



Wallerawang Power Station Project Demolition

Rehabilitation Management Plan

Prepared by
Liberty Industrial Pty Ltd
For



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PREPARED: Alwin De Leon Date: 26 - 02 - 2021
Project Manager

ACCEPTED: Matt Smith Date: 01 - 03 - 2021
Senior Project Manager

Specialist Deconstruction Services

■ Industrial demolition contractors ■ Mine closure consulting ■ 3D Modelling

■ Demolition consultants ■ Asbestos abatement

Liberty Industrial Pty Ltd A.B.N. 99 147 758 487



TABLE OF CONTENTS

GLOSSARY AND ABBREVIATIONS.....	2
1 REQUIREMENT MATRIX.....	3
2 INTRODUCTION	5
2.1 Purpose.....	5
2.2 Revision changes of this RehabMP	5
2.3 Distribution list	5
2.4 Legislation, Standards and Codes of Practice.....	5
2.5 Obligations	6
3 PROJECT OVERVIEW	7
3.1 Project Objectives	7
4 EXISTING ENVIRONMENT	8
5 POTENTIAL IMPACTS.....	10
6 OBJECTIVES AND PERFORMANCE CRITERIA	11
6.1 Objectives of this Plan	11
6.2 Performance Criteria.....	11
7 REHABILITATION MANAGEMENT MEASURES	12
7.1 Rehabilitation Management Measures	12
7.2 Implementation	13

LIST OF TABLES

Table 1 – Key Rehabilitation Development Approval Conditions.....	3
Table 2 – Rehabilitation Management Practices	13

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 Rehabilitation Development Approval Conditions

DCC No	Condition Requirement	Document Reference
Schedule A 1(h)	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: a) A rehabilitation management plan	This Plan
Schedule B (31)	Restoration Plan A Site Restoration Plan shall be submitted to and approved by Council prior to the commencement of any work. This plan must identify the proposed revegetation to be undertaken upon of the demolition work.	This Plan
Schedule B (53)	Contaminated Land Any areas of contaminated ground, including any land contamination caused by the proposed demolition works are to be clearly identified and surveyed and a copy of the appropriate plan provided to Council for any future potential development t of the site.	Contaminated Land Management Plan
Schedule B (58)	Rehabilitation A Rehabilitation Plan is to be submitted to Council addressing the proposed end use and rehabilitation works. The rehabilitation plan must: a) Assess the quantity and availability of materials on site that can be applied to rehabilitation (including overburden, tailings and put walls etc). b) Consider likely flood behaviour and impacts on the landscape as proposed to be rehabilitated (including during each of the various rehabilitated stages), c) Develop clear rehabilitation objectives for the whole site, including the following: d) Stabilisation of disturbed areas to prevent the emission of dust following closure; and e) Landscaping the site with native species endemic to the locality. f) Develop clear, progressive rehabilitation staging for the whole site, including specific milestone dates for rehabilitation works and a program for monitoring progress against these dates; g) Describe in detail the measures that would be implemented over the next 5 years to rehabilitate and manage the landscape on the site	This Plan

	h) It is to further clearly identify finished contours, topsoil depths, drainage/siltation controls, plant and grass materials to be used.	
Schedule B (63)	Environmental Requirements 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 (68)	That the activity be undertaken in compliance with environment protection licence 766.	EPL 766

2 INTRODUCTION

2.1 PURPOSE

This Rehabilitation Management Plan (REHABMP) has been prepared by Liberty Industrial (Liberty) for the Wallerawang Power Station (WWPS) 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 REHABMP 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;

2.2 REVISION CHANGES OF THIS REHABMP

Changes to the REHABMP shall only be implemented with the approval of the Project Manager.

This REHABMP will be revised to address learnings identified through continual improvement and as necessary.

2.3 DISTRIBUTION LIST

A controlled copy of this REHABMP 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.
- NSW Environment Protection Authority (EPA)

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

Once REHABMP 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.

2.4 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

- Australian Standard AS 2601:2001: The Demolition of Structures
- State Environmental Planning Policy No. 55 – Remediation of Land;
- Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004).

2.5 OBLIGATIONS

Liberty, as the Principal Contractor, will undertake the Project in a manner that complies with the requirements for rehabilitation and restoration of the site.

Details to ensure how this will be achieved are located in Section 6 Rehabilitation Management Measures Controls.

All construction personnel working on the Project have the following general obligations:

- Receive training and awareness of environment, work procedures and the final rehabilitation of the site.
- Comply with all Laws relating to Rehabilitation including authorisations, licenses and approvals required by any government agency for the lawful use of the site to carrying out of contracted work;
- Not to cause harm the existing environment;
- To undertake all works in a manner that will not adversely affect the existing environment;
- Include plans for the final restoration and rehabilitation in the planning process for the Project works.
- Operate in a proper and efficient manner and maintain in good working order, all plant used in connection with the carrying out the contracted work;

3 PROJECT OVERVIEW

Wallerawang Power Station (WWPS) 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, coal dome and administration building.

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 industrial and business 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 of which the local community and the broader region is justifiably proud.

3.1 PROJECT OBJECTIVES

The objectives of the Project are to:

- safely demolish the majority of structures on the Wallerawang Power Station site and deliver cleared areas to the client to enable the future redevelopment of the site;
- maximise the recovery of valuable resources in a safe, environmentally compliant, cost effective and timely manner;
- minimise waste, and recycle and reuse as much material as possible;
- 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.

4 EXISTING ENVIRONMENT

Wallerawang Power Station commenced operations in 1957 with the opening of the Wallerawang A Station. The Wallerawang B Station commenced operations in 1961. The Wallerawang C Station commenced operations in 1976 with the commissioning of Unit 7 and with Unit 8 being commissioned in 1980. The A and B stations were closed in the 1980's and were demolished in the late 1990's. The Wallerawang C Station (Units 7 and 8) continued in service until 2014 when the power station was closed, having reached the end of its economic life.

The site has been subject to heavy industrial activity for some 60 years and is considered to be a highly disturbed environment. The operations of the power station have resulted in some contamination of the lands on the site. This has been the subject of a number of detailed reports Greenspot is committed to the ongoing management of areas of environmental concern.

The site has also been cleared of all native vegetation and contains areas of maintained lawn, grassland and garden beds. The site otherwise is traversed by roadways and areas of concrete and other hardstand. The coal handling plant area is largely bare and unvegetated due to long term stockpiling of coal.

The project will involve the demolition and deconstruction of the majority of structures on the Wallerawang Power Station site, including chimney stacks, precipitators, boilers, coal handling plant, and other smaller buildings and structures as shown in Figure 1.

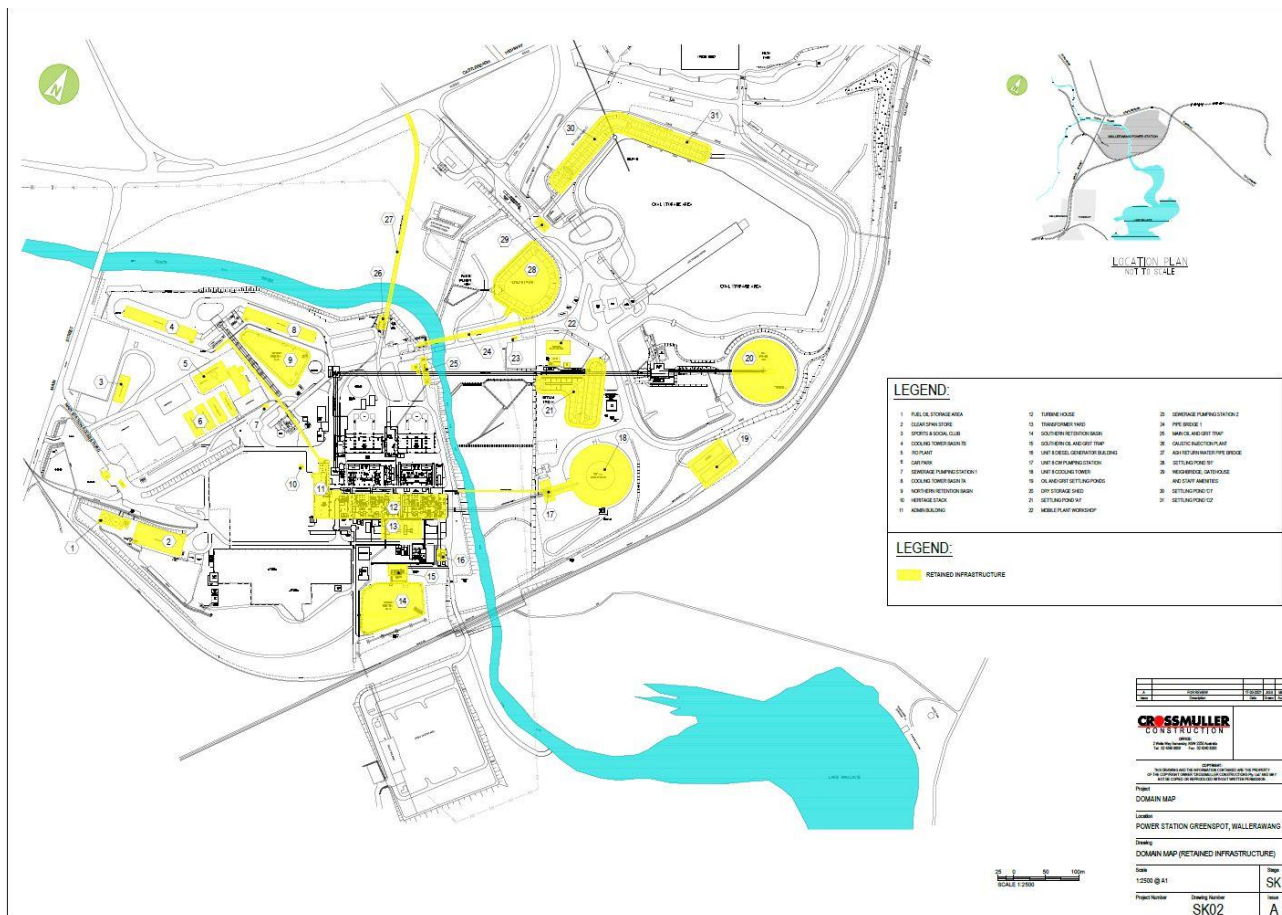
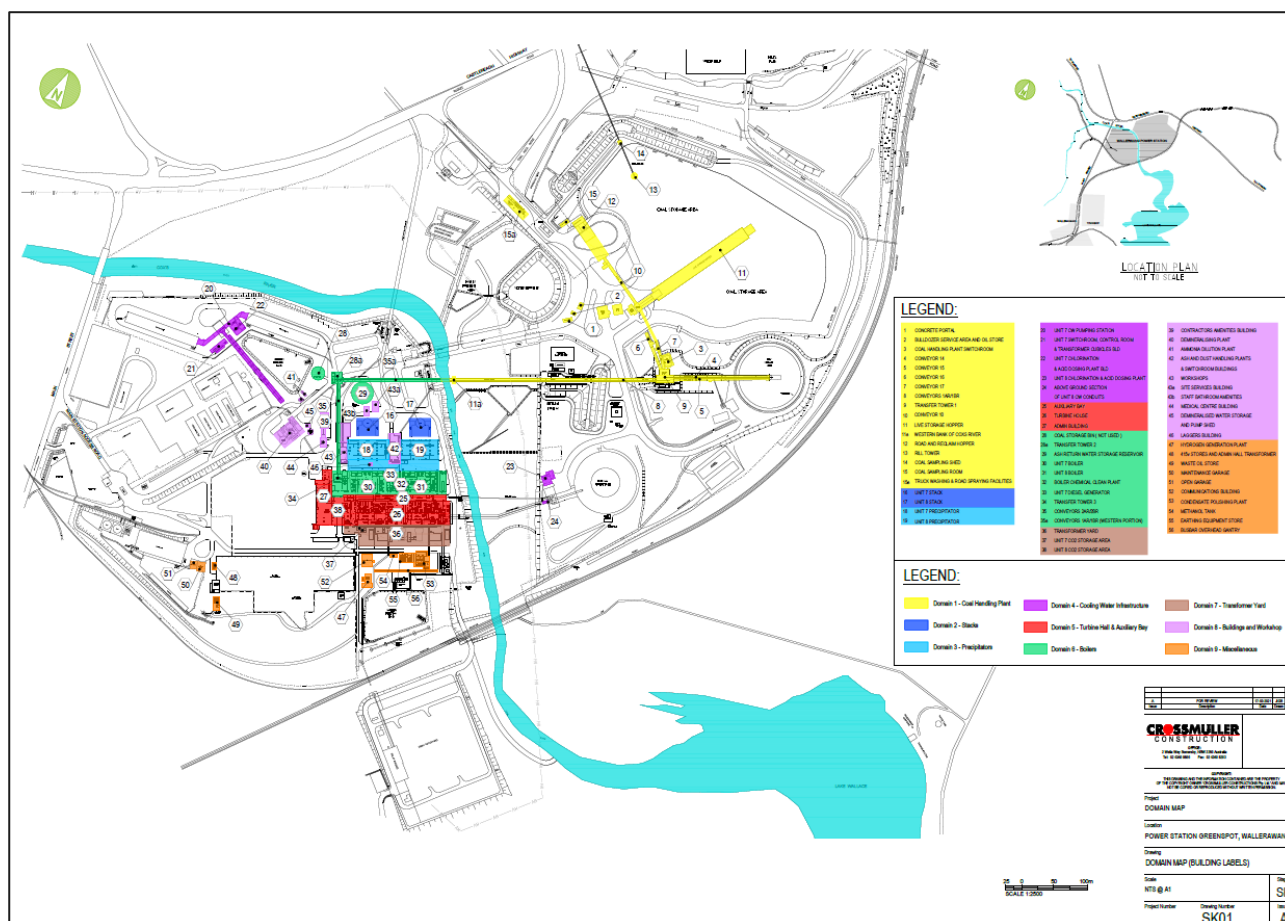


Figure 1: Retained Infrastructure Domain Map



The demolition works will take place largely on the footprint of the structures being demolished, with the only exception being the chimney stacks which will be felled in a direction away from the Coxs River. Most of the buildings and structures will be demolished using mechanical shears and other mechanical means. The chimney stacks and boiler structures will be felled using explosives. The steel and concrete materials resulting from the demolition works will be processed, sorted and recycled. The main impact from the works will be on the existing footprint of the buildings and structures.

It is proposed that the demolition works will be undertaken to ground level or to “top of slab” to avoid disturbing the grounds on the site. The processing and sorting of materials will also be carried out in a way that will not disturb the ground. Accordingly, potential contamination in the ground will not be disturbed or mobilised.

5 POTENTIAL IMPACTS

In light of the history and disturbed nature of the site, the potential impacts from the proposed demolition activities will be minimal (if any).

The structures to be demolished will largely be carried out on the existing footprint of the buildings or structures. The chimney will be felled towards the north-west in an area of demolished buildings, roadway and some grass.

The demolition will be carried out to ground level or to “top of slab” to avoid disturbing the grounds on the site. This will avoid contact with any potential contamination and will also ensure that potential contamination is not disturbed or mobilised.

The processing of the scrap and other materials will be carried out in situ in the immediate vicinity of the building or structure with the final processing and sorting being carried out in the area of the old coal stockpile.

It is therefore expected that the demolition activities carried out on the site will only have a minimal (if any) impact on the existing environment.

The completion of the demolition activities will leave cleared areas at ground level. These areas will largely be open concrete hardstand.

Areas of exposed soils that go unmanaged are likely to be colonised by exotic weed species and be subject to erosion.

6 OBJECTIVES AND PERFORMANCE CRITERIA

6.1 OBJECTIVES OF THIS PLAN

The objectives for rehabilitation at the completion of the Project are to:

- Not to damage or further degrade the environment on the site;
- To use demolition methods that do not adversely affect the existing environment;
- To leave the site clear of waste and other materials at the completion of the works;
- To leave the site in an environmentally stable condition which will be suitable for the redevelopment and repurposing of the site.

6.2 PERFORMANCE CRITERIA

- No adverse effects on the existing environment;
- Stable environmental condition including no; erosion, generation of dust, germination of invasive weeds, refuge for feral animals or any other potential function of environmental degradation.
- Suitability of the site for further development and repurposing.

7 REHABILITATION MANAGEMENT MEASURES

The following sections discuss rehabilitation measures for the project.

7.1 REHABILITATION MANAGEMENT MEASURES

The methods to be applied to this project are aimed at not adversely affecting the existing environment and also to not disturb any potential contamination or to mobilise any potential contamination. At the completion of the works the site will still be considered as highly disturbed and with some contamination reflecting the 60 years of heavy industrial operations on the site.

The main objective of Greenspot for the Wallerawang Power Station site is to re-develop, re-use and re-purpose the site. This plan will facilitate the ongoing economic benefit to the community and ongoing employment opportunities. The site has access to electricity, water and rail infrastructure, transport access and some retained buildings. These facilities are well suited to ongoing industrial development on the site.

At the completion of the demolition activities, it is proposed to leave the site in a condition that will be environmentally stable, clean and will suit the proposed re-development and re-use of the site. The site will be left with areas of concrete hardstand where structures once stood. Trenches, tunnels and voids will have been largely filled to be level with the ground. This will offer a unique cleared site which will be ready for re-development. Water drainage systems will also be largely retained.

The condition of the environment of the site will be largely unchanged and as such the site will be suitable for ongoing industrial activity.

The site layout will also be largely unchanged leaving no unstable structures or profiles.

The site drainage system will also be largely unchanged and so will be able to continue to manage storm water and run off.

The ground will also be undisturbed resulting no change to the stability or geotechnical structure of the ground.

It is proposed that the final rehabilitation, in terms of areas to be re-vegetated, be undertaken as the site is re-developed. As each stage of the re-development is implemented so the site will be landscaped, revegetated, and rehabilitated to suit the new use and the new buildings and structures. This approach will avoid undoing rehabilitation that may have been carried out immediately at the completion of demolition. It will also result in a rehabilitation that will be integrated and aligned to the new development.

These new developments will be subject to Development Applications and associated Approvals. The associated Consent Conditions will provide guidance and direction for the final rehabilitation to be completed to the satisfaction of the Approving Authority.

The management measures are summarised in Table 6.1 below.

Table 2 – Rehabilitation Management Practices

Reference No.	Action	Responsibility	Timing
R-1	A REHABMP shall be prepared as part of the demolition EMP prior to the start of demolition works. This Plan would include measures to protect existing environment and to describe how the site will be left at the completion of works.	Project Manager	Prior to demolition
R-2	Implement demolition methods that do not adversely impact the existing environment.	Site Supervisor	Project duration
R-3	Implement demolition methods that do not impact the soil or ground.	Site Supervisor	Project duration
R-4	Ensure that the site is clear of waste and other materials	Site Supervisor	Project duration
R-5	Ensure that the site is left in a condition that is environmentally stable. Areas of exposed soils are to be covered with mulch or geotextile fabric, weeds are to be managed at all times and feral animals are to be humanely managed	Site Supervisor	Project duration Ongoing Post project completion
R-6	Ensure that the future redevelopment of the site includes plans for the final rehabilitation and is also matched to the new industries, buildings and structures that will establish on site to the satisfaction of the Approval Authorities.	Greenspot	Future

7.2 IMPLEMENTATION

Liberty, as the Principal Demolition Contractor, will ensure that the demolition methods to be used for the Wallerawang Power Station demolition do not adversely the existing environment or disturb the ground or soil on the site.

Liberty will work with Greenspot to review demolition methods and procedures to be applied to the works.

At the end of the works Liberty will ensure that all waste and extraneous materials will have been removed from site, unless otherwise approved to be retained on the site under the site EPL, for example concrete waste which complies with the relevant resource recovery exemption may be disposed of in site voids.

At the end of the works Liberty will review the works area to ensure that it is clean and in an environmentally stable condition suitable for redevelopment.

At the end of the project works there will be sign offs by Liberty and Greenspot to ensure that the works have been satisfactorily completed and that the site is on a condition that will allow the future planned re-development and re-purposing works to be carried out without encumbrance.

Greenspot will be responsible for the ongoing management and re-development of the site. The re-development of the site will involve future Development Applications for proposed industries and businesses to establish on the site. As such the final rehabilitation of the site will be carried out in accordance with Consent Conditions as defined by Approval Authorities, and to the satisfaction of the Approving Authorities.