Wallerawang Power Station Project Demolition

Biodiversity Management Plan

Prepared by

Liberty Industrial Pty Ltd

For

Revision No.	Revision Date	Authority	Changes
A	07.02.2021	ADL	Draft
B	09.04.2021	ADL	Adressing Greenspot comments
C	13.04.2021	ADL	Addressing additional Greenspot comments

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Project Manager

ACCEPTED: Matt Smith Date: 01 - 03 - 2021

Senior Project Manager

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GLOSSARY AND ABBREVIATIONS

ACM	Asbestos Containing Material
ALARP	Mitigate risk to “As Low As Reasonably Practical”;
ARCP	Asbestos Removal Control Plan
AWS	Automatic Weather Station
Code of Practice	A practical guide to achieve the standards of health and safety required under the model Work Health and Safety (WHS) Act and model WHS Regulations
DA	Development Approval (DA015/19) issued by Lithgow City Council on the 26th of September 2019
Environmental Aspect	means the interaction, relationship or impact of an operation or activity with the Environment
Environmental Law	relating to the storage, handling or transportation of waste, dangerous goods or hazardous material relating to Workplace health and safety; or which has as one of its purposes or effects the protection of the Environment
Environmental Notice	means any direction, order, demand, license or other requirement from a Government Agency to take action or refrain from taking any action in respect of the Site or the Works in connection with any Environmental Law
EPA	Environment Protection Authority
HESQ	Health Environment Safety Quality
Liberty	Liberty Industrial
SEE	Wallerawang Power Station Demolition Statement of Environmental Effects (SSE) (Aurecon 2018)
Site	means a project site or work area where the company is undertaking activities on behalf of a client
Standards	Standards are published documents setting out specifications and procedure
WPS	Wallerawang Power Station

1 REQUIREMENT MATRIX

Development Approval Conditions

Table 1 – Key Biodiversity Development Approval Conditions

DCC No	Condition Requirement	Document Reference
Schedule A 1(e)	The applicant is required to prepare and submit to Council for approval the following plans relating to the demolition of the Wallerawang Power Station Site: e) Biodiversity Management Plan	This plan
Schedule B (42)	In addition to meeting the specific performance criteria established under this consent, the Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the demolition, construction or operation/use of the development	This plan
Schedule B (63)	An Environmental Management Plan is to be submitted and approved by Council prior to works commencing on site. The plan is to outline management strategies/plans to mitigate and manage potential environmental impacts associated with the project.	DEMP
Schedule B (64)	That the development be undertaken in accordance with the environmental safeguards to minimise any adverse impacts, as identified under Section 5 within the Wallerawang Power Station Demolition Statement of Environmental Effects (SEE) – Reference 253776 dated 26 September 2018.	This Plan
Schedule B (68)	That the activity be undertaken in compliance with environment protection licence 766.	EPL 766
Advisory Notes (AN1)	Threatened Species No Threatened Species or Endangered Ecological Community listed under the Threatened Species Conversation Act 1995, the Environment Protection and Biodiversity Conservation Act 1999 or the associated Regulations are to be cleared as result of this Approval. This includes for fencing or accessways.	This Plan

2 PURPOSE

This Biodiversity Management Plan (BDMP) has been prepared by Liberty Industrial (Liberty) for the Wallerawang Power Station (WPS) Decommission, Demolition and Rehabilitation (DDR) Project (The Project) and will form part of the Demolition Environmental Management Plan (DEMP).

It is the policy of Liberty to ensure a high standard of care to minimise the impact on the environment, immediate work sites, and the local community.

This Biodiversity Management Plan addresses the applicable requirements of:

- Development Approval (DA) (DA015/19) issued by Lithgow City Council on the 26th of September 2019;
- Wallerawang Power Station Demolition Statement of Environmental Effects (SEE) (Aurecon 2018);
- Applicable New South Wales and Australian Environmental Legislation.

3 REVISION CHANGES OF THIS BDMP

Changes to the BDMP shall only be implemented with the approval of the Project Manager. This BDMP will be revised to address learnings identified through continual improvement and as necessary.

4 DISTRIBUTION LIST

A controlled copy of this BDMP is to be distributed to the following parties for comment and review

- Liberty Industrial Directors, Senior Management, Project Manager, Project Engineer, HSEQ Manager and Site Supervisors;
- Greenspot Project Managers;
- Lithgow City Council (LCC).

Following review, it will be submitted to LCC for approval prior to physical commencement of the Project.

Once the Biodiversity Management Plan has been approved, it will be integrated into the WWPS DEMP. A hardcopy of the DEMP will be kept onsite and updated as required by the Project Environmental Advisor, as well as a controlled PDF version being uploaded into the project management database. All Contractors and Subcontractors will be provided a copy to ensure their works are consistent with the DEMP.

5 LEGISLATION, STANDARDS AND CODES OF PRACTICE

The contractor commits to comply with all relevant sections of legislation, policies, licences, guidelines and standards applicable to the project and are listed below;

- AS/NZS ISO 19011:2014 – Guidelines for Auditing Management Systems
- Biodiversity Conservation Act, 2016 (NSW)
- Biosecurity Act, 2015 (NSW)
- Protection of the Environment Operations Act 1997 (NSW)
- Environment Protection and Biodiversity Conservation Act 1999 (Cwth)
- Environment Protection Manual for Authorised Officers: Bunding and Spill Management, Technical Bulletin (Environment Protection Authority, 1997).
- Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004).

6 PROJECT BACKGROUND

Wallerawang Power Station (WPS) is a former coal-fired power station owned by Greenspot Wallerawang Pty Ltd (Greenspot). WWPS is located adjacent to the township of Wallerawang, approximately 14 kilometres (km) from Lithgow and 160 km west of Sydney, in the Central Tablelands of NSW. WWPS began operation in 1957, initially consisting of four 30 megawatt (MW) units, with two 60 MW units being added in 1961 and 500 MW units being added in 1976 and 1980. The 30 MW and 60 MW units were decommissioned in the 1990's and their above ground infrastructure was salvaged or demolished at that time.

In November 2014, EnergyAustralia announced it would permanently close WWPS due to ongoing reduced energy demand, lack of access to competitively priced coal and the power station's high operating costs. The WWPS has since been deregistered as an electricity generation facility with EnergyAustralia commencing some DDR activities. In September 2020, Greenspot acquired the WWPS site and surrounding buffer lands from EnergyAustralia. Greenspot is now progressing the DDR Project with Liberty Industrial as the Principal Contractor for the demolition works.

The DDR project will take approximately two years to complete, commencing on site in the first half of 2021.

Under current plans, key infrastructure on site will be retained including the turbine hall structure, cooling tower and coal dome.

In parallel with completing the DDR project, Greenspot will progress with their development of an industrial park concept plan for the WWPS site and buffer lands, seeking approvals for a variety of uses.

Greenspot's primary objective is to revitalise what would otherwise be a stranded asset, and in doing so, to generate opportunities for economic activity and employment. The desired outcome is a hub of economic activity.

7 PROJECT OBJECTIVES

The objectives of the Project are to:

- maximise the recovery of valuable resources in a safe, environmentally compliant, cost effective and timely manner
- protect the workforce from exposure to hazards and risks
- protect the surrounding environment and community from avoidable impacts in compliance with the planning approvals.

Liberty Industrial as a licensed demolition contractor, will prepare and implement a variety of management plans and a demolition work plan consistent with AS2601-2001.

8 GENERAL DESCRIPTION OF THE SITE AND WORK DOMAINS

As per section 2.1 of the DEMP.

9 EXISTING ENVIRONMENT

The Wallerawang Power Station site is located near Marrangaroo National Park within an area known for high biodiversity value. However, the site itself is considered to be a highly disturbed environment.

The site had all native vegetation cleared from it and contains areas of lawn and garden beds containing non-endemic species.

In 2012, Delta Electricity prepared the 'Delta Western Land Management Plan 2012-2017' which reviewed local fauna and flora populations, heritage sites and waste management for the Wallerawang Power Station, Mount Piper Power Station, Lake Wallace, Lake Lyell, Thompsons Creek and buffer lands surrounding the ash repository sites at Kerosene Vale and Mount Piper Ash Dam. A summary of the plan review findings is provided the Wallerawang Power Station Demolition Statement of Environmental Effects (SEE) (Aurecon 2018). The plan did not assess the power station site, given it did not provide natural fauna or flora habitat .

There is however, the potential for local micro-bat and bird communities to have created nest areas within the established infrastructure on the Wallerawang Power Station since its closure and decommissioning.

10 POTENTIAL IMPACTS

10.1 FLORA

WWPS is a highly modified industrial site and is not considered to contain suitable natural habitat for threatened flora species that are known to occupy the areas surrounding the site. Additionally, the Demolition Project is not expected to require any vegetation clearing, however, minor tree trimming, and removal of garden beds may be necessary to allow for demolition activities to occur. This would impact on areas of lawn and planted exotic species only. Direct Impacts to threatened flora species are therefore not expected.

Potential for the Project to facilitate the movement of exotic weeds during the demolition works, including those declared noxious weeds listed under the Biosecurity Act 2015, presents a risk of indirect impact to ecological communities. Exotic weed species have the potential to impact on the biodiversity of the adjoining habitats and are known to reduce the ecological functioning of adjacent native communities.

The Project could facilitate the movement of weeds as a result of:

- the increase in human activity in ancillary sites and areas being demolished
- machinery movements, including the attachment of seed (and other propagules) to vehicles and machinery
- earthworks and movement and disturbance of soil profiles.

Additionally, following completion of the Project, there is the potential that weeds may establish within the site and adjacent areas. As such, weeds would need to be managed during the Project with any observation of weed germination or establishment being recorded in weekly inspections.

10.2 FAUNA

Potential impacts to fauna on the site are considered low, however, native bats, birds, aquatic or semiaquatic species may have inhabited the WWPS since its decommissioning, therefore these species have the potential to be impacted by the demolition works. It is proposed that if demolition personnel identify any fauna inhabiting the redundant structures, they are to notify the environmental representative. If native fauna species are found to inhabit any structures, a suitably qualified wildlife handler would be engaged to move them to a suitable location prior to demolition occurring.

The potential impacts of the project on biodiversity are considered to be minor. The safeguards and mitigation measures identified in Table 6.1 (Biodiversity Safeguards and Mitigation Measures) would be implemented to ensure minimal impact on biodiversity within the site and the surrounding environment.

11 OBJECTIVES AND PERFORMANCE CRITERIA

11.1 OBJECTIVES OF THIS PLAN

The biodiversity objectives for the Project are to:

- Avoid impacting the biodiversity of native ecosystems on and off the project site;
- Educate demolition personnel on the potential for native fauna species to inhabit the site;
- Establish demolition works procedures to manage encounters with or observation of native fauna;
- Establish a strategy for effective management of demolition works that limits impact to the natural environment.
- Avoid the spread of noxious weed species as a result of demolition works.

11.2 PERFORMANCE CRITERIA

- No negative impact to native ecosystems on and surrounding the project site;
- No adverse effects on the existing biodiversity or threatened species.

12 BIODIVERSITY MITIGATION AND CONTROLS

The following sections discuss biodiversity mitigation measures for the project.

12.1 BIODIVERSITY SAFEGUARDS AND MITIGATION MEASURES

Table 2 Biodiversity Impact Mitigation Measures

Reference No.	Action	Responsibility	Timing
B-1	Biodiversity Management Plan shall be prepared as part of the demolition EMP prior to the start of demolition works. This Plan would include measures to protect native flora and fauna on and close to the site.	Project Manager	Prior to demolition
B-2	All personnel required to undertake demolition activities or activities adjacent to native vegetation would be informed of biodiversity protection measures which including; • Reporting any sighting of fauna within structures to be demolished, or adjacent native vegetation, to the environmental representative	All Site Personnel	Project duration
B-3	Environmental representative will investigate any reports of fauna within buildings to be demolished or within adjacent vegetation. If native fauna species are found to inhabit any structures, a suitably qualified wildlife handler would be engaged to move them to a suitable location prior to demolition occurring.	Environmental Representative	Project duration
B-4	To control invasive flora species, observations of weed germination, presence or establishment of weeds within the project site will be recorded in weekly site inspections and acted on accordingly	Site Supervisor	Project duration
B-5	Ensure vehicles entering and exiting site are clean and free of dirt and organic material as far as reasonably practicable.	Site Supervisor	Project duration

12.2 BIODIVERSITY RISK ASSESSMENT ASPECTS AND IMPACTS

Risk Assessment Matrix

The following risk assessment matrix has been used to determine the risk to air quality relevant to the WWPS demolition and decommissioning works. The level of risk determined from the matrix identifies the level of control measures required for that air quality aspect in relation to potential impacts to sensitive receivers (including relevantly for the purposes of this plan, potential impacts on biodiversity).

Table 3 - Risk Assessment Matrix

Likelihood	Consequence				
	1 - Low	2 - Minor	3 - Moderate	4 - Major	5 - Critical
A - Almost certain	High (11)	High (16)	Extreme (20)	Extreme (23)	Extreme (25)
B - Likely	Moderate (7)	High (12)	High (17)	Extreme (21)	Extreme (24)
C - Possible	Low (4)	Moderate (8)	High (13)	Extreme (18)	Extreme (22)
D - Unlikely	Low (2)	Low (5)	Moderate (9)	High (14)	Extreme (19)
E - Rare	Low (1)	Low (3)	Moderate (6)	High (10)	High (15)

	Tolerable	ALARP	ALARP	INTOLERABLE

12.3 RISK MATRIX EXPLANATION

Table 4 - Risk Matrix Explanation

Probability			**Consequences**		
A	Almost Certain	Expected to occur, quite common.	25	Critical	Major environmental harm. E.g. critical pollution incident causing significant damage or potential to health or the environment. Fines and prosecution likely.
B	Likely	Will probably occur, has happened.	21	Major	Long term or serious environmental damage. Numerous complaints received. Potential for prosecution. Loss of reputation
C	Possible	Might occur at some time.	13	Moderate	Moderate environmental impact. Will cause complaints. Possible fine.
D	Unlikely	Could occur at some time although unlikely.	5	Minor	Minimal environmental harm. Potential for complaints. Fine unlikely.
E	Rare	Might occur at some time in exceptional circumstances.	1	Low	Little or no environmental harm. Little potential for fines or complaints.

A biodiversity project risk has been conducted for the project and is detailed in Table 5.

Table 5 Biodiversity Project Risk

#	Work Activity	Potential Hazards	Initial Risk	Safeguards/controls How can the risk be minimised?	Residual Risk	Responsibility
1	▪ Demolition using large excavators, through induced collapse and deconstruction techniques ▪ Sorting of demolition waste using excavators ▪ Loading of demolition waste for transport using excavators and loading equipment ▪ Removal of concrete building slabs and roads with excavators and breaking equipment	Injuring or killing native fauna within site structures and stockpiles	9	Section 6, Table 2 – Biodiversity Impact Mitigation Measures	3	Site Supervisor Project Manager Demolition Personnel Environment Representative
2	Removing vegetation or exposing natural ground as part of demolition activities	Establishment of invasive flora species	17	Section 6, Table 2 – Biodiversity Impact Mitigation Measures	3	Site Supervisor Project Manager
3	Movement of vehicles and plant to, from and throughout the project site	Migration of invasive fauna seeds or propagation material	17	Section 6, Table 2 – Biodiversity Impact Mitigation Measures	3	

13 COMPLIANCE MANAGEMENT

13.1 TRAINING

All workers and visitors shall undergo the following inductions/trainings prior to commencing work:

- Liberty Industrial Project Specific Induction
- Greenspot Site Induction

All personnel, including employees, contractors and sub-contractors, are required to complete a project induction containing relevant environmental information before they are authorised to work on the project.

Records of all training activities, including inductions, will be maintained. Records will include the name and role of the attendee, the name of the course and, where applicable, reference to the document-controlled version of the material presented, and a copy of the assessment completed.