Gentle	Direction			
Surface water near by	No				
Potentially dangerous good on-site	No				
If yes, provided details					
Services Connections	Yes				
Groundwater bores/surface water sources	No				
If yes, provided details					
Vegetation Stress	No				
Surrounding Current Land Uses					
North	Rail		South	Rail	
West	Major road		East	Local parks and recreation	
Human sensitive receptors nearby	Yes	If yes, provided details	Fly tipped waste		
Site Photos	See Appendix C				
General Comments					
Pale brown sand with limestone gravels trees recently cut some services nearby fridge outside fence to the south. No visible or olfactory signs of contamination.					

Table E: Site Inspection Form –Ecology

Site Inspection Form – Western Environmental			
Date	21 July 2023	Site Name	49 – Cooloongup, Mandurah
Coordinates (GDA2020-Z50)			Portion No. 5
Environmental Scientist			
Vegetation present	Yes		
Vegetation description	<p>Cleared to the south covered with grass invasion. To the north native bushes, potential <i>Melaleuca</i> sp., <i>Grevillia preissii</i>, <i>Acacia rostellifera</i>. Adjacent bushland is <i>Acacia rostellifera</i> thickets with bridal creeper and weedy grass understory.</p> <p>Vegetation where the proposed new Western Power supply is located is comprised by <i>Acacia rostellifera</i>, <i>Grevillea preissii</i>, <i>*Eragrostis curvula</i> and weedy grass understory.</p>		
Vegetation condition	Completely Degraded		
Weed percentage cover	75-100%		
Disturbance	Historic clearing and weeds		
Wetland mapped	No		
Is vegetation indicative of wetland vegetation?	No		
Does the condition align with MU/RE/CCW?	N/A		
Black cockatoo foraging habitat	No		
Black cockatoo roosting habitat	No		
Black cockatoo breeding habitat	No		
Fauna evidence	No		
Site Photos	See Appendix D		
General Comments			
<p>Planted landscaping mix, not representative of adjacent vegetation type. Adjacent bushland is <i>Acacia rostellifera</i> thickets with bridal creeper and weedy grass understory.</p> <p>The vegetation within the clearing footprint area is comprised by <i>Acacia rostellifera</i>, <i>Grevillea preissii</i>, <i>*Eragrostis curvula</i> and a weedy grass understory. Regrowth has been occurring since 2008. Refer to Figure 15.</p>			

5. Conclusions and Recommendations

5.1 Summary of Findings

5.1.1 Contamination

Following historical review and inspection of the Site, the following key outcomes have been identified:

- The Site has been vacant bushland until 1987 where the eastern portion was developed for use as a major road. The Site was developed for use as a railway line and railway corridor in 2006 terminating in 2008.
- A number of potential sources of contamination were identified in association with the Sites historical development with the uses of unknown fill material and its current and historical to use for railway purposes. A review of this information, in association with the site setting, indicates that any sub-surface impacts present at the Site, would likely occur within the vicinity of subsurface superficial soils.
- The overall risk of potential contamination at the site is considered to be low.

5.1.2 Recommendations

The following recommendations are made:

- Intrusive investigations should be undertaken to determine the presence or absence of ASS.
- While no further contamination assessment is recommended, if evidence of contamination is identified during construction the Unexpected Finds Sub-Plan should be adhered to.

5.1.3 Ecology

Based on review of publicly available data and biological assessment of the Site, the following key findings have been identified:

- The vegetation present at the Site is a mix of landscaping and revegetation species.
- Vegetation appears to be regrowth since 2008. The vegetation is therefore considered native under the *Environmental Protection Act 1986* (EP Act).
- The Project necessitates the clearing of 0.14 ha of vegetation representing native vegetation as shown in Figure 15.

- No TECs, Threatened or Priority Flora or other ecologically sensitive areas (ESAs) will be impacted by the Project.
- The clearing of 0.14 ha of native vegetation is not considered significant under the EPBC Act *Significant impact guidelines 1.1 – Matters of National Environmental Significance* (DoE, 2013).

5.2 Recommendations

The following recommendations are made:

- The clearing of native vegetation requires a Native Vegetation Clearing Permit. An exemption may however apply under Part V of the EP Act (DWER, 2019).

5.3 Summary of Environmental Management Requirements

5.3.1 Contamination

Based on the findings of this ESA (and subsequent intrusive investigations, if proposed), the following management is likely to be required at the Site:

- Environmental Sub-Plan: Unexpected Finds.

5.3.2 Ecology

Based on the findings of this ESA, the following management is required at the Site:

- The vegetation on the Site has been assessed to be regrowth since 2008 and is therefore considered native in accordance with the EP Act.
- The clearing of 0.14 ha of native vegetation is not considered a significant impact under the EPBC Act.
- A clearing permit or exemption will be required.

5.4 Assumptions and Uncertainties

The conclusions drawn and recommendations made have been developed on the assumption that the data collected accurately represents the conditions at the Site. Assumptions and uncertainties pertaining to the data collected include the following:

- Historical information such as storage of any chemicals/fuels and/or spills that may have occurred on-site are not definitive.

-
- Gaps in historical aerial photography and government databases do not provide continuity of Site changes.
 - A review of available land tenure does not always reveal potentially contaminating activities and land uses.

Although assumptions and uncertainties exist, these do not significantly change the overall history of the Site, which will be adequately assessed by the investigations proposed herein.

6. References

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Figures

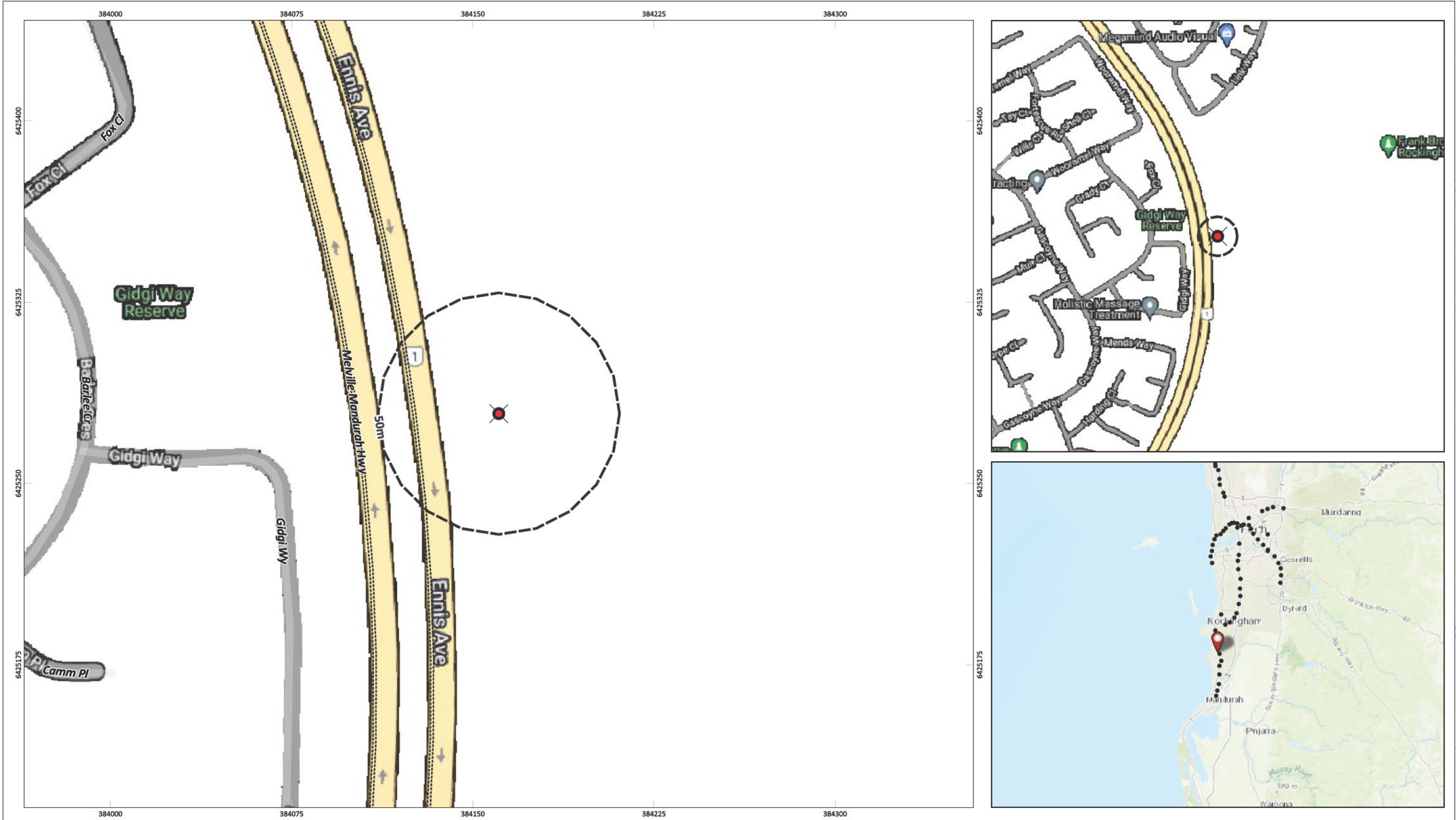


Figure 1: Site Location

0

25

50

75

100 m

N

SCALE

1:1,500

SHEET SIZE

A3 COLOUR

COORDINATE REFERENCE SYSTEM

GDA2020 / MGA zone 50

DATA SOURCE

LANDGATE AERIAL IMAGERY Perth_Metro_Summer_2023_Image

PROJECT/REPORT NAME

Environmental Site Assessment
Site No. 49- Coo loongup- Mandurah Line

CLIENT

UGL Engineering Pty Limited

PROJECT NUMBER

P22.100

VERSION

0

DRAWN BY / REVIEWED BY

AC / JG

DATE

16/8/2023

Legend

The Site

Buffer 50m

No	Description	Drawn	Approved	Date
A	Original issue	AC	JG	16/8/2023

NOTES:

Base map ESN Topo.

WESTERN

ENVIRONMENTAL

Western Environmental Pty Ltd

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Appendix C Site Photos – Contamination



Photo 1

Date: 17 July 2023

Description: Image of site facing south.



Photo 2

Date: 17 July 2023

Description: Image of site facing west.



Photo 3

Date: 17 July 2023

Description: : Image of site facing north.

Appendix D Site Photos – Ecology



Photo 4

Date: 17 July 2023

Description: Vegetation where the proposed new Western Power supply is located



Photo 5

Date: 17 July 2023

Description: Vegetation within proposed monopole fold direction



Photo 6

Date: 17 July 2023

Description: Vegetation north of proposed monopole fold location

Appendix E Species List

Species	Stratum	Cover
<i>Acacia rostellifera</i>	Mid	5%
<i>Grevillea preissii</i>	Mid	2%
* <i>Eragrostis curvula</i>	Ground	8%
*Common weedy grass	Ground	3%



Appendix B

**WEPL (2024). PTA Radio Systems
Replacement (RSR) Project – Biological
Assessment, Site #49 COOLOONGUP**



Monday, 4 November 2024



Our Ref: P22.100A-LRP-NVCP_A_DRAFT-Cooloongup

(08) 6162 8980

UGL Engineering Pty Limited

PO Box 437, Leederville, WA 6903

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153 Abernethy Road
Belmont WA 6104

ATTENTION: [REDACTED]

**SUBJECT: PTA RADIO SYSTEMS REPLACEMENT (RSR) PROJECT – BIOLOGICAL ASSESSMENT,
SITE #49 COOLOONGUP**

Project Background

Western Environmental Pty Ltd (WEPL) was commissioned by UGL Engineering Pty Limited (the Client) to undertake Environmental Site Assessments (ESA) at several sites associated with the Public Transport Authority (PTA) Radio Systems Replacement (RSR) Project.

The RSR Project will upgrade the radio system of Perth's rail transport by replacing the existing analogue system with a digital system. This involves the installation of monopoles and new Western Power (WP) pillars across the rail network. The Project will help to deliver High Capacity Signalling, which will provide increased reliability and flexibility of trains, to support a more efficient rail network for Perth's growing population (Metronet, 2023).

The assessments undertaken included a desktop review of the environmental site conditions and relevant surrounding and historical land uses. Where relevant, site assessments for flora, vegetation and fauna were undertaken to identify present environmental values.

UGL has requested 6 Sites to be surveyed as an additional variation located within Bush Forever Sites along the PTA trainline corridor. The purpose of the biological assessment was to Identify and qualify the existing vegetation in the areas adjacent to the design locations and to identify which areas would have the least impact if cleared. This work would delineate key environmental values for flora and fauna within the proposed disturbance areas to support a Native Vegetation Clearing Permit or provide advice on the need for a Permit.

Based on the survey findings and the site reference designs provided by PTA, the Cooloongup Site was one of the six Bush Forever Sites identified requiring a Native Vegetation Clearing Permit under Part V of the *Environmental Protection Act 1986* (EP Act), with site locations being displayed in Figure 1.

Table 1: Site Identification and Land Descriptions

Site Name	Property Details	Landowner
Cooloongup Site #49	Lot: 2730 P215879 Land ID Number: 1869067 LGA: City of Rockingham Bush Forever Site Number: 356 Rockingham Golf Club Environmentally Sensitive Area: 18656	LGA: City of Rockingham

Survey Methodology

Flora and vegetation assessments were undertaken between 8 July and 9 July 2024. The following elements were assessed:

- Broad description of vegetation types, including broad species composition and weed invasion.
- Vegetation Condition in consistence with the EPA *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessments* (EPA, 2016).
- Opportunistic sampling of flora species where taxa could not be identified on Site.
- Presence of potential black cockatoo habitat values and other significant fauna habitat values.
- Presence of TECs, Threatened and Priority Flora and other Environmentally Sensitive Areas (ESAs).

Results

The results found in the Cooloongup survey Site where clearing will be required are presented in Table 2 and displayed in Figure 2 below. Historical aerial imagery of each site is shown in Appendix B.





Figure 1: Site Location - Cooloongup

<div><div><div><div></div><div>N</div></div><div><div>0</div><div>50</div><div>100</div><div>150</div><div>200 m</div></div></div></div>		<div>PROJECT/REPORT NAME</div> <div>PTA Radio Systems Replacement (RSR) Project – Biological Assessments Cooloongup</div>		<div>Legend</div> <div><div><div></div></div>Survey Area</div>		<table><tr><th>No</th><th>Description</th><th>Drawn</th><th>Approved</th><th>Date</th></tr><tr><td>A</td><td>Original issue</td><td>SM</td><td>DR</td><td>7/8/2024</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	No	Description	Drawn	Approved	Date	A	Original issue	SM	DR	7/8/2024																																								
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A	Original issue	SM	DR	7/8/2024																																																				
<div>SCALE</div> <div>1:3,388</div>		<div>SHEET SIZE</div> <div>A3 COLOUR</div>		<div>CLIENT</div> <div>Navlika Mooloo (UGL)</div>																																																				
<div>COORDINATE REFERENCE SYSTEM</div> <div>GDA2020 / MGA zone 50</div>		<div>PROJECT NUMBER</div> <div>P22.100</div>		<div>VERSION</div> <div>0</div>																																																				
<div>DATA SOURCE</div> <div>LANDGATE AERIAL IMAGERY Summer 2023</div>		<div>DRAWN BY / REVIEWED BY</div> <div>SM/DR</div>		<div>DATE</div> <div>7/8/2024</div>		<div>NOTES:</div> <div>Cadastral boundary (LGATE-002), Base map ESRI Topo, Townships (LGATE-248).</div>																																																		
						<div><div><div></div><div>WESTERN ENVIRONMENTAL</div><div>Western Environmental Pty Ltd 08 6244 2310 enquiries@western.com.au Level 3/25 Prowse St, West Perth WA 6005 western.com.au</div></div></div>																																																		

Table 2: Cooloongup– Site Inspection Form

Site Inspection Form			
Date	8 July 2024	Site Name	49- Cooloongup, Rockingham
Coordinates (GDA2020-Z50)			Portion No. 5
Environmental Scientist			
Vegetation present	Yes		
Vegetation description	<p>Precleared vegetation at laydown 1 (Open and degraded)</p> <p>Laydown 2 and 3- Native vegetation was characterised by <i>Acacia rostellifera</i>, <i>Acacia cyclops</i> and <i>Hakea prostrata</i> over <i>Acanthocarpus preissii</i>, <i>Lomandra maritima</i> and <i>*Asphodelus fistulosus</i> (Native acacia woodland on sand in Good condition)</p> <p>Ground stratum covered by grassy weeds.</p>		
Vegetation condition	Good (VT-01) – Completely Degraded (Pre-cleared area)		
Weed percentage cover	25%		
Disturbance	Historic clearing and weeds. 4WD and golf course access disturbance.		
Wetland mapped	No		
Is vegetation indicative of wetland vegetation?	No		
Does the condition align with MU/RE/CCW?	N/A		
Black cockatoo foraging habitat	No		
Black cockatoo roosting habitat	No		
Black cockatoo breeding habitat	No		
Fauna evidence	No		
Site Photos	See Appendix A		
General Comments			
<p>Vegetation appears to be a mixture of precleared/revegetation in a good condition.</p> <p>The vegetation is predominately acacia woodland with some patches towards the rail corridor cleared previously.</p> <p>Cooloongup Site does not hold values for fauna habitat with vegetation condition and proximity to road and rail limiting ecological value.</p> <p>Vegetation and clearing footprint mapping are presented in Figure 2.</p>			





Figure 2: Biological Assessment- Cooloongup

0

10

20

30

40 m

N

SCALE

1:1,243

SHEET SIZE

A3 COLOUR

COORDINATE REFERENCE SYSTEM

GDA2020 / MGA zone 50

DATA SOURCE

LANDGATE AERIAL IMAGERY Summer 2023

PROJECT/REPORT NAME

PTA Radio Systems Replacement (RSR)
Project – Biological Assessments
Cooloongup

CLIENT

Navlika Mooloo (UGL)

PROJECT NUMBER

P22.100

VERSION

0

DRAWN BY / REVIEWED BY

SM/DR

DATE

8/8/2024

Legend

Survey Area

Bush Forever Areas -
2000 (DPLH-019)

Clearing Regulations -
Environmentally
Sensitive Areas (DWER-046)

Vegetation Type

VT01 - Acacia woodland

Cleared

No	Description	Drawn	Approved	Date
A	Original issue	SM	DR	8/8/2024

NOTES:

Cadastral boundary (LGATE-002). Label
corresponds to the vegetation association number.

WESTERN
ENVIRONMENTAL

Western Environmental Pty Ltd
08 6244 2310 | enquiries@westernv.com.au
Level 3/25 Prowse St, West Perth WA 6005
westernv.com.au

G:\GIS\Project Data\2022\22.100\20240726_BioReport\A22.100_Bio.qgz

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Designed and Automated by AC



0 10 20 30 40 m

N

PROJECT/REPORT NAME
PTA Radio Systems Replacement (RSR)
Project – Biological Assessments
Coo loongup

CLIENT
Navlika Mooloo (UGL)

PROJECT NUMBER
P22.100

VERSION
0

DRAWN BY / REVIEWED BY
SM/DR

DATE
8/8/2024

Legend

Survey Area

Vegetation Condition

Cleared

Good

No	Description	Drawn	Approved	Date
A	Original issue	SM	DR	8/8/2024

NOTES:

Cadastral boundary (LGATE-002). Label corresponds to the vegetation association number.

Western Environmental Pty Ltd
08 6244 2310 | enquiries@westernv.com.au
Level 3/25 Prowse St, West Perth WA 6005
westernv.com.au

Impact Mitigation Measures

Due to the already existing alignment of the Perth railway system, opportunities to implement mitigation measures were limited for this Project.

Where possible, the location of monopoles was chosen in a way that no vegetation will have to be impacted. Out of a total of 112 sites, 21 were identified to potentially have environmental values present. UGL conducted biological assessments to ensure procedures of best environmental practice were implemented. Out of the 21 sites, six sites were within Bush Forever boundaries and five sites were left where clearing was found to be unavoidable.

For sites where TECs were present or potentially present, the disturbance footprint was adjusted, resulting in a lower impact to the TECs and therefore an overall less significant impact caused by the Project.

At sites where clearing was inevitable, the clearing extent has been limited to areas where clearing is required for site access and the installation of monopoles or WP pillars. No additional clearing is proposed.

Summary of Residual Clearing Impact and Significance Assessment

A summary of the clearing necessitated by the Project is presented in Table 3. The impact significance was assessed to comply with the EPBC Act *Significant impact guidelines 1.1 – Matters of National Environmental Significance* (DoE, 2013).

Table 3: Clearing Impact for Each Applicable Site

Site	Impacted Vegetation - Description	Clearing Impact (ha)	Significance Assessment under the EPBC Act
Cooloongup #49	<ul style="list-style-type: none">• Vegetation is a Good quality acacia woodland at Laydown 2 and 3 with low to moderate diversity.• Vegetation at Laydown 1 is in cleared and in a Degraded condition from previous PTA and residential clearing.• Regrowth since 2005 and therefore considered native under the EP Act.• The vegetation is in Good condition.• No TECs, Threatened or Priority Flora will be impacted.• Laydown/turnaround points 2 and 3 are in ESA-18656• Impacted vegetation covers an area of 0.05 ha (Laydown areas 2 and 3) and is in Good condition.• Laydown area 1 is located within cleared land (0.15 ha).	0.05ha	Not significant



Conclusions

UGL has undertaken several revisions in the design of the Project to aid construction work of communication monopoles for the PTA. The vegetation at the Cooloongup Site was of a moderate to low diversity and in a Good to Degraded condition.

There were not any TECs, Threatened or Priority Flora identified that will be impacted by the small amount of clearing performed to construct the monopoles. Laydown/turnaround points 2 and 3 are located in the environmentally sensitive area (ESA)-18656. The Cooloongup Site does not hold values for fauna habitat with vegetation condition and proximity to road and rail limiting ecological value.

The Cooloongup Site does sit within a Bush Forever boundary and it therefore appears to require a NVCP. The Project necessitates clearing of 0.05 ha of native vegetation and because of its extent will have negligible impact on the broader environment.

This report should be read in conjunction with the Schedule - Statement of Limitations. Should you have any queries regarding the above, please contact the undersigned on (08) 6162 8980.

Yours sincerely,

Western Environmental Approvals Pty Ltd



Director

Schedule

- Statement of Limitation

Appendices

- Appendix A: Site Photos
- Appendix B: Aerial Imagery



Statement of Limitations

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The conclusions must also be considered in light of the agreed scope of services (including any constraints or limitation therein) and the methods used to carry out those services, both of which are as stated or referred to in this report.

Environmental Conclusions

In accordance with the scope of services, WEPL has conducted environmental field monitoring and/or testing in the preparation of this report. The nature and extent of monitoring and/or testing conducted is described in this report.

On all sites, varying degrees of non-uniformity of vertical and horizontal conditions in media (soil, water, air, waste or other media as described in the report) are encountered. Hence no monitoring, common testing or sampling technique can eliminate the possibility that monitoring or testing results/samples are not totally representative of media conditions encountered. The conclusions are based on the data and the environmental field monitoring and/or testing actually undertaken, and are therefore merely indicative of the environmental condition of the site at the time of preparing this report, including the presence or otherwise of contaminants or emissions. It should be recognised that site conditions, including the extent and concentration of contaminants, can change.

Within the limitations imposed by the scope of services, the monitoring, testing, sampling and preparation of this report have been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. To the maximum extent permitted by law, no other warranty, express or implied, is made.

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Other Limitations

This report is intended to be read in its entirety, and sections or parts of this report should therefore not be read and relied on out of context.

WEPL will not be liable to update or revise this report to take into account any events or circumstances or facts becoming apparent after the date of this report.



References

Department of the Environment (DoE). (2013). *Significant impact guidelines 1.1 – Matters of National Environmental Significance*. Accessed on 1 November from https://www.dcceew.gov.au/sites/default/files/documents/nes-guidelines_1.pdf

Metronet. (2023). *High Capacity Signalling: Radio Systems Replacement Fact Sheet*. Retrieved on 1 November 2023 from <https://metronet.wa.gov.au/Portals/31/Project%20Documents/High%20Capacity%20Signalling/Radio%20Systems%20Replacement%20Fact%20Sheet.pdf>.

Appendix A

Site Photos





Photo 1

Cooloongup

Date: 8 July 2024

Description: Cleared vegetation facing northwest at laydown 1 cooloongup.





Photo 2

Cooloongup

Date: 8 July 2024

Description: Cleared vegetation facing east at laydown 1 Cooloongup.





Photo 3

Cooloongup

Date: 8 July 2024

Description: Vegetation dominated by acacia at laydown 2 facing north, Cooloongup.





Photo 4

Cooloongup

Date: 8 July 2024

Description: Vegetation at laydown 2 facing south.





Photo 5

Cooloongup

Date: 8 July 2024

Description: Vegetation dominated by acacia at laydown 3 facing north west.

