Allied Pinnacle

Picton Mill, NSW

Operational Environment Management Plan

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Document History and Status

Revision	Date issued	Reviewed by	Approved by	Date approved	Revision type
1	August 2018	M. Pignatelli	G. Bull	August 2018	Update as per Environmental Audit (SLR) 2017 Action Plan
2	September 2018	R. Herron	G. Bull	September 2018	Add Document History and Status information.
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1. Introduction

This document describes the Operation Environmental Management Plan (OEMP) implemented by Allied Pinnacle Pty Ltd and its contractors during the operation of the Allied Pinnacle Flour Mill at Maldon, in the Wollondilly Local Government Area (LGA).

This OEMP responds to the specific requirements of the Consent Conditions for Development Application DA-318-12-2004-I, as modified by Modification 3 approved on 30 November 2017.

1.1 Requirements for this plan

The purpose of this plan is to detail an environmental management framework, practices and procedures to be followed during operation of the development. The controls documented in this management plan seek to address the requirements of the Department of Planning and Environment (DPE), the Australian Rail and Track Corporation (ARTC), Wollondilly Shire Council (Council) and the Environment Protection Authority (EPA).

Consent condition 5.3 requires the OEMP to specifically address the requirements outlined in Table 1. Table 1 also provides a reference to where the requirements have been addressed in this plan.

Table 1 - Requirements of consent condition 5.3

Requirement	Reference to this plan
a) identification of all statutory and other obligations that the Applicant is required to fulfil in relation to operation of the development, including all consents, licences, approvals and consultations;	Section 3
b) a description of the roles and responsibilities for all relevant employees involved in the operation of the development;	Section 4
c) overall environmental policies and principles to be applied to the operation of the development;	Section 5
d) standards and performance measures to be applied to the development, and a means by which environmental performance can be periodically reviewed and improved, where appropriate;	Section 5.5 and 6.1
e) management policies to ensure that environmental performance goals are met and to comply with the conditions of this consent; and	Section 6
f) the Management Plans listed under condition 5.4 of this consent.	Section 6 Appendix A-E

In addition the OEMP also addresses the consent conditions outlined in Table 2.

Table 2 – Other relevant consent conditions

Consent condition		Requirement	Reference to this plan
1.3	Statutory requirements	The Applicant shall ensure that all licences, permits and approvals are obtained and maintained as required throughout the life of the development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approvals.	Section 3
3.3	Auditing	Twelve months after the commencement of operation of the development, and every three years thereafter, or as otherwise agreed or required by the Secretary, the Applicant shall commission an independent, qualified person or team to undertake an Environmental Audit of the development. The independent person or team shall be approved by the Secretary prior to the commencement of the Audit. An Environmental Audit Report shall be submitted for the approval of the Secretary within one month of the completion of the Audit. The audit shall:…	Section 5.5.1
4.3	Complaints Register	The Applicant shall record details of all complaints received through the means listed under condition 4.2 of this consent in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to: a) the date and time, where relevant, of the complaint; b) the means by which the complaint was made (telephone, mail or email); c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect; d) the nature of the complaint; e) any action(s) taken by the Applicant in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the Applicant in relation to the complaint, the reason(s) why no action was taken. The Complaints Register shall be made available for inspection by the EPA and the Secretary upon request.	Section 5.4.2

Consent condition		Requirement	Reference to this plan
5.5	OEMP Review	Every three years after the commencement of operation of the development the Applicant shall undertake a formal review of the OEMP required under condition 5.3 of this consent. The review shall ensure that the OEMP is up-to-date and all changes to procedures and practices prior to the review are fully incorporated into the OEMP. The Applicant shall notify the secretary of the completion of the review and and shall supply a copy of the updated OEMP to the secretary and any other party upon request.	Section 5.5.1
6.1	Incident Reporting	The Applicant shall notify the EPA and the Secretary of any incident with actual or potential significant off-site impacts on people or the biophysical environment within 12 hours of becoming aware of the incident. The Applicant shall provide full written details of the incident to the EPA and the Secretary within seven days of the date on which the incident occurred.	Section 5.7.2
6.2	Incident Reporting	The Applicant shall meet the requirements of the Secretary to address the cause or impact of any incident, as it relates to this consent, reported in accordance with condition 6.1, within such period as the Secretary may require. Note: Condition 6.2 of this consent does not limit or preclude the EPA from requiring any action to address the cause or impact of any incident, in the context of the EPA's statutory role in relation to the development.	Section 5.7.2
6.3	Annual Performance Reporting	The Applicant shall, throughout the life of the development, prepare and submit for the approval of the Secretary, an Annual Environmental Management Report (AEMR). The AEMR shall review the performance of the development against the Operation Environmental Management Plan (refer to condition 5.3 of this consent), the conditions of this consent and other licences and approvals relating to the development. The AEMR shall include, but not necessarily be limited to:...	Section 5.8

1.2 Scope of OEMP

The OEMP covers operations involved in the milling process at the Allied Pinnacle site, and draws particular attention to aspects potentially impacting on the environment. The OEMP outlines environmental responsibilities and provides practical guidance on the implementation of environmental management procedures relating to site operations. Areas of risk are examined and corresponding mitigation measures such as environmental monitoring are outlined.

As per the consent conditions, particular attention has been paid to the key areas of environmental significance associated with the development. These areas include:

- Noise management
- Water monitoring and management
- Traffic management
- Cultural heritage
- Landscape management.

Detailed management requirements for these aspects are addressed in sub-plans to this OEMP.

1.3 Objectives of OEMP

The objectives of this OEMP are to:

- Provide an operational framework demonstrating Allied Pinnacle's commitment to conduct all operational activities in a manner that minimises impacts to the physical, biological, cultural and social environment.
- Ensure that impacts are minimised or avoided during the operation phase.
- Ensure that all Allied Pinnacle' employees and Contractors involved in the operational activities on the site, are aware of their environmental responsibilities and are proactive in their approach to environmental management.
- Comply with relevant legislative requirements.

Under the contractual arrangements for the operations of the Allied Pinnacle Picton Flour Mill, all companies, contractors and sub-contractors undertaking work during operations must comply with this OEMP.

1.4 Abbreviations

Abbreviation	
ARTC	Australian Rail Track Authority
CBNTCAC	Cubbitch Barta Native Title Claimants Aboriginal Corporation CoC
DA	Development Application
DCP	Development Control Plan
DIPNR	Department of Infrastructure, Planning and Natural Resources
DPE	Department of Planning and Environment
EMS	Environmental Management System

Abbreviation	
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EP&A	Environmental Planning and Assessment Act 1979
EPL	Environment Protection Licence
EIS	Environmental Impact Statement
LEP	Local Environmental Plan
LGA	Local Government Area
OEH	Office of Environment and Heritage
OEMP	Operation Environmental Management Plan
POEO	Protection of the Environment Operations Act 1997
RMS	Roads and Maritime Services
TLALC	Tharawal Local Aboriginal Land Council

2. Operations

2.1 Overview

Milling operations cannot proceed on the site without the consideration of a number of factors that may have an impact on the surrounding environment and community if not managed appropriately.

- The issue of wastewater management holds some significance when the proximity of the mill to regional catchments is examined.
- The operations will generate noise and traffic to a degree and the levels, impacts and mitigation measures should be implemented to adequately protect the local community.
- The site is surrounded by rural and industrial zoned land. Landscaping measures should reflect Allied Pinnacle's objective to minimise impacts on the visual amenity in the area.
- The mill is situated within a culturally sensitive area and operations should be undertaken in such a way as to minimise impacts on Aboriginal heritage.

The OEMP is designed to address these areas of key environmental significance within an operational framework, whilst demonstrating the procedures in place to ensure operations will be undertaken in a manner that is consistent with the relevant provisions of the Consent Conditions and Environment Protection Licence (EPL). As a working document, this OEMP will be under periodic review and monitoring to provide all stakeholders involved with an assurance that the environmental impacts have been recognised and are being managed appropriately.

2.2 Operational activities

The mill is capable of processing up to 300,000 tonnes a year of wheat and maize, with a corresponding 300,000 tonnes a year output from the milling process (not including a small amount of moisture that is added to the product during the milling process). The operations summarised in this section provide an overall view of the processes on site that have the most influence on the surrounding environment. An overview of the site is shown on Figure 1.

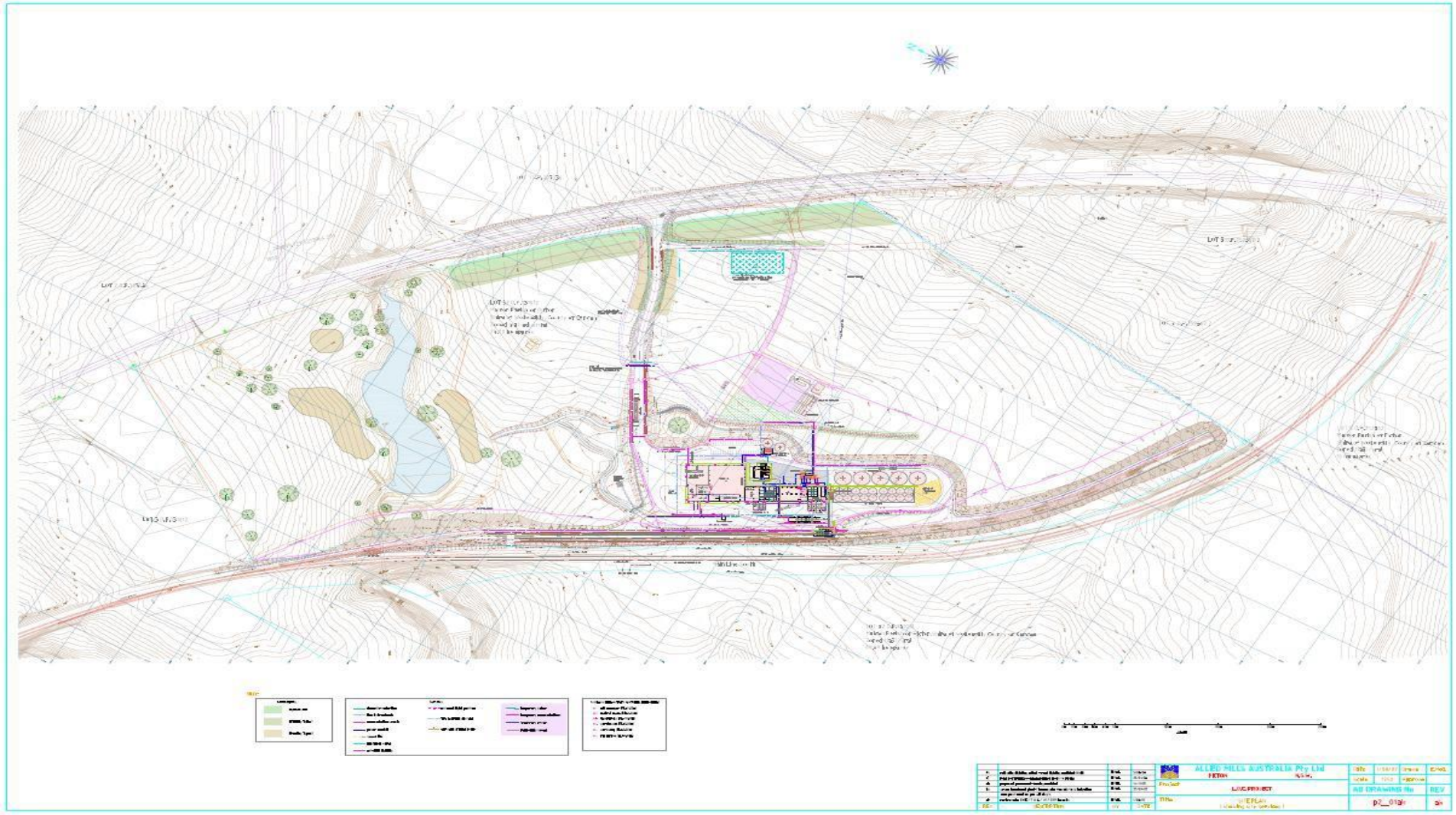

Figure 1- Extent of Operations

2.2.1 Flour and maize mill operations

Grain Intake

The grain intake plant is one of the key elements of the milling operations, processing up to approximately 300,000 tonnes per year of grain. All grain is received through a combination of rail and road deliveries. Grain is received on site using the grain intake facility located under the rail siding, where an intake pit will receive grain from either rail or road transport. The grain is transported to the bulk storage bins via an underground conduit directly connected to the elevator pit.

Grain Bulk Storage

Wheat is stored on site in the wheat silos. These are connected to the main plant by chain conveyors. In addition to the main storage facility, the wheat cleaning plants also require separate storage bin capacity.

Grain Cleaning Process

Pre-cleaning of incoming grain involves screening (to remove metal and other impurities) and aspiration (drawing air through the grain to extract light impurities). As part of the cleaning process, water is sprayed onto the grain and absorbed at a rate of up to 5% of dry grain weight (a process known as tempering). A second tempering is carried out for the application of additional water at a rate of up to 3% of grain weight. Collected screenings (impurities) are graded and passed to a ground screenings bin in the screenings disposal plant.

Milling Process

Both wheat and maize is processed by wheat and maize milling technology. Wheat based products such as fine low ash flours, baker's flours, biscuit flours, wheat semolinas, general purpose flours, noodle flours and wholemeal flours are produced on the wheat mill. The maize milling plant is designed primarily for the production of maize products (flaking grits, semolinas, polenta and residual flour).

Finished Product Storage

The finished product is stored in the following structures:

- concrete storage bins for flour storage
- flour blending bins
- mill mix storage bins
- specialty product storage bins
- wholemeal storage bins.

Out-loading

Finished product is dispatched from the plant by:

- packing into bags and on to pallets for loading onto flat-bed trucks (approximately 20-40% of finished products)
- bulk loading into tankers for removal by truck (approximately 60-80% of finished products, including all by-products).

Bag Packing

Bag packing may be required 24 hours a day, seven days a week, and is executed by a fully automated flour packing system. Trucks reverse into the packaged product loading area, and are loaded by fork lift.

Bulk Loading

Bulk out-loading occurs using a rapid loading system to handle flour that is then be deposited into tankers or waiting trucks. Approximately 80% of the production output for flour, semolina and wholemeal is in bulk. The bulk flour out-loading system can accommodate approximately 25 to 30 tanker loads a day.

By-product Handling

The only by-product of the process is grain husks ('mill mix'), which requires storage before being loaded into open top transport. From the storage bins, this by-product is transported in bulk to a pellet mill, to be turned into animal feed. Two storage and bulk out-loading silos allow rapid loading into open top trucks. The system meets a standard free of product spillage and dust emission, and the trucks are housed in a completely enclosed loading area.

Administration and General Maintenance Facilities

There are several ancillary areas within the plant, including:

- a small onsite laboratory, used for testing the physical properties of the raw grains and the quality of the finished products
- materials and finished products
- control centre area
- maintenance area
- administrative/office area.

2.2.2 Transport operations

Operations involve the delivery of grain by rail, unless issues with the rail network result in the use of trucks for incoming grain as a contingency measure. Trains arrive at different times but will only unload between the hours of 7am to 7pm. It is anticipated that one train will arrive every two days.

Trucks will be used to take the processed product from the site and operate 24 hours a day, 7 days a week depending on production flows. B-doubles and semi-trailers transport the flour, which forms approximately 80% of the processed product. Trucks with trailers and bogies transport the mill mix, which is a by-product of the milling process and represents the other 20% of product to be produced by the mill. Truck operations including deliveries, are approximately 30 vehicles per day making up to 60 trips in and out of the site.

Access to the site is via a two-lane, eight metre-wide road, with direct access onto Picton Road. The haul road is connected to Picton Road via a 'Type C' style intersection (in accordance with Roads and Maritimes Services (RMS) requirements). Access to properties to the east of the site is provided by a spur road from the main access road. The internal road system is divided into designated private car and heavy freight vehicle areas, to minimise traffic-related conflicts.

2.2.3 Water management

The milling process at the Picton site consumes potable water to maintain suitable moisture content in the grain and, as the grain absorbs all of the water, there is no liquid waste generated by this process.

Bioswales and drainage lines have been developed around the facility to maintain the surface water and watertable quality. Measures such as grading away from buildings and bunding assist in directing the movement of surface water away from built areas whilst the presence of spill kits provide added protection to surface water and groundwater from contamination in the event of a spill.

Systems have been established to manage water on site and include:

- Sprinkler irrigation area developed to manage liquids separated by the biocycle treatment process.
- Drainage lines and bio-swales to control and redirect water flows.
- Bunding around storage areas to limit the accumulation of surface water runoff.

2.2.4 Waste water management

Domestic wastewater is generated from the on site staff amenities. All domestic wastewater is treated on site as there is no municipal sewer connection. The water is treated by means of a small package sewage treatment plant. The plant comprises of a septic tank, primary aeration tanks, and secondary aeration tanks that clarify and chlorinate the water. The treated effluent is disposed of by irrigation to land within the mill site.

Waste waters generated from the onsite laboratory are kept isolated from stormwater drainage and from domestic wastewater systems and are disposed of in a controlled manner.

The milling process is described as a ‘zero-waste process’. The process water added during the milling process is wholly consumed, and no liquid process waste streams are discharged from the mill. The sewage treatment plant is designed for a maximum daily flow of 3000L/day and serves as a low maintenance system that treats only domestic wastewater, preventing offensive odours in the process.

3. Regulatory requirements

3.1 Project Documentation

The OEMP outlines the statutory and other obligations applicable to the project as stipulated in the relevant provisions of the:

- Development Application DA-318-12-2004-i lodged with the Department of Infrastructure, Planning and Natural Resources (DIPNR) on 23rd December 2004
- Consent Conditions MODs 1 to 3 dated 30 November 2017 issue by DPE
- EPL 12498 issued by the NSW Environment Protection Authority (EPA)
- Environmental Impact Statement (EIS) for Grain Milling Facility, Picton Road, Maldon, prepared by Kellogg Brown and Root Pty Ltd, dated 22 December 2004
- Additional information relating to air quality, traffic, waste water, visual amenity impacts and responding to issues raised in submissions prepared by Kellogg Brown and Root Pty Ltd, including the Visual Assessment: Additional Information report prepared by Garry Stanley dated March 2004, all submitted to DPE on 12 April 2005
- Aboriginal Heritage Assessment, Final Report for the Proposed Allied Mills Flour Mill, Picton NSW, prepared by Austral Archaeology Pty Ltd, dated May 2005, and submitted to DPE 2 June 2005
- Additional information relating to operational noise prepared by Heggies Australia dated 10 June 2005
- Review of wastewater treatment and effluent application to land, Allied Mills Pty Ltd – Picton Mill, 2016 prepared by Landfax Laboratory.

3.2 Statutory instruments

This section provides a summary of the statutory instruments applicable to the operation of the site. Copies of the Allied Pinnacle statutory instruments are available at the Allied Pinnacle Picton office or on the Allied Pinnacle web-page at:

https://alliedpinnacle.com/whs/picton/

3.2.1 Development Consent Conditions

The EIS for the construction and operations of Allied Pinnacle' Picton Flour Mill works was prepared to satisfy the requirements of Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act), and Schedule 3 of the Environmental Planning and Assessment Regulations. The EIS was assessed by the DPE in consultation with other relevant authorities. Development consent was required under part 4 of the EP&A Act. The EIS went on public exhibition and received approval from the Minister for Planning on 9th August, 2005 and as modified by MOD1 (approved 11 June 2007), MOD2 (approved 11 February 2008) and MOD3 (approved 30 November 2017).

The Consent Conditions outline various reporting conditions which Allied Pinnacle need to meet in order to comply with the Consent Conditions. These include:

- Independent Audit every three years
- Annual Environmental Management Report
- Environmental monitoring.

3.2.2 Environment Protection Licence (EPL)

EPL12498 issued by the EPA under the provisions of the POEO Act regulates the operation of agricultural crop processing at the Allied Pinnacle Flour Mill. The licence permits the Scheduled Activity - Agricultural Processing of between 100,000 - 250,000 tonnes annual processing capacity. The EPL must be reviewed at least every five years after being issued.

According to licence requirements, an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), must be submitted to the EPA.

This OEMP provides the framework for managing environmental risk including compliance with the EPL.

3.3 Legislation

Legislation and guidelines related to site operations and broad implication of these are listed in Table 3. Allied Pinnacle will seek to ensure that the relevant provisions of legislation and guidelines are complied with during site operations by a review as required, or at least every three years.

Table 3 - Legislation Summary

Legislation / Guideline	Summary / Function	Applicability
Commonwealth Legislation		
Environment Protection and Biodiversity Conservation Act 1999	To provide for the protection of Matters of National Environmental Significance.	Site operations do not have any impacts upon Matters of National Environmental Significance.
NSW Legislation		
Contaminated Land Management Act, 1997	To establish a process for investigating and (where appropriate) remediating land that the EPA considers to be contaminated significantly enough to require regulation.	The EPA must be notified where an activity has resulted in contamination or contaminated land is discovered at the site where the contaminants exceed the relevant criteria. This OEMP details the regulatory notification requirements to be implemented in the event of activities causing contaminated land or the discovery of contaminated land.
Environmental Planning and Assessment Act, 1979	To provide a framework for the formal assessment of proposed development in NSW to confirm its compliance with planning controls.	Picton Mill operates under DA-318-12-2007-i as modified. Any proposed changes to the site and its operations may be subject to assessment and approval under the Act.
Heritage Act 1977	To protect natural, cultural and built heritage in NSW by allowing heritage items or places to be	No natural, cultural or built heritage is located on the site.

Legislation / Guideline	Summary / Function	Applicability
	listed on the State Heritage Register, and for interim heritage orders to be made to protect heritage items or places. *Note: this Act does not apply to Aboriginal Heritage, which is managed under the provisions of the National Parks & Wildlife Act 1974.*	
National Parks & Wildlife Act 1974	To administer national parks and reserves in NSW, and to protect and conserve flora and fauna, Aboriginal places and Aboriginal objects.	Aboriginal objects are located on the site. It is an offence under the Act to harm or desecrate an Aboriginal object or place. Any aboriginal heritage items to be salvaged or destroyed will require consent under Section 90 of the Act, in the form of an Aboriginal Heritage Impact Permit (AHIP). The scarred tree (AMP ST 1) has specific protection requirements detailed in the CoA.
Native Vegetation Act 2003	To protect native vegetation of high conservation value and prevent broadscale clearing of native vegetation in NSW.	No rare or threatened flora species are known to occur on the site. Site operations do not require the disturbance of vegetated areas.
Noxious Weeds Act 1993	To reduce the negative impact of weeds on the economy, community and environment of NSW.	The management of weeds on site must be compliant with the requirements of this Act.
Protection of the Environment Operations Act, 1997	To regulate pollution in NSW through providing a system for licensing polluting activities, issuing environment protection notices and penalty notices.	Picton Mill undertakes the Scheduled Activity Agricultural Processing under EPL12498. Site operations must be compliant with the requirements of the licence.
Roads Act 1993	To regulate the carrying out of various activities on public road.	Access to Picton Road is compliant with the requirements of this Act.
Wollondilly Local Environmental Plan 2011	To make local environmental planning provisions for land in Wollondilly.	Any proposed changes to the site and its operations may be subject to the requirements of the LEP.

4. Environmental responsibilities

The key responsibilities and accountabilities of operational staff are outlined in Table 4. These responsibilities may be modified further as operations progress. The organisational chart shown in Figure 2 shows the relationship between roles listed in this OEMP.

Figure 2 - Organisational Chart

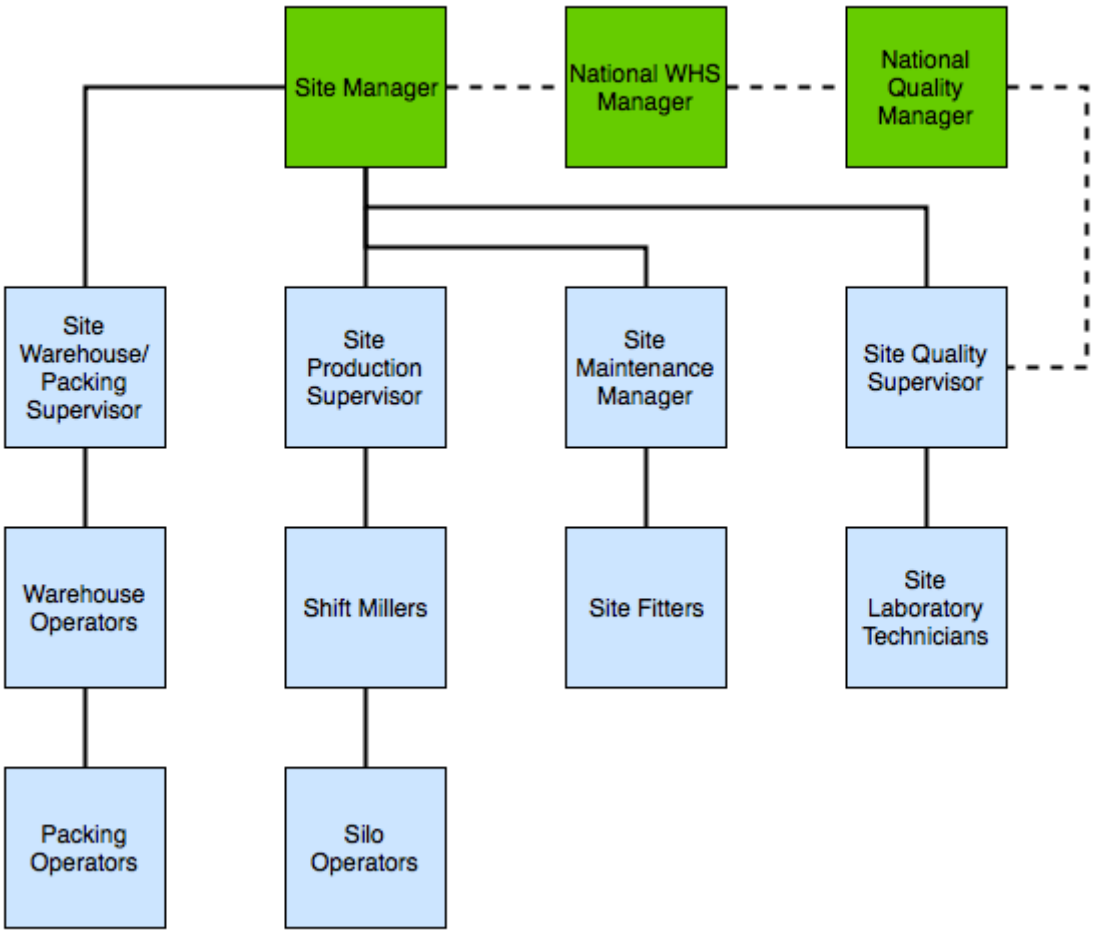

Table 4 - Roles & Responsibilities

Role	Reports To	Responsibilities
Site Manager	Central Management Team	Monitor activities against the Consent Conditions, the EPL, the OEMP and associated sub plans to maintain compliance. Oversee the implementation of the OEMP and associated sub-plans. Update and review the OEMP and associated sub plans, as required. Review the environmental risk assessment following a change in operations or following an incident or complaint.

Role	Reports To	Responsibilities
		Ensure all personnel on site including contractors have completed the environmental awareness induction and attend toolbox discussions as required. Maintain communications with Government Authorities and other stakeholders. Ensure that all complaints and incidents are recorded on the site's Incident Register. Investigate all non-compliances, complaints and incidents, identify corrective and preventative actions and ensure actions are implemented and monitored. Ensure all environmental audits, monitoring, inspections and reporting is undertaken in accordance with this OEMP. Ensure all reporting to Government Authorities is submitted in a timely manner. Ensure all environmental incidents are recorded in accordance with procedures and mitigation measures are implemented to minimise the possibility of the same incident happening again. Has the authority and independence to recommend the implementation of reasonable mitigation measures to avoid or minimise unintended or adverse environmental impacts.
Area Managers (Warehouse / Packing Manager, Maintenance Manager, QA Manager, Milling Manager)	Site Manager	Monitor that all personnel (including subcontractors) are aware of responsibilities with respect to the environment and the requirements of the OEMP. Provide support to site staff on environmental issues and OEMP implementation. Advise Site Manager on all emerging environmental issues, including suggestions for mitigation. Ensure that all environmental incidents are immediately reported to the Site Manager. Ensure that corrective actions arising out of reviews, inspections and environmental incidents are implemented in a timely and satisfactory manner. Receive, develop and implement actions to address community complaints and incidents in consultation with the Site Manager, and others in the team. Input of complaints, records of community contact and other relevant information into Complaints Register.
Site staff	Relevant Area Managers	Follow instructions and procedures stipulated in the environmental awareness/induction training program. Install environmental controls as directed by Site Managers. Maintain environmental controls to ensure they remain effective.

Role	Reports To	Responsibilities
		Report environmental incidents to Area Managers or the Site Manager as soon as practicable. Carry out corrective and preventative actions as directed by Area Managers or the Site Manager
Sub-contractors	Relevant Site Supervisor	Follow instructions and procedures stipulated in the environmental awareness/induction training program. Report environmental incidents to Area Managers or the Site Manager as soon as practicable.

5. Environmental management framework

5.1 Environmental management framework

Allied Pinnacle's approach integrates environmental management systems into the production framework as a corporate responsibility and in order to maintain a high standard of quality control as a business centred on the food industry. The management system supports the company's compliance with legislated and voluntary environmental obligations as well as continuously improving their overall environmental performance.

Allied Pinnacle is committed to an ethical business approach through:

- Compliance with the law.
- Honouring business obligations.
- Ensuring absolute integrity.

Allied Pinnacle recognise the importance of adhering to stringent product quality, safety, and environmental standards and take such standards very seriously in their constant quest to maintain the highest standards of consistency, reliability, and environmentally responsible practices that customers expect in Allied Pinnacle products.

Allied Pinnacle documents their commitment to environmental performance through their Work, Health Safety Environment and Rehabilitation Policy (WHSE- Form 02 WHSE and Rehab Policy).

5.2 Environmental risk assessment

The Environmental Risk Register in **Section 5.2.3** and the relevant sub-plans in **Section 6** of this OEMP both provide a framework for the environmental risks associated with the operation of the Allied Pinnacle Flour Mill. In order to calculate and assess the likelihood, consequences and risk rating of these environmental risks and others that may emerge as the milling operations progress, a process has been established by Allied Pinnacle that can be utilised by site staff and management alike. This process is consistent with the Allied Pinnacle risk assessment process and adapted for determining environmental risks for this OEMP.

5.2.1 Risk Assessment

The following tables outline the risk assessment process using three steps to identify the appropriate management measures required.

- Use Table 5 to determine how severe the potential impact will be.
- Use Table 6 to determine the likelihood that the aspect will have an impact on the environment or the reputation of the company.
- Determine the level of risk utilising Table 7. This will determine the type and level of environmental protection measures that will be required. Where a significant risk to the environment has been identified, environmental protection measures must be introduced to reduce the risk to an acceptable level. Aspects with a medium or low risk should also have practicable management measures implemented if these can further reduce risk.

Table 5 - Consequence descriptors

Rating	Consequence Level	Description
5	Severe	Critical long term environmental harm or catastrophic irreversible environmental harm.
4	Major	Serious medium term environmental harm.
3	Moderate	Significant short term environmental harm.
2	Minor	Unreasonable short term impacts or interference.
1	Negligible	Unfavourable impacts with no lasting detrimental effects.

Table 6 - Likelihood descriptors

Rating	Consequence Level	Description
5	Almost Certain	The risk scenario will occur in most instances and is unavoidable due to site activities.
4	Likely	The risk scenario is likely to occur and is a consequence of site activities or occurs regularly.
3	Possible	The risk scenario may occur or has occurred multiple times.
2	Unlikely	The risk scenario is unlikely to occur and site activities may contribute to the risk scenario or has occurred once.
1	Rare	The risk scenario will rarely occur and site activities do not normally contribute to the risk scenario or has never occurred.

Table 7 - Risk matrix

		Likelihood				
		Almost Certain	Likely	Possible	Unlikely	Rare
Consequence	Severe	CAT 1 25	CAT 1 24	CAT 1 23	CAT 2 19	CAT 2 15
	Major	CAT 1 23	CAT 1 21	CAT 2 18	CAT 2 14	CAT 3 10
	Moderate	CAT 1 20	CAT 2 17	CAT 3 13	CAT 3 9	CAT 4 6
	Minor	CAT 2 16	CAT 3 12	CAT 3 8	CAT 4 5	CAT 4 3
	Negligible	CAT 3 11	CAT 4 7	CAT 4 4	CAT 4 2	CAT 4 1

5.2.2 Control of risk

The Site Manager shall determine how the risks can be successfully mitigated to ensure sound environmental management. This includes updating the OEMP and associated sub-plans to cover any further identified management measures and mitigation strategies. It is the responsibility of the Site Manager and relevant Area Managers to ensure that all personnel are aware of the nature and implications of any changes to the operational activities associated with the milling process.

5.2.3 Environmental aspects and impacts register

Environmental aspects and potential adverse environmental impacts relevant to the operation of the Allied Pinnacle Flour Mill were identified during the EIS and approval phases of this development. These aspects and impacts are summarised in Table 8.

Table 8 - Environmental aspects and impacts summary

Environmental aspect	Potential impacts	Reference
Waste water management	Effluent contamination of groundwater or surface water catchment area.	Appendix B –Water Monitoring and Management Sub-Plan
Chemical storage	Leakages from chlorine nook into groundwater and surface water. Emission of chlorine to the atmosphere as a vapour.	PIRMP Section 5.7 - Environmental incident management
Spill management	Spills of fuels or oils impacting on groundwater and surface water quality.	PIRMP Section 5 - Environmental incident management
Operational noise impacts	Significant noise impacts on surrounding community through milling and transport operations.	Appendix A– Operational Noise and Vibration Management Sub-Plan
Air quality	Dust plume over mill and neighbouring properties through grain receival and handling.	PIRMP Section 5 - Environmental incident management
Fire management	Dust explosion at grain / product storage involving grain or flour dust. Fire involving timber pallets and packing paper impacting on surrounding flora, fauna and heritage items.	PIRMP Section 55.7 - Environmental incident management
Visual amenity	Visual impacts on nearby properties and the surrounding roads.	Appendix E– Landscape Management Sub-Plan

Environmental aspect	Potential impacts	Reference
Heritage items	Direct or indirect impacts on items of indigenous or non-indigenous heritage value.	Appendix D– Cultural Heritage Management Sub-Plan

The environmental risk register and risks identified in each of the sub-plans attached to this OEMP should be reviewed by the Site Manager following a change in operations or following an incident or complaint.

A closer assessment of environmental risks associated with site operations is undertaken within each sub-plan attached to this OEMP, as required by the Condition 5.4.

5.3 Environment awareness training and internal communications

All personnel involved in operations at the mill site receive a base level of environmental awareness and induction training prior to commencing work on the site. The environmental component to the site general induction broadly addresses the environmental aspects, risks and mitigation measures outlined in this OEMP.

The site induction training is delivered by “Rapid Induct”. The Rapid Induct system maintains a register of all induction attendees, dates and written acknowledgment of understanding and agreement to comply with its requirements.

Additional environmental communications or training may be required:

- when site environmental measures are found to be inadequate to manage potential or actual environmental impacts, and/or a change in the scope of operations occurs
- when refresher training is required on the Allied Pinnacle’s obligations under the Consent Conditions, EPL or this OEMP
- in response to specific environmental issues or concerns, requests by Authorities or any changes on site that affect the environmental aspects of the operations.

Additional communications would typically be delivered through production meetings or quarterly management reviews. Additional training would typically be delivered through additional inductions or toolbox discussions.

5.4 External communications

5.4.1 Regulatory, community and stakeholder communications

The operation of the mill involves communication with members of the community, regulators and stakeholders at various levels. Allied Pinnacle ensures that operations are supported by open communication throughout the life of the works, not just in response to incidents or complaints.

The following stakeholders have been identified as relevant to the operations at this site:

- Department of Planning and Environment (DPE)
- Environment Protection Authority (EPA)
- Roads and Maritime Services (RMS)
- Office of Environment & Heritage (OEH)
- Wollondilly City Council (Council)
- Sydney Water Corporation (Sydney Water)

- NSW Department of Primary Industries (DPI)
- Tharawal Local Aboriginal Land Council (Tharawal LALC)
- Cubbitch Barta Native Title Claimants
- Aboriginal Corporation (Cubbitch Barta NTCAC)
- Australian Rail Track Corporation (ARTC)
- Community including neighbouring residents and businesses.

Allied Pinnacle will proactively liaise with all external stakeholders (as applicable) to inform them of any changes to site operations or activities that may cause change in off-site environmental or community impacts.

5.4.2 Complaints management process

Allied Pinnacle record the details of all complaints received in the “Rapid Induct Incident Database”. The database includes:

- the date and time of the complaint
- the means by which the complaint was made (e.g. telephone, email, mail, in person)
- any personal details of the complainant that were provided, or if no details were provided a note to that effect
- the nature of the complaint
- the time taken to respond to the complaint
- any investigations and actions taken by Allied Pinnacle in relation to the complaint
- any follow-up contact with, and feedback from, the complainant
- if no action was taken by Allied Pinnacle in relation to the complaint, the reason(s) why no action was taken.

5.5 Environmental surveillance

Environmental surveillance is undertaken to periodically review the performance of the operations and monitor compliance with regulatory requirements as outlined in the Consent Conditions , the EPL and this OEMP. Environmental surveillance comprises environmental audits, monitoring and inspections.

A summary of environmental audits, monitoring and inspections required by the OEMP is provided in **Appendix F** – Combined implementation checklist. The environmental audits, monitoring and inspections are programmed and scheduled alongside operational inspections using the “SAP Plant Maintenance Module”.

5.5.1 Environmental Audits

An environmental audit shall be undertaken every three years in accordance with the requirements of consent condition 3.3. The audit shall be undertaken by a person or team independent of the operations and approved by the Secretary of DPE.

Internal compliance reviews shall be undertaken by a person or team nominated by the Site Manager. Internal compliance reviews are undertaken in preparation for the Annual Environmental Management Report required by consent condition 6.3 and the Annual Return for the EPL.

Update of the OEMP following formal review/audit will be completed as required and submitted to the DPE.

5.5.2 Monitoring

Environmental monitoring is specified within each sub-plan attached to this OEMP (Appendix A to Appendix E).

5.5.3 Inspections

Environmental site inspections shall be undertaken by staff nominated by the Site Manager on a periodic basis, typically quarterly or six monthly, as specified within each sub-plan attached to this OEMP.

5.6 Non-compliances

Non-compliances or potential non-compliances are situations or events that do not comply with the safeguards and procedures stipulated in this OEMP. Non-compliances or potential non-compliances may be identified in any of the following situations:

- As part of site inspections, supervision or monitoring of normal activities
- Incident investigation reviews
- During internal or external audits
- Review of legal compliance for licences and dangerous goods
- Complaint investigations.

Where the non-compliance cannot be resolved by site staff and relevant Area Managers in the first instance, the non-compliance shall be recorded in “Rapid Induct incident database” or hazard database.

5.7 Environmental incident management

5.7.1 Environmental incident response procedure

The site has a statutory obligation to respond to incidents in accordance with the site’s Pollution Incident Response Management Plan (PIRMP). A PIRMP is required under the *Protection of the Environment Operations Act 1997* (POEO Act) for all EPL holders.

A copy of the PIRMP is available on site and on the Allied Pinnacle – Picton web-page.

5.7.2 Notifying the Secretary of an Incident

In addition to the statutory obligations of the PIRMP, the Site Manager shall, in accordance with consent conditions 6.1 and 6.2:

- notify the EPA and the Secretary of any incident with actual or potential significant off-site impacts on people or the biophysical environment within 12[1] hours of becoming aware of the incident.
- provide full written details of the incident to the EPA and the Secretary within seven days of the date on which the incident occurred.

[1] Note: The PIRMP requires “immediate” notification to relevant agencies. This OEMP does not override that requirement.

5.7.3 Incident investigation

The Site Manager must be involved in the investigative process as the point of contact for all environmental issues related to the site. All site staff must be made aware of the requirement to report any environmental incidents and participate in incident investigations. A collaborative effort must be made to ensure that the cause of the incident is identified in order to establish the most suitable methods for preventing recurrence.

Details of the incident investigation are recorded in the “Rapid Induct Incident Reporting Database”.

5.8 Reporting to authorities

Allied Pinnacle obligations to report to relevant authorities are summarised in Table 9.

Table 9 – Summary of reporting obligations

Obligation	Report	Frequency
CoA 5.8	AWTS Maintenance and Monitoring Requirements	Quarterly
EPL Clause R1	Annual Return	Annually
CoA 6.3	Annual Environmental Management Report	Annually
CoA 3.3	Independent Environmental Audit and report submitted to DPE within one month of the completion of the audit.	Once every three years
NVMP	Periodic compliance noise monitoring	Once every three years
CoA 5.5	Update the OEMP	Once every three years
PIRMP CoA 6.1 and 6.2	Incident reporting	Event based
CoA 1.6	Compliance update as may be required by the Secretary.	As required
NVMP	Within 28 days of completing noise monitoring any non-compliance with the noise criterion shall be reported to the EPA and the Director-General	As required

5.9 Document controls

Environmental records will be maintained to provide evidence of the effective operation of this OEMP. Such records include:

- correspondence to/from stakeholders and interested parties;
- permits, licences and approvals;
- Rapid Induct induction training records
- Rapid Induct environmental complaints/enquiries registers
- Rapid Induct environmental incident reports

- SAP Plant Maintenance Module - non-compliance reports;
- implementation checklist
- Independent audit reports
- Annual Environmental Management Reports
- Annual returns
- Specialist reports required by the Consent Conditions
- Environmental monitoring records
- Completed inspection checklists.

The *implementation checklists* may be maintained in the form outlined in Appendix A or incorporated into the Allied Pinnacle SAP system.

6. Implementation

6.1 Environmental targets and key indicators

The following environmental performance indicators in Table 10 are used to assess the performance of the milling operations. If adverse trends are noted a review of the relevant procedures and mitigation measures will be initiated by the Site Manager in consultation with the relevant site supervisory staff, to address the issue in question and achieve acceptable performance.

Table 10 – Environmental performance targets and indicators

Environmental aspect	Performance targets	Performance indicators
Operational Noise	Achievement of zero non-compliance with the noise limit criteria as outlined in the Noise Management Sub-plan. Adopt best management practices and best available technology economically achievable principles to reduce noise emissions. Adherence to noise mitigation measures including the adaptation where necessary of engineering measures on trucks, the implementation of operating techniques such as limited compression braking and speed limit restrictions. Maintain accurate truck movement data to establish patterns and time frames that can assist in controlling noise impacts.	Noise monitoring data obtained from the sensitive receiver locations outlined in Appendix A. Compliance indicators as assessed by the specialist noise consultant as required. Site inspections to demonstrate compliance with engineering and operational requirements respectively. Accurate and up to date logs and movement records indicating compliance with timeframes and adherence to operational boundaries as defined in this OEMP. Zero noise complaints received for the operations.
Water Quality	Ensure that process water added during the milling process is wholly consumed and no liquid process waste streams are discharged from the mill during operations. Retain the maximum daily flow of 3000L/day to ensure the effective operation of the treatment plant. Respond to pollution incidents (such as the release of waste	Visual evidence of liquid process waste during operations. Monitoring level in-flow to treatment plant. Records for regular maintenance and monitoring of the treatment plant and irrigation area. Zero external/internal environmental complaints and incidents relating to apparent odours, visual pollution or pollution of land/water.

Environmental aspect	Performance targets	Performance indicators
	water into undesignated areas) and implement control measures within 24 hours of identification of breach.	
Traffic	Allied Pinnacle and sub-contractor compliance with Traffic Management Sub-plan and regulatory requirements.	Site traffic movements operating as per Traffic Management Sub-plan. Accurate and up to date logs and movement records indicating compliance with timeframes and adherence to operational boundaries as defined in this OEMP.
Cultural Heritage	Allied Pinnacle and sub-contractor compliance with Cultural Heritage Management Sub-Plan and regulatory requirements. Comply with heritage requirements of relevant stakeholders.	Landscaping and site management to ensure 100% compliance with stakeholder requirements.
Landscape	Allied Pinnacle and sub-contractor compliance with Landscape Management Sub-plan and regulatory requirements. Minimal impact to visual amenity.	Evidence of landscaping and revegetation as screening mechanisms.

6.2 Environmental management sub-plans

Detailed management sub-plans have been developed to mitigate potential environmental impacts associated with the operation of the Allied Pinnacle Grain Milling Facility.

The following sub-plans are included as appendices to this OEMP:

- Noise & Vibration Management Sub-Plan (Appendix A)
- Water Monitoring and Management Sub-Plan (Appendix B)
- Traffic Management Sub-Plan (Appendix C)
- Cultural Heritage Management Sub-Plan (Appendix D)
- Landscape Management Sub-Plan (Appendix E).

6.3 Management/mitigation measures

An implementation checklist which comprises all the management/mitigation measures specified in the sub-plans is appended as Appendix F.

Appendices

Appendix A – Operational Noise and Vibration Management Sub-Plan

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7. Introduction

This Noise and Vibration Management Sub-Plan (NVMP) forms part of the Operational Environmental Management Plan (OEMP) for the Allied Pinnacle Australia Pty Ltd (Allied Pinnacle) Grain Milling Facility (the mill) at Maldon, south-west Sydney. The NVMP has been developed in response to consent condition 5.4 for Development Application DA-318-12-2004-I, as modified by Modification 3 approved on 30 November 2017.

The NVMP identifies measures to minimise and mitigate noise impacts on surrounding land uses from the proposed works. The level of noise generated during the proposed works program will depend on the location of the receiver, the type and duration of works and intervening topography, and existing building structures between the noise emission source and receiver.

7.1 Noise generating activities

Noise generating activities associated with the operation of the flour and maize mill include:

- Grain to be received on site from a daily train delivery at the rail sidings. Unloading of grain to occur between 7am to 7pm.
- Grain processing activities for grain cleaning, milling and finished product storage to occur within internal mill buildings.
- Finished product to be packed into bags and on pallets for loading onto flat-bed trucks and bulk loading into tankers for removal by truck.
- Road traffic operations shall be on a 400 meter long road linking the site directly to Picton Road. A U turn bay shall reduce requirements for vehicles queuing. Approximately 15 vehicle movements, or up to 30 trips to and from the site per day will be required during a 24 hour period of continuous operation.
- Roof mounted ventilation fans on the mill buildings have been identified as the primary source of operational noise and have been subject to noise attenuation measures.

The potential noise impacts associated with the Allied Pinnacle development, including potential mitigation measures and enhancements, have been dealt with specifically in the Picton Flour Mill Environmental Impact Statement, (KBR, December 2004), Volume 1: Flour and Maize Mill Picton Road, Environmental Impact Statement Noise and Vibration Impact Assessment (Heggies, December 2004).

The noise and vibration impact assessment was revised following the provision of further fixed plant acoustic information, detailed in Allied Pinnacle Flour and Maize Mill, Maldon Acoustic Assessment of Fixed Mechanical Plant Items, (Heggies, November 2007).

The noise control measures documented in this management plan include:

- Applying Best Management Practice and Best Available Technology Economically Achievable principles for Mill fixed plant and mobile operations.
- Employing best practice techniques to minimise noise emissions to sensitive receivers from Mill operations.
- Undertaking operational noise monitoring post commencement of operations and throughout the project lifetime.
- Implementing a log for noise comments or complaints.
- Implementing a noise risk matrix for staff response to potential noise issues.

7.2 Vibration generating activities

The noise and vibration impact assessment (Heggies, 2004) prepared for the EIS (KBR, 2004), determined Allied Pinnacle Flour Mill operational activities are not anticipated to result in perceived vibration-related impacts at the nearest potentially affected receivers.

7.3 Environmental objectives

The purpose of this sub-plan is to comply with the requirements of the consent conditions and to minimise potential noise impacts on the local community.

The objectives of this sub-plan are to:

- Develop noise management measures for compliance with the adopted operational noise criterion.
- Manage potential noise impacts from the Allied Pinnacle Flour Mill operations and associated road and rail transportation movements.
- Minimise noise impacts on the local community and surrounding ambient noise environment.
- Implement a noise monitoring strategy for post commissioning and ongoing operational noise monitoring.

7.4 Requirements of this Plan

Consent condition 5.4(a) requires the NVMP to specifically address the requirements outlined in Table 1. Table 1 also provides a reference to where the requirements have been addressed in this plan.

Table 11 - Requirements of consent condition 5.4(a)

Requirement	Reference to this plan
Procedures to ensure that all reasonable and feasible noise mitigation measures are applied during operation of the development, including those measures listed in condition 2.7(Note 1)	Section 5
A system to undertake periodic assessment of Best Available Technically Economically Achievable and Best Management Practices to minimise noise emissions at all times and to seek to achieve noise reduction in accordance with the goal prescribed in condition 2.7(Note 1)	Section 5.3
Procedures to generate suitable documentation for annual environmental reporting, that demonstrates that the noise limits and noise goals specified under this consent, or best practice noise control operations, are being met	Section 5.4 and 6
Identification of all relevant receivers and the applicable criteria at those receivers commensurate with the noise limits and noise goals specified under this consent	Section 3.2
Identification of activities that will be carried out in relation to the development and the associated noise sources	Section 1.1 and 1.2
Proposed on-going community consultation measures	Section 5.4 of the OEMP
Development of reactive and pro-active strategies for dealing promptly with any noise complaints	Section 7.1
Noise monitoring and reporting procedures.	Section 5.3

Note: Condition 2.7 relates to landscaping and does not contain any measures related to noise. This NVMP has interpreted this requirement to mean "measures listed in consent conditions 2.3 and 2.4.

8. Legislative requirements and guidelines

The Protection of the Environment Operations Act, 1997 (POEO Act) regulates noise generation and prohibits the generation of 'offensive noise' as defined under the Act. In addition to the regulatory requirements under the POEO Act, the Environment Protection Authority (EPA) provides guidelines regarding acoustic criteria and noise controls.

Key legislation and guidelines relevant to noise management is provided in Table 12.

Table 12 – Key legislation and guidelines

Legislation / Guideline	Applicability
Protection of the Environment Operations Act, 1997 (POEO Act)	Provides for the control of polluting activities in NSW to prevent pollution of the environment. This relates specifically to noise pollution for this project.
Protection of the Environment Operations (Noise Control) Regulation, 2008	Provides provisions on matters relating to noise emissions, maintenance of control equipment, use of certain articles and inspection and testing procedures.
Environment Protection Authority NSW Industrial Noise Policy (2000)(Note 1)	Guidelines for the measurement, analysis and assessment of environmental noise to maintain residential amenity and limit intrusion potential in a balanced and structured manner.
Environment Protection Authority Environmental Noise Control Manual (1994)	Describes noise control policies and procedures within a framework or relevant legislation, acoustic theory and technology. Noise goals for construction works outlined.
Australian Standard AS 1055 Acoustics–Description and Measurement of Environmental Noise (1997)	Outlines provisions for the measurement of environmental noise levels.
Australian Standard AS 2107 Acoustics–Recommended Design Sound Levels and Reverberation Times for Building Interiors (2000)	Recommends internal noise levels for various land uses and habitable rooms.
DoP Section 76A Environmental Planning and Assessment Act 1979, Schedule 1 Application DA- 318-12-2004-i.	Department of Planning Consent Condition for the Grain Milling Facility, Picton Road, Maldon.

Note 1: The Environment Protection Authority NSW Industrial Noise Policy (2000) has been superseded by the Noise Policy for Industry 2017. However, Environment Protection Authority NSW Industrial Noise Policy (2000) is referenced in the consent condition hence is applicable to this site

9. Performance objectives

Allied Pinnacle Flour Mill activity shall be undertaken in accordance with operational noise commitments outlined in Table 14.

9.1 Hours of operation

Condition 2.3 has established specific sensitive receiver criterion for Allied Pinnacle Flour Mill operations during the day time, evening and night time period at the nearest potentially affected sensitive receivers.

The operational period for the purpose of noise assessment has been defined as:

- Day time: 7am – 6pm
- Evening: 6pm – 10pm
- Night time: 10pm – 7am

9.2 Sensitive receiver locations

The following locations have been established as potential sensitive receivers as per the Noise and Vibration Impact Assessments (Heggies 2004 and 2007).

- Location 1: 390 Picton Road, Maldon
- Location 2: 1365 Menangle Road, Maldon
- Location 3: 1404 Menangle Road, Maldon
- Location 4: 285 Picton Road, Maldon
- Location 5: 300 Picton Road, Maldon
- Location 6: 460 Wilton Park Road, Maldon

It is noted that following a rezoning which occurred in January 2014, Location 1 and Location 5 are now zoned Industrial. The residence at the Location 1 is no longer occupied and therefore is not considered a sensitive receiver however it remains on the sensitive receiver list as it is registered in the Approval.

9.3 Operational noise limits

Operational noise limits as established in Condition 2.3 are detailed in Table 13.

Table 13 - Maximum allowable operational noise contributions

Location	Day		Evening		Night		
	$L_{Aeq,\ 11hr}$	$L_{Aeq,\ 15min}$	$L_{Aeq,\ 4hr}$	$L_{Aeq,\ 15min}$	$L_{Aeq,\ 9hr}$	$L_{Aeq,\ 15min}$	$L_{A1,\ 1\ min}$
1	-	44	41	44	36	43	53
2	-	40	-	40	31	37	47
3	43	43	39	43	32	43	61
4	42	42	38	42	26	42	64
5	45	45	37	45	28	42	52

Location	Day		Evening		Night		
6	-	35	-	35	27	35	49

Maximum allowable noise contributions are to apply under meteorological conditions of:

- Wind speed up to 3 meter per second at 10 meters above ground level; or
- Temperature inversion conditions of up to 3 °C per 100 meters and wind speed up to 2 meters / per second at 10 meters above ground.

Table 14 - Consent conditions for noise and vibration

Condition		Operational noise commitment
2.3	Maximum allowable operational noise contributions	At the nearest receivers site specific operational noise limits shall apply: • Day time 42 – 45 dB(A) LAeq, 11hr and 35 – 45 dB(A) LAeq, 15min • Evening 37 – 41 dB(A) LAeq, 4hr and 35 – 45 dB(A) LAeq, 15min • Night time 27 – 36 dB(A) LAeq, 9hr, 35 – 43 dB(A) LAeq, 15min and 47 – 64 dB(A) LA1, 1min
2.4	Location 1 maximum allowable night time noise goal	Notwithstanding condition 2.3, the Allied Pinnacle Flour Mill shall implement all reasonable and feasible measures to achieve a night time noise contribution goal at Location 1 of 33 dB(A) LAeq, 9hr. As a minimum, Allied Pinnacle Flour Mill shall implement the following measures: a) during the night time all truck movement shall be in the forward direction only; b) during the night time all reversing forklift movements will be limited to being within the confines of the warehouse building c) during the night time, Allied Pinnacle shall not normally cause or permit a train to be broken up, shunted, or unloaded at the site; and d) additional attenuation to the exhaust fans detailed in the Acoustic Assessment of Fixed Mechanical Plant (Heggies, 2007).
		If the Applicant undertakes a noise impact assessment, in accordance with the EPA's Industrial Noise Policy, that demonstrates that the appropriate noise criteria can be complied with at all relevant receiver locations without the noise mitigation measures prescribed in this condition, then the Applicant may, with the approval of the EPA and the Secretary, cease to implement those measures.

Condition		Operational noise commitment
2.5	Assessing LAeq (period) compliance at receiver locations	Allied Pinnacle Flour Mill day time, evening and night time period LAeq, 15min noise contributions should be measured at the most affected point within the residential boundary, or at the most affected point within 30 meters of the dwelling for the assessment of compliance with Condition 2.3 noise limits. Where direct measurement of noise is impractical, an alternative noise assessment method deemed acceptable by the Environmental Protection Authority (EPA) may be implemented (reference to be made to Section 4 and Section 11 of INP). The EPA accepted alternative approach shall be submitted to the Director-General prior to the implementation of the assessment method.
2.6	Assessing LA1 (period) compliance at receiver location	In assessing LA1 (1min) noise contributions specified under Condition 2.3, noise from the Allied Pinnacle Flour Mill shall be measured 1 meter from the building façade. Where direct measurement of noise is impractical, an alternative noise assessment method deemed acceptable by the Department of Environment and Climate Change (DECC) may be implemented (reference made to Section 11 of INP). The DECC accepted alternative approach shall be submitted to the Director-General prior to the implementation of the assessment method.
3.1	Operational noise review (within 90 days of commencement of operation)	This clause no longer applies to this NVMP as the site has already complied with the requirement to undertake a program to confirm the noise emission performance of the development within 90 days of the commencement of operation of the Project.

10. Potential noise impacts

The noise and vibration impact assessment (Heggies, December 2004), carried out as part of the EIS, identified potential noise impacts associated with the mill operations and characterised the existing ambient noise environment. A revision to the assessment was undertaken for the final selection of fans required for the operation of the Mill (Heggies, November 2007). Key noise issues from the assessments have been summarised in this chapter for the identification of potential noise impacts associated with the development.

10.1 Existing ambient noise environment

Baseline ambient noise monitoring was undertaken during September 2004 for the identification of day time, evening and night time noise levels and determination of existing influences to noise environs. Nearest potentially affected receivers to the Allied Pinnacle Flour Mill site were identified at Picton Road, Menangle Road, Wilton Park Road. The local ambient noise environment at the receiver locations was influenced by existing local road traffic.

The measured period day time (7am – 10pm), evening (6pm – 10pm) and night time (10pm – 7am) noise levels were applied for the determination of site specific operational noise goals for Allied Pinnacle Flour Mill.

10.1.1 Meteorological conditions

Assessment of meteorological data for the period October 2003 to October 2004 was obtained from a local Camden weather station for the determination of potential noise enhancing wind gradient and temperature inversion conditions. Adopting guidance from the NSW INP, frequency analysis demonstrate wind gradients and temperature inversions are not a feature for the area and are not required for inclusion in the assessment process.

10.2 Predicted operational noise impacts

An assessment of potential operational noise emissions from the Mill was prepared for key operational noise fixed and mobile plant and equipment. Predicted operational noise levels were determined for the nearest potentially impacted receiver locations.

A 24/7 operation schedule was adopted inclusive of train unloading events involving the locomotive engine and grain wagons. Day time / evening and night time modelling scenarios were adopted.

Table 15 summarises predicted noise impacts at the nearest receiver locations for the revised operations for 26 fixed fans in cumulative operation for the night time period. Received noise levels have been assessed to the maximum allowable noise contributions established in Condition 2.3.

Table 15 - Predicted night time noise impacts

Receiver	Noise limit	Unmitigated impacts	Compliance	Mitigated impacts	Compliance
1	36	56	+ 20	36	Yes
2	31	47	+ 16	27	Yes
3	32	46	+ 14	26	Yes
4	26	38	+ 12	26	Yes
5	28	45	+ 17	28	Yes
6	27	36	+ 9	19	Yes

Received unmitigated noise levels of 36 - 56 dB(A) were predicted for Mill operations, which are potentially up to 20 dB in exceedance of the receiver specific noise limits.

The roof top mounted fans were identified as the dominant noise source contribution to received noise levels. Fan silencers (attenuators) were installed for noise control on 17 of the 26 fan units.

At all receiver locations compliance with the night time noise limits is predicted to be achieved.

It was noted that introduction of additional fixed plant to the Mill operations and intermittent sources (such as forklift operations) may also result in exceedance of the noise limits during peak operational periods (Heggies, 2004).

An assessment of sleep disturbance potential was undertaken for night time operations, no potential exceedance of adopted Environmental Noise Control Manual (ENCM, EPA 1994) noise goals was predicted. Peak received LA1 noise levels have been detailed in Table 16.

Table 16 – Predicted peak night time noise levels

Receiver	Predicted **$L_{A1, 1min}$** noise levels				Sleep disturbance criteria
	Loco engine	Wagon bunching	Truck engine	Reversing alarms	
1	51	52	<20	21	52
2	32	39	24	34	47
3	34	42	28	38	57
4	33	42	27	37	64
5	35	46	31	41	52
6	31	34	<20	<20	48

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11. Noise management measures

This chapter provides noise management and mitigation measures for implementation during Allied Pinnacle Flour Mill operations, designed to achieve compliance with:

- receiver specific night time 26 - 36 dB(A) LAeq
- 15min noise limits (COC 2.3), 33 dB(A) LAeq
- 9hr (night) Location 1 night time noise goal (Condition 2.4)
- compliance with DoP conditions and
- to minimise adverse community response or complaint to operations.

Adopting principles of Best Management Practice and Best Available Technology Economically Achievable, management measures have been proposed indicative of normal operations and likely noise influence within the surrounding ambient environment.

Noise management and mitigation measures have been developed considerate of the predicted operational noise levels from the revised acoustic assessment (Heggies, 2007) and the existing influence to ambient noise environs.

11.1 Plant and equipment selection mitigation measures

The facility shall be maintained to ensure the commitments outlined in Table 17 are implemented for future operations.

Table 17 – Plant and equipment selection

Parameter	Details
Bag packing works	• Implement BMP and BATEA principles such as provision of acoustic screening shall be adopted to reduce noise emissions. • Select all plant and equipment after considering noise emissions from the item.
Site vehicle and mobile plant source noise control	• Select the quietest available plant and equipment that can economically carry out the work. • Utilise, where appropriate, silencers (or similar ameliorative measures) to minimise potential cumulative noise emissions and reduce total site-related noise emissions.
Exhaust fans	• Attenuation to the exhaust fans detailed in the Acoustic Assessment of Fixed Mechanical Plant (Heggies, 2007).

11.2 Operational mitigation measures

The facility shall be operated to ensure the noise mitigation measures in Table 18 are maintained on an ongoing basis. Implementation of these measures shall be monitored by the Site Manager, Warehouse Manager and Mill Supervisor. No records are required to be maintained however, repeat failure to implement any of these mitigation measures shall be recorded as an incident in the "Rapid Induct Incident Database".

Table 18 – Operational mitigation measures

Parameter	Details
Operational hours	• Operational hours shall be a 24 hours, 7 days a week schedule • Delivery of wheat via the rail spur shall occur between 7am – 7pm only, with a maximum of one train delivery per day
Night time control of operations	During the night time 10pm – 7am period: • All truck movement shall be in the forward direction only (no truck reversing shall be permitted) • Reversing forklift movements shall be confined to the warehouse building only • Trains shall not normally be broken up, shunted, or unloaded
Bag packing works	• Schedule noise intensive works at times to minimise impact on sensitive receivers (typically the mid-day period) and peak hours (where transportation noise dominates).
Site building facades	• During the night time period (7am – 10pm), Warehouse, Workshop and Flour Mill building façade doors, roller doors, shutters, ventilation and other openings should be closed to minimise potential breakout of internal noise, with the exception of emergency doors.
Trucks	• All trucks on site are to follow facility rules as set in the Allied Pinnacle Traffic Management Plan • Arrange traffic routes and timetable planning so that reversing of vehicles and queuing on site is minimised

11.3 Assessment of practices to minimise noise emissions

Subject to the receipt of noise complaints or failure to meet operational noise limits set out in Section 3.3, an acoustic consultant shall be engaged to undertake an assessment of Best Available Technically Economically Achievable and Best Management Practices to minimise noise emissions.

11.4 Periodic monitoring requirements

Allied Pinnacle shall conduct the periodic maintenance and monitoring requirements outlined in Table 19 to Table 22 to minimise noise emissions at all times.

Records of the periodic maintenance and monitoring shall be maintained in the SAP Plant Maintenance Module. The records shall detail inspection events and any identified potential corrective work required.

Table 19 - Quarterly reporting obligations

Parameter	Details
Operational mitigation measures	• Quarterly monitoring of targeted measures by the Warehouse Manager or the Mill Manager.
Maintenance of fans and fan silencers	• Routine inspection and maintenance of the fan units and fan silencers to maintain required operational and noise attenuation performance.
Bag packing works	• Maintain all equipment in good operating order. • Investigate and rectify any unusually noisy equipment.

Table 20 – Annual obligations

Parameter	Details
Noise incidents and complaints	• Conduct an annual review of the "Rapid Induct Incident Database" for noise related incidents and complaints to determine the effectiveness of the mitigation measures and whether the noise limits and noise goals specified under these Consent Conditions, or best practice noise control operations, are being met.

Table 21 – Triennial obligations

Parameter	Details
Periodic operational noise limit compliance monitoring program	Once every 3 years (Refer to Section 3.6): • Undertake noise monitoring of operations at the most affected sensitive receptors. • Conduct noise monitoring, assessment and reporting adopting NSW Industrial Noise Policy (NSW EPA INP, 2000) guidance. • Manage operational noise reports as part of the operations "Rapid Induct Incident Database". • Undertake noise monitoring as per the defined strategy in Section 6 of this sub-plan.

Table 22 – Event-based obligations

Parameter	Details
Future operational noise compliance	• Undertake operational noise monitoring and noise criterion compliance assessment reporting within 14 days of any change to the schedule of operations from the defined works in the Schedule 1 Application. • Conduct operation noise monitoring at receiver locations as per defined strategy in Section 6 of this sub-plan.
Noise compliance investigation report	• In the event of received adverse comment or complaint relating to noise from Allied Pinnacle Flour Mill operations, undertake an assessment of received noise influence. • Include noise monitoring at the complainant property or nearest determined representative location as part of any noise complaint investigation. • Undertake noise monitoring, assessment and reporting considerate of NSW INP guidance. • In the event of non-compliance with noise criterion, investigate the source noise management and reasonable and feasible noise mitigation measures. • Undertake noise monitoring as per the defined strategy in Section 6 of this sub-plan. • Log all complaints in the Rapid Induct Incident Database.
Noise incident report log	• Maintain a log of noise related issues and events in the “Rapid Induct Incident Database”.. The database is to record any received noise complaints, detailing complaint location, action carried out and outcomes of investigations and implementation of management measures. • Detail plant operations, road and rail transportation movements relating to noise events and findings during routine reviews of operation in the database. Monitoring data from the periodic assessment of ambient noise levels shall also be provided for cross reference and to form a historical database of measured noise events from operations. • Undertake periodic review of the database to identify key noise events and referenced operations.

12. Noise monitoring strategy

Noise monitoring of the mill operations was required by DA 318-12-2004-I Condition 3.1 at commissioning and recommended in the NVMP noise management measures. No further noise monitoring is specified by the approval. A noise monitoring strategy has been developed to address ongoing noise monitoring and noise monitoring in response to complaints.

12.1 Noise monitoring locations

The operational noise and vibration impact assessment (Heggies, 2004 and 2007) and the project specific noise limits have been adopted in determination of the nearest sensitive receiver locations for operational noise monitoring.

Figure 3 details monitoring locations and the Flour Mill and road and rail access routes.

Noise monitoring as part of complaint investigation should be undertaken at the complainant property or nearest representative location.

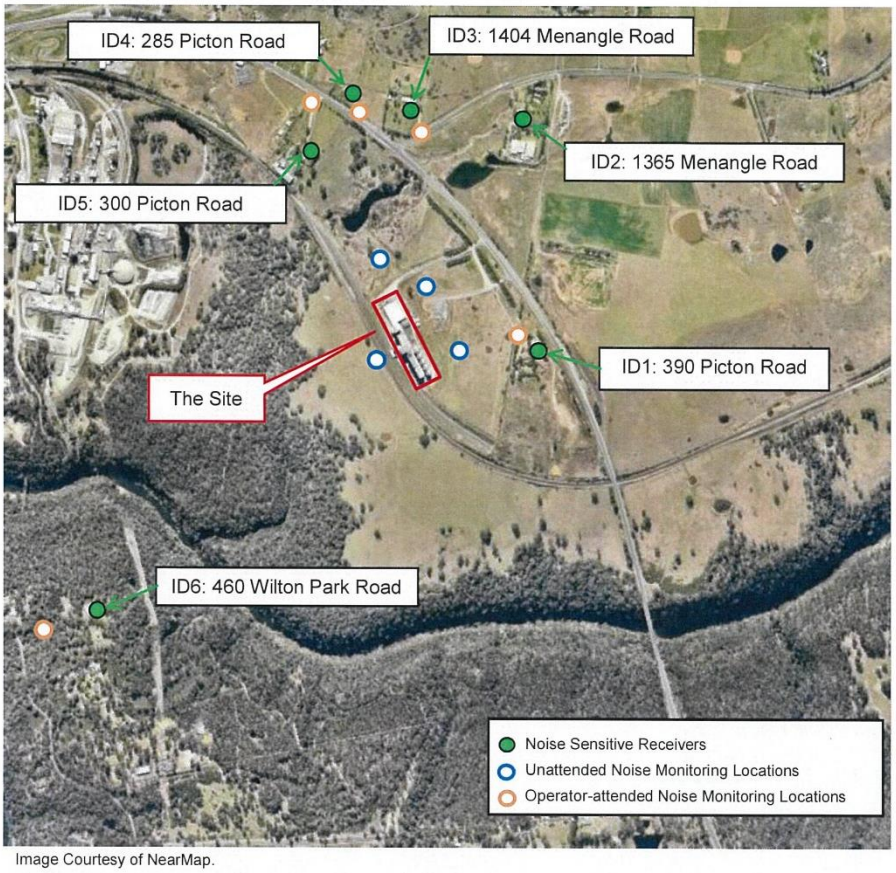

Image Courtesy of NearMap.

Figure 3 - Noise monitoring locations

12.2 Noise monitoring methodology

All noise monitoring should be undertaken adopting, as a minimum, the following procedures. Specific methodologies have been provided for the purpose of noise limit compliance assessment and noise complaint investigation.

12.2.1 Noise monitoring procedure

The attended noise monitoring instruments should be set on A-weighted, fast response and logged noise levels over fifteen minute statistical intervals. The instrument is set to comply with AS1259 Sound Level Meters.

Unattended noise monitors shall be established at identified residential locations. Continuous 15 minute statistical measurements shall be undertaken using noise loggers.

Noise monitoring will be undertaken in accordance with AS1055 where the microphone will be positioned at 1.2 metres above ground level and will be fitted with a windsock. Pre-measurement and post-measurement calibrations will be carried out to determine any significant variances observed in the reference signal. All instrument sets shall be calibrated by a NATA accredited laboratory within two years of the measurement period.

Noise monitoring shall be undertaken consistent with the NSW INP, where the following monitoring principles shall be applied:

- Attended noise monitoring should be undertaken during the day time (7am – 6pm), evening (6pm – 10pm) and night time (10pm- 7am) periods.
- Attended day time and evening time measurements should be made during the arrival, unloading and departure for a wheat train delivery cycle.
- Allied Pinnacle Flour Mill day time, evening and night time period LAeq operational noise contribution shall be measured at the most affected point within the residential boundary, or at the most affected point within 30 meters of the dwelling.
- Allied Pinnacle Flour Mill day time, evening and night time period LA1 operational noise contributions shall be measured at 1 meter from the building façade in the presence of minimal near field reflections.
- Adopting INP guidance, assessment of received noise profiles shall be undertaken for determination of potential disturbing tonal, impulsive, intermittent or low frequency noise characteristics attributable to Allied Mill Flour Mill operations.
- Noise monitoring shall be undertaken during periods of satisfactory meteorological conditions; wind speed less than 5 meters per second and nil precipitation.

12.2.2 Correlation to operations / complaint investigation monitoring

Short term operator attended noise monitoring should be undertaken for the determination of day time, evening and night time noise environs and received noise influence from Flour Mill operations at the identified complainant premises.

Noise monitoring shall be undertaken upon receipt of the complaint. Noise monitoring and reporting shall be undertaken by a suitably qualified acoustic consultant.

12.3 Periodic compliance noise monitoring

As part of due diligence practice, monitoring of ambient noise levels will be undertaken every 3 years in the surrounding environment for the determination of potential operational influence on noise environs and compliance with the adopted day time, evening and night time noise limits.

Short term operator attended noise measurements will be undertaken at previously adopted nearest receptor locations to facilitate comparative analysis of noise levels.

Consideration of the Flour Mill operations and local meteorological conditions, noise monitoring is recommended to occur every 3 years during normal Flour Mill operations. Reporting of the noise monitoring and assessment shall be managed as part of the operations log.

Noise monitoring and reporting shall be undertaken by a suitably qualified acoustic consultant.

12.4 Reporting

Within 28 days of completing noise monitoring any non-compliance with the noise criterion shall be reported to the EPA and the Director-General of DPE.

Throughout the life of the project periodic results of operational noise monitoring shall be detailed in the AEMR. As required further noise monitoring shall be undertaken in the event of adverse community comment or complaint related to operational noise.

13. Corrective action

An important aspect in the environmental noise management of the Flour Mill operations includes the adoption of suitable procedures in the event of a complaint or non- conformance.

All noise complaints and observed noise events will be reported in the “Rapid Induct Incident Database”, investigated and corrected in accordance with noise management and mitigation measures of the NVMP to ensure effective noise management practices at all times on site.

Refer also to Section 5.4.2 of the OEMP.

13.1 Noise and vibration complaints

Specific corrective action items for noise and vibration complaints are provided in Table 23.

The noise management measures will be reviewed and amended accordingly where a complaint is received (and verified) or a change in work method occurs. All Allied Pinnacle staff will be notified of changes made to the noise management measures.

Table 23 - Corrective actions for noise and vibration non-conformances

Trigger	Action	Responsibility
Complaints received from nearby resident/s Complaints received from regulatory authority	• Record complaint. • Investigate and verify complaint and assess if excessive off-site impacts have occurred. • Implement reasonable and feasible corrective measures to avoid recurrence or minimise ongoing adverse impacts. • Complete monitoring/additional investigations to verify the adequacy of the recommendations (as required). • Notify complainant of actions taken. • Continue to monitor activity if required.	Site Manager

Appendix B –Water Monitoring and Management Sub-Plan

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Appendix A – Implementation checklist for the WMMP

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14. Introduction

This Water Monitoring and Management Sub-Plan (WMMP) responds to the specific requirements of the Consent Conditions of for Development Application DA-318-12-2004-I, as modified by Modification 3 approved on 30 November 2017.

The WMMP forms part of the Operational Environmental Management Plan (OEMP) for the Allied Pinnacle grain milling facility at Picton, NSW and supersedes the document formerly known as the Soil and Water Management Plan, July 2015.

The on-site activities specifically relating to this plan include:

- Water supply
- Milling operations and process wastewater
- Domestic wastewater
- Effluent irrigation
- Laboratory operations
- Stormwater management.

14.1 Requirements for this plan

The purpose of this plan is to minimise the potential impacts of the milling facility on the local surface and groundwater bodies. The controls documented in this management plan seek to address the requirements of the Department of Planning and Environment (DPE), the Australian Rail and Track Corporation (ARTC), Wollondilly Shire Council and the Environment Protection Authority (EPA).

Consent condition 5.4(b) requires the WMMP to specifically address the requirements outlined in Table 1. Table 1 also provides a reference to where the requirements have been addressed in this plan.

Table 24 - Requirements of consent condition 5.4(b)

Requirement	Reference to this plan
Consideration of all reasonable and feasible options to avoid discharge to ground and/or ambient waters including methods to minimise the volume of contaminated water and effluent generated	Section 2
Description of the criteria for nomination of areas as clean or dirty and identification of clean and dirty surface water areas on site maps	Section 3.1
Details of water management and monitoring measures to be implemented, including measures to ensure the continued integrity of the culverts under the Great Southern Railway Line (GSRL).	Section 3
Characterisation of wastewater qualities and quantities for reuse on-site and specification of wastewater reuse areas on site maps for the development	Section 4.2

Requirement	Reference to this plan
Details of irrigation management practices to ensure there is no off-site impact through the use of treated effluent for irrigation	Section 5.2
A program for monitoring effluent and receiving soil and waters to ensure the suitable operation of the sewage treatment plant, and the ongoing viability of the land and waters receiving the effluent under the irrigation scheme	Section 4.3 Section 5.3
Details of the remedial actions to be taken in response to an exceedance of concentration limits or other performance criteria for the treated water, or if there are predicted or actual adverse weather conditions, or complaints received regarding irrigation activities	Section 6
Specific details shall be provided in relation to the times, locations, volumes and qualities of the water to be irrigated, including how the quality of water to be used for irrigation will be assessed.	Section 4.3

In addition the plan must also address the consent conditions outlined in Table 2.

Table 25 – Consent conditions for water quality

Condition		Requirement	Reference to this plan
2.11	General	The milling operations development shall be carried out to minimise adverse impacts to aquatic/riparian environments and to not cause erosion/sedimentation or increase in flood levels of protected waters.	Section 3 Section 4 Section 5
2.12	General	The applicant shall not excavate or place materials on protected land, or otherwise affect the flow of protected waters unless otherwise approved by DPI, in consultation with the Department of Primary Industries (Fisheries)	Table 5
2.13	General	Section 120 of the Protection of the Environment Operations Act 1997 must be complied either in the carrying out of the development, except as expressly provided by a licence under the act for the development.	Section 3 Section 4 Section 5
2.24	Rehabilitation: Maintaining the riparian zone	The rehabilitated riparian zones shall be maintained and monitored for a period of at least two years after final planting, or where other revegetation methods are used, two years after plants are of tubestock size and are at the densities	Not applicable. Two years has expired after final planting.

Condition		Requirement	Reference to this plan
		specified in the Vegetation Management Plan. Maintenance shall include sediment and erosion control, watering, weed control, replacement of plant losses, disease and insect control, protection from any mowing or slashing of adjacent land, mulching and any other requirements necessary for achieving successful vegetation establishment.	
2.25	Rehabilitation: Maintaining the riparian zone	Immediately after completion of initial planting/seeding and every six months thereafter for the duration of the maintenance period Allied Pinnacle shall submit to DWE a monitoring report addressing the performance criteria specified in the Vegetation Management Plan, and comment on the stability and condition of any stream works. With each monitoring report, the person responsible for implementing the Vegetation Management Plan must certify in writing that plantings (including follow-up plantings) have been carried out using stock propagated from seed or plant material collected only from native plants from the local botanical provenance	Not applicable. The maintenance period has expired.
2.26	Salinity management	The applicant shall implement the recommendations of the Report prepared by the Environmental Investigation Services dated December 2004 in Volume 2 of the EIS	Section 5.4
2.30	Culvert under the GSRL	The applicant shall not disturb the original fabric of the culvert under the Great Southern Railway Line in the carrying out of the development	Section 3.2
5.4 (b)	WMMP	As part of the Environmental Management Plan for the development required under condition 5.3 of this consent, Allied Pinnacle shall prepare and implement water monitoring and management plans	Refer to Table 1.
5.6	Effluent Irrigation area	When applying effluent to land, Allied Pinnacle must ensure:	Section 5.2

Condition		Requirement	Reference to this plan
		- There is no surface water runoff beyond the irrigation area - Spray does not drift beyond the boundary of the site - The quantities of nutrients, salt, hydraulic load and organic material are effectively absorbed through plant or crop production or within the soil, as outlined in MOD 3 and confirmed through annual soil monitoring.	
5.7	Effluent irrigation area	Within 2 months of the approval of MOD 3, Allied Pinnacle must ensure the irrigation area is managed and maintained as follows: - A diversion bank of no higher than 200 mm must be constructed between the road and the irrigation area to divert runoff into the tree row - Any depressions capable of ponding water in the irrigation area must be regularly removed by levelling with top soil - The irrigation area must be regularly mowed to a length of 100mm - Pasture or fodder crops must only be harvested when dry.	Section 5.2
5.8	AWTS maintenance and monitoring requirements	Within 2 months of approval of MOD3, Allied Pinnacle must ensure the AWTS is serviced prior to irrigation recommencing. The service report, together with records of those measurements are to be submitted to the Department prior to any irrigation recommencing and then on a quarterly basis. Before commencing each service, measurements are to be taken to demonstrate that the following target requirements have been met: - faecal coliforms, or E.coli (thermotolerant coliforms) must be less than 100 colony forming units per 100 ml in the irrigation chamber;	Section 4.3

Condition		Requirement	Reference to this plan
		- dissolved oxygen in the irrigation chamber is more than 5 mg O_2/L at 20 degrees Celsius; and - free available chlorine in the irrigation chamber is between 0.01 and 2.0 mg/L.	
5.9	AWTS Maintenance and monitoring requirements	Within two months of the determination of MOD 3, the Applicant must update and implement the Water Monitoring and Management Plan, as required by Condition 5.4 b), to the satisfaction of the Secretary, to include: - an annual soil monitoring program for the irrigation area in accordance with the DEC Guideline; and - the management and monitoring requirements detailed in conditions 5.6 to 5.8 inclusive.	Section 4.3 Section 5.3

14.2 Legislative requirements and guidelines

Key legislation and guidelines relevant to water management is provided in Table 26.

Table 26 - Key legislation and guidelines

Legislation / Guideline	Applicability
Protection of the Environment Operations Act, 1997 (POEO Act)	Provides for the control of polluting activities in NSW to prevent pollution of the environment. This relates specifically to water pollution for this project.
Environmental Protection Licence (EPL), under Section 55 of the POEO Act, 1997	Operational environmental licence for Allied Pinnacle Picton Grain Milling facility. The EPL does not include conditions for monitoring of surface or groundwater quality.
DoP Section 76A Environmental Planning and Assessment Act 1979, Schedule 1 Application DA- 318-12-2004-i.	Consent Conditions or the Grain Milling Facility, Picton road, Maldon. The Consent Conditions specify the operating conditions for the mill.
DoP Section 75W Approval under Environmental Planning and Assessment Act 1979, DA-318-12-2004-i	Modification of Consent Conditions dated 30 November 2017 (known as MOD 3). The modified Consent Conditions detail modified conditions for operation of the mill.
Wollondilly Shire: On-Site Sewerage Management Strategy	Aims to manage on-site effluent disposal within the Wollondilly LGA whilst reducing the impact of sewerage pollution and

Legislation / Guideline	Applicability
	minimising the risk to the environment. This includes AWTS units like installed at the mill facility.
Environmental Guideline Use of Effluent by Irrigation (DEC 2004)	Provides the framework, principles and objectives that should be considered when establishing an irrigation system that uses effluent (effluent irrigation system). The guidelines have been used in the development of this WMMP.
Australian Guidelines for Water Recycling Managing Health and Environmental Risks Phase 1 (NHMRC 2006)	Provides a generic framework for management of recycled water quality and use that applies to all combinations of recycled water and end uses. It also provides specific guidance on the use of treated sewage and greywater for purposes other than drinking and environmental flows. The guidelines have been used in the development of this WMMP.

15. Summary of water processes on-site

This section provides an overview of the water processes on site and the controls applied to avoid discharge to ground and/or ambient waters and methods to minimise the volume of contaminated water and effluent generated.

15.1 Water supply

Water supply to the site is provided via a Sydney Water Mains connection. Total process and domestic water supply is estimated at around 115kL/d.

15.2 Milling operations and process waste water

The mill is capable of processing up to 300,000 tonnes a year of wheat and maize. The flour and maize operations at the mill will involve intake of wheat or maize (grain) into the bulk storage facility, followed by a cleaning process and finally a milling process. A small amount of water is added to the milling process.

The milling process is described as a 'zero-waste process'. The process water added during the milling process is wholly consumed, and no liquid process waste streams are discharged from the mill.

15.3 Domestic waste water

Domestic wastewater is generated from the on-site staff amenities. Domestic wastewater is treated via an Econocycle Aerated Wastewater Treatment System (AWTS).

The design capacity of the AWTS is a maximum of 3,000 L / day, based on the predicted wastewater generation of nine office staff, three sets of six shift workers and eight visitors a day. The 2016 Review reports that that while the patronage of the wastewater system has risen from an estimated 35 to 45 persons per day (+29%), the volume of wastewater has fallen from 3000 L/day to a measured average 2000 L/day.

The AWTS provides a reliable and low maintenance system to prevent offensive odours, and to comply with the determining authorities' requirements.

Maintenance, monitoring and performance standards for the AWTS have been set by consent condition 5.8.

15.4 Effluent irrigation

Treated effluent from the AWTS is applied to land via an effluent irrigation system after chlorination. The principal objective of the effluent irrigation system is to use or immobilise the nutrients quickly, to prevent potential contamination of ground and surface water.

Maintenance, monitoring and performance standards for the effluent irrigation area have been set by consent conditions 5.6 and 5.9.

15.5 Laboratory operations

A small laboratory is located within the mill buildings and although minimal waste is generated through the laboratory processes, it is viewed as a potential source for pollutants within the mill operation.

Any chemicals used are stored in an appropriately sealed, bunded and labelled container, with a Safety Data Sheet (SDS) register in place. Spent chemicals are removed from the site by a licensed waste removal contractor.

15.6 Stormwater management

The objectives of the stormwater drainage system near the mill buildings is to quickly and efficiently move stormwater runoff away from the mill building and to ensure standing water is eliminated. Standing water in the vicinity of the plant would be a significant operational issue.

A system of bio-swales downstream of the access road passively treats stormwater runoff while conveying it to the reservoir. The on-site reservoir holds the stormwater runoff from the site, providing further opportunity to contain pollutants and allow any sediment to settle. The reservoir also receives stormwater flows from upstream locations and adjacent properties.

When the reservoir spills, it discharges runoff to Carriage Creek via one of two culverts underneath the railway embankment, which in turn discharges to the Nepean River.

Site activities and stormwater runoff do not have negative impacts on the surface water reservoir and creek systems.

16. Stormwater management

The EPL does not set any stormwater discharge limits hence the site must comply with Section 120 of the POEO Act.

This section considers potential stormwater pollution sources from the site. The EIS stated that the total unmitigated increase in water pollution from this catchment due to the development would be minimal for most pollutants except for total suspended solids (TSS). However with engineered controls in place, the likelihood of TSS as a pollutant from the site is also low. The site is situated in a grassed rural setting, and the developed site includes 3 ha of hard stand (roads and plant) drains to the on-site reservoir via a system of bio-swales.

16.1 Clean and dirty catchments

The presence of pollutants on the ground, coinciding with a rainfall event, poses a potential risk to surface water becoming polluted by the transportation of pollutants into the reservoir via the drainage system. Extreme rainfall events could see the pollutants transferred to Carriage Creek and further downstream towards the Nepean River.

To mitigate these impacts, clean and dirty areas have been determined using a risk assessment approach consistent with the OEMP. A summary of the assessment is provided in Table 27.

Table 27 - Stormwater risk assessment

Area description	Pollutant sources	Risk of contaminated runoff (with no controls)	Controls	Residual Risk of contaminated runoff (with controls)
Hardstand areas most likely to be impacted by spilled material during loading and unloading of bulk product	Sediment Grain spillage Oil leakage	Minor/Possible **CAT 3**	Regular clean-up to prevent vermin Drainage blanket Bioswales Reservoir	Negligible/Possible **CAT 4**
Other hardstand areas which convey vehicular traffic	Sediment Oil leakage	Negligible/Rare **CAT 4**	Regular clean-up Bioswales Reservoir	Negligible/Rare **CAT 4**
Roof areas	Nil	Negligible/Rare **CAT 4**	-	Negligible/Rare **CAT 4**
Grassed areas not used for operational purposes	Nil	Negligible/Rare **CAT 4**	-	Negligible/Rare **CAT 4**
Irrigation area	Sewage effluent	Minor/Possible **CAT 3**	Effluent quality Monitoring Operational controls	Negligible/Possible **CAT 4**
Fuel and chemical storage areas	Fuel and chemicals	Minor/Possible **CAT 3**	Stored **within buildings** and contained within bunds Regular clean-up	Negligible/Possible **CAT 4**

External areas with a risk of contaminated runoff (with no controls) greater than “CAT 4”, are considered to be “dirty areas”.

Figure 1 illustrates the area considered to be “dirty”, for the purposes of this plan. The nominated controls are incorporated into the inspection check sheet.

Figure 1 – Site plan

16.2 Culverts under the Great Southern Railway Line

The development is located in the lower end of a 254ha catchment which discharges into Carriage Creek. The Carriage Creek tributary within the site consists of a storage reservoir opening to a spillway. This reservoir represents the main storage on site. The catchment drains to Carriage Creek, via two railway culverts. Culvert 1 receives flow from a catchment area of 229 ha when the reservoir is full and spilling. Culvert 2 receives flow from a catchment area of 25 ha which includes the site of the Allied Pinnacle milling facility.

Development of the Allied Pinnacle milling facility has resulted in changes to the land cover of the site to include increased hard-stand on the site. Additionally, regrading of the site area to enable stormwater from the mill site to pass through the reservoir has increased the catchment area of railway culvert 1. Consequently a greater volume of runoff passes through Culvert 1, when compared to its undeveloped state. The EIS presented the results of hydrological modelling for changes to catchment areas and land cover. Hydrological modelling determined that an additional 14m^3 of water would pass through Culvert 1 during a 100 year ARI storm event, largely due to the diversion of stormwater flow from Culvert 2 to Culvert 1, as well as the increased hardstand on the site which would result in 1m^3 of additional flow through Culvert 1.

To ensure the continued integrity of the culverts under the Great Southern Railway Line, and at the request of ARTC, the facility will monitor the culverts for scouring, erosion or sediment build-up.. The nominated controls are incorporated into the mitigation measures of this plan.

Due to the heritage value of the culvert under the Great Southern Railway Line, Allied Pinnacle shall not disturb the original fabric of the culvert of the during any maintenance around the culvert.

16.3 Maintenance and monitoring of the stormwater system

The EIS specifies that an EMP would be prepared for water quality management, to include:

- a schedule for maintenance of the drainage system, in particular keeping grass short in the vicinity of the mill buildings so that drainage is efficient and standing water is eliminated
- a schedule for maintaining and cleaning culverts and trash racks
- a program of quarterly sampling from the reservoir to monitor reservoir water quality.

It is noted that the reservoir also receives stormwater flows from adjacent properties and upstream locations including Picton Road. The contribution of pollutants such as TSS and oil and grease from Picton Road are likely to be more significant than from the site hence monitoring the reservoir may not be representative of stormwater discharge from the site. For this reason, monitoring water quality from the reservoir has been excluded from this monitoring plan.

To provide confidence that the site's stormwater discharges are compliant with Section 120 of the POEO Act, and monitor the continued integrity of the culverts under the Great Southern Railway Line, the facility shall undertake the following maintenance and inspection regime outlined in Table 28.

Table 28 - Stormwater system maintenance and inspection regime

Frequency	Location	Maintenance and inspections
Quarterly	Hardstand areas most likely to be impacted by spilled material during loading and unloading of bulk product	Inspect for cleanliness; build-up of grain and other product, oil staining and sediment. Maintain as required
Quarterly	Internal drainage system including the bioswales, culverts and trash racks.	Inspect for scouring, erosion sediment build-up Inspect for a good vegetation however it should be kept short. Maintain as required
Quarterly	Protected areas, culverts, bioswales not to have any materials on the land or excavation to affect the flow of water.	Inspect culverts, reservoir, bioswales to ensure no materials stored in these areas and no excavation of these areas.
Six monthly	Upstream of the culverts under the Great Southern Railway Line	Inspect for scouring, erosion or sediment build-up. Maintain as required. Notify ARTC if the embankment is threatened

17. Wastewater management

17.1 Wastewater treatment

The development generates domestic wastewater from the general domestic activities of staff present at the site (washing, showering, toilets & kitchen). This site is not connected to municipal sewer, therefore all domestic wastewater is treated onsite, by an AWTS, comprising:

- Septic tank
- Primary aeration tanks
- Secondary aeration tank incorporating clarifier and chlorinator.

17.2 Effluent quality and quantity

To compare the performance of the waste water management system with the estimated performance in the EIS, Allied Pinnacle commissioned Landfax Laboratory to undertake a "Review of wastewater treatment and effluent application to land, Allied Mills Pty Ltd – Picton Mill" (2016 Review). The 2016 Review was used to support MOD 3, which was approved by DPE.

The 2016 Review reported that:

- The EIS estimated an effluent quantity of 3000L/day however monitoring of the effluent discharged from the AWTS over the period 26 October 2015 and 6th January 2016 for a total of 73 days, showed the average effluent quantity was 1950 L/day.
- The EIS estimated the treated effluent concentrations to be consistent with the NSW EPA target whereas the 2016 Review based its comparison calculations using actual effluent quality data based on samples taken on 12 July 2016 (July 2016 concentrations).
- The EIS calculated load was calculate based on the EIS concentration multiplied by EIS estimated an effluent quantity whereas the July 2016 Load was calculate based on the July 2016 concentration multiplied by the actual average effluent quantity.

The comparisons are presented in Table 29.

The 2016 review demonstrated that, based upon the July 2016 Load, the system is performing well within the EIS calculated load.

The 2016 review concluded that the operation and maintenance of the AWTS are producing an effluent that reflects the high inputs of human wastes and low domestic wastes; high in nitrogen and phosphorus, but low in total alkalinity. With a suitable irrigation area to assimilate the nitrogen and phosphorus as well as the hydraulic load, the overall system should not be hampered by defined limits on effluent quality, except for those properties that directly relate to system function and public health.

Treated effluent is applied to land adjacent to the mill site, by irrigation. Refer to Section 5 for further detail ion the irrigation area..

Table 29 - Comparison of load based upon EIS values and July 2016 values

Parameter	NSW EPA Target (mg/L)	EIS concentration (mg/L)	EIS calculated load (kg/year)	July 2016 concentration (mg/L)	July 2016 Load (kg/year)
BOD	<40	<40	43.8	17	12.4
Total nitrogen	<50	<50	54.8	63	46.0
Total phosphorus	<10	<10	11.0	8.2	6.0
Total dissolved solids	<500	<500	548	503	367

17.3 AWTS maintenance and monitoring requirements

Maintenance and monitoring requirements for the AWTS have been set by consent condition 5.8 as outlined below.

Quarterly maintenance and monitoring

Allied Pinnacle shall engage an approved service agent for quarterly servicing of the AWTS. Records of the servicing reports shall be maintained and submitted to DPE and Wollondilly Shire Council.

Before commencing each quarterly service, the facility shall collect samples from within the irrigation chamber of the AWTS for analysis of the parameters in Table 19.

Table 30 - Quarterly AWTS monitoring

Parameter	Goal
Faecal coliforms, or E.coli (Thermotolerant coliforms)	<100 colony forming units per 100 mL
Dissolve oxygen	>5 mg O_2/L at 20^oC
Free available chlorine	0.01 – 2.0 mg/L

Quarterly records of maintenance and monitoring shall be submitted to DPE in accordance with consent condition 5.8.

Six-monthly monitoring

As recommended by the 2016 Review, twice annually (one summer and one winter), the facility shall collect samples from within the irrigation chamber of the AWTS for analysis of the parameters in Table 31.

Table 31 - Six-monthly AWTS monitoring

Parameter	Goal
Ammonia-N	These parameters need to be quantified without limit. These annual results need to be maintained on a progressive spreadsheet where the changes from one year to the next can be evaluated.
Nitrate-N	
Total N (nitrate-N plus Total Kjeldahl nitrogen (TKN))	
pH	
Electrical conductivity	
Orthophosphate-P	
Total phosphorus (TP)	
Major cations (sodium, calcium, potassium, magnesium)	
Calculate sodium adsorption ratio	

18. Effluent irrigation area

18.1 The irrigation area

The 2016 Review calculated the required irrigation area for nutrient assimilation and water balance (based upon the 12th July 2016 effluent quality and the effluent production of 2000 L/day) to be:

- Hydraulic load 900m^2
- Nitrogen load 1270m^2
- Phosphorus load 275m^2

The effluent irrigation area is shown on Figure 1. It is gently sloping towards the west and located in a corner of the site between the entrance road and the side road. The effluent irrigation area is estimated to be 1250m^2 and consists of two rows of four irrigator risers, roughly parallel to the contour.

18.2 Irrigation management practices

Management requirements for the irrigation area are outlined in Table 32.

The facility shall continuously monitor that the irrigation management practices are being implemented. The monitoring shall be recorded quarterly to provide documentary evidence for the purpose of demonstrating compliance.

Table 32 – Irrigation management practices

Consent condition	Requirement	Monitoring
Condition 5.6: When applying effluent to land, the applicant must ensure:	There is no surface water runoff beyond the irrigation area as identified in Figure 1.	Monitor when irrigating. Record quarterly.
	Spray does not drift beyond the boundary of the site	Monitor when irrigating. Record quarterly.
	The quantities of nutrients, salt, hydraulic load and organic material are effectively absorbed through plant or crop production or within the soil as outlined in MOD 3 and conformed through annual soil monitoring	Annually. See Section 5.3.
Condition 5.7: Manage and maintain the irrigation area as follows:	A diversion bank of no higher than 200 mm is maintained between the road and the irrigation area to divert runoff away from the irrigation area and into the tree row.	Monitor when irrigating. Record quarterly.

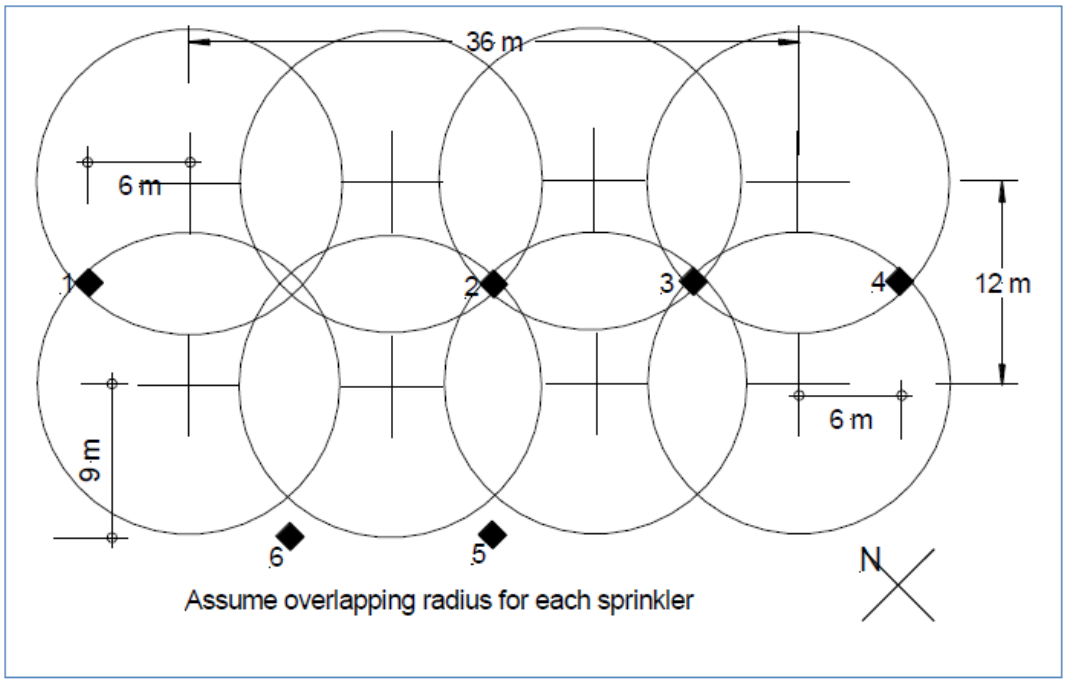
Consent condition	Requirement	Monitoring
	Any depressions capable of ponding water (such as natural depressions or wheel tracks) in the irrigation area must be regularly removed by levelling with topsoil	Monitor when irrigating. Record quarterly.
	The irrigation area must be regularly mowed to a length of 100mm	Monitor when irrigating. Record quarterly.
	Pasture or fodder crops must only be harvested when dry.	Not Applicable. Pasture or fodder crops are not harvested.

18.3 Effluent irrigation area monitoring requirements

An annual soil monitoring program for the irrigation area has been developed following the 2016 Review in accordance with the DEC guideline.

Annually, sample the soil at six designated locations within the irrigation area as illustrated in Figure 2.

Figure 2 – Location of soil boreholes relative to sprinklers



Attachment A, Figure 2 Location of soil boreholes relative to sprinklers

At each of the six sites, take samples from:

- the surface (A horizon 0-100 mm) and
- the top 100 mm of the B horizon (clay horizon) 350-450 mm

The 2016 Review concluded that

- Monitoring total phosphorus in the soil has no merit because of the very high phosphorus sorption capacity. Excess phosphorus is simply locked up in this mechanism and unavailable for export.
- Total nitrogen does not require a limit, since increases in organic matter because of root vigour and microbial activity can have a significant effect upon TN values with only positive environmental effects.

Soil parameters to monitor on an annual basis are presented in Table 33.

Table 33 - Annual monitoring at designated locations within the irrigation area

Parameter	Goal
Soil pH (1:5 in water) and (1:5 in 0.01M CaCl2)	These parameters need to be quantified without limit. These annual results need to be maintained on a progressive spreadsheet where the changes from one year to the next can be evaluated.
Electrical conductivity (1:5 soil:water)	
Major cations (sodium, calcium, potassium, magnesium)	
Exchangeable acidity (measure of hydrogen and aluminium ions in soil solution)	
Calculation of exchangeable sodium percentage (ESP)	
Calculation of cation exchange capacity (CEC)	
Organic carbon (OC) Walkely & Black method	
Extractable phosphorus	
Extractable sulphur	
Nitrate-N (Mineral N)	
Chloride	
Emerson Aggregate Stability Test (performed with simulated effluent)	

18.4 Salinity management

Consent condition 2.26 required that the applicant shall implement the recommendations of the Report prepared by the Environmental Investigation Services (EIS) dated December 2004 in Volume 2 of the EIS. However the 2016 review supporting MOD 3 concluded that:

The effluent has a very low salinity and the soil profile has low salinity in each of the three horizons. The effluent has a low SAR, unlikely to exacerbate the increasing ESP in the B and B2 horizons. As these horizons are not exposed and are not physically disturbed, the increase ESP is a function of landscape and of no environmental consequence.

Therefore the recommendations of the report prepared by EIS report have not been incorporated into this management plan.

19. Corrective actions

Table 11 outlines the proposed corrective actions to be implemented in the event of not meeting concentration goals, adverse trends, adverse observations/weather conditions or complaints related to the scope of this management plan.

Table 34 – Proposed corrective actions to adverse conditions

Condition/Event	Corrective action
Adverse observations related to the internal drainage system inspections	Record the observation and the implemented corrective action on the implementation checklist.
Adverse observations related to the culverts under the Great Southern Railway Line.	Record the observation and the implemented corrective action on the implementation checklist. If undertaking work in the vicinity of the culverts under the Great Southern Railway Line, do not disturb the original fabric of the culvert. Notify ARTC prior to commencing work near the culvert or the rail embankment OR if either have been impacted in some way .
Effluent water quality not achieving water quality goals (Refer to Table 7)	Maintain AWTS. Seek advice from AWTS service agent on corrective measures.
Deteriorating trend in effluent water quality (Refer to Table 8)	Investigate potential changes to the influent that may have contributed to the change in effluent quality. Seek advice from soil scientist on the capacity of the irrigation area to assimilate deteriorating effluent water quality.
Adverse observations related to the operation and condition of the irrigation area. Adverse weather conditions impacting the operation and condition of the irrigation area	If there is potential for irrigated effluent to drift or flow from the irrigation area, cease irrigation until the condition has been rectified. Record the observation and the implemented corrective action on the monitoring checklist.
Deteriorating trend in irrigation area soil quality (Refer to Section 10)	Seek advice from soil scientist on corrective measures.
Complaints regarding the irrigation area	Manage the complaint in accordance with the Allied Pinnacle complaints management system.

20. Records to be maintained

The facility shall maintain the following records to demonstrate compliance with this plan:

- *Periodic implementation checklists* completed as per the agreed schedule.
- Evidence of corrective actions such as photographs and third party service records or reports
- Effluent quality and irrigation area soil quality laboratory analytical data (Laboratory reports)
- Trend analysis of effluent quality and irrigation area soil quality including a progressive spreadsheet where the changes from one year to the next can be evaluated
- AWTS service records.

The *periodic implementation checklists* may be maintained in the form outlined in Appendix A or incorporated into the Allied Pinnacle SAP system.

Appendix C – Traffic Management Sub-Plan

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21. Introduction

This Traffic Management Plan (TMP) responds to the specific requirements of the consent condition 5.4(C) for Development Application DA-318-12-2004-I, as modified by Modification 3 approved on 30 November 2017.

This TMP identifies measures to minimise and mitigate traffic impacts associated with the Allied Pinnacle Grain Milling Facility operations.

With reference to light passenger vehicles, heavy vehicles and on-site support vehicles at the Allied Pinnacle Grain Milling Facility, this sub-plan will address:

- vehicle noise practices
- vehicle exhaust emissions
- on-site speed limits
- vehicle movement scheduling
- load coverage practices
- a system of audited management practices and
- contract information for sub-contracted drivers.

Allied Pinnacle do not operate a fleet of trucks. All truck movements on site are undertaken by service providers or contract operators. The control measures in this document have been developed to reflect this.

The mill will be capable of receiving and processing up to 300,000 tonnes of raw materials per year. All raw materials will arrive at the site via a purpose built railway spur off the main southern rail line. The goods will be off-loaded from the train by conveying grain into storage silos. Trucks will distribute packaged and bulk goods from the site once processed. Bulk goods will be dumped into sealed tankers, and packaged products will be loaded onto curtain-sided trailers by a forklift.

21.1 Requirements for this plan

Consent condition 5.4(c) requires the TMP to specifically address the requirements outlined in Table 1. Table 1 also provides a reference to where the requirements have been addressed in this plan.

Table 35 - Requirements of consent condition 5.4(c)

Requirement	Reference to this plan
Driver training to ensure that noisy practices such as the use of compression engine brakes are avoided or minimised	Not applicable. Allied Pinnacle do not operate their own fleet of trucks.
Best exhaust emission and noise practice in the selection and maintenance of vehicle fleets	
Speed limits to be observed along routes to and from, and within the site	Section 6.2
Movement scheduling where practicable to minimise noise impacts during sensitive time of the day	Section 4.2

Requirement	Reference to this plan
Behavioural requirements and load coverage specifications for drivers	Section 6.2
A system of audited management practices that identifies non-conformances, initiates and monitors corrective and preventive actions (including disciplinary action from breaches of procedures), and assesses the implementation and improvement of the Strategy; and	Section 7
Clauses in conditions of employment or contracts for drivers that require adherence to the noise minimisation procedures and facilitate implementation of disciplinary actions for breaches of the procedures	Section 6.2

22. Legislative requirements and guidelines

Key legislation and guidelines relevant to traffic management is provided in Table 26.

Table 36 - Key legislation and guidelines

Legislation / Guideline	Applicability
Protection of the Environment Operations (Noise Control) Regulation 2008	The regulation aims to prevent high noise levels from vehicles caused by lack of maintenance, deliberate tampering or inappropriate use • Noise levels from motor vehicles used on roads and road related areas must not exceed specified maximum noise levels. • Noise levels from motor vehicles used off-road must not be offensive. • Noise control equipment on motor vehicles used on roads or related areas must not be defective and must be securely in place. • A person must not modify a vehicle so that it exceeds the specified maximum noise level.
Road Transport (Safety and Traffic Management) Act 1999	Road Rule 224 - requires horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach, or if the horn is being used as a part of an anti-theft device. Road Rule 291 - requires that a person must not start a vehicle, or drive a vehicle, in a way that makes unnecessary noise or smoke, e.g. unnecessarily revving a vehicle when it is stationary or repeatedly opening and closing the throttle when the vehicle is in motion. Police officers can issue three demerit points for this offence. Road Rule NSW, 291-1 - requires that the engine of a stationary vehicle be turned off to prevent noise, other than for stoppages in traffic or examinations due to engine malfunction
Protection of the Environment Operations (Clean Air) Regulation 2002 NOTE: Protection of the Environment Operations (Clean Air) Regulation 2002 is repealed and replaced with 2010	Part 4 of the Regulation covers motor vehicles and motor vehicle fuels. In particular, the Regulation deals with the following matters: • the emission of air impurities, including excessive smoke from motor vehicles • the compulsory fitting and maintenance of anti-pollution devices, and exemptions from these requirements

Legislation / Guideline	Applicability
	• the method of transfer of petrol into a vehicle's fuel tank • benzene content and volatility of petrol
Road Transport (Vehicle Registration) Regulation 2007	Limits the overall size (width, height and length) and some internal dimensions of vehicles to ensure that they have adequate manoeuvrability and that they are compatible with road systems and other traffic. A permit is required from the RTA to exceed dimensions if the length, rear overhang, forward projection, width or height of a vehicle exceeds the limits allowed by the Regulation.
RTA Vehicle Standards Information Sheet No. 5 – Vehicle Dimension Limits	Sets out the limits for vehicle length, height and width, ground clearance, projecting loads and equipment, loading space, rear overhang, turning circle and axle groups and suspension systems.
Road Transport (Mass, Loading, & Access) Regulation 1996 NOTE: Regulation 1996 has been repealed and replaced with 2005 Regulation.	Requires that loads be restrained to at least a minimum performance standard. These minimum performance standards are designed to ensure that loads are secured to the vehicle in a way that means they do not move or come free

23. Summary of operations

23.1 Train

All rail deliveries of grain are contracted to Southern Shorthaul Railroad (SSR). Trains will arrive on average every two days, with approximately five per fortnight. The trains can arrive at anytime, but will normally be unloaded between 07:00 and 19:00.

When rail breakdowns occur grain deliveries will be made by trucks resulting in increased road traffic to the facility.

23.2 Heavy Vehicles

Several different types of trucks will be used for delivering products and performing maintenance services at the mill. Bulk products will comprise approximately 80% of all heavy vehicle movements and products will be loaded into sealed semi / B-double tanker trailers. The remaining 20% of products will be packaged on pallets and loaded on to curtain-sided truck and dog / bogie trailers using three gas powered forklifts.

Trucks will operate 24 hours a day, everyday, resulting in approximately 30 trips a day. Bulk goods trucks will constitute approximately 20 trips per day and around four trips will be generated by packaged goods. An additional three to six trips will be generated by deliveries. Night time operation will be limited in most cases by sub-contractor availability and supply flows. This will result in an average of two trips per hour between 0500 and 1900.

Allied Pinnacle do not own or operate and truck movement on the site. All truck movements on site can be classified as either:

- Casual providers – service providers such as deliveries and waste management
- Contract providers - heavy vehicles associated with bulk products

23.3 Other Vehicles

There are approximately 28 to 30 staff who drive to work for three different shifts resulting on average in 54 private vehicle trips. There will also be weekly deliveries and service supply providers coming to the site: including pest management, fire alarm servicing, office cleaners, gas supplies etc. These services will amount to an additional five to six vehicle movements per week.

In addition to the trips to the site there will be trips within the site. These will be conducted with three fork lifts to load and unload deliveries. One ride on lawnmower will also be used on-site for grounds maintenance.

23.4 Site access

On approach to the Allied Pinnacle Grain Milling Facility along Picton Road there is a right turn slot (single lane for vehicles to merge into and slow-down in order to enter the site without impeding traffic), this lane is approximately 200 metres in length. There are two exits from the site, with the main access road having a protected right turn bay for exiting vehicles. These interchange improvements address issues raised in the Wollondilly Shire Council DCP 20 and have been approved by the RTA.

24. Performance objectives

24.1 On-site speed limits

There will be three separate traffic areas with two different speed limits. Picton Road is the first road that the vehicles will travel along and the RTA has indicated a safe speed limit of 100km/h on either side of the access road in and out of the Allied Pinnacle site. The access road leading into the site is posted with a speed limit of 10km/h in both directions. Once the vehicles are on-site, a posted speed limit of 10km/h applies to the entire site. The mill has installed speed humps around the site in order to ensure that vehicles abide by this speed limit.

Noise levels are reduced through low speed limits. As a consequence of the speed limit, noise is reduced by greatly reducing the need for rapid acceleration and use of compression braking. Noise reduction is reinforced through management practices that restrict the use of compression braking on-site, these practices are referred to in Section 6.1.

24.2 Movement scheduling

Production will vary depending on customer demand throughout the year; this will result in varying schedules of truck movements. When possible these movements will take place outside peak periods. During periods of heavy production some truck movements may be made during these more sensitive periods.

25. Potential traffic impacts

25.1 Traffic impacts

The total GHV traffic generation from the site is approximately 30 trips per day to and from the site. While there has been an increase in traffic associated with the site, compared to the EIS predictions, there have been no complaints or incidents regarding the movement of traffic to and from the site, or an observed impact to traffic flow or increased congestion on Picton Road from the additional traffic movements.

On 9 June 2016, DPE sought further clarification from Allied Pinnacle and required consultation be undertaken with RMS and Council. Allied Pinnacle engaged GHD to undertake a traffic impact assessment, which included consultation with RMS and Council. The assessment concluded that the impacts were negligible and consistent with the predictions in the EIS.

RMS formally advised DPE that the traffic movements are considered acceptable (letter dated 22 September 2016).

25.2 Noise impacts

Noise modelling scenarios were performed (Heggies 2004) as part of the noise and vibration impact assessment undertaken as part of the EIS for projected vehicle movements and loading / unloading activities. The increase in truck movements will result in an increase of less than 0.5 dBA for residents affected along Picton Road. Night-time loading and unloading activities indicate that the night-time sleep disturbance criteria will not be exceeded. Vehicle operations within the Allied Pinnacle Grain Milling Facility will result in minimal noise impacts to surrounding residents.

25.3 Exhaust emission impacts

The relatively small increase in the number of vehicle trips compared to existing traffic along Picton Road will result in very small impacts from exhaust fumes.

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26. Traffic management measures

The following traffic management measures have been identified to address the nominal traffic impacts as identified in Section 5.

26.1 Physical measures

The following physical measures are provide on-site to reduce traffic impacts on site:

- Landscaping of boundaries in accordance with the Landscape Management Plan
- Paved surfaces and one-way traffic routing on site for efficient vehicle movements and minimise reversing
- Speed humps and speed signage
- Signage with site facility traffic rules; and
- Security gate to only permit authorised access to site.
- Enter and leave the site in a forward motion.

26.2 Managing casual and contract heavy vehicle operators

Due to the casual and contract nature of heavy vehicle movements on site, Allied Pinnacle has developed facility rules which all truck operators must comply with. These rules are posted on signage at the entrance to the site and monitored by site managers.

In addition, contract operators are managed as follows:

- the rules are provide to contract operators as work instructions in accordance with the Allied Mills General Transport Agreement (Section 6.3).
- all vehicles coming on to site must be registered and comply with relevant government regulations in relation to noise and emissions.

26.3 Facility rules

In order for the Allied Pinnacle Grain Milling Facility to operate safely and efficiently and minimise noise and exhaust emissions, the following rules for all vehicles are to be followed:

- adherence to the 10 km/h speed limit on-site
- refrain from using engine braking unless necessary for safety
- when queuing, trucks shall turn off engines
- refrain from excessively accelerating and decelerating
- ensure loads are covered to satisfy all legal requirements
- weigh all loads before departing facility to ensure they do not exceed vehicle load capacities
- do not allow vehicles to idle excessively and follow all road rules within the site.

27. Traffic monitoring strategy

27.1 Traffic monitoring

The drivers are responsible for knowing, understanding and following the facility rules in addition to standard road rules that apply to their vehicles. The site managers will monitor compliance to these rules on an ongoing basis and through quarterly site inspections for:

- speed compliance
- vehicle noise levels, and
- appropriate load coverage.

27.2 Reporting of accidents, incidents and complaints

Accidents, incidents and complaints will be entered into the Allied Pinnacle “Rapid Induct Incident Database” as a complaint or incident.

Corrective actions will be managed through the Allied Pinnacle “Rapid Induct Incident Database” and Section 5.6 of the OEMP.

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Appendix D – Cultural Heritage Management Sub-Plan

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28. Introduction

This Cultural Heritage Management sub-plan (CHMP) responds to the specific requirements of the Consent Condition 5.4 (d) for Development Application DA-318-12-2004-I, as modified by Modification 3 approved on 30 November 2017. It has been developed in order to address the potential impacts associated with the operation of the Allied Pinnacle Flour Mill in Maldon on the cultural heritage zones that have been established on this site.

The management principles outlined in this sub-plan and the resulting strategies and recommendations will serve to guide the relationship between cultural heritage and operations as well as provide long-term guidance to protect identified areas of Aboriginal archaeological and cultural value.

28.1 Requirements for this Plan

Consent condition 5.4(d) requires the CHMP to specifically address the requirements outlined in Table 1. Table 1 also provides a reference to where the requirements have been addressed in this plan.

Table 37 - Requirements of consent condition 5.4(b)

Requirement	Reference to this plan
Measures to ensure that the two Heritage Conservation Zones are suitably managed during the life of the development.	Section 5
The Plan shall be prepared in consultation with the EPA, and Aboriginal community, and shall clearly demonstrate how the issues and requirements of these entities have been addressed.	Section 1.2 and 6
Where the Plan is not consistent with the requirements of these entities, then a full justification for that inconsistency must be provided.	Not applicable

28.2 Assessment of cultural heritage significance

An Aboriginal heritage assessment was undertaken by Austral Archaeology Pty Ltd on behalf of Kellogg Brown & Root Pty Ltd acting for Allied Pinnacle, in late 2004. An additional assessment inclusive of the results from the original 2004 report was produced by Austral Archaeology Pty Ltd in May 2005. Combined, these assessments were two of several environmental studies undertaken to determine the capability of the Maldon site to support the flour mill proposal in light of the environmental, social and cultural constraints of the study area. The archaeological and cultural heritage assessment involved determination of the known archaeological and environmental context of the area and assessment of the known and potential archaeological resource.

The 2005 assessment included the outcomes and recommendations resulting from liaison following preparation of the original report. This consultation process involved Allied Pinnacle, the former NSW Department of Environment and Conservation (now Office of Environment and Heritage (OEH)), Wollondilly Shire Council, the Aboriginal stakeholder groups (Tharawal Local Aboriginal Land Council (TLALC) and Cubbitch Barta Native Title Claimants Aboriginal Corporation (CBNTCAC)) and Austral Archaeology Pty Ltd. Consultation was chiefly concerned

with the mitigation and management of the Aboriginal archaeological and cultural values that had been identified on-site.

The consultation between all parties at this stage resulted in the agreement on the establishment of two Aboriginal heritage conservation zones (AHCZs). The first zone (Aboriginal Heritage Conservation Zone A) incorporates all land extending 50 m from the northerly, southerly and easterly banks of the reservoir situated in the north west corner of the property to the westerly property boundary. The second (Aboriginal Heritage Conservation Zone B), extends for a diameter of 30 m with the scarred tree (AMP ST 1), which is situated roughly in the middle of the property, as the zone's focal point. Figure 1 outlines the extent of the two heritage conservation zones.

The two Aboriginal heritage conservation zones form the focal point of the assessment on cultural heritage protection across the Allied Pinnacle site. On the basis of the desktop research, Aboriginal community consultation and the field survey, the study area as a whole was considered to be of moderate archaeological significance.

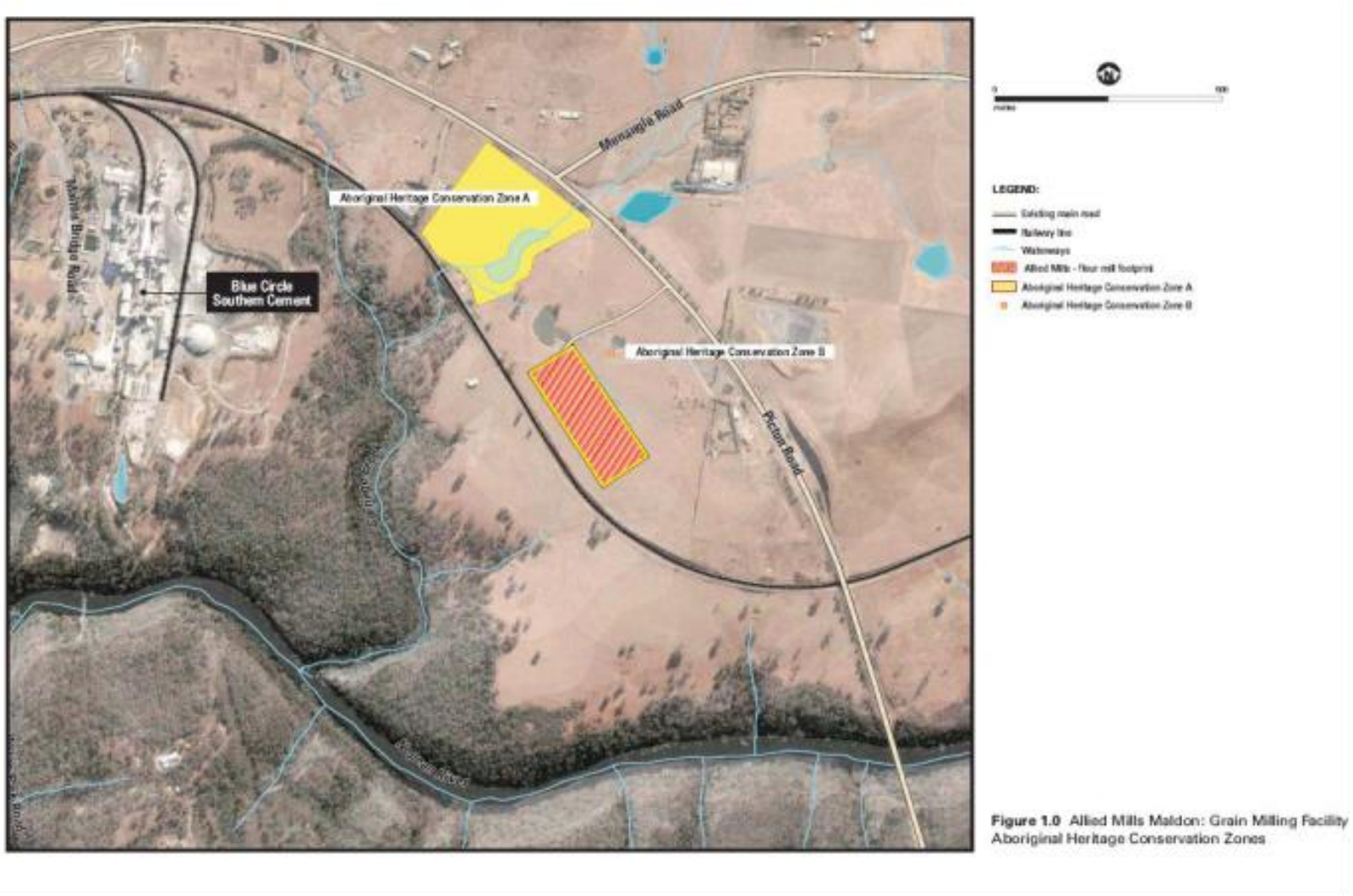

Figure 1 - Aboriginal Cultural Heritage Zones

29. Legislative requirements and guidelines

Key legislation and guidelines relevant to management of cultural heritage items and places is provided in Table 26.

Table 38 - Key legislation and guidelines

Legislation / Guideline	Applicability
Environment Protection and Biodiversity Conservation Act 1999	This Act establishes the National Heritage List, which includes natural, Indigenous and historic places that are of exceptional national heritage value. The Act also establishes the Commonwealth Heritage List, which comprises natural, Indigenous and historic places on Commonwealth lands or under Australian Government control, and identified by the Minister for the Environment, Heritage and the Arts as having Commonwealth Heritage values.
Aboriginal and Torres Strait Islander Heritage Protection Act 1984	This Federal Act administered by the Aboriginal and Torres Strait Islander Commission, provides blanket protection for Aboriginal heritage in circumstances where state level protection does not exist. This Act falls under Commonwealth jurisdiction and therefore it overrides state and territory provisions
New South Wales National Parks and Wildlife Act 1974	All Aboriginal objects, regardless of level of significance, are protected under Section 90 of this Act. Sites of traditional Aboriginal significance that do not necessarily contain archaeological items may be gazetted as Aboriginal places and are also protected under Section 90. Under Section 90, it is an offence for a person to destroy, deface, damage or desecrate an Aboriginal object or Aboriginal place without first being issued with a Heritage Impact Permit by the Director-General. The amended Act requires that due diligence must be taken to avoid any impacts on Aboriginal objects.
Environmental Planning and Assessment Act 1979	This Act requires that impacts on the environment including cultural heritage, are considered prior to land development. Local Environment Plans (LEPs) provide guidance on the extent of environmental assessment required. Consideration of potential impacts has been addressed in an Environmental Impact Statement (EIS), with a corresponding archaeological assessment provided by Austral Archaeology to add depth to the study of heritage-related issues. Aboriginal and non-Aboriginal cultural heritage are issues that require consideration under this Act.

30. Performance objectives

The objectives driving the establishment of the two Aboriginal heritage conservation zones are that:

- the archaeological and cultural value of all known and potential Aboriginal archaeological sites contained within their boundaries will be protected from the immediate impacts resulting from the operation of the grain mill
- the long term impacts from subsequent use of the site will be managed and off-set.

This will ensure that both the Aboriginal sites contained within these zones as well as the zones' inherent cultural value remain undisturbed during the continuing use of the site. These strategies will also provide protection and a basis for management advice for any future development that may potentially impact these zones. To this end management measures have been developed in Section 5 of this sub-plan.

Management of cultural heritage objectives are centred around communication with relevant stakeholders and as such, a clear line of communication has been established. Allied Pinnacle Site Manager is the point of contact for the Aboriginal stakeholders, Council and the regulators, and is responsible for ensuring the cultural heritage management objectives are met.

31. Potential cultural heritage impacts

The items and areas of cultural significance have more than likely been exposed to years of vegetation clearance, stock grazing and the impacts associated with rail, road and dam construction. This has the potential to destroy or relocate items of significance, and may also impact on the physical form of areas of significance.

The purpose of this sub-plan is to ensure that the condition of heritage resources within the two Aboriginal heritage conservation zones is maintained in a state that reflects conditions achieved prior to the commencement of milling operations.

Potential impacts include potential damage to the landform through unauthorised access to the heritage conservation areas. Unauthorised access may lead to erosion or the introduction of weeds and foreign flora species.

Contact from vehicles or machinery would have an even greater impact on the integrity of the zones, especially the areas of environmental sensitivity such as the scar tree in Zone B and the riparian zone surrounding the reservoir in Zone A.

The issue of wilful damage to areas of Aboriginal heritage has also been discussed during previous consultations and provides another incentive to ensure the areas are secure from unauthorised access.

Attention must also be paid to the potential for impacts to heritage resources that have not yet been identified, and that may be damaged by operational activities. The management of such items or areas is covered in greater detail in Section 5.

32. Cultural heritage management measures

The cultural values of the area can only be assessed by the local Aboriginal community and thus consultation with (TLALC) and (CBNTCAC) has been ongoing throughout the project. The formulation of conservation management guidelines to address these sites and landscapes has been performed in accordance with current legislative requirements and standard archaeological practice.

During initial fieldwork the representatives from the CBNTCAC and the TLALC Aboriginal stakeholder groups, expressed concern that the scarred tree in particular, should be avoided and that the creek line surrounds warranted further investigation. As a result of consultation the land to the north west of the study area surrounding the reservoir was also identified to be one of particular importance to local Aboriginal people.

Consent Condition 2.29 relates directly to the concerns of the Aboriginal stakeholders, and stipulates the management measures to be implemented for the two Aboriginal heritage conservation zones. The requirements for these zones have been satisfied and include but are not limited to:

- Fully establishing and securing the Heritage Conservation Zone A in the north-western end of the site.
- Fully establishing and securing the Heritage Conservation Zone B incorporating the area surrounding the scarred tree with at least a diameter of 30 metres.
- Implementing suitable drainage measures in the vicinity of the Heritage Conservation Zone B to ensure ponding or other impacts do not occur in a manner which would affect the root zone of the tree.

In May 2015 members of the Local Aboriginal Land Council were invited to site to review the current heritage protection arrangements. As an outcome of the meeting, heritage management measures outlined in Table 39 were developed for the Heritage Conservation Zones.

Table 39 – Management measures

Heritage Conservation Zone	Management Measures
Applicable to both Zones	• Fence the heritage conservation zones to restrict unauthorised access. • Contact both Aboriginal stakeholder groups should Allied Pinnacle need to perform a task in order to maintain the landscape values of either zone. • Consult with both Aboriginal stakeholder groups to determine the best way to manage the issue whilst being respectful of the inherent cultural values of the heritage conservation zones. • Storage of chemicals or substances used for equipment and vehicle maintenance must not be directly up-gradient of either of these zones.

Heritage Conservation Zone	Management Measures
	• Avoid vehicle and plant movements in the fenced off areas protecting the Aboriginal heritage conservation zones, and care must be taken when operating any mowers in the vicinity of either zone. • Conduct environmental inductions and awareness training for all site staff. • Monitor the extent of operational activities. • Stop work immediately in the area surrounding any unexpected find of Aboriginal item or places, until an assessment of the most appropriate course of action has been made. An archaeologist may be required, and subsequent consultation with OEH, may also occur.
Applicable to Zone A	• Regularly remove noxious and environmental weeds such as, but not limited to, St Johns Wort, Blackberry, Box Thorn, Privet, Wild Olives. • Remove weeds from the reservoir. • Time weed removal to avoid water bird breeding season. • Conduct cultural burn for weed removal as required in consultation with OEH, both Aboriginal stakeholder groups, Council and Rural Fire Service.
Applicable to Zone B	• Avoid damage to the trunk or root system of the scar tree while mowing in the vicinity of the scar tree. • Trimming of branches of the scar tree located within Zone B is prohibited. Branches must be allowed to naturally fall inside the perimeter fencing.

33. Cultural heritage monitoring strategy

33.1 Notification

The Office of Environment and Heritage (OEH), as the statutory body, are ultimately responsible for all Aboriginal sites and places within NSW. They are to be consulted should:

- any future development be proposed in proximity to the Aboriginal heritage conservation zones
- any actions that may interfere with the identified cultural and archaeological values associated with either Aboriginal heritage conservation zone
- any issues or conflicts arise between the local stakeholders in relation to the management and protection of these conservation zones during operations.

The TLALC and CBNTCAC Aboriginal stakeholder groups shall be consulted immediately should any issues arise as to the protection and management of the two Aboriginal heritage conservation zones. Key contact details are provided in Table 40.

Table 40 – Key contacts

Stakeholder	Nature of involvement in Project	Relevant Stakeholder contact	When Consulted	Person responsible for consultation
Cubbitch Barta Native Title Claimants	Aboriginal Heritage Stakeholders	Glenda Chalker Ph: 4684 1129	As required for Aboriginal heritage issues	Site Manager
Tharawal Local Aboriginal Land Council	Aboriginal Heritage Stakeholders	Megan Ely Ph. 4681 0059	As required for Aboriginal heritage issues	Site Manager
Office of Environment and Heritage	Incident management Parramatta office	Ph: 9995 5000	Notification if heritage items are identified	Site Manager

33.1 Recording incidents

Non-conformances with management measures in Table 2 will be recorded as an incident and entered into the Allied Pinnacle “Rapid Induct Incident Database”.

Corrective actions will be managed through the Allied Pinnacle “Rapid Induct Incident Database” and Section 5.6 of the OEMP.

Appendix E – Landscape Management Sub-Plan

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34. Introduction

This Landscape Management -Plan (LMP) responds to the specific requirements of the Consent Condition 5.4(e) for Development Application DA-318-12-2004-I, as modified by Modification 3 approved on 30 November 2017. It has been developed in order to address the landscape-related issues associated with the operation of the Allied Pinnacle Grain Milling Facility in Maldon.

The management principles outlined in this sub-plan, the resulting strategies, and recommendations will serve to provide long-term guidance to protect the site through the implementation and maintenance of landscaping practices.

34.1 Requirements for this plan

Consent condition 5.4(e) requires the LMP to specifically address the requirements outlined in Table 1. Table 1 also provides a reference to where the requirements have been addressed in this plan.

Table 41 - Requirements of consent condition 5.4(e)

Requirement	Reference to this plan
Details of all landscaping to be undertaken on the site with specific reference to screening landscaping and the timing of landscaping works	Section 4
Maximisation of flora species endemic to the locality in landscaping the site;	Section 4.3
Results of consultation with Council and the EPA (formerly OEH) to determine appropriate species for landscaping on the site; and	Section 3.1 and 5.1
A program to ensure that all landscaped areas on the site are maintained in a tidy, healthy and weed free state	Section 4.4

34.2 Assessment of landscape significance

The Allied Pinnacle Maldon site holds significance in a landscape context as it is:

- A prominent built feature in a rural setting with potential visual impacts.
- An important site with cultural heritage significance.

The site is divided into three zones according to the level of visual impact it imposes on the local roads, railway and housing settlements. Zone A is a high visual impact zone, Zone B is a medium visual impact zone, and Zone C is a low visual impact zone. The highest section of the mill would be visible from areas within Zone A which includes Picton and Menangle Roads.

The Blue Circle Southern cement works, approximately 500 m west of the site, is a dominant industrial development that is highly visible from surrounding roads and land uses.

An examination of the area would reveal that the viewshed is primarily experienced by:

- motorists on the two major roads (Picton Road and Menangle Road)

- Countrylink and CityRail passengers using the Main Southern Railway line
- residents in the Menangle Road housing subdivision.

The two views however, that would experience the greatest adverse visual impacts are:

- from Picton Road, travelling south-east until opposite the mill
- from Menangle Road, travelling toward the intersection with Picton Road.

The potential visual impacts involve those travelling along the surrounding roads and rail line, and those living in close proximity to the site. As such, mitigation measures have been outlined in Section 4 of this sub-plan.

35. Legislative requirements and guidelines

Key legislation and guidelines relevant to management of visual impact is provided in Table 26.

Table 42 - Key legislation and guidelines

Legislation / Guideline	Applicability
Development Control Plan (DCP No. 20) - Industrial development	DCP-20 outlines Council's requirements regarding the development of industrial land within Wollondilly Shire. In line with Section 72 of the Environmental Planning and Assessment Act, 1979, this plan applies to all lands under Council's planning instruments that are zoned for industrial purposes, or zones which allow industrial development. Where a development application is lodged that relates to land to which this plan applies, Council shall take the provisions of this plan into consideration in determining that application.
Environmental Planning and Assessment Act 1979	This Act requires that impacts on the environment including landscaping are considered prior to land development. This consideration ensures developments are undertaken through the DA process and in conjunction with obligations stipulated in Development Control Plans (DCPs) and Local Environmental Plans (LEPs).
Wollondilly Local Environmental Plan 1991	This plan applies to the whole of the land within the Shire of Wollondilly. The plan aims to: • ensure that new development is undertaken in a manner that is sympathetic to the streetscapes and landscapes of Picton and the distinctive character that they impart to the Shire of Wollondilly. • maintain the rural natural landscape character of the Wollondilly local government area by providing a balance between agricultural and other land uses

36. Performance objectives

36.1 General landscaping

The Wollondilly Shire Council outlines objectives relating to landscaping within the Development Control Plan No. 20 – Industrial Development. These involve enhancing the landscape around industrial areas, planting vegetation that provides screening from buildings, and utilising landscaping styles that require minimum maintenance.

Furthermore, Council standards involve improving the aesthetic quality of areas through the use of mounds and vegetation.

The goal is to improve the visual amenity of the area and to integrate the Allied Pinnacle Grain Milling Facility into the local landscape as effectively as possible.

The objectives are to ensure that screening landscaping is undertaken in areas agreed upon by the relevant stakeholders, and that vegetation selection utilises flora species that are endemic to the local area, with specific species included where required.

An ongoing maintenance regime must be adhered to in order to ensure the area is tidy, healthy and weed free.

36.2 Landscape specifications under review

In conjunction with current landscaping treatments, events external to the site in terms of land re-zoning have taken place. The Allied Pinnacle site forms part of the Maldon Industrial lands investigation into rezoning of land surrounding the site between Picton Road and the Nepean River. This rezoning has the full support of the Wollondilly Shire Council and re-zoning occurred in 2011 to IN1 – General Industrial. Refer 4.2

In addition, land within the Allied Pinnacle site adjacent to the western boundary is within one of the established Aboriginal Heritage Conservation Zones (Zone A). Planned and existing landscaping treatments are outlined in Figure 1.

37. Landscape management measures

37.1 Implementation

Allied Pinnacle used earth mounding and landscaping using native trees and shrubs to soften the visual impact generated by the milling facilities. Established and planned landscape treatments, including planned areas that have resulted from consultation with Aboriginal stakeholder groups, are outlined in Figure 1.

Landscaping works undertaken on site (under L1) have included the formation of an earth mounding strip along the Picton Road boundary. These mounds have been created to a height of over 2m, with a maximum slope of 1:3 for mass planted areas and up to 1:4 for the grassed slopes, to allow for slashing and mowing. The mounding has been established to achieve immediate screening for the bulk of the site, while the highest aspects of the milling facility will still be partially visible from off-site. Additional softening of the views has been achieved by planting native Australian shrubs and trees on the slopes of the mounds.

Planting of native tree and shrub species was undertaken along both sides of the access road near the entry point from Picton Road. This vegetation was established in accordance with L2 as per Figure 1.

37.2 Extension of landscape treatment L2

Consent condition 2.8 requires Landscape Treatment L2 to be extended along the entire length of the shared property boundaries between the site and the adjacent properties to the east and west of the site. However, this has not occurred as DPE advised by letter on 24th February 2009 that Landscape Treatment L2 could be delayed pending the rezoning of adjacent land to an industrial landuse.

The Wollondilly Local Environment Plan 2011 shows the lots bordering the east and west of the site are now IN1 – General Industrial. On 3rd June 2015, Allied Pinnacle sent a letter to DPE advising the changes in zoning and requested confirmation that the landscaping treatment is no longer required. DPE advised on 24th May 2016 landscape treatment L2 is no longer required.

Allied Pinnacle shall not proceed with the extension to Landscape Treatment L2 unless instructed otherwise by the Secretary.

37.3 Species and planting rates

Table 43 outlines the species and planting rates that have been adopted for the L1 and L2 landscape treatments at Allied Pinnacle' Maldon site.

Table 43 - Landscape flora species and planting rates

Landscape Treatment 1 (L1)	Planting Rates (m2)	Landscape Treatment 2 (L2)	Planting Rates (m2)
Parramatta Green Wattle	1:16	Parramatta Green Wattle	1:16
Rough Barked Apple	1:16	Rough Barked Apple	1:16
She Oak	1:16	She Oak	1:16
Cabbage Gum	1:16	Cabbage Gum	1:16
Iron Bark	1:16	Iron Bark	1:16
Thin Leaved Stringy Bark	1:16	Thin Leaved Stringy Bark	1:16
Spotted Gum	1:16	Spotted Gum	1:16
Grey Box	1:16	Grey Box	1:16
Grey Ironbark	1:16	Grey Ironbark	1:16
Forest Red Gum	1:16	Forest Red Gum	1:16
Shrubs	**Shrubs**		
Two-veined Hickory	1:1	Prickily Leaved Tea Tree	1:16
Sydney Green Wattle	1:1	**Groundcovers/Grasses**	
Sickle Wattle	1:1	Clematis	4:1
Sydney Golden Wattle	1:1	Native Sarsparilla	4:1
Hakea dactyloides	1:1	Dusky Coral Pea	4:1
Banksia serrata	1:1	Matt Rush	4:1
Sunshine Wattle	1:1	Native Iris	4:1
Black Thorn	1:1	Slender Rise Flower	4:1
Willow Bottlebrush	1:1		
Pink Spider Flower	1:1		
Tick Bush	1:1		
Prickily Leaved Tea Tree	1:16		
Ball Everlasting	1:1		
Geebung	1:1		
Groundcovers/Grasses			
Clematis	4:1		
Native Sarsparilla	4:1		
Dusky Coral Pea	4:1		

Landscape Treatment 1 (L1)	Planting Rates (m2)	Landscape Treatment 2 (L2)	Planting Rates (m2)
Matt Rush	4:1		
Native Iris	4:1		
Slender Rise Flower	4:1		

37.4 Maintenance

Landscaped areas will be maintained by:

- removing of weeds throughout the operational life of the development.
- ensuring litter and pooled water do not accumulate within landscaped areas to prevent health risks and for aesthetic value.
- mowing of grass to maintain low rodent populations, to reduce the risks of bushfire, and for aesthetic value.
- maintaining mounds and planted buffer zones to reduce likelihood of erosion, slumping etc.

The maintenance regime will be dependent on conditions such as temperature, water availability and general weather patterns, and as such may vary from month to month.

Aboriginal Heritage conservation zones shall be maintained in accordance with the management measures outlined in the Cultural Heritage Management Sub-Plan.

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38. Landscape monitoring strategy

38.1 Notification

The Council, DPE and the OEH will be consulted should any changes to the landscaping program occur. The relevant Aboriginal stakeholder groups will be consulted should any of these changes involve land within the Aboriginal Heritage Conservation Zones.

The landscaped features are well established however periodic monitoring will be undertaken for the purpose of maintenance and upkeep. This will also involve monitoring the boundaries onto the site and those surrounding the Aboriginal Heritage Conservation Zones where specific requirements involve landscaping conditions and maintenance.

38.2 Recording incidents

Corrective actions will be managed through the Allied Pinnacle “Rapid Induct Incident Database” and Section 5.6 of the OEMP.

Appendix F – Combined implementation checklist

Appendix F – Implementation checklist for the OEMP

Date:

Inspection by:

Corrective Actions competed date:

Corrective actions completed by:

Quarterly checklist

Area	Management / Mitigation measure	Yes/No	Observation/Corrective action (Include photos where appropriate)	Evidence of corrective action Refer to evidence where appropriate)
Appendix A - NVMP				
Operational mitigation measures	Routine inspection of targeted operational measures including (refer to Section 5.2): • Night time control of operations • Bag packing works • Site building facades			
Maintenance of fans and fan silencers	Routine inspection and maintenance of the fan units and fan silencers to maintain required operational and noise attenuation performance.			
Bag packing works	• All equipment shall be adequately maintained and kept in good operating order. • Any unusually noisy equipment will be investigated and rectified			
Appendix B - WMMP				
Hardstand areas	All hardstand areas are kept clean of pollutants that may wash into the stormwater system including: • Spilt grain or oil leaks • Sediment, dust or litter			

Fuel and chemical storage areas	All liquid product including fuels and chemicals are stored within: • bunded areas			
Internal stormwater drains	Stormwater drains on site including bio-swales, culverts and trash racks are free of: • scouring or erosion • spilt grain or oil • sediment build-up or litter.			
	Bio-swales have a good vegetation cover and the grass is kept short.			
	Shut-off blanket in the mill mix out-loading is readily deployable.			
AWTS	Effluent quality monitoring in accordance with Table 7 of the Soil & Water Management Plan has been implemented..		Refer to lab results	
	The AWTS has been serviced.		Refer to service record	
	Effluent quality monitoring and service records have been submitted to DPE.			
Irrigation area	There is no evidence of surface water runoff beyond the irrigation area.			
	Spray does not drift beyond the boundary of the site.			
	A stormwater diversion bank is maintained between the road and the irrigation area.			
	There are no depressions capable of ponding water (such as natural depressions or wheel tracks).			
	Grass is kept to below 100mm in length.			

Laboratory	Chemicals are stored in an appropriately sealed, bunded and labelled containers, with SDS register in place.			
	Spent chemicals: • Are not poured down the sink. • Waste chemical containers are used for spent chemicals and removed by a specialist contractor.			
Appendix C - TMP				
Traffic	Routine traffic monitoring including: • speed compliance • vehicle noise levels • appropriate load coverage.			
Appendix D - CHMP				
Heritage Conservation Zones A	Routine inspection including: • Fencing is secure to prevent vehicular and other unauthorised access. • No chemicals or substances are placed directly upstream of the Zone. • Noxious environmental weeds in the area and the reservoir are under control to maintain aesthetic quality, reduce exposure to uneven ground and control snake populations.			
Heritage Conservation Zones B	Routine inspection including: • Fencing is secure to prevent vehicular and other unauthorised access. • Mowing around the scar tree does not impact the trees trunk or root zone. • No ponding is evident which may impact the trees root zone. • The tree has not been trimmed and branches have been allowed to			

	naturally fall inside the perimeter fencing.			
Appendix E - LMP				
Landscape areas	Routine inspection of landscape areas to confirm: • noxious weeds are controlled • litter and pooled water has not accumulated • grass is mowed to maintain low rodent populations, reduce the risks of bushfire, and for aesthetic value. • mounds and planted buffer zones are maintained to reduce likelihood of erosion, slumping etc.			

6-monthly checklist

Area	Management / Mitigation measure	Yes/No	Observation/Corrective action	Evidence of corrective action
Appendix B - WMMP				
Culverts - Great Southern Railway Line	The approaches to the culverts under the Great Southern Railway Line are free of: • Scouring or erosion • Excessive sediment or vegetation build-up.			
AWTS	Water quality monitoring in accordance with Table 8 of the Plan has been implemented.		Refer to lab results	

Annual checklist

Area	Management / Mitigation measure	Yes/No	Observation/Corrective action	Evidence of corrective action
OEMP				
Consent Conditions	Annual Environmental Management Report			
EPL	Annual Return			
Appendix A - NVMP				
Noise incidents and complaints	Annually review the “Rapid Induct Incident Database” for noise related incidents and complaints to determine the effectiveness of the mitigation measures and whether the noise limits and noise goals specified under this consent, or best practice noise control operations, are being met.			
Appendix B - WMMP				
Irrigation Area	Soil monitoring in accordance with Table 10 of WMMP has been implemented		Refer to lab results	

Triennial checklist

Area	Management / Mitigation measure	Yes/No	Observation/Corrective action	Evidence of corrective action
OEMP				
Consent Conditions	Independent Audit			
Appendix A - NVMP				
Periodic operational	Periodic operational noise limit compliance monitoring program			

Area	Management / Mitigation measure	Yes/No	Observation/Corrective action	Evidence of corrective action
noise limit compliance monitoring program				

Event-based checklist

Area	Management / Mitigation measure	Yes/No	Observation/Corrective action	Evidence of corrective action
Appendix A - NVMP				
Future operational noise compliance	• Operational noise monitoring and noise criterion compliance assessment reporting shall be undertaken within 14 days of any change to the schedule of operations from the defined works in the Schedule 1 Application. • Operation noise monitoring at receiver locations as per defined strategy in Section 6 of this Sub-plan.			
Noise compliance investigation report	• In the event of received adverse comment or complaint relating to noise from Allied Pinnacle Flour Mill operations, an assessment of received noise influence shall be undertaken. • All complaints shall be logged in the Rapid Induct Incident database.			

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