

# **Statement of Environmental Effects**

# Barellan GrainCorp Facility – Additional Bunkers

June 2022

**Project Number: 22-115** 





# **Document verification**

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# **Acronyms and abbreviations**

AHIMS Aboriginal Heritage Information Management System

AHIP Aboriginal Heritage Impact Permit

AWS Automatic weather station

BC Act Biodiversity Conservation Act 2016 (NSW)

Biosecurity Act 2015 (NSW)

BOM Australian Bureau of Meteorology

Cwth Commonwealth

DAWE Department of Agriculture, Water and the Environment (Cwth) (formerly

DoEE)

DECCW (Former) Department of Environment, Climate Change and Water (NSW)

(now DPE)

DoEE (Former) Department of the Environment and Energy (Cwth) (now

DAWE)

DPE Department of Planning and Environment (NSW) (formerly DPIE)

EEC Endangered ecological community – as defined under relevant law

applying to the proposal

EES Environment, Energy and Science (NSW), Division of DPIE (formerly

OEH, and, prior, DECCW)

EIA Environmental impact assessment

EPBC Act Environment Protection and Biodiversity Conservation Act 1999 (Cwth)

EP&A Act Environmental Planning and Assessment Act 1979 (NSW)

ESD Ecologically Sustainable Development

ha hectares

HBT Hollow-bearing tree

Heritage Act 1977 (NSW)

km kilometres

LALC Local Aboriginal Land Council

LEP Local Environment Plan

m metres

MNES Matters of National Environmental Significance under the EPBC Act (c.f.)

NPW Act National Parks and Wildlife Act 1974 (NSW)

NV Act Native Vegetation Act 2003 (NSW)

OEH (Former) Office of Environment and Heritage (NSW) (now EES)

PMST Protected Matters Search Tool

# Statement of Environmental Effects

Barellan GrainCorp Facility – Additional Bunkers

REP Regional Environmental Plan

SEE Statement of Environmental Effects

TISEPP State Environmental Planning Policy (Infrastructure) 2007 (NSW)



# 1. Introduction

This Statement of Environmental Effects (SEE) has been prepared by NGH, on behalf of GrainCorp Limited (the Proponent). This report supports a Development Application (DA) seeking Council's approval of additional grain facilities proposed at 10 Sandy Creek Road, Barellan. The proposed activities include the construction and use of 8 grain storage bunkers, extension of the internal access roads and associated drainage.

Development consent is sought under Part 4 of the *Environmental Planning and Assessment Act* 1979 (EP&A Act). The proposed development is not declared as Designated Development under Schedule 3 the Environmental Planning and Assessment Regulation 2021 (EP&A Regulation)). The Proposal is not a type of development listed in the schedule, as the proposed works would be an extension to the existing rural industry (grain storage facility).

The proposed development would not be considered regionally significant development (pursuant to Section 5, Schedule 6 of the State Environmental Planning Policy (Planning Systems) 2021), as it has a capital investment value of less than \$5 million dollars. The Narrandera Shire Council (NSC) is the relevant consent Authority.

This SEE has been prepared in accordance with the requirements of the EP&A Act and the EP&A Regulation. This report shall be read in conjunction with the accompanying plans listed in Table 1-1 and attachments.

Table 1-1	Accompany	vina nlans	and docui	mentation
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Reference	Description	Prepared by
Appendix A	Development design and layout	Tahlee Consulting Services
Appendix B	Development application – Grain loading facility	Narrandera Shire Council
Appendix B	Development application – redevelopment of Barellan yard.	Narrandera Shire Council

# 1.1 Applicant and land ownership

The applicant is Daniel Samways, on behalf of GrainCorp Limited (GrainCorp). The subject land includes Lot 1 DP1033278, owned by GrainCorp and Lot 2 DP1033278, owned by Dawn Lorraine Ware. The development site adjoins the existing GrainCorp facility (refer to Figure 1-1 and Figure 1-2), which currently has approval to operate on the following land parcels (Table 1-2).

Table 1-2 Lots involved with the existing development

Controlling authority	Lot / DP
GrainCorp Limited	Lot 1 DP1033278 Lot 10 DP819655

Controlling authority	Lot / DP
Transport for NSW	Lot 3006 DP1203503
Crown Land	Lot 7013 DP94873 Lot 23 DP751672 Lot 7304 DP1152955



Figure 1-1 Location of the proposed development in relation to the existing facility

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Figure 1-2 Lot and DP numbers

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# 1.2 Land acquisition

GrainCorp intends to acquire part of Lot 2 DP1033278. After obtaining DA Approval for the Proposal, the Proponent intends to lease part of Lot 2 DP1033278, until a subdivision is approved. Purchase of the land would take place shortly thereafter.

# 1.3 Existing approvals and matters before council

The site is an approved grain storage and handling facility. The proposal would extend grain storage ability on the site. There are no changes to the handling processes on the site.

A development approval (DA 0.0/2016/2017) is in effect for part Lot 1 DP1033278. Consent was granted on 15 August 2017 for the Proponent to use part of this land as a Grain Loading Facility (refer to Appendix B for documentation). There are no changes to this development as part of this proposal.

# 1.4 Capital investment

The capital investment of the Proposal is approximately \$1.9 million dollars.

# 1.5 Subject land and locality

The subject land comprises parts of Lot 1 and Lot 2 DP1033278 (refer to Figure 1-2).

The subject land is located on the northern side of Yapunyah Street, in the village of Barellan (refer to Figure 1-3). Barellan is a rural village approximately 56.2 kilometres (km) north of the Narrandera Central Business District (CBD).

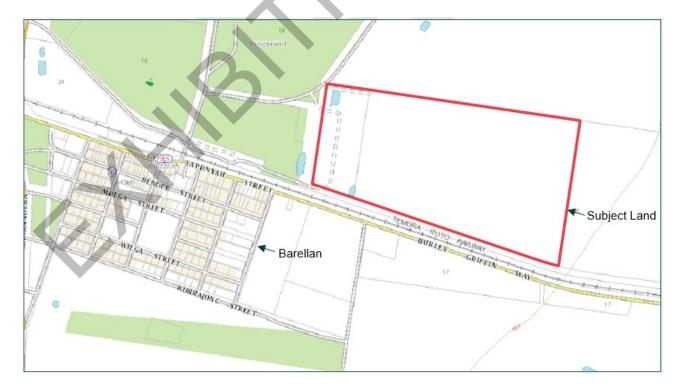


Figure 1-3 Subject land locality

# 2. The Proposal

# 2.1 Existing development

GrainCorp is a leading Australian agribusiness, with a diverse range of grain storage, handling, marketing and processing operations. GrainCorp exports grain to over 30 countries worldwide, playing an important role in the global supply of grain products.

GrainCorp owns the largest network of regional storage sites in eastern Australia, with a total storage capacity of over 20 million tonnes. Infrastructure at the Barellan GrainCorp site has the capacity to store approximately 276,000 tonnes of grain. Currently, the Barellan site receives grain via road trucks. Operational activities include:

- Receival of truck loads through a sampling station and weighbridge
- Unloading of grain into receival hoppers from trucks
- Transfer of grain from hoppers via mobile stackers to fixed storage locations or bunkers
- Loading of grain to trucks or rail wagons for distribution
- Treatment of grain for pests by a fumigation process.

Ancillary activities that may also occur onsite include:

- Loading of grain dust to trucks for beneficial reuse
- Loading of waste grain to trucks for beneficial reuse
- Workshop activities for maintenance and service of plant and equipment
- Washdown of plants and equipment at workshops
- Operation of a water truck for dust suppression
- Fuel storage and fuelling of plant and equipment
- · Chemical storage and use
- Waste collection and storage
- Weed and pest control

# 2.2 Proposed bunker storage

The proposal is for additional grain storage bunkers and associated works as part of the existing rural industry (grain storage facility). The proposed expansion of bunkers would increase bulk storage capacity to 512,000 tonnes of grain, which would almost double the developments existing capacity. The Proposal would also allow for better segregation of different commodities and grades of grain.

The layout of the proposed development is over Lot 1 and Lot 2 DP1033278. The proposed development plan has been provided in Appendix A of this report.

The Proposal would involve:

- The construction of 8 earthen bunkers (measuring approximately 284m long by 40m wide).
- The construction of additional internal roads to facilitate grain storage within the bunkers.

The internal roads would be constructed to a standard suitable for semi-trailers to access the proposed bunkers. Road width would vary depending on its location and include:

- Access roads to / from the bunkers would be around 4m (one way) to 8m (two way) wide
- Roads at the end of each bunker would be around 20m wide
- Stacker lanes, constructed between the bunkers, would be around 18m wide
- Tarping lanes, constructed beside bunkers, would be around 4m wide for external lanes and 8m wide for internal lanes.

To reduce dust emissions the unsealed access roads to / from the bunkers would be sheeted with 20mm hard rock aggregate, and water carts will be used for dust suppression. Air quality and dust suppression is discussed in detail in section 3.5 of this report.

## 2.2.1 Plant and equipment

The Proposal would be an addition to the existing GrainCorp development. No additional plant or equipment would be required. Plant used during construction would include:

- Scrapers
- Compactor
- Smooth drum roller

- Road graders
- Tip trucks

# 2.2.2 Storage and materials management

A qualified and registered Pest Control team is currently employed to control rodents / insects occurring on site. Herbicides are kept and used on site. Only registered and approved products are used. No modifications to the current pest or weed management strategies are proposed as a part of this development.

#### 2.2.3 Design considerations

The Proposal has been designed in consultation with an engineering firm. The design and function of the Proposal complements the existing use of the site, namely a grain storage and handling facility. Appendix A contains the detailed design.

The Proposal would be constructed on land currently used for the purposes of the GrainCorp development and cropping activities. As such, the development site has been heavily cleared and disturbed. It is considered that the Proposal would be suitable for its proposed use.

# 2.3 Security fencing and lighting

An existing perimeter fence with signage is in place restricting public access and vehicles from entering the site. During construction, temporary fencing requirements would be determined as part of the Contractor Safety Management Process (CSMP).

Permanent perimeter fencing would be installed around the development site post-construction of the Proposal.

No fixed lighting is proposed as part of this development. Portable light towers can be deployed during peak receival periods, such as during harvest.

# 2.4 Hours of operation

Operational hours for the proposed bunker storage would be in keeping with that of the existing site:

Operating period	Hours
General hours (Monday to Friday)	7.00am to 6.00pm
Peak season / harvest (Monday to Sunday)	24 hours a day
Rail operating hours	24 hours a day

# 2.5 Staffing and facilities

No additional staff would be required for the proposed addition. Staff amenities would continue to be provided from within the existing GrainCorp development. During peak times (harvest) additional portable toilets are provided for casual staff. Portable toilets would be located within the existing GrainCorp development.

# 2.6 Transport and vehicular movements

Arc Traffic & Transport (2022) were engaged by the Proponent to prepare a traffic assessment for the proposed development (Appendix L). The development is currently accessed via Sandy Creek Road, which in turn connects with the Burley Griffin Way (Yapunyah Street). During peak harvest periods, it is anticipated that the proposed development could result in an additional 144 truck movements per day. Given that processing at the existing weighbridge and sample stands is currently at capacity, it is considered unlikely that this would result in additional truck movements on-site. The site entry currently allows for the queuing upon arrival of up to 25-30 heavy vehicles. Upon entering the site, trucks follow a one-way road through the site before exiting via Sandy Creek Road.

No additional access points are proposed as part of this Proposal. Traffic flow into and out of the development would not change. The GrainCorp development is adequately supported by existing major thoroughfares, such as the Burley Griffin Way. It is considered unlikely that the development would have unintended traffic impacts on the surrounding area.

Rail transport plays a significant role in site operations, and specifically for outbound grain transport, averaging approximately 75% of outbound transport over the period 2012 – 2021, and an even higher percentage during peak harvest years. There is no expectation that the Proposal will result in significant change to existing (peak) rail transport operations.

# 2.7 Off-street parking

The Narrandera Development Control Plan 2013 does not contain provisions for parking in relation to the proposed development, therefore parking requirements will be assessed on their merits. There are currently 20 parking spaces available to staff. Given that processing at the existing weighbridge and sample stands is currently at capacity, it is considered unlikely that additional staff

would be required for the Proposal. As such no additional parking would be required during operation of the proposed development.

#### 2.8 Utilities

The existing GrainCorp development is serviced by essential infrastructure including water, electricity, drainage and communication networks. Three large dams, located within the bunker yard, also supply non potable water for the site. This water is used for dust suppression and compaction. Water available within the dams is considered more than sufficient to meet the demands of the Proposal. In the event of a drought, a town water supply is available for use. Less trucks access the site during drought conditions, due to decreases in grain production, so less water is required for onsite dust suppression.

Wastewater is produced by staff amenities. The sewage within the tanks is collected and disposed of by a licensed waste transporter at a licensed waste facility.

The Proposal does not require additional connections to utilities or services.

#### 2.9 Stormwater

The ground within the proposal area is flat to gently undulating, and localised pooling of water occurs following significant rainfall. Bunker pavements would be shaped to shed water into open V drains. These drains would direct stormwater into retention dams. Refer to Appendix H for detailed drainage designs. The fall of the pavements and new internal roadways has been designed to minimise the volume and speed of surface water flows, therefore eliminating the potential for severe wash off and erosion on site.



# 3. Site and environmental analysis

# 3.1 Site analysis

The subject land comprises 2 adjoining lots legally described as Lot 1 and Lot 2 DP1033278. Lots 1 and 2 are rectangular in shape. Lot 1 has an area of around 16ha, while Lot 2 has an area of around 100ha.

The subject land is located immediately northeast of the village of Barellan, which has a population of around 538 people (ABS, 2016). The subject land adjoins the Temora Roto Railway line, which provides transportation services for grain and livestock throughout the surrounding areas. Land surrounding Barellan is largely agricultural and is mostly utilised for grazing and broad acre cropping.

The subject land is located approximately 1.1km northeast of the town centre. The closest residential development (on land zoned RU5 Village) is approximately 250 metres to the southwest of the subject land, when measured from the easternmost point of the property boundary, as shown in Figure 3-1.



Figure 3-1 Subject land with respect to the village of Barellan (Source: NSW Spatial Services, 2022)

# 3.2 Site history

The original GrainCorp handling site, located immediately west of the subject land, has been in operation since 1968, when the original bulk grain shed was constructed. The development site is currently used for the purposes of grain storage and cropping.

In 2017, additional development approvals (refer to section 1.3) were granted for the addition of a grain loading facility, as well as the redevelopment of the site, which included upgrades to the site entrance, internal access roads, the weighbridge and hut.

# 3.3 Existing and emerging character

The subject land and precinct are bound by agricultural land to the north, east and south. Predominant activities include broadacre cropping and livestock grazing. Several freight networks, including the Burley Griffin Way and the Temora Roto railway line, are accessible from the subject land.

As discussed in section 3.1 of this report, the village of Barellan is located southwest of the development site. There are no neighbours in the immediate vicinity to this development. The development is not proposed to be built to a great height, with grain stored in bunkers not exceeding a height of 9.5m and therefore, a visual impact on nearby receivers is not anticipated. As can be seen in Figure 3-2, existing vegetation provides ample screening between the development site, the Burley Griffin Way and Barellan.



Figure 3-2 Existing vegetative screening for the development

# 3.4 Noise and vibration

## 3.4.1 Approach

The noise and vibration assessment have been prepared in accordance with the policies and guidance, administered by the Environment Protection Authority (EPA):

- Construction noise:
  - NSW Interim Construction Noise Guideline (ICNG) 2009.
  - NSW Noise Policy for Industry (NPI) NSW EPA 2017.

The NSW Interim Construction Noise Guideline (ICNG) 2009 provides guidance on the measurement and management of construction noise impacts. The guideline requires, a quantitative assessment of noise impacts when works are likely to impact an individual or sensitive land use for more than three weeks in total.

The ICNG describes the 'noise management levels' (NMLs), for residences and other sensitive receivers. For works during standard working hours, residences are considered noise affected when construction noise is 10 dB(A) above the rating background level (RBL) (as detailed in Table 3-1) and 'highly noise affected' when construction noise is above 75 dB(A). Works outside standard working hours affect sensitive receivers when construction noise is 5 dB(A) above the RBL (EPA, 2017).

#### 3.4.2 Existing environment

The existing noise sources are typical of a rural environment. Noise sources include tractors, headers, quad bikes, light and heavy vehicles, as well as noise associated with train movements. Noise from farm activities including cultivation, sowing, spraying, grain harvest, haymaking and animal movement occur at peak times and are driven by seasonal conditions.

## 3.4.3 Background noise

Background noise monitoring has not been conducted for the Proposal. NGH has adopted the recommended background levels from the NPI (2017). The NPI in Table 3-1 describes typical existing background Rural Residential noise levels. These background noise levels were adopted as the RBLs for the purpose of this noise assessment.

Table 3-1 Average background A-weighted sound pressure level (EPA, 2017).

	Daytime	Evening	Night-time
	0700-1800	1800-2200	2200-0700
Rural Residential	40 dB(A)	35 dB(A)	30 dB(A)

Noise management levels for the proposed activity have been determined in accordance with the NSW ICNG described below and summarised in Table 3-2.

- Standard working hours 10 dB above background levels.
- Outside standard working hours 5 dB above background levels.
- Residences receiving noise levels over 75 dB(A) during standard working hours are considered highly noise affected irrespective of the RBL.

Table 3-2 Noise management levels for the Proposal

Daytime NML (dB(A))	Evening NML (dB(A))	Night NML (dB(A))	Highly Noise Affected
(RBL +10 dB(A))	(RBL +5 dB(A))	(RBL +5 dB(A))	Level (dB(A))
50 dB(A)	40 dB(A)	35 dB(A)	75 dB(A)

## 3.4.4 Potential noise impacts

The predicted noise level for the proposed work was calculated using the Transport for NSW Services' Construction Noise Estimator Tool (CNET). The following scenarios were modelled:

Bunker construction

- Operation (non-harvest periods)
- Operation (harvest periods).

Operational equipment is representative of the entire development (existing and proposed). Given the current processing capacity of the existing weighbridge and sample stands, it is considered unlikely that operational plant requirements would increase as a result of the proposed extension. However, due to the mobility of the proposed plant and the rotational nature of the bunker system, it is possible that all of the plant listed in Table 3-3 could be utilised within the development site. Therefore, these scenarios have predicted the 'worst case outcome' and assumed that all plant and machinery are operating continuously and concurrently.

Table 3-3 Construction equipment

Construction equipment	Sound power level (dB(A))	No. of units				
Scenario: Bunker construction						
Scrapers	88	3				
Compactor	85	1				
Smooth drum roller	82	1				
Road graders	85	2				
Tip trucks – delivering gravel	85	2				
Scenario: Operations (non-harvest periods)						
Front end loaders	88	2				
Trucks (delivering / out loading grain)	85	2				
Skid-steer loader	85	1				
Scenario: Operations (harvest period)						
Grain stackers*	78	5				
Trucks (delivering / out loading grain)	85	3				
Front end loaders	88	3				
Skid-steer loader	85	1				

<sup>\*</sup>Grain stackers are powered by a 125 kVA generator.

Two representative locations (R1 & R2) were chosen for the noise assessment. As can be seen in Figure 3-3, both receivers are located approximately 420m from the development site. Due to the mobility of the proposed plant and the rotational nature of the bunker system, the noise assessment has also included an evaluation of the distance between R1 and the subject land (approximately 250m). The results of the three scenarios are provided in Table 3-4 below.



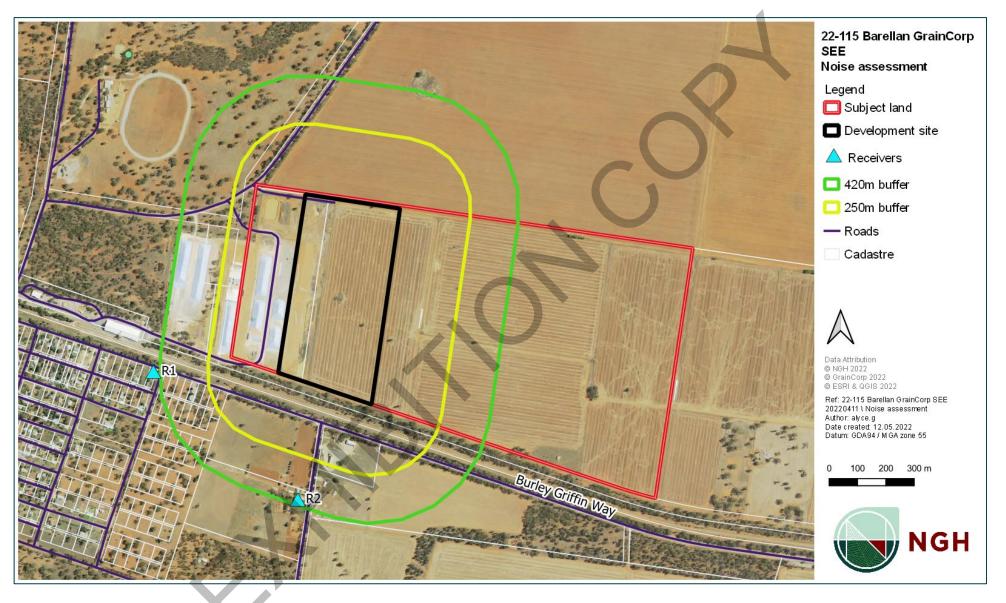


Figure 3-3 Noise assessment

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Table 3-4 Predicted construction noise levels

Approximate distance from the development	Daytime NML (dB(A))	Predicted Noise Level dB(A)*	NMLs Exceedance (dB(A))**	Description	Recommended additional mitigation measures***	
Site establishment						
R1 – 250m	50	56	1	Clearly audible	Not applicable	
R2 – 420m	50	49	0	No exceedance	Not applicable	
Operation (non-harvest period)						
R1 – 250m	50	55	5	Clearly audible	Not applicable	
R2 – 420m	50	48	0	No exceedance	Not applicable	
Operation (harvest period)						
R1 – 250m	50	57	7	Clearly audible	Not applicable	
R2 – 420m	50	50	0	No exceedance	Not applicable	

<sup>\*</sup> Green = no exceedance, Yellow = Minor exceedance, Orange = Substantial exceedance, Red = highly noise effected \*\* Clearly audible = < 10 dB(A) above NML, Moderately intrusive = 10 – 20 dB(A) above NML, Highly intrusive = > 20 dB(A) above NML

Receivers located more than 420m from the Proposal would experience no exceedance of the daytime NML. Receivers (R1) located within 250m of the subject land would experience minor exceedance of up to 7dBA above the daytime NML. Noise exceedances are considered to be minor and would be no greater than that experienced during current operations.

Given that no sensitive receivers are located within 400m of the Proposal and that the proposed extension would be located further away from Barellan, it is unlikely that neighbouring properties would be impacted by noise during construction or operation of the development.

The expected number of trains visiting the GrainCorp site is unlikely to increase over a 12-month period, as a result of the development (refer to Appendix J). However, the number of trains servicing the site is largely determined by the capacity of the rail network, availability of trains and harvest conditions. The rail network is currently at capacity, due to the volume of grain produced during high harvest periods. This development has the capacity to store grain on-site for up to 2 years, until it can be loaded to rail for export. As such, additional train movements are not necessary and no further assessment for rail transport is required.

<sup>\*\*\*</sup>Differences of 2dBA are indiscernible to the human ear

Vibration impacts dissipate with distance. Given the distance of 420m to the closest residential receiver (measured from the westernmost edge of the development site), vibration impacts are not expected as a result of the proposed development.

#### 3.4.5 Safeguards and mitigation measures

The proposed development is not expected to generate excessive noise; however, the following mitigation measures would be employed to further minimise noise generation:

- Traffic will be controlled to minimise braking and reversing of vehicles
- Reversing and warning buzzers will be replaced with ones that are more auditorily pleasing
- Complaints will be managed promptly via the existing Complaints Management System (Appendix G)

# 3.5 Air Quality

## 3.5.1 Existing environment

Air quality within the Subject land and the township of Barellan is dominated by seasonal influences and rural activities.

During the latter drier months of summer, evaporation rates are high and air quality is impacted by high levels of dust or clay particulate matter (OEH, n.d.). Dust sources include harvesting, livestock movement, traffic and transport and windstorms. During autumn burning of cereal crop residues often leads to elevated levels of particulates, predominantly comprising soot. Cultivation for broad acre farming can also generate localised elevated dust levels.

During winter air quality standards improve as pastures and crops carpet the landscape. Spring air quality is also high but can be influenced by the dispersion of pollen and spores.

#### Prevailing wind conditions

Long-term data for the closest wind speed and direction roses was obtained for Wagga Wagga (Wagga AMO, site number: 072150), located approximately 115km southeast of the Subject land (Figure 3-4) (BoM, 2022).

As can be seen below, prevailing winds mostly blow to the east and northeast, respectively. Given that the Proposal is located northeast of Barellan, it is considered likely that dust generated by the development would be largely blown east and/or northeast, away from the village. It is possible, however, that isolated gusts of wind to the west / southwest could carry dust into Barellan.

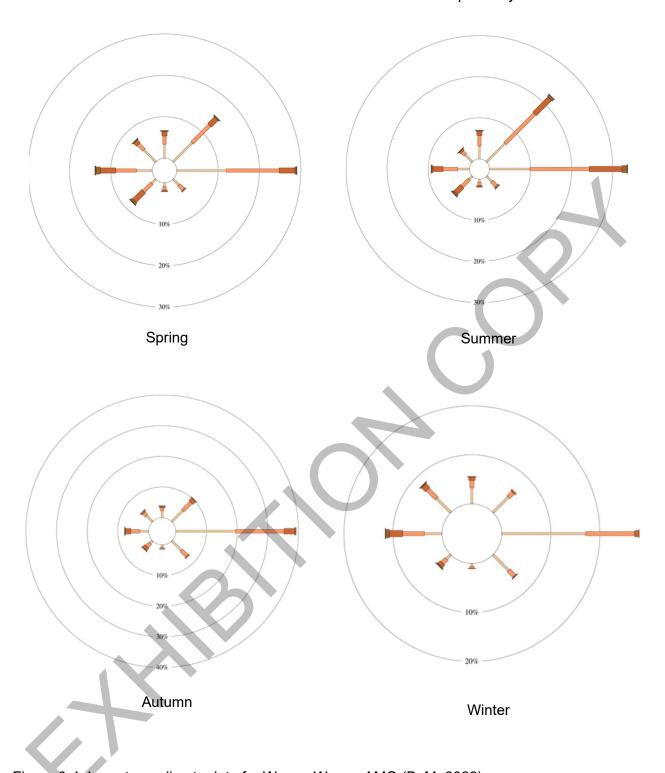


Figure 3-4 Long-term climate data for Wagga Wagga AMO (BoM, 2022)

# 3.5.2 Background air quality levels

Climate data was obtained from a monitoring station in North Wagga Wagga (DPIE, 2022). Long-term averages (2012-2021) over the four seasons were compared for airborne particulate matter (PM). PM may be either directly emitted from sources or formed in the atmosphere through the chemical reactions of gases and certain organic compounds (CA.Gov, 2022). These organic compounds can be emitted by both natural sources, such as trees and vegetation, as well as from man-made (anthropogenic) sources, such as industrial processes and motor vehicle exhaust (CA.Gov, 2022). Particles are defined by their diameter for air quality regulatory purposes. Those

with a diameter of 10 microns or less (PM10) are inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter (PM2.5). Therefore, PM2.5 comprises a portion of PM10. (CA.Gov, 2022). Background PM10 and PM2.5 levels were investigated for the purposes of this assessment.

As shown in Figure 3-5, PM10 emissions are highest on average over the Spring and Summer months. This is likely attributed to higher pollen counts, as well as activities such as harvest and livestock movements.

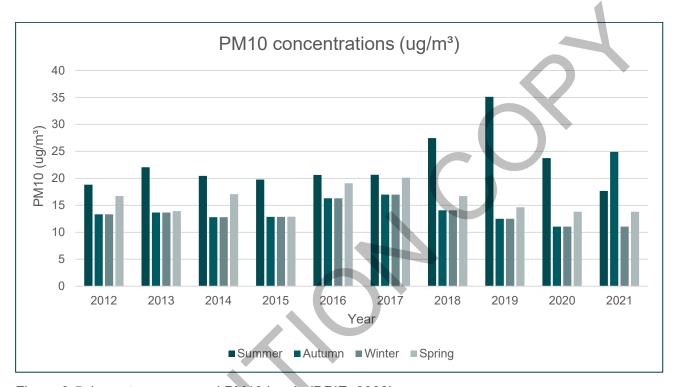


Figure 3-5 Long-term seasonal PM10 levels (DPIE, 2022)

As shown in Figure 3-6, PM2.5 emissions are on average generally higher in the Autumn and Winter months. This can be attributed to the burning of cereal crop residues, which often leads to elevated levels of particulates, predominantly comprising soot. An increase in fireplace usage over the Autumn and Winter months also contributes to particulate matter. The exception is in 2019 and 2020, when PM2.5 counts were highest during Summer. This was due to widespread bushfires occurring throughout NSW, which would have contributed to significant soot and particulate loads within the area.

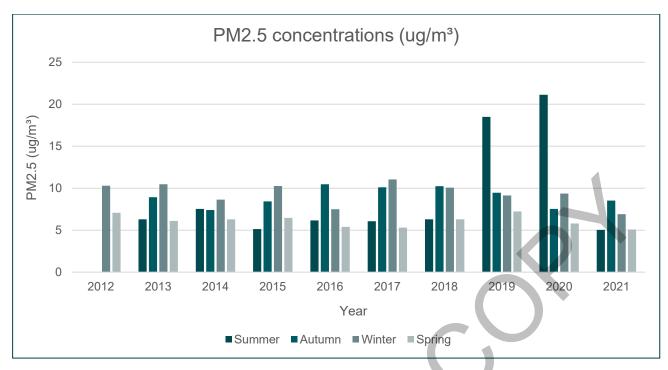


Figure 3-6 Long-term seasonal PM2.5 levels (DPIE, 2022)

#### 3.5.3 Potential impacts

The proposed development has the potential to contribute to dust impacts via the following activities:

- Heavy vehicles accessing / leaving the site
- Loading / unloading grain.

After reviewing the available long-term air quality data, it is considered unlikely that the proposed development would have a noticeable impact on air quality within the area. However, due to the proximity of the development to Barellan and the reduced air quality already experienced by sensitive receivers living in the area, a precautionary approach has been adopted. Mitigation measures have been provided in section 3.5.4 of this report.

The existing grain handling and storage facility is largely odour free. The proposed development is therefore unlikely to produce a significant change in odour. No further assessment was considered necessary.

# 3.5.4 Safeguards and mitigation measures

The Proposal would reduce potential dust impacts by:

- Use of a watercart during construction and operation. The watercart would be used as required, throughout the day. Additional triggers for increased use would include:
  - Visual cues (visible dust onsite)
  - Consecutive dry / hot days
  - o Roads that are experiencing high traffic loads.
- Internal access roads to / from the bunkers are to be sheeted with hard rock aggregate (20mm) to reduce the disturbance of fine particulates on trafficable surfaces
- Traffic will be controlled to flow in a clockwise direction around site with minimal braking or reversing of vehicles

Limiting vehicle speeds within the development site

Other dust mitigation measures that have been considered within the existing development include:

- The introduction of solvent-based polymers to water carts. These were found to provide limited benefit, especially in areas where trucks turn and disturb the trafficable surface
- Fixed water sprays were not installed, as they are not as effective as water carts during
  periods of high wind, which is common during the summer months. Fixed water sprays can
  often lead to the over-application of water, which leads to sediment and erosion control
  issues.

Providing that mitigation measures are followed, it is considered unlikely that the development would produce dust to an extent that would further impact on air quality conditions within Barellan.

# 3.6 Hazardous goods

Herbicides are kept and used on site. Only registered and approved products are used. No modifications to the current pest or weed management strategies are proposed as a part of this development. Fumigants are brought to site specifically for fumigation tasks by qualified pest control staff and any residues removed from site after the task. The bins are fumigated via a series of fans, injection system, valves and gas bottles (brought to sight as required). Gas used to fumigate the bins includes Profume and Methyl Bromide.

Specific Safe Work Method Statements, SAFE Work instructions and procedures are in place to reduce the potential for leaks, spills and emissions on site.

#### 3.7 Contamination

The subject land is not on the list of Contaminated Sites Notified to the NSW EPA.

Aerial imagery indicates that the land has been utilised for agricultural activities, which is a potentially contaminating land use according to the Managing Land Contamination Planning Guidelines (EPA, 1998). As such, consideration of the State Environmental Planning Policy (Resilience and Hazards) 2021, in relation to the Proposal, has been provided in section 4.1.7 of this SEE.

# 3.8 Heritage considerations

# 3.8.1 Post-European heritage

The subject land is not located in a conservation area and does not contain an Item of Environmental Heritage listed in Schedule 5 of the Narrandera Local Environmental Plan 2013. The closest heritage item is the Former Refreshment Rooms (I007), located approximately 800m southwest of the Subject land. No further assessment or reporting is considered necessary.

#### 3.8.2 Aboriginal cultural heritage

An extensive search on the Aboriginal Heritage Information Management System (AHIMS) data base indicated that no Aboriginal sites or objects are recorded within or adjacent to the subject land. The AHIMS search also indicated that there were no Aboriginal Places recorded within or adjacent to the subject land. Please note that a register search is not conclusive and the absence

of recorded sites within the subject land is not necessarily an indication that Aboriginal sites and objects are not present, as it requires that an area has been inspected and any sites are provided to the relevant body to add to the register.

# 3.9 Biodiversity considerations

#### 3.9.1 Database searches

Database searches were completed for records of Commonwealth and State listed threatened species, populations, and ecological communities. Searches were conducted on the 14 April 2022 and included the following:

- NSW Bionet Atlas records within 10km of the Subject land
- EPBC Act Protected Matters Search tool (PMST) records within 10km of the Subject land
- Biodiversity Values Map (DPE, 2022).

Relevant literature was reviewed, which included the Australian Government Department of Agriculture, Water and the Environment (DAWE) Threatened Species Profiles.

These searches have been provided in Appendix F of this report.

## **Summary of PMST searches**

Under the environmental assessment provisions of the EPBC Act, the following Matters of National Environmental Significance (MNES) are required to be considered to assist in determining whether the proposal should be referred to DAWE.

Table 3-5 Summary of PMST searches

MNES	Potential presence at Site	
World Heritage Properties	None	
National Heritage Places	None	
Wetland of International Importance	Banrock station wetland complex 500 – 600km upstream Hattah-kulyne lakes 300 - 400km upstream Riverland 500 - 600km upstream. The Coorong, and Lakes Alexandria and Albert Wetlands 600 - 700km upstream.	
Great Barrier Reef Marine Park	None	
Commonwealth Marine Area	None	
Listed Threatened EECs	Grey Box ( <i>Eucalyptus microcarpa</i> ) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia Poplar Box Grassy Woodland on Alluvial Plains Weeping Myall Woodlands White Box–Yellow Box–Blakely's Red Gum Grassy Woodland and Derived Native Grassland	
Listed Threatened Species	25	
Listed Migratory Species	10	

#### 3.9.2 Site visit

A field survey was conducted on 22 April 2022 by a suitably qualified consultant from NGH. Floristic surveys were completed to determine the vegetation communities present. The development site was surveyed using the 'random meander' method (Cropper, 1993). The survey included an assessment of the condition and composition of existing vegetation. Hollow-bearing trees (HBTs) and potential threatened species habitat were assessed and mapped. Based on existing vegetation mapping and the field survey, vegetation within the development site was assigned to a Plant Community Type (PCT) in accordance with the Vegetation Information System Classification Database (DPE, 2022).

#### 3.9.3 Existing environment

The subject land does not occur within an area mapped on the biodiversity values map (DPE, 2022) or an area of outstanding biodiversity value listed under the *Biodiversity Conservation Act* 2016 (BC Act).

Vegetation within Lot 2 DP1033278 was observed to be largely exotic (refer to Figure 3-7). Evidence of cropping activities was present (refer to Figure 3-8). Curly Windmill Grass (*Enteropogon ramosus*) was observed in the very southwest corner of the paddock (refer to Figure 3-9). This grass was observed to continue as a long, thin strip along the western fence line. Remnant vegetation, including Poplar Box (*Eucalyptus populnea*) and White Cypress Pine (*Callitris columellaris*) were observed occasionally as paddock trees throughout the development site (refer to Figure 3-10).

Native vegetation consistent with PCT 82: Western Grey Box – Poplar Box – White Cypress Pine tall woodland on red loams mainly of the Eastern Cobar Peneplain Bioregion, was observed within Lot 1 DP1033278. Remnant vegetation, including Poplar Box and White Cypress Pine were observed occasionally. One HBT was recorded (refer to Figure 3-7).

PCT 82 was observed to be in low condition. The mid-storey was largely absent, aside from two juvenile White Cypress Pines (refer to Figure 3-11). A mixture of native and non-native species was observed within the understorey. Curly Windmill Grass and Panicum Grass (*Panicum sp.*) were the dominant species observed. Other native species, such as Fuzzweed (*Vittadinia cuneata*), Spiny-fruit Saltbush (*Atriplex spinibractea*) and Jersey Cudweed (*Helichrysum luteoalbum*) were observed occasionally throughout the development site.

A full flora list is available in Appendix E.



Figure 3-7 Vegetation mapping within the development site



Figure 3-8 Evidence of cropping within Lot 2 DP1033278



Figure 3-9 Native vegetation observed within the southwest corner of Lot 2 DP1033278





Figure 3-10 Paddock trees observed within Lot 2 DP1033278





Figure 3-11 Native vegetation and juvenile White Cypress Pines observed within Lot 1 DP1033278

## 3.9.4 Potential biodiversity impacts

Approximately 14.97ha of non-native vegetation would be impacted by the proposed works. Native vegetation impacts have been detailed in Table 3-6.

Table 3-6 Vegetation impacts

Vegetation type	Impact (ha)
PCT 82 - Low condition	1.47
PCT 82 - Paddock trees	0.03
Total	1.50

Vegetation impacts would include:

- · Removal of approximately 3 paddock trees
- Disturbance to groundcover from the establishment of site compound and laydown areas and vehicle movement
- Excavation of groundcover and soils for the installation of bunkers and associated roads.

One HBT was observed within the development site. This HBT would not be impacted by the proposed works.

# Threatened ecological communities (TECs)

PCT 82 Western Grey Box – Poplar Box – White Cypress Pine tall woodland on red loams mainly of the eastern Cobar Peneplain Bioregion, forms part of the Federally (EPBC) listed Endangered Ecological Community (EEC) Poplar Box Grassy Woodland on Alluvial Plains.

The results of the site survey indicate that PCT 82 woodland observed within the development site does not qualify for consideration under the EPBC Act (DAWE, 2019). This was determined by the following considerations:

- The tree crown cover was < 10%
- The ground layer was not dominated by native species (< 20 native plant species per patch)
- There was minimal evidence of periodic recruitment.

## **Threatened species**

A search of the Bionet Atlas within 10km of the Subject land indicates that the following species have the potential to occur within the Subject land:

- Pine Donkey Orchid (Diuris tricolor) BC V
- Grey-crowned Babbler (Pomatostomus temporalis) BC V
- Major Mitchell's Cockatoo (Lophochroa leadbeateri) BC V
- Superb Parrot (Polytelis swainsonii) BC V, EPBC V.

## Pine Donkey Orchid (Diuris tricolor)

The Pine Donkey Orchid (*Diuris tricolor*) was not observed during the site survey.

Historic imagery (refer to Appendix K) indicates that the development site had been cleared prior to 1990. Given the highly disturbed nature of the development site, it is considered unlikely that the Pine Donkey Orchid (*Diuris tricolor*) would be impacted by the Proposal. No further assessment was considered necessary.

#### **Grey-crowned Babbler** (*Pomatostomus temporalis*)

The Grey-crowned Babbler (*Pomatostomus temporalis*) was not observed during the site survey.

This species lives in family groups that may consist of up to fifteen birds (OEH, 2001). Flight is laborious so birds prefer to hop to the top of a tree and glide down to the next one. Birds are generally unable to cross large open areas (OEH, 2001). The Proposal involves the removal of three isolated paddock trees, from within a cropped paddock. Given that the development site involves large open areas, with minimal shrub cover, it is considered unlikely that this species would occur within the development site or be impacted by the Proposal. No further assessment was considered necessary.

#### Major Mitchell's Cockatoo (Lophochroa leadbeateri)

The Major Mitchell's Cockatoo (Lophochroa leadbeateri) was not observed during the site survey.

This species inhabits a wide range of treed and treeless inland habitats, within easy reach of water (OEH, 2022). This species nests in hollows and feeds on the seeds of native / exotic melons, saltbushes, wattles and cypress pines (OEH, 2022). The Proposal involves the removal of three isolated paddock trees, from within a cropped paddock. No HBTs would be impacted by the proposed works. Given that the nearest water source, Mirrool Creek, is located approximately 5.5km south of the development site and that nesting habitat is not proposed to be impacted, it is considered unlikely that this species would be impacted by the Proposal. No further assessment was considered necessary.

#### Superb Parrot (Polytelis swainsonii)

The Superb Parrot (*Polytelis swainsonii*) was not observed during the site survey.

This species nests in small colonies, within the hollows of large trees (dead or alive) mainly in tall riparian River Red Gum Forest or woodland (OEH, 2017). The Proposal involves the removal of three isolated paddock trees, from within a cropped paddock. No HBTs would be impacted by the proposed works. Given that the nearest water source, Mirrool Creek, is located approximately 5.5km south of the development site and that nesting habitat is not proposed to be impacted, it is considered unlikely that this species would be impacted by the Proposal. No further assessment was considered necessary.

## **Koala Habitat assessment**

Part 3.2 of Chapter 3 of the State Environmental Planning Policy (Biodiversity and Conservation) 2021, determines development consent may be granted if the applicant provides to the Council evidence, prepared by a suitably qualified and experienced person, that the land subject to the development application:

- is not potential koala habitat; or,
- if it is potential koala habitat, it is not core koala habitat; or,

• if it is core koala habitat, a Koala Plan of Management (Koala PoM) must be either be in place or be prepared, and Council's determination of the DA cannot be inconsistent with the Koala PoM.

Under section 3.2 of Chapter of the Biodiversity and Conservation SEPP, the following definitions apply:"

- Potential koala habitat: means areas of native vegetation where trees of the types listed in Schedule 1 of the Biodiversity and Conservation SEPP 2021 constitute at least 15% of the total number of trees in the upper or lower strata of the tree component.
- Core koala habitat: means an area of land with a resident population of koalas, evidenced by attributes such as breeding females, being females with young, and recent sightings of and historical records of a population.

# Does the proposed development area contain trees listed under Schedule 1 of the Biodiversity and Conservation SEPP 2021?

Yes, the Subject land does contain Koala feed trees listed in Schedule 1 listed under Schedule 1 of the Biodiversity and Conservation SEPP. Two mature Poplar Box (*Eucalyptus populnea*) trees were observed throughout the development site.

#### Is the land potential Koala habitat?

The development site does contain Koala feed trees listed in Schedule 1 of the Biodiversity and Conservation SEPP. However, the development site was observed to be heavily cleared for the purposes of the GrainCorp development and cropping activities. Given the highly trafficked nature of the site, the presence of security fencing and the lack of connectivity between the trees, it is considered unlikely that the development site would be considered potential Koala habitat.

#### Is the land core Koala habitat?

There was no detection of Koala or evidence of their presence during site visit undertaken by an NGH consultant. No trees were found to have scratches and no Koalas were observed within any of the trees in the development site. No NSW Bionet Atlas records for the Koala occur within the locality.

NGH ecologists therefore do not consider the land to be potential or core Koala habitat, as defined under the Biodiversity and Conservation SEPP, and a Koala Management Plan is not required for this proposed development.

#### 3.9.5 Land Category Assessment

The proposal requires assessment against the Biodiversity Offset Scheme (BOS) thresholds under Part 7.4 of the BC Act. Clause 2 states that "in determining whether the proposed development exceed the BOS thresholds, any part of the proposed development that involves the clearing of native vegetation on Category 1-exempt land (within the meaning of Part 5A of the *Local Land Services Act* (LLS Act)) is to be disregarded"

The native regulatory land mapping under the LLS Act determining Category 1-Exempt land and Category 2- regulated land is not yet finalised. Only boundaries mapping Category 2 – sensitive regulated land (environmentally sensitive land), Category 2 – vulnerable regulated land (land prone to erosion) and excluded land (land excluded from Part 5A of the Local Land Services Act) are currently publicly visible on the native vegetation regulatory (NVR) Map viewer. During the transitional period, land categories are to be determined in accordance with the definitions in the LLS Act.

To meet the Category 1 -Exempt land definition, land must be:

- Located on land zoned as RU1 Land and
- Cleared of native vegetation as at 1 January 1990 (woody vegetation) or
- Lawfully cleared of native vegetation since 1 January 1990 and January 2014.

An assessment of the paddock to determine whether it meets the definition of Category 1 -Exempt Land was undertaken. The assessment concluded that:

- Lot 1 DP1033278 and Lot 2 DP1033278 occur on RU1 Land
- The development site is not mapped as Category 2 Regulated Land under NVR mapping (DPE, 2022) (Appendix F)
- Historic aerial imagery shows that Lot 2 DP1033278 had been continuously cropped and Lot 1 DP1033278 has been disturbed for the purposes of the GrainCorp development, since at least 1980 and up to 2018 (Appendix K)
- Lot 1 DP1033278 was cleared of native vegetation in 1990
- Lot 2 DP1033278 was cleared of native vegetation, apart from three paddock trees, which were present in 1990
- Land use mapping (DAWE, 2017) shows the development site mapped as 'cropping' and 'bulk grain storage' (refer to Figure 3-13).

Thus, it is considered that Lot 1 DP1033278 and the majority of Lot 2 DP1033278 can be classified as Category 1 - Exempt Land (Figure 3-12). Impacts to native vegetation on Category 1- Exempt Land are excluded under the area clearing calculations of the BOS area threshold assessment. Therefore, this native vegetation impacted in the development site is not required to be considered in the area clearing calculations.

Three remnant paddock trees in Lot 2 DP1033278 were present in 1990 and are considered to be Category 2 – regulated land. These paddock trees form an area of 0.03ha. Impacts to this native vegetation have been considered.



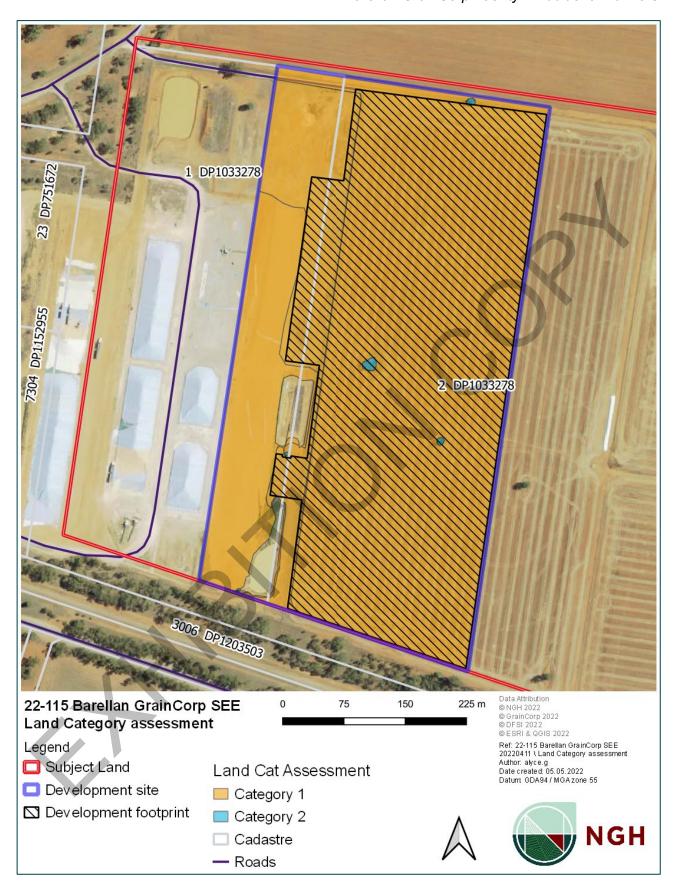


Figure 3-12 Land category assessment

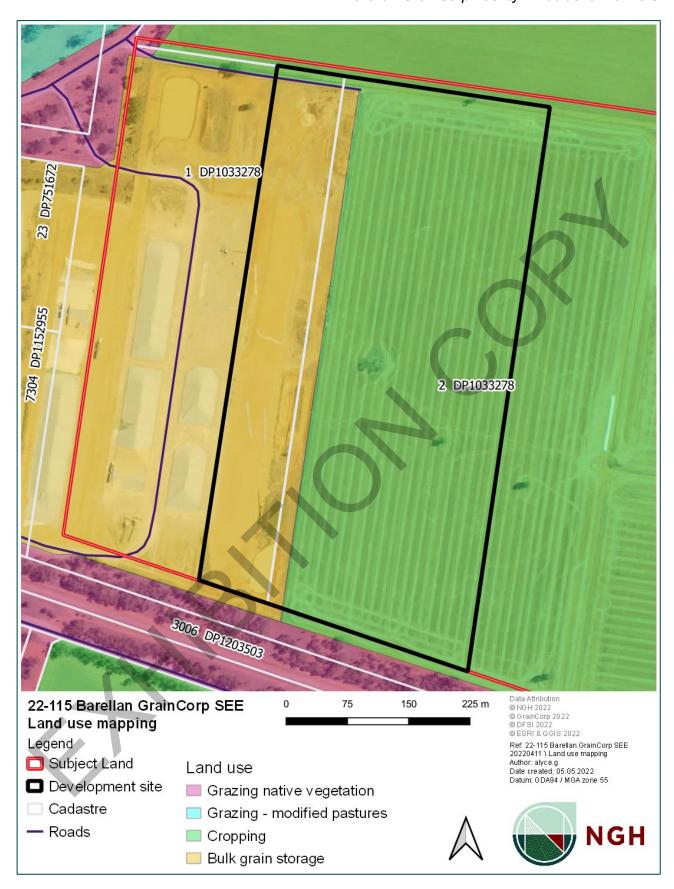


Figure 3-13 Land use mapping

## 3.9.6 Biodiversity Conservation Act thresholds

A summary of the potential impacts from the proposal against the Biodiversity Offset Scheme (BOS) thresholds is provided in Table 3-7 below.

Table 3-7 Impact assessment against BOS thresholds

Threshold		Application to the Proposal	Threshold Exceeded?
The development is likely to significantly affect threatened species, populations or ecological communities (clause 7.2(1)(a))		Threatened species are unlikely to be significantly affected.	No
associated with the property  40ha to less than 1000ha  1 ha or more		The minimum lot size for the land is 400ha according to the	No
		according to the Narrandera Local Environment Plan (LEP) 2013.  Approximately 1.5ha of native vegetation would be cleared by the works.  A Land Category assessment was completed in section 3.9.6 of this report. The results of the Land Category assessment indicate that Lot 1 DP1033278 and Lot 2 DP1033278 can be classified as Category 1 - Exempt Land. Impacts to native vegetation on Category 1- Exempt Land are excluded under the BOS area threshold assessment. 0.03 ha of Category 2 land (paddock trees) would be impacted. This is below the BOS threshold and therefore, the proposal does not trigger the area clearing	
The clearing of native veget action prescribed by clause identified on the Biodiversity	6.1, on land	The development site is not identified on the Biodiversity Values map (Appendix F).	No
The development is in an ar Biodiversity Value (clause 7	•	No areas of Outstanding Biodiversity Value occur within the development site.	No

#### 3.9.7 Matters of National Environmental Significance

No EPBC Act listed Wetlands of International Importance, Threatened Species or Migratory species were recorded during the site survey. No impacts to threatened species, protected under the EPBC Act are considered likely, given that:

- No HBTs would be impacted
- The development site has experienced prior disturbance
- Habitat was not considered suitable for threatened species occurring within the locality.

No EPBC referral was considered necessary.

#### 3.9.8 Safeguards and mitigation measures

The following mitigation measures would be implemented to protect biodiversity occurring within the development site:

- An unexpected finds procedure would be implemented in the event that a threatened flora
  or fauna species or ecological community that had not been identified is unexpectedly
  encountered during construction.
- A suitably qualified ecologist would be present during the removal of all paddock trees.



## 4. Statutory framework

## 4.1 State planning controls

#### 4.1.1 Environmental Planning and Assessment Act 1979

The EP&A Act and associated regulations and instruments set the framework for development assessment in NSW. The proposed development would be assessed under the provisions of Part 4 of the EP&A Act.

### 4.1.2 Environmental Planning and Assessment Regulation 2021

The proposed development has been considered against the provisions in Schedule 3 of the EP&A Regulation. The Proposal is not declared as Designated Development, given that the grain storage is a rural industry.

The proposal is not an agricultural produce processing facility as no processing would be undertaken. As such, the land use is not a development type listed in Schedule 3 of the EP&A Regulation and the proposal is not designated development.

#### Integrated development considerations

Application is being made for the proposed development in accordance with Part 4 of the NSW EP&A Act. In accordance with Section 4.46 of the EP&A Act, integrated development is development that in order for it to be carried out, requires development consent and one or more of the following approvals.

The proposed development is not considered Integrated Development as indicated in Table 4-1.

Table 4-1 Clause 4.46 What is "integrated development?" (EP&A Act)

Relevant Act and approval for integrated development	Approval required
Coal Mine Subsidence Compensation Act 2017 Approval to alter or erect improvements, or to subdivide land, within a mine subsidence district.	Not relevant to proposed development.
Fisheries Management Act 1994  Aquaculture permit.  Permit to carry out dredging or reclamation work.  Permit to cut, remove, damage or destroy marine vegetation on public water land or an aquaculture lease, or on the foreshore of any such land or lease.  Permit to—  (a) set a net, netting or other material, or  (b) construct or alter a dam, floodgate, causeway or weir, or  (c) otherwise create an obstruction, across or within a bay, inlet, river or creek, or across or around a flat.	
Heritage Act 1977 Approval in respect of the doing or carrying out of an act, matter or thing referred to in s 57(1).	Not relevant to proposed development.

Relevant Act and approval for integrated development	Approval required
Mining Act 1992 Grant of mining lease.	Not relevant to proposed development.
National Parks and Wildlife Act 1974 Grant of Aboriginal heritage impact permit.	Not relevant to proposed development.
Petroleum (Onshore) Act 1991 Grant of production lease.	Not relevant to proposed development.
Protection of the Environment Operations Act 1997 (POEO Act) Environment protection licence to authorise carrying out of scheduled development work at any premises.  Environment protection licence (EPL) to authorise carrying out of scheduled activities at any premises (excluding any activity described as a "waste activity" but including any activity described as a "waste facility").  Environment protection licences to control carrying out of non-scheduled activities for the purposes of regulating water pollution resulting from the activity.	General agricultural processing of more than 30,000 tonnes of agricultural produce per year triggers the requirement for an EPL under Schedule 1 of the POEO Act, where agricultural produce is defined as seeds, fruit, vegetables and other plant material, but excludes dairy produce and grapes.  The Barellan GrainCorp development involves the handling and storage of grain for distribution. As no processing occurs on site, the POEO Act is not relevant to the proposed development, and an EPL is not required.  It is considered that the grading of grain and management of pests associated with the storage does not constitute processing under the POEO Act, which is defined as:  • process includes crush, juice, grind, gin, mill, separate, wash, sort, coat, roll, press, steam, flake, comb, homogenise and pasteurise.
Roads Act 1993 Consent to—	Not relevant to proposed development.
<ul> <li>(a) erect a structure or carry out a work in, on or over a public road, or</li> <li>(b) dig up or disturb the surface of a public road, or</li> <li>(c) remove or interfere with a structure, work or tree on a public road, or</li> <li>(d) pump water into a public road from any land adjoining the road, or</li> <li>(e) connect a road (whether public or private) to a classified road.</li> </ul>	
Rural Fires Act 1997  Authorisation under section 100B in respect of bush fire safety of subdivision of land that could lawfully be used for residential or rural residential purposes or development of land for special fire protection purposes.	Not relevant to proposed development.
Water Management Act 2000 Water use approval, water management work approval or activity	Not relevant to proposed development.

Relevant Act and approval for integrated development	Approval required
approval under Part 3 of Chapter 3.	

#### 4.1.3 Biodiversity Conservation Act 2016

The subject land has been extensively modified through historical land clearing and agricultural activities. As discussed in section 3.9.6 of this report, Lot 1 DP1033278 and a large proportion of Lot 2 DP1033278 can be classified as Category 1 - Exempt Land. Impacts to native vegetation on Category 1- Exempt Land are excluded under the BOS area threshold assessment. Approximately 0.03ha of native vegetation, represented by three paddock trees, were observed within Lot 2 DP1033278. An assessment of the potential impacts of vegetation removal is provided in section 3.9.4 of this report.

As discussed in section 3.9.4, the following species have been recorded within 1.5km of the Subject land:

- Grey Crowned Babbler (*Pomatostomus temporalis*)
- Major Mitchell's Cockatoo (Lophochroa leadbeateri)
- Superb Parrot (Polytelis swainsonii)
- Pine Donkey Orchid (Diuris tricolor).

Due to prior clearing and a lack of suitable habitat, it is considered unlikely that threatened or vulnerable species would occur within the subject land. Therefore, there are no anticipated impacts on threatened flora and fauna as a result of the proposed development.

No further biodiversity assessments would be required to support the DA.

#### 4.1.4 State Environmental Planning Policy (Planning Systems) 2021

The aims of the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) are to identify and facilitate development or infrastructure of State or regional significance.

## **Regionally Significant Development**

Clause 20 of the Planning Systems SEPP provides that development is declared to be regionally significant development for the purposes of the EP&A Act if the development is specified in Schedule 6 of the Planning Systems SEPP.

Section 5 of Schedule 6 states that regionally significant development includes:

Development that has a capital investment value of more than \$5 million for any of the following purposes—

(a) air transport facilities, electricity generating works, port facilities, rail infrastructure facilities, road infrastructure facilities, sewerage systems, telecommunications facilities, waste or resource management facilities, water supply systems, or wharf or boating facilities

Rail infrastructure facilities include:

(j) rail freight terminals, sidings and freight intermodal facilities

As the Proposal does not have a capital investment of more than \$5 million dollars, it is not

considered to be regionally significant development and would not require determination by the NSW Planning Panel.

#### 4.1.5 State Environmental Planning Policy (Transport and Infrastructure) 2021

The State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP), contains provisions that facilitate the development and redevelopment of land for the purposes of infrastructure and service delivery.

# Section 2.117 Development on proposed classified road / Section 2.118 Development with frontage to classified road

The Subject land does not have frontage to a classified road or to land that is reserved for the purposes of a proposed classified road.

#### Section 2.121 Traffic-generating development

The proposed development involves the extension of an existing premises. According to Schedule 3 of the TISEPP, 'any other purpose' that generates 200 or more motor vehicles per hour with access to a road (generally) are considered to be traffic generating developments. According to section 2.121 of Part 2.3 of TISEPP:

A public authority, or a person acting on behalf of a public authority, must not carry out development to which this section applies that this Chapter provides may be carried out without consent unless the authority or person has —

- (a) given written notice of the intention to carry out the development to TfNSW in relation to the development, and
- (b) taken into consideration any response to the notice that is received from TfNSW within 21 days after the notice is given.

As 39 vehicles per hour would be generated by the Proposal during harvest periods, the Proposal is not considered to be a traffic generating development.

#### 4.1.6 State Environmental Planning Policy (Biodiversity and Conservation) 2021

The following chapters of the State Environmental Planning Policy (Biodiversity and Conservation) 2021 (Biodiversity and Conservation SEPP) are relevant to the proposed development:

#### **Chapter 3: Koala Habitat Protection 2020**

The Koala Habitat Protection 2020 encourages the conservation and management of natural vegetation that provides habitat for Koalas. Koala Habitat Protection 2020 applies to all RU1, RU2 and RU3 zoned land outside of the Sydney Metropolitan Area and the Central Coast.

The provisions of Chapter 3 of the Biodiversity and Conservation SEPP apply to the Proposal. An assessment of koala habitat is undertaken in section 3.9.4 of this report.

#### **Chapter 4: Koala Habitat Protection 2021**

The principles of the Koala Habitat Protection 2021 are to help reverse the decline of koala populations by ensuring koala habitat is properly considered during the development assessment process and to provide a process for councils to strategically manage koala habitat through the development of koala plans of management.

Chapter 4 does not apply to land zoned RU1 Primary Production (unless the zone is in a local government area marked with an \* in Schedule 2). As Narrandera Shire LGA does not meet this criteria, Chapter 4 of the Biodiversity and Conservation SEPP does not apply to the Proposal

#### 4.1.7 State Environmental Planning Policy (Resilience and Hazards) 2021

Chapter 4 of the State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) requires consideration of site contamination. The subject land is not on the list of Contaminated Sites Notified to the NSW EPA.

The Subject land is currently used for agricultural purposes. 'Agricultural activities' are listed as a potentially contaminating activity in Table 1 of the Managing Land Contamination Planning Guidelines (EPA, 1998). Historic aerial imagery indicates that the land has been used for cropping and grazing activities. The subject land has not been used for horticultural activities.

Low levels of agricultural residues would not be incompatible with the proposed use as a grain storage facility, given that grain protectants (e.g., sprays) are used to manage pests within the site.

## 4.2 Local planning controls

#### 4.2.1 Narrandera Local Environment Plan 2013

The Subject land is zoned RU1 Primary Production under the provisions of the Narrandera Local Environment Plan (LEP) 2013, as shown in Figure 4-1.

#### 4.2.2 Permissibility of the proposal

The proposed development would be for the land use purpose of additions to the existing rural industry, which is defined as:

rural industry means the handling, treating, production, processing, storage or packing of animal or plant agricultural products for commercial purposes, and includes any of the following—

(a) agricultural produce industries

agricultural produce industries means a building or place used for the handling, treating, processing or packing, for commercial purposes, of produce from agriculture (including dairy products, seeds, fruit, vegetables or other plant material), and includes wineries, flour mills, cotton seed oil plants, cotton gins, feed mills, cheese and butter factories, and juicing or canning plants, but does not include a livestock processing industry.

Note—Agricultural produce industries are a type of rural industry

The proposed additions are solely for the purpose of storage / handling of grain for commercial purposes prior to re-distribution.

Rural industry is land use listed as permissible with consent under the RU1 land use table, therefore, the Proposal is permitted with consent in the RU1 zone.

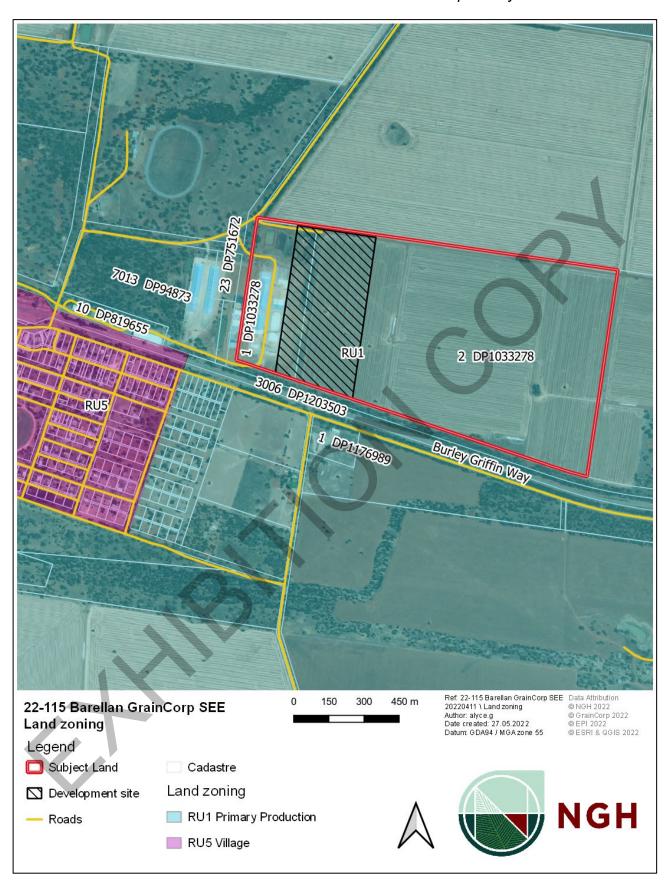


Figure 4-1 Land zoning

#### 4.2.3 Objectives of the zone

The proposed development complies with the objectives of the RU1 Primary Production zone, as discussed in Table 4-2 below.

Table 4-2 Narrandera LEP objectives

RU1 Primary Production zone objectives	Comment
To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.	The objective is satisfied, given that the Proposal would provide increased grain storage capacity for local producers, thus contributing to sustainable agricultural activities within rural industries.
To encourage diversity in primary industry enterprises and systems appropriate for the area.	The objective is satisfied, given that the Proposal would encourage diversity within local agricultural enterprises.
To minimise the fragmentation and alienation of resource lands.	The objective is satisfied, given that the Proposal represents an extension to an existing development. No fragmentation or alienation would occur as a result of the development.
To minimise conflict between land uses within this zone and land uses within adjoining zones.	The objective is satisfied given that the Proposal would encourage agricultural activity and growth, which is consistent with Primary Production land use objectives.

#### 4.2.4 Clause 5.10 – Heritage conservation

As indicated in section 3.8.2 of this report an extensive AHIMS search indicated that no Aboriginal sites or objects are recorded within or adjacent to the subject land. The AHIMS search also indicated that there were no Aboriginal Places recorded within or adjacent to the subject land.

Section 3.8.1 of this report indicated that the subject land is not located in a conservation area and does not contain an Item of Environmental Heritage listed in Schedule 5 of the LEP. No further assessment or reporting is considered necessary.

### 4.2.5 Clause 5.11 – Bushfire hazard reduction

The south-eastern fringe of the subject land is mapped as bushfire prone land (Figure 4-2); however, the development site is not mapped as bushfire prone land. The Proposal would involve the installation of earthen bunkers and haul roads within the development site. It is considered that the Proposal would reduce bushfire risk within the immediate vicinity.

GrainCorp has an Emergency Response Procedure in place, as part of their Environmental Management Plan (Appendix I).

## Barellan GrainCorp Facility – Additional Bunkers

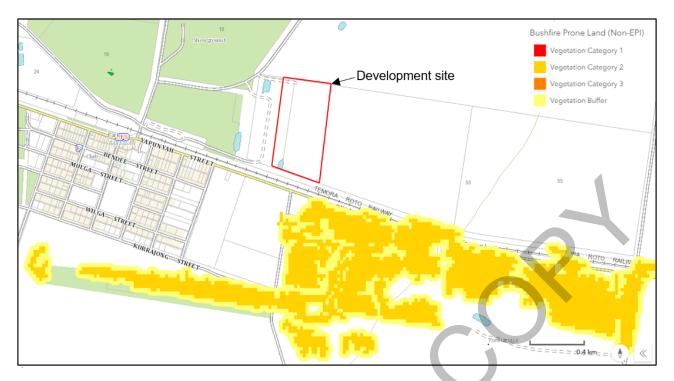


Figure 4-2 Bushfire prone land occurring within proximity to the development site (NSW Spatial Services, 2022)

#### 4.2.6 Clause 5.2.1 – Flood planning

The Proposal does not occur on land mapped as flood prone land.

#### 4.2.7 Clause 6.1 – Earthworks

The Proposal would involve minor earthworks, including:

- Bunkers and drains (up to 0.5m)
- Stormwater retention dams (up to 5m).

Given the modest size of the Proposal, it is considered unlikely that there would be a detrimental effect on drainage patterns or soil stability within the locality. Surface water would be directed into open V drains and into retention dams within the GrainCorp site. Sediment and erosion controls would be installed prior to works commencing and maintained in an effective condition until earthworks have been completed and construction areas rehabilitated.

The Proposal is not located in a potentially contaminated area (refer to section 3.7), would not impact on the amenity of adjoining properties (refer to section 3.1) and would not impact on the future use / redevelopment of the land. Given that the nearest waterway is located approximately 6km south of the development site, it is considered unlikely that the Proposal would have an adverse impact on a waterway or drinking water catchment. The Proposal would not impact on an environmentally sensitive area (refer to section 3.9).

An extensive search on the Aboriginal Heritage Information Management System (AHIMS) data base indicated that no Aboriginal sites or objects are recorded within or adjacent to the subject land. The AHIMS search also indicated that there were no Aboriginal Places recorded within or adjacent to the subject land.

#### 4.2.8 Clause 6.3 – Stormwater management

The Proposal involves the redirection of stormwater into open V drains and into retention dams. The fall of the pavements and new internal roadways has been designed to minimise the volume and speed of surface water flows, therefore eliminating the potential for severe wash off and erosion on site.

Water retained within the retention dams would be reused onsite for dust suppression.

#### 4.2.9 Clause 6.4 – Terrestrial biodiversity

A small area of mapped terrestrial biodiversity occurs within the south-eastern portion of the subject land. No areas of mapped terrestrial biodiversity occur within the development site, as indicated in Figure 4-3. The subject land, as well as immediate surrounding lands, have been extensively modified through historical land clearing associated with agricultural activities and the GrainCorp development. Therefore, the proposed development is not considered to be an action that would result in any notable adverse impacts on a native vegetation community, the habitat of a threatened species, or a wetland environment.

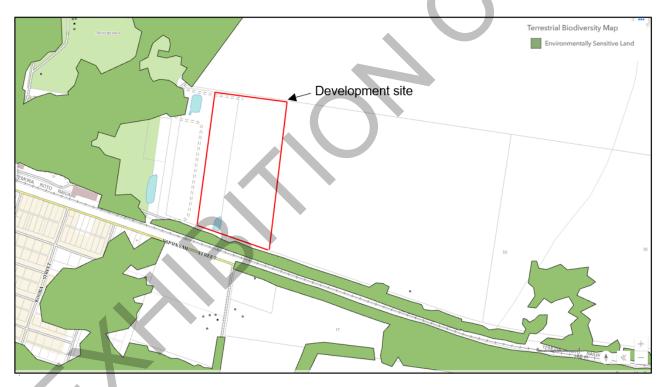


Figure 4-3 Terrestrial biodiversity occurring within proximity to the development site (NSW Spatial Services, 2022)

#### 4.2.10 Clause 6.5 – Groundwater vulnerability

The Proposal is not located within or nearby to land mapped as having groundwater vulnerability.

#### 4.2.11 Clause 6.6 - Riparian land and watercourses

The Proposal is not located within or nearby to land mapped as a riparian land or watercourse.

#### 4.2.12 Clause 6.7 - Wetlands

The Proposal does not occur within or nearby to land mapped as containing a wetland.

#### 4.2.13 Clause 6.13 - Essential services

As discussed in section 2.8 of this report, the existing GrainCorp development is serviced by essential infrastructure including water, electricity, drainage and communication networks.

Wastewater is produced by staff amenities. The sewage within the tanks is collected and disposed of by a licensed waste transporter at a licensed waste facility.

The Proposal does not require additional connections to utilities or services.

#### 4.2.14 Narrandera Shire Development Control Plan 2013

The Narrandera Shire Development Control Plan (DCP) 2013 contains provisions relevant to the proposed development.

The provisions, relevant to the Proposal are discussed in Table 4-3.



#### Table 4-3 Relevant DCP provisions

#### **Development Control Plan – Consideration of Relevant Clauses**

#### Controls that apply to all development

#### Section 3.1 Building design

- incorporate variations in facade treatments, roof lines and building development. materials:
- Low scale building elements such as display areas, offices, staff amenities are to be located at the front of premises and constructed in brick or finished concrete: and
- Roofing materials are to be non-reflective where roof pitch is greater than 17 degrees. Where a building is not visible from a public road Council may allow reflective roofing materials such, as zincalume, to be used.

The following building setbacks apply to new industrial development:

- Street setback must be a minimum of 5m from the front boundary;
- No requirement for setback for the secondary frontage of the building; and
- Side and rear setbacks are to meet BCA requirements.

Building elevations to the street frontage or where visible from a The control is satisfied given the proposed development would involve the installation public road, reserve, railway or adjacent residential areas are to of earthen bunkers and several haul roads. No buildings are proposed as part of the

#### Section 3.2 Utilities and Services

The applicant is to demonstrate the availability and feasibility of providing The control is satisfied given the proposal would connect to existing utilities with the water, sewer and stormwater services appropriate for the scale and GrainCorp development. nature of development. All applications must demonstrate adequate provision for storage and handling of solid wastes.

Council may require a Liquid Trade Waste Application where liquid wastes (excluding domestic waste from a hand wash basin, shower, bath or toilet) are to be discharged to Council's sewerage system.

of landscaping. Storage tanks shall be appropriately located and

Wash down bays and all other potentially contaminated liquid wastes, are also located within the existing GrainCorp development.

Stormwater runoff generated from the development site would flow north into open V drains and into retention dams (refer to site plans in Appendix A). Sediment and erosion controls would be installed prior to works commencing and maintained in an Onsite stormwater capture and reuse shall be provided for maintenance effective condition until earthworks have been completed and construction areas rehabilitated.

screened. NB - reuse facilities shall not form part of stormwater calculations.

Buildings and structures are to be located clear of utility infrastructure.

#### Section 3.3 Traffic and access

network to support the proposed industrial development.

The development will need to identify site access, loading/unloading facilities, safe on-site manoeuvring for the largest design vehicle, surfaces for access driveways, parking areas, loading/unloading facilities and associated vehicle manoeuvring areas relative to the design vehicle.

The following design outcomes apply to new industrial development:

- All vehicles must be able to enter and exit the site in forward direction:
- Customer parking to be provided convenient to the public entrance;
- Adequate space and facilities for loading and unloading are required to be provided wholly within the site:
- Loading bay(s) must be sited to avoid use for other purposes such as customer parking or materials storage;
- Loading bay(s) must be line marked and signposted; and
- The number of access points from a site to any one street frontage is limited to 1 ingress and 1 egress only.

The development will need to demonstrate the adequacy of the local road The control is satisfied given that the proposed development would utilise the same access and egress points as the existing GrainCorp development. This access and egress arrangement enables vehicles to enter and leave the site in a forward direction.

> There is adequate space for the loading and unloading of goods on-site. A marshalling area on the site provides room for trucks to queue while waiting to be sampled. Loading / unloading bays are sited to avoid conflict and away from employee parking facilities.

> The existing GrainCorp development provides 20 off-street parking places (within Lot 10 DP819655) to meet the anticipated number of employees attending the site. The parking area has been located adjacent to the site office for safe and convenient access for employees.

#### Section 3.4 Outdoor Lighting

Outdoor Lighting.

All outdoor lighting is to comply with AS4282 Control of Obtrusive Effects of Portable light towers would be utilised during harvest, as required. Portable light towers would be utilised during harvest, as required. faced downwards, to eliminate light pollution. This lighting would comply with AS4282.

#### Section 3.5 Noise

industrial development:

- minimise noise impacts on residences where proposed within 400m of a residential zone:
- External plant (generators, air conditioning plant etc.) shall be enclosed to minimise noise nuisance where adjoining residential area: and
- All plant and machinery will be installed to eliminate transmission of vibration to adjoining properties.

The following are specific controls to reduce potential noise impacts from The control is satisfied given the proposal would incorporate mitigation measures to reduce the nuisance of noise.

Windows, doors and other wall openings shall be arranged to The Proposal would limit vehicular movements and speeds and restrict vehicle movements to the minimum necessary to undertake the works. Employees would reduce throttle settings and turn off equipment when not being used.

Adverse impacts resulting from the development are not anticipated.

#### Section 3.6 Storage of material/goods/rubbish

All materials, goods, rubbish, etc., shall be stored within the curtilage of the The control is satisfied given waste would be appropriately screened. building at all times; or suitable screen fences shall be erected around the property.

Waste material shall be stored in appropriate receptacles, and removed on with the NSW DPE Waste Classification Guidelines. a regular basis to Council's satisfaction, so as to not provide a harbour for vermin.

Waste would be stored in appropriate receptacles until collected by an appropriate licensed contractor. Materials to be disposed off-site would be classified in accordance

#### Section 3.7 Consolidation of land

Property Information.

Consolidation is to be completed prior to occupation of the development.

Industrial development over two or more lots will require the consolidation of Consolidation is not proposed as a part of this DA. A separate DA for subdivision is those lots into a single title with the Registrar General of NSW Land and proposed. Consolidation of land would be considered as a part of this future application.

#### Engineering Standards - Commercial and Industrial Development

#### Roads and Access

the vehicles anticipated to use the site.

All internal driveways are to be suitably drained.

All internal driveways will be sealed and constructed to a width suitable for The Proposal would involve an extension of unsealed haul roads within the site. A variation to the engineering standard of this control is requested, allowing for the extension of the existing gravel roads within the development site.

All vehicles are to be able to enter and leave the site in a forward direction. Internal driveway a width of 6 metres is to be provided for two way traffic and 4.5 metres for one way traffic.

Consideration is to be given to pedestrian movement in and around the development.

All car parking located within Council's road reserve will be sealed.

All car parking spaces shall be line-marked using 100 mm wide lines, with a minimum width of three (3) metres.

Disabled parking shall be provided in accordance with AS 1428.1 and will be suitably marked. Signs indicating the location of car parking are to be erected.

The dimensions of off-street car parking spaces will comply with the design standards contained within the NSW Roads and Traffic Authority's Guide to Traffic Generating Developments.

The departure from this engineering standard, using an appropriate alternative option, is considered justifiable, safe and would have manageable impacts because:

- The roads would be covered in a 20mm rock aggregate, this is consistent with the existing approved roads within the site.
- The site management has considered the most effective measures to avoid and minimise impacts of having rock aggregate finish on the roads this includes:
  - Use of a watercart during construction and operation to control, avoid and minimise dust impacts. The watercart would be used as required, throughout the day. Additional triggers for increased use would include:
    - Visual cues (visible dust onsite)
    - Consecutive dry / hot days
    - Roads that are experiencing high traffic loads.
  - Internal access roads to / from the bunkers are to be sheeted with hard rock aggregate (20mm) to reduce the disturbance of fine particulates on trafficable surfaces.
  - Traffic will be controlled to flow in a clockwise direction around site with minimal braking or reversing of vehicles.
  - o Limiting vehicle speeds within the development site.
- The finish is appropriate for all vehicles that would access the site.
- All roads would be built to a width suitable for the vehicles using the site (refer to section 2.2 of this report).
- Given that processing at the existing weighbridge and sample stands are currently at capacity, it is considered unlikely that the Proposal would result in an increase in truck movements within the development site at any one time, meaning there would be no resulting increase in impact at any one time within the site.
- All vehicles would be able to enter and leave the site in a forward direction.

Based on the above, the continued use of a 20mm rock aggregate on internal roads is considered reasonable and justified for the Proposal.

Staff car parking is available within the existing GrainCorp development. No additional parking facilities are required as part of the Proposal.

#### Sewerage

produces potentially contaminated liquid, to be discharged to Council's the site. sewer is to enter into a Trade Waste Discharge Agreement with Council.

contaminated liquid wastes, will be connected to Council's sewer main via a corrugated plate interceptor or similar depending on Trade Waste been completed and construction areas rehabilitated. Agreement conditions.

The development will be located and designed to ensure connection to The control is satisfied given the proposal would connect to existing utilities with the Council's sewer mains, where available. The operator of a business that GrainCorp site. Contractors are currently employed to remove sewerage waste from

Surface water would be directed into open V drains and into retention dams (refer to All sumps wash down bays, floor wastes, and all other potentially site plans in Appendix A). Sediment and erosion controls would be installed prior to works commencing and maintained in an effective condition until earthworks have

#### **Erosion and Sediment Control**

- grading to areas of construction only;
- Minimise the length and steepness of slopes;
- Limit the time unprotected areas are exposed to rain and wind intercept, divert and dispose of clean runoff onto all disturbed areas:
- Consider installing permanent stormwater drainage on land as part of the first stage of building or development:
- Reduce runoff velocities by minimising length of flow paths, constructing channels with gentle gradients and providing rough linings to steeper channels:
- Use temporary vegetation or mulch to disturbed area including soil stockpiles progressively stabilise all disturbed areas with permanent vegetation:
- Trap sediment as close to the source as possible:
- Locate sediment traps or filters below all disturbed areas;
- Locate sediment filters above environmentally sensitive areas such as creeks, streams, lakes and steep slopes:
- Subdivide drainage catchments into smaller units appropriate to the type of sediment control use sediment traps or basins as the most effective control of concentrated runoff flows:

Consider clearing and grading with the building layout design – limit This control is satisfied given that the bunkers would incorporate water management controls designed to direct any stockpile water runoff to retention dams.

Crushed aggregates would be applied to assist in sediment control.

Wash down bays and all other potentially contaminated liquid wastes are located within the existing GrainCorp development.

Surface water would be directed into open V drains and into retention dams (refer to site plans in Appendix A).

- Use sediment filters as the most appropriate means of controlling sheet runoff flows:
- Identify existing vegetation which has the potential to filter sediment laden sheet runoff flows:
- Locate multiple sediment basins or major sediment traps so that they drain in parallel, not in series, to reduce the risk of total failure.

#### Signage

- Signage must comply with State Environmental Planning Policy 64 Advertising and Signage Schedule 1 Assessment Criteria;
- Advertising in rural areas may only advertise a facility, activity or service located on the land, or direct travelling public to a tourist facility or building or place of scientific, historical or scenic interest, within the area; and
- External illumination to signs must be top mounted and directed downwards and toward the sign.

Additional internal traffic signage would be installed as part of the Proposal. No external signage is proposed.

#### 4.3 Other relevant section 4.15 matters for consideration

The EP&A Act and associated regulations and instruments set the framework for development assessment in NSW. The proposed development would be assessed under the provisions of Part 4 of the EP&A Act.

In accordance with Section 1.7 of the EP&A Act, the provisions of Part 7 of the BC Act have been considered, refer to section 4.1.3 of this SEE for discussion.

The provisions of Section 4.10 of the EP&A Act have been considered. The proposed development is not considered to be designated development, refer to section 4.1.2 of this SEE for discussion.

The provisions of Section 4.15 of the EP&A Act have been considered. The proposed development is not state or regionally significant development. This SEE has considered the provisions of the Narrandera LEP and DCP (refer to discussion in sections 4.2.1 and 4.2.14 of this SEE).

Section 4.15 of the EP&A Act also states that in determining a Development Application, a consent authority is to take into consideration other relevant matters. These matters are listed in Table 4-4 below.

Table 4-4 Relevant Section 4.15 matters

Other relevant Section 4.15 matters for consideration			
any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority:	There are no known proposed instruments that are considered imminent and that are applicable to the Proposal.		
any planning agreement:	There are no known planning agreements applicable to the development Proposal.		
the suitability of the site for the development:	This report has found that the site is suitable for the development as follows:		
	The Proposal is consistent with the desired character established through the zone objectives for the land		
	The site is of a size needed for the use		
	Reasonable separation is provided from sensitive receivers		
	Environmental impacts are minimised and managed through the recommended mitigation measures		
	The Proposal provides social and economic benefits for the surrounding region		
any submissions:	Council (as the determining authority) would undertake appropriate public notification and would consider any submissions made.		
the public interest:	The Proposal has been found to comply with the relevant legislated planning policies and guidelines endorsed by Council for the community. As such, approval of the Proposal is considered in the public interest.		

## 5. Environmental assessment

Table 5-1 Statement of Environmental Effects

Primary Matters	Likely impact	Comment	Safeguards and Mitigation Measures
Context and Setting	Positive	There is likely to be a positive community impact through the opportunities created, economically and for employment. The Proposal is consistent with the aims of the LEP, and environmental impacts have been managed and / or minimised throughout the design process.  The Proposal is considered suitable based on the physical characteristics of the land. The Proposal would not conflict with the typical desired outcomes for land zoned RU1 Primary Production. The Proposal would encourage agricultural activity and growth, which is consistent with Primary Production land use objectives.	No mitigation measures are proposed.
Visual amenity	Negligible	The proposed site is large enough to accommodate the Proposal.  The development would be located immediately east of the existing GrainCorp development. The site is surrounded by agricultural land and would be adequately buffered from sensitive receivers in the surrounding area.  Portable lighting would be utilized during harvest. Lighting would comply with the relevant Australian Standards for the control of obtrusive effects of outdoor lighting, AS4282.	Lighting would comply with the relevant Australian Standards for the control of obtrusive effects of outdoor lighting, AS4282.
Transport and vehicular movements	Negligible	No additional access points are proposed as part of this Proposal. Traffic flow into and out of the development would not change. The Proposal is adequately supported by existing major thoroughfares, such as the Burley Griffin Way.  The proposed development site is of an adequate size and width to facilitate loading/unloading, access and turning movements and ensure the continued safety and efficiency of the existing road network.	No mitigation measures are proposed.

Primary Matters	Likely impact	Comment	Safeguards and Mitigation Measures
Infrastructure	Negligible	The control is satisfied given the proposal would connect to existing utilities with the GrainCorp development.	No mitigation measures are proposed.
Heritage	Negligible	The subject land is not located in a conservation area and does not contain an Item of Environmental Heritage listed in Schedule 5 of the Narrandera Local Environmental Plan 2013.	No mitigation measures are proposed.
	Moderate	An extensive search on the Aboriginal Heritage Information Management System (AHIMS) data base indicated that no Aboriginal sites or objects are recorded within or adjacent to the subject land. The AHIMS search also indicated that there were no Aboriginal Places recorded within or adjacent to the subject land.	
Construction	Negligible	Construction work would be managed with minimal nuisance to the surrounding road network and undertaken only within approved construction hours.	Refer to impact specific measures for noise, water management etc.
Land Resources	Negligible	The Proposal would utilise approximately 22.68ha of land. This includes approximately 5.4ha of land currently owned by GrainCorp, which is not utilized for other purposes. The redevelopment of approximately 17.28ha of cropping land would support agricultural activities and growth within the Narrandera Shire LGA.	No mitigation measures are proposed.
Soil and Water	Negligible	Minor earthworks are anticipated during construction of the development. Soil and erosion controls would be implemented during the construction phase to avoid any adverse impacts.	Maintain vegetative cover where possible and implement soil and erosion control measures during the construction phase.
Air Quality	Low	It is considered unlikely that the proposed development would have a noticeable impact on air quality within the area. However, due to the proximity of the development to Barellan and the reduced air quality already experienced by sensitive receivers living in the area, a	The Proposal would reduce potential dust impacts by:  • Use of a watercart during construction

Primary Matters	Likely impact	Comment	Safeguards and Mitigation Measures
		precautionary approach has been adopted.	and operation. The watercart would be used regularly throughout the day. Additional triggers for increased use would include:  Visual cues (visible dust onsite)  Consecutive dry / hot days Roads that are experiencing high traffic loads  Internal access roads to/from the bunkers are to be sheeted with hard rock aggregate (20mm) to reduce the disturbance of fine particulates on trafficable surfaces  Traffic will be controlled to flow in a clockwise direction around site with minimal braking or reversing of vehicles  Limiting vehicle speeds within the development site
Noise and vibration	Low	Receivers located more than 420m from the Proposal would experience no exceedance of the daytime NML. Receivers (R1) located within 250m of the subject land would experience minor exceedance of up to 7dBA above the daytime NML. Noise exceedances are considered to be minor and would be no greater than that experienced during current operations. Given that no sensitive receivers are located within 400m of the Proposal and that the proposed extension would be located further away from Barellan, it is unlikely that neighbouring properties would be impacted by noise during construction or operation of the development.	The proposed development is not expected to generate excessive noise; however, the following mitigation measures would be employed to further minimise noise generation:  • Traffic will be controlled to minimise braking and reversing of vehicles
		The expected number of trains visiting the GrainCorp site is likely to increase over a 12-month period, as a result of the development;	Reversing and warning buzzers will be replaced with ones that are more

Primary Matters	Likely impact	Comment	Safeguards and Mitigation Measures
		however, the number of trains would not exceed one per day. As such, no further assessment is considered necessary.  Vibration impacts dissipate with distance. Given the distance of 420m to the closest residential receiver (measured from the westernmost edge of the development site), vibration impacts are not expected as a result of the proposed development.	auditorily pleasing     Complaints will be managed promptly via the existing Complaints     Management System (Appendix G)
Biodiversity	Negligible	Vegetation clearing has occurred as a result of historical agricultural activities and during the development of the GrainCorp facility. No impacts to threatened species are anticipated as a result of the Proposal.  Lot 1 DP1033278 and a large proportion of Lot 2 DP1033278 can be classified as Category 1 - Exempt Land. Impacts to native vegetation on Category 1- Exempt Land are excluded under the BOS area threshold assessment. Approximately 0.03ha of native vegetation, represented by three paddock trees, were observed within Lot 2 DP1033278. An assessment of the potential impacts of vegetation removal is provided in section 3.9.4 of this report. The proposal does not trigger the BOS thresholds and no further assessment was considered necessary.	<ul> <li>An unexpected finds procedure would be implemented in the event that a threatened flora or fauna species or ecological community that had not been identified is unexpectedly encountered during construction.</li> <li>A suitably qualified ecologist would be present during the removal of all paddock trees.</li> </ul>
Waste	Negligible	Waste would be stored in appropriate receptacles until collected by an appropriate licensed contractor. Materials to be disposed off-site would be classified in accordance with the NSW DPE Waste Classification Guidelines.	No mitigation measures are proposed.
Land Hazards	Negligible	The subject land is not flood or bushfire prone. The Proposal would not increase bushfire or land hazard risk to the site.	No mitigation measures are proposed.
Contaminated Land	Negligible	The subject land is not on the list of Contaminated Sites notified to the NSW EPA. The subject land was historically used for agricultural purposes and any minor residual contamination would not be incompatible with the proposed use of the land.	No mitigation measures are proposed.

Primary Matters	Likely impact	Comment	Safeguards and Mitigation Measures
Social and Economic Impacts	Positive	The public interest is supported by the proposed development, which would provide social and economic benefits through the provision of agricultural growth and employment opportunities.	Not applicable.
Cumulative Impacts	Negligible	The proposed development would have no identifiable adverse impacts on the surrounding area. No cumulative impacts are expected from the proposed development.	No mitigation measures are proposed.

## 6. Conclusion

This Statement of Environmental Effects (SEE) has been prepared to support a Development Application seeking Councils consideration of additional grain storage facilities at 10 Sandy Creek Road, Barellan.

The proposed development would support the objectives of the RU1 Primary Production zone, by providing increased grain storage capacity for local producers, thus contributing to sustainable agricultural activities within rural industries. The proposed development would stimulate employment opportunities and contribute to economic growth within the region and support agricultural enterprises within the locality. It is considered that the development site has the appropriate vehicular access and sufficient area for loading, parking, storage and stormwater management.

The proposed development includes the construction of 8 bunkers for the purpose of storing grain. The Subject land is largely free of complex environmental constraints. This report introduces controls to manage and mitigate potential impacts on the local environment and it is considered that the proposed development would avoid adverse outcomes.

The public interest is supported by the proposed development, given that it would contribute to the development of the Narrandera Shire, thereby ensuring the future of the region.

The SEE demonstrates that that the proposed development would comply with the relevant provisions of the *Environmental Planning and Assessment Act 1979*, the Narrandera LEP and DCP.



## 7. References

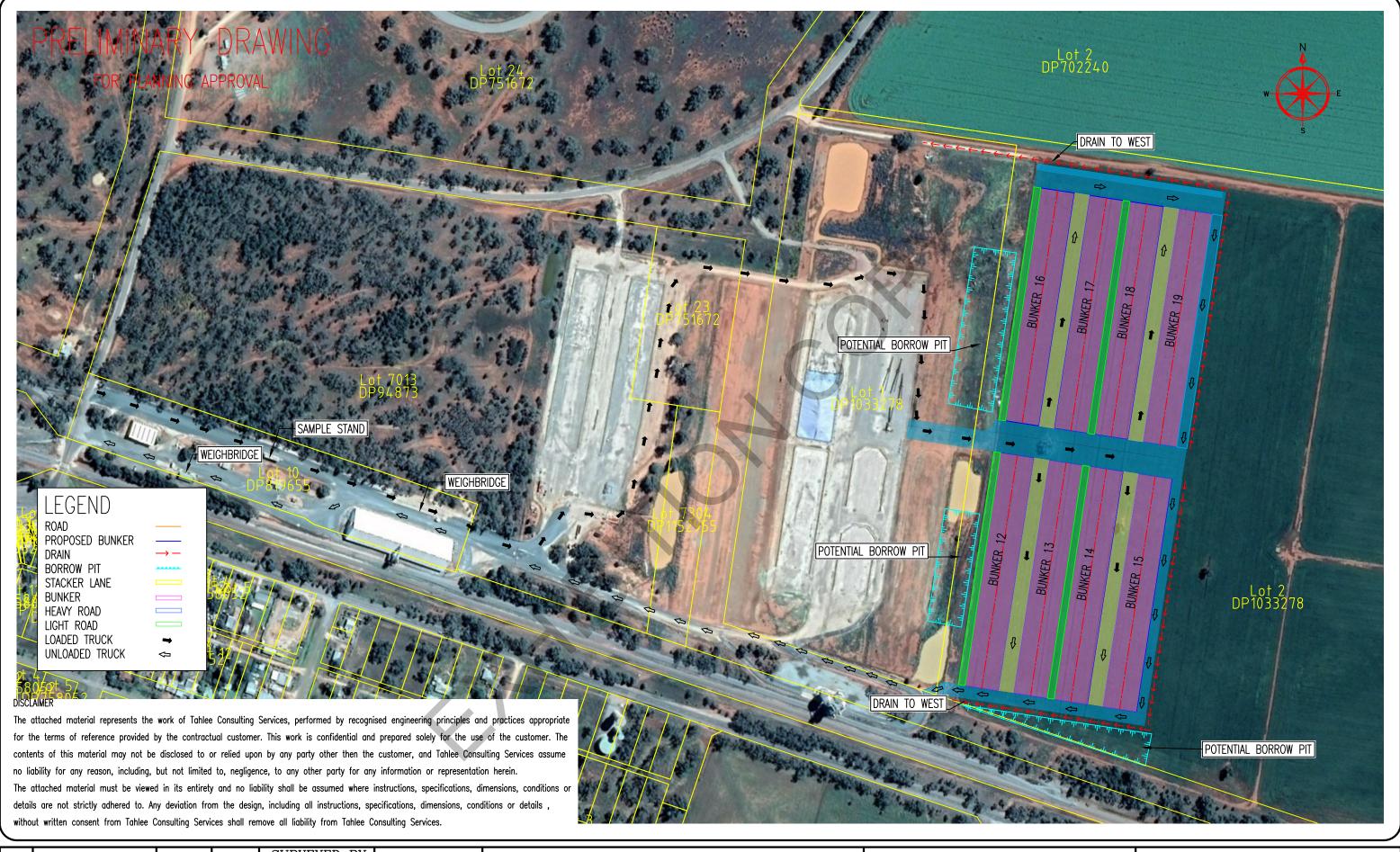
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## Appendix A Development design and layout





В	TRAFFIC FLOW UPDATED	29/10/21	BJR
Α	ORIGINAL ISSUE	29/10/21	NN
No.	REVISION	DATE	BY

SURVEYED BY: LiDAR DATUM: GDA 94 AHD

NN

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DRAWN CHECKED APPROVED

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ABN 23 829 235 819 CONSULTING ENGINEERS 19A ABBOTT St GUNNEDAH NSW 2380 Tel: 02 6742 5275

PROJECT GRAINCORP BARELLAN

SCALE 1:4,000 (A3 SHEET) TITLE BARELLAN SITE DEVELOPMENT APPROVAL **LAYOUT** SHEET 1 OF 1

DRAWING NO.

AMDT. 0646 2

# Appendix B Existing development application



Narrandera Shire Council	Notice of Determination of a Development Application Issued under the Environmental Planning and Assessment Act 1979 Section 81 (1) (a)
Development Application No:	030/2016/2017
Applicant Details	Ben Sullivan GrainCorp Limited 1 Wentworth Street WAGGA WAGGA NSW 2650
Land to be developed	Pt Lot 3006 DP1203503; Lot 1 DP1033278; Pt Crown Land 10 Sandy Creek Road, BARELLAN
Proposed development	Grain Loading Facility
Building Code of Australia Building Classification	10b
Determination	Consent Granted Subject to Conditions described below
Date of determination	15 August 2017
Consent to operate from:	15 August 2017
Consent to lapse on (five years from date of consent)	15 August 2022
Conditions of Consent (including section 94 conditions)	See Schedule 1
	List Local Government Act 1993 approvals granted under S 78A (5) – N/A
Other approvals	General terms of other approvals integrated as part of the consent – N/A
	List approvals – N/A
Right of Review and Appeal	If you are dissatisfied with this determination you may request the Council to conduct a review of the determination (Section 82A of the Act), within the time limited for the making of an appeal under section 97.
	If you are dissatisfied with this decision section 97 of the <i>Environmental Planning &amp; Assessment Act 1979</i> gives you the right of appeal to the Land and Environment Court within 6 months after the date on which you receive this notice.
	*Section 97 of the <i>Environmental Planning &amp; Assessment Act 1979</i> does not apply to the Determination of a Development Application for State significant development or local designated development that has been the subject of a Commission of Inquiry

Page 1 of 9 DA/030/2016/2017

Date of Certificate	23 August 2017
Signature:	Juliah Geddes Deputy General Manager Infrastructure

#### Notes:

- 1. Where the consent is subject to a condition that the consent is not to operate until the applicant satisfies a particular condition the date of operation will not be endorsed until that condition has been satisfied.
- 2. Clause 101 of the Regulation contains additional particulars to be included in a notice of determination where a condition under Section 94 and 94A of the Environmental Planning & Assessment Act 1979 has been imposed.

"AN IMPORTANT MESSAGE ABOUT PRIVACY - All information, including personal information, collected by Narrandera Shire Council is protected by the Privacy & Personal Information Protection Act, 1998. The collection of such information by Council shall be used for Council purposes only and will assist Council to carry out its statutory obligations in accordance with the Local Government Act, 1993 and other associated legislation. Such information may be passed on to those third parties authorised by law to receive it."

DA/030/2016/2017

# SCHEDULE 1 CONDITIONS OF CONSENT – DA/030/2016/2017

Cond #	Details					Met
ADMII	VISTRATIVI	E OR GENERAL CONDITIONS				
		general background controls and minor adminically identified and specified.	istrative matters or pi	rocedures t	hat ensure th	е
1.	Approved Plans and Documentation  The development must be carried out in accordance with the approved plans and specifications as follows:					
	Ref No	Drawing/Document Title	Prepared/Drawn By	Version	Date	
	17121	Statement of Environmental Effects – Proposed Grain Loading Facility, Barellan	ngh Environmental	Final	18/05/17	
	16-019	Proposed Rail Loading Civil Works — Plans:  16-019-c01 — Locality Plan  16-019-c02 — Construction Notes  16-019-c03 — General Arrangements  16-019-c04 — Plan View & Sections  16-019-c05 — Access Road Sections  16-019-c06 — Access Road Sections	JME Civil Pty Ltd	Rev A April 2017	18/04/17	
	-	Project Regeneration  Barellan – Proposed Rail Loading Concept  Site Arrangement Elevations  Ref: 20160901-BAR-DWG-003	GrainCorp Operations Limited	В	2/12/16	
	-	Project Regeneration  Barellan – Proposed Rail Loading Concept  Site Arrangement Elevations  Ref: 20160901-BAR-DWG-005  (ISOMETRIC VIEWS)	GrainCorp Operations Limited	В	2/12/16	
	i e	To ensure the development is carried out in accorda )(e) of the Environmental Planning and Assessment A		plans. Section	on 79C(1)(c)	
2.	Code.	General  ng work must be carried out in accordance with  Statutory requirement of Clause 145 of the Environm	·			
3.	locality b	lopment is to be conducted in a manner that wi y reason of the emission of noise, vibration, smo te water, waste products, grit, oil, by causing in	el <mark>l,</mark> fumes, smoke, var	oour, stean	n, soot, ash,	
	1	vise. So that the development does not reduce the amenia ental Planning and Assessment Act 1979, as amended	•	79C(1)( <b>b</b> ) of	the	
4.	Contaminated and Hazardous Materials					
	during co	ny contaminated, scheduled, hazardous or asbeinstruction works, the Applicant and Contractor (ep OEH-Environment Protection Authority, W	shall ensure the appr	ropriate Re	gulatory	9

notified, and that such material is contained, encapsulated, sealed, handled or otherwise disposed of to the requirements of such Authority. (Note: Such materials cannot be disposed of to landfill unless the particular facilities are licensed to receive that type and class of waste). REASON: Ensure statutory requirements are observed and the contamination of the environment is prevented. 5. Stormwater and Water Supply General All stormwater drainage and water plumbing work shall be carried out by a licensed plumber and drainer. REASON: Statutory requirement of Section 634 Local Government Act 1993. 6. Solid Waste All solid waste from construction and operation of the proposed development shall be assessed, classified and disposed of in accordance with the EPA - Waste Classification Guidelines, Whilst recycling and reuse are preferable to landfill disposal, all disposal options (including recycling and reuse) must be undertaken with lawful authority as required under the Protection of the Environment Operations Act. **REASON:** Council requirement to require compliance with the POEO Act. 7. Excavation General If an excavation associated with the erection of the building extends below the surface level of an adjoining allotment of land and/or the base of the footings of a building on the site or on an adjoining allotment of land, the person causing the excavation to be made: a. must preserve and protect the adjoining building and land from damage; and b. if necessary, must underpin and support the building and land in an approve manner. For the purposes of this condition, allotment of land includes a public road and any other public place. The requirements of this condition does not apply if the person having the benefit of the development consent owns the adjoining land or the owner of the adjoining land has given consent in writing to that condition not applying. REASON: To ensure compliance with the Environmental Planning and Assessment Act, 1979. This is a prescribed condition. 8. **Excavation and Backfilling** All excavations and backfilling associated with the proposed development must be executed safely and in accordance with appropriate professional standards. **REASON:** To ensure safe working practice and to comply with the prescribed conditions as set out under the Environmental Planning and Assessment Act, 1979. 9. **Ground Disturbance** Any proposed ground disturbance activities must be confined to the areas assessed and should the impacted area change or increase, then further assessment will be required in relation to native flora and fauna, and cultural heritage matters. REASON: OEH requirement under the National Parks and Wildlife Act 1974 and Threatened Species

Conservation Act 1995.

# 10. Hollow Bearing Trees - Protocol

The hollow-bearing tree removal protocol outlined in the Statement of Environmental Effects is to be followed.

REASON: OEH requirement under the Threatened Species Conservation Act 1995.

#### 11. Hollow Bearing Trees - Removal

The removal of hollow-bearing trees is not to occur during spring to early summer to avoid the main breeding period for hollow-dependent fauna.

REASON: OEH requirement under the Threatened Species Conservation Act 1995.

#### 12. Unexpected Finds Protocol

An Unexpected Finds Protocol is to be developed in the event Aboriginal sites or objects are encountered during construction or operation of the proposed grain facility.

REASON: OEH requirement under the National Parks and Wildlife Act 1974.

#### 13. Lighting Adjoining Public Roads

No external lighting is permitted at night of any infrastructure associated with the project that may cause distraction to road users other than low intensity security lighting.

REASON: To ensure the road safety is maintained.

#### PRIOR TO THE ISSUE OF A CONSTRUCTION CERTIFICATE

#### 14. | Construction Certificate Required

No activity is to be carried out on site until the Construction Certificate has been issued, other than:

- a. Site investigation for the preparation of the construction, and/or
- b. Implementation of environmental protection measures, such as erosion control, etc that are required by this consent

**REASON:** To ensure the Construction Certificate is issued prior to the commencements of works.

# 15. Fire Safety Measures

A list of Fire Safety Measures must be submitted prior to issue of the Construction Certificate pursuant to clause 139 of the Environmental Planning and Assessment Regulation 2000. The Regulation prescribes that the information to be submitted must include:

- a. A list of any existing fire safety measures provided in relation to the land or any existing building on the land; and
- b. A list of the proposed fire safety measures to be provided in relation to the land and any building on the land as a consequence of the building work.

**REASON:** Requirement of the Environmental Planning and Assessment Regulation 2000.

# 16. Construction Environment Management Plan

Construction Environment Management Plan (CEMP) shall be prepared for the development site and submitted to Council for approval **prior** to issue of the Construction Certificate. The CEMP shall address mitigation and control measures for both the construction and operation phases of the development for the following matters:

- Construction noise and vibration management
- b. Air quality including dust management

- c. Water management including erosion and sediment control
- d. Waste management

**REASON:** To ensure appropriate mitigation measures for the protection of the environment.

#### 17. Section 94A Contribution

Pursuant to the Council's plan under Section 94A of the Environmental Planning and Assessment Act, the applicant shall submit a detailed cost report in accordance with Schedule 2 as required by item 2.11 of the Plan. The cost report shall be prepared by a suitably qualified person. The applicable contribution shall be confirmed by Council and payable prior to the issue of the Construction Certificate.

**REASON:** To meet the requirements of Council's Section 94A plan.

# PRIOR TO THE COMMENCEMENT OF WORKS

There are a number of matters that need to be completed before your project can physically commence. These are set out in the following conditions.

#### 18. Crown Lands

Application is to be made with the Department of Industry - Lands for a Licence on the Crown road prior to undertaking any works/activities on a Crown road.

**REASON:** To ensure appropriate procedures are followed in relation to the use of Crown roads to the satisfaction of the responsible authority.

#### 19. | Erection of Signs for Development

The two following signs must be erected in a prominent position on site so they can be read easily by anyone on any public road or other public place adjacent to the developed site.

- a. The name of the Principal Contractor and a telephone number where that person may be contacted outside working hours, and
- b. Stating that unauthorised entry to the site is prohibited.

**REASON:** To ensure compliance with Section 80A(11) of the Environmental Planning and Assessment Act 1979, as amended.

# 20. Rubbish Container

A site rubbish container shall be provided on the site for the duration of the construction works and be in place prior to the commencement of any works on site.

**REASON:** Council requirement to prevent pollution of the environment by wind-blown litter.

# 21. Hoarding

A hoarding barricade or fence shall be erected between the building and any adjoining public place and/or around any road openings or obstructions if pedestrian or vehicular traffic is likely to be endangered, obstructed or inconvenienced by the proposed works. If necessary, an awning sufficient to prevent any material from, or in connection with the work falling onto the public place is also to be erected.

The work is to be kept lit during the time between sunset and sunrise if the work may be a source of danger to persons using the adjoining public place.

**REASON:** Council requirement for the protection of the public.

Narrandera Shire Council	Notice of Determination of a Development Application Issued under the Environmental Planning and Assessment Act 1979 Section 81 (1) (a)		
Development Application No:	057/2016/2017		
Applicant Details	Ben Sullivan GrainCorp Limited 1 Wentworth Street WAGGA WAGGA NSW 2650		
Land to be developed	Pt Lot 3006 DP1203503; Lot 1 DP1033278; Pt Crown Land 10 Sandy Creek Road, BARELLAN		
Proposed development	Redevelopment of Barellan Yard, including the construction of a new site entrance, internal access roads, weighbridge and hut		
Building Code of Australia Building Classification	5, 10b		
Determination	Consent Granted Subject to Conditions described below		
Date of determination	23 August 2017		
Consent to operate from:	23 August 2017		
Consent to lapse on (five years from date of consent)	23 August 2022		
Conditions of Consent (including section 94 conditions)	See Schedule 1		
Other approvals	List Local Government Act 1993 approvals granted under S 78A (5) – N/A General terms of other approvals integrated as part of the consent – N/A List approvals – N/A		
Right of Review and Appeal	If you are dissatisfied with this determination you may request the Council to conduct a review of the determination (Section 82A of the Act), within the time limited for the making of an appeal under section 97.		
19	If you are dissatisfied with this decision section 97 of the <i>Environmental Planning &amp; Assessment Act 1979</i> gives you the right of appeal to the Land and Environment Court within 6 months after the date on which you receive this notice.		

DA/057/2016/2017 Page 1 of 11

subject of a Commission of Inquiry

\*Section 97 of the *Environmental Planning & Assessment Act 1979* does not apply to the Determination of a Development Application for State significant development or local designated development that has been the

Date of Certificate	30 August 2017
Signature:	Julian Geddes Deputy General Manager Infrastructure

#### Notes:

- 1. Where the consent is subject to a condition that the consent is not to operate until the applicant satisfies a particular condition the date of operation will not be endorsed until that condition has been satisfied.
- 2. Clause 101 of the Regulation contains additional particulars to be included in a notice of determination where a condition under Section 94 and 94A of the Environmental Planning & Assessment Act 1979 has been imposed.

"AN IMPORTANT MESSAGE ABOUT PRIVACY - All information, including personal information, collected by Narrandera Shire Council is protected by the Privacy & Personal Information Protection Act, 1998. The collection of such information by Council shall be used for Council purposes only and will assist Council to carry out its statutory obligations in accordance with the Local Government Act, 1993 and other associated legislation. Such information may be passed on to those third parties authorised by law to receive.

# SCNEDULE 1 CONDITIONS OF CONSENT – DA 057/2016/2017

Cond #	Details	Met
ADMINI	STRATIVE DR GENERAL CONDITIONS	L
	t includes general background controls and minor administrative matters or procedures that er nent is clearly identified and specified.	sure the
1.	Approved Plans and Documentation	
	The development must be carried out in accordance with the approved plans and specifications as follows:	
	Ref Drawing/Document Title Prepared/Drawn Version Date No. By	
	17-254 Statement of Environmental Effects – ngh Environmental Final 8/06/17 Redevelopment of Barellan Yard, Barellan	
	16-019 Site Development - Barellan - Plans: JME Civil Pty Ltd March 10/03/17 15-046-c02 - Construction Notes 15-046-c03 - General Arrangement - Rev B 15-046-c04 - Plan View - Entry Road and	
	Typical Pavement Section  15-046-c05 — Plan View — Southern Road and Typical Pavement Section  15-046-c06 — Plan View — Southern Road and Typical Pavement Section  15-046-c07 — Plan View — Northern Road	
	and Typical Pavement Section  15-046-c08 — Culverts Sections  15-046-c09 — Entry Road Box Cross Sections  15-046-c10 — Northern Road Box Cross Sections	
	15-046-c11 – Southern Road Box Cross Sections	
	<b>REASON</b> : To ensure the development is carried out in accordance with the approved plans. Section 79C(1)(c) and 79C(1)(e) of the Environmental Planning and Assessment Act 1979, as amended.	
2.	Building General  All building work must be carried out in accordance with the provisions of the National Construction Code.	
	<b>REASON</b> : Statutory requirement of Clause 145 of the Environmental Planning and Assessment Regulation 2000.	
3.	Amenity General  The development is to be conducted in a manner that will not interfere with the amenity of the locality by reason of the emission of noise, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit, oil, by causing interference to television or radio reception or otherwise.	
	REASON: So that the development does not reduce the amenity of the area. Section 79C(1)(b) of the Environmental Planning and Assessment Act 1979, as amended.	

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#### 4. Contaminated and Hazardous Materials

Should any contaminated, scheduled, hazardous or asbestos material be discovered before or during construction works, the Applicant and Contractor shall ensure the appropriate Regulatory Authority (ep OEH-Environment Protection Authority, WorkCover, Council, NSW Fire Brigade etc) is notified, and that such material is contained, encapsulated, sealed, handled or otherwise disposed of to the requirements of such Authority. (Note: Such materials cannot be disposed of to landfill unless the particular facilities are licensed to receive that type and class of waste).

**REASON:** Ensure statutory requirements are observed and the contamination of the environment is prevented.

#### 5. Stormwater and Water Supply General

All stormwater drainage and water plumbing work shall be carried out by a licensed plumber and drainer.

REASON: Statutory requirement of Section 634 Local Government Act 1993

#### 6. Solid Waste

All solid waste from construction and operation of the proposed development shall be assessed, classified and disposed of in accordance with the EPA - Waste Classification Guidelines. Whilst recycling and reuse are preferable to landfill disposal, all disposal options (including recycling and reuse) must be undertaken with lawful authority as required under the Protection of the Environment Operations Act.

**REASON:** Council requirement to require compliance with the POEO Act

#### 7. Excavation General

If an excavation associated with the erection of the building extends below the surface level of an adjoining allotment of land and/or the base of the footings of a building on the site or on an adjoining allotment of land, the person causing the excavation to be made:

- a. must preserve and protect the adjoining building and land from damage; and
- b. if necessary, must underpin and support the building and land in an approve manner.

For the purposes of this condition, allotment of land includes a public road and any other public place.

The requirements of this condition does not apply if the person having the benefit of the development consent owns the adjoining land or the owner of the adjoining land has given consent in writing to that condition not applying.

**REASON:** To ensure compliance with the Environmental Planning and Assessment Act, 1979. This is a prescribed condition.

# 8. Excavation and Backfilling

All excavations and backfilling associated with the proposed development must be executed safely and in accordance with appropriate professional standards.

**REASON**: To ensure safe working practice and to comply with the prescribed conditions as set out under the Environmental Planning and Assessment Act, 1979.

#### 9. **Ground Disturbance**

Any proposed ground disturbance activities must be confined to the areas assessed and should the impacted area change or increase, then further assessment will be required in relation to native flora and fauna, and cultural heritage matters.

**REASON:** OEH requirement under the National Parks and Wildlife Act 1974 and Threatened Species Conservation Act 1995.

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10	Hall and Day to Tax and Day to and	
10.	Hollow Bearing Trees - Protocol  The hollow-bearing tree removal protocol outlined in the Statement of Environmental Effects	
	is to be followed.	
THE PROPERTY OF THE PROPERTY O	REASON: OEH requirement under the Threatened Species Conservation Act 1995.	
11.	Hollow Bearing Trees - Removal	
	The removal of hollow-bearing trees is not to occur during spring to early summer to avoid the main breeding period for hollow-dependent fauna.	
	REASON: OEH requirement under the Threatened Species Conservation Act 1995.	
12.	Unexpected Finds Protocol	
	An Unexpected Finds Protocol is to be developed in the event Aboriginal sites or objects are encountered during construction or operation of the proposed grain facility.  **REASON: OEH requirement under the National Parks and Wildlife Act 1974.	
13.	Lighting Adjoining Public Roads	
	No external lighting is permitted at night of any infrastructure associated with the project that may cause distraction to road users other than low intensity security lighting.	
	REASON: To ensure the road safety is maintained.	
PRIOR	TO THE ISSUE OF A CONSTRUCTION CERTIFICATE	
14.	Construction Certificate Required	
	No activity is to be carried out on site until the Construction Certificate has been issued, other than:	
	<ul><li>a. Site investigation for the preparation of the construction, and/or</li><li>b. Implementation of environmental protection measures, such as erosion control, etc that are required by this consent</li></ul>	
	<b>REASON:</b> To ensure the construction certificate is issued prior to the commencements of works.	
15.	RMS Condition - Road Infrastructure Cost Responsibility	
	All works associated with the project shall be at no cost to the Roads and Maritime Services.	
	<b>REASON:</b> RMS requirement to ensure the appropriate acceptance of responsibility of costs for public infrastructure provision and maintenance.	
16.	Fire Safety Measures	
	A list of Fire Safety Measures must be submitted <b>prior to the issue of a Construction</b> Certificate pursuant to clause 139 of the Environmental Planning and Assessment Regulation 2000. The Regulation prescribes that the information to be submitted must include:	
	a. A list of any existing fire safety measures provided in relation to the land or any existing building on the land; and	
	b. A list of the proposed fire safety measures to be provided in relation to the land and any building on the land as a consequence of the building work.	
	REASON: Requirement of the Environmental Planning and Assessment Regulation 2000.	
17.	Section 94A Contribution	
	Pursuant to the Council's plan under Section 94A of the Environmental Planning and Assessment Act, the applicant shall submit a detailed cost report in accordance with Schedule 2 as required by item 2.11 of the Plan. The cost report shall be prepared by a suitably qualified person. The applicable contribution shall be confirmed by Council and payable prior to the issue of the Construction Certificate.	
	REASON: To meet the requirements of Council's Section 94A plan.	

DA/057/2016/2017 Page 5 of 11

#### PRIOR TO THE COMMENCEMENT OF WORKS

There are a number of matters that need to be completed before your project can physically commence. These are set out in the following conditions.

#### 18. RMS Condition - Traffic Management

A Traffic Management Plan shall be prepared in consultation with the relevant road authorities (Council and Roads and Maritime Services) and rail authorities to outline measures to manage traffic related issues associated with the development, particularly in respect to Sandy Creek Road. The plan shall address all light and heavy traffic generation to the development site and detail the potential impacts associated with the development, the mitigation measures to be implemented, and the procedures to monitor and ensure compliance. This plan shall address, but not necessarily be limited to;

- a. Details of measures to minimise the potential for interaction of vehicular traffic with train schedule through the rail level crossing on Sandy Creek Road, eg timing of movement of vehicles outside of train schedules.
- b. Details of measures to be employed to ensure safety of road users and minimise potential conflict with project generated traffic,
- c. The management and coordination of the movement of vehicles for construction and worker related access to the site and to limit disruption to other motorists, emergency vehicles, school bus timetables and school zone operating times,
- d. loads, weights and lengths of haulage and construction related vehicles and the number of movements of such vehicles,
- e. any proposed precautionary measures such as signage to warn road users such as motorists about the activities for the project,
- f. a Driver Code of Conduct to address such items as; appropriate driver behaviour including adherence to all traffic regulations and speed limits, maintaining appropriate distances between vehicles, etc and appropriate penalties for infringements of the Code,
- g. details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the facility.

**REASON:** RMS requirement to ensure appropriate management of traffic.

# 19. RMS Condition - Railway Crossing

A Safety Management Plan is to be prepared for the railway level crossing on Sandy Creek Road prior to the commencement of works on the development site and the preparation of the Traffic Management Plan. The plan shall be consistent with the requirements of the NSW Railway Safety Act, 2008. As a minimum this plan shall set out the risks identified at the railway crossing, the measures taken to manage those risks and the responsibilities for the management of those risks.

**REASON:** RMS requirement to ensure safety at railway level crossings.

#### 20. RMS Condition - Road Upgrades

Prior to the commencement of construction on-site, the Applicant must undertake all works to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles to meet any reasonable requirements that may be specified by the relevant roads authority. The design and specifications, and construction, of these works must be completed and certified by an appropriately qualified person to be to a standard to accommodate the traffic generating requirements of the project. On Classified Roads the geometric road design and pavement design must be to the satisfaction of the Roads and Maritime Services.

**REASON:** RMS requirement to ensure appropriate standard of road infrastructure is maintained.

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# 21. RMS Condition - Dust Management Plan A management plan to provide measures to suppress dust generation from the development site particularly towards the Burley Griffin Way shall be prepared and implemented to the satisfaction of Council and Roads and Maritime Services. REASON: RMS requirement to ensure dust generation from traffic is managed appropriately. 22. RMS Condition - Works Authorisation Deed The Burley Griffin Way is part of the State Road network. For works on the State Road network the developer is required to enter into a Works Authorisation Deed (WAD) with Roads and Maritime Services before finalising the design or undertaking any construction work within or connecting to the road reserve. The developer will be required to submit detailed design plans and all relevant additional information as may be required in the Works Authorisation Deed documentation, for each specific change to the state road network for assessment. The applicant is to contact the Land Use Manager for the South West Region on Ph. 02 69236611 for further detail. REASON: RMS works approval requirement on State Roads. 23. RMS Condition - Roads Act Approval Any works within the road reserve of the Burley Griffin Way requires approval under Section 138 of the Roads Act, 1993 from the road authority (Council) and concurrence from Roads and Maritime Services prior to commencement of any such works. The developer is responsible for all public utility adjustment/relocation works, necessitated by the development and as required by the various public utility authorities and/or their agents. **REASON:** Statutory requirement for works approval within road reserves. 24. Crown Lands Application to be made with the Department of Industry – Lands for a licence to undertake works/activities on the Crown road portion, prior to the purchase and closure of the Crown Road. **REASON:** To ensure appropriate procedures are followed in relation to the use of Crown roads to the satisfaction of the responsible authority. 25. **Erection of Signs for Development** The two following signs must be erected in a prominent position on site so they can be read easily by anyone on any public road or other public place adjacent to the developed site. a. The name of the Principal Contractor and a telephone number where that person may be contacted outside working hours, and b. Stating that unauthorised entry to the site is prohibited. REASON: To ensure compliance with Section 80A(11) of the Environmental Planning and Assessment Act 1979, as amended. 26. Rubbish Container A site rubbish container shall be provided on the site for the duration of the construction works and be in place prior to the commencement of any works on site. **REASON:** Council requirement to prevent pollution of the environment by wind-blown litter. 27. Hoarding A hoarding barricade or fence shall be erected between the building and any adjoining public place and/or around any road openings or obstructions if pedestrian or vehicular traffic is likely to be endangered, obstructed or inconvenienced by the proposed works. If necessary, an awning sufficient to prevent any material from, or in connection with the work falling onto the public place is also to be erected.

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The work is to be kept lit during the time between sunset and sunrise if the work may be a source of danger to persons using the adjoining public place.

\*\*REASON: Council requirement for the protection of the public.

#### 28. Temporary Closet

Temporary closet accommodation being provided throughout the course of building operations by means of a chemical closet complying with the requirements of the Department of Environment and Climate Change.

**REASON**: To ensure all workers on site have access to toilet facilities.

#### **DURING WORKS**

The development will need to meet certain standards. The following conditions set out matters that need to be done during the construction or implementation process.

# 29. Complaints Management System

A Complaints Management System is to be set up and maintained in accordance with the system outlined in the Statement of Environmental Effects. Records shall be kept up to date and available for inspection by Council at any time during construction or operation of the facility.

**REASON**: To ensure complaints are managed and addressed appropriately.

#### 30. DA Record to be Kept On-Site

The builder must at all times maintain, on the job, a legible copy of the plan and specification approved with the Construction Certificate.

**REASON**: Because it is in the public interest that a copy of the construction certificate plans are available. Section 79C(1)(e) of the Environmental Planning and Assessment Act 1979, as amended.

#### 31. Hours of Operation – Construction

Construction work shall only be carried out within the following times:

Monday to Saturday:

7.00am to 6.00pm

Saturday:

7.00am to 1.00pm if inaudible on residential premises,

otherwise

8.00am to 1.00pm

Sunday or Public Holidays:

No demolition or construction work permitted.

The above restrictions may be subject to review and variation by Council upon assessment of the level of annoyance if any that may arise.

**REASON:** Council requirement to reduce likelihood of noise nuisance and to preserve the amenity of the area.

# 32. **Building Inspections**

The following Critical Stage Inspections are required to be carried out by the Principal Certifying Authority to enable the issue of an Occupation Certificate:

- a. After excavation for, and prior to the placement of, any footings.
- b. Prior to pouring any in-situ reinforced concrete building element.
- c. After the building work has been completed and prior to any occupation certificate being
- d. issued in relation to the building work.

**NO**TE: If Council is nominated as the Principal Certifying Authority, 48 hours prior notice for all of the above inspections (where applicable) shall be given.

NOTE: An Occupation Certificate in relation to the building will not be issued unless all of the above stages have been inspected.

**REASON**: Because it is in the public interest that the development complies with Section 109E(3)(d) of the Environmental Planning And Assessment Act 1979, as amended.

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# 33. Aboriginal Heritage

In the event of any Aboriginal archaeological material being discovered during earthmoving/construction works, all work in that area shall cease immediately and the Office of Environment and Heritage (OEH) notified of the discovery as soon as practicable. Work shall only recommence upon the authorisation of the OEH.

**REASON**: Council and statutory requirement to protect Aboriginal heritage.

#### 34. Rubbish and Debris

All building work rubbish and debris, including that which can be windblown, shall be contained on site at all times prior to disposal at Council's Waste Management Centre.

**NOTE**: No building rubbish or debris shall be placed or permitted to be placed on any adjoining public reserve, footway or road.

**REASON**: To ensure that the building site and adjoining public places are maintained in ac clean and tidy condition so as not to interfere with the amenity of the area. Section 79C (1)(e) of the Environmental Planning and Assessment Act 1979, as amended.

#### 35. **Erosion and Sediment Control**

Erosion and sediment control measures shall be undertaken and maintained in respect to any part of the land where the natural surface is disturbed or earthworks are carried out. Materials from the site are not to be tracked into the road by vehicles entering or leaving the site. At the end of each working day any dust, dirt or other sediment shall be swept off the road, contained on the site and not washed down any stormwater pit or gutter. NOTE: All erosion and sediment control measures must be in place prior to earthworks commencing.

**REASON**: To protect the environment and any Council infrastructure and to ensure all system functions remain in good working order.

# 36. Waste General

Waste construction materials including soil arising from the development, must be disposed of at an appropriately licensed waste facility.

**REASON**: To ensure environmentally safe disposal.

#### 37. **Stormwater**

All storm water shall be managed on site and is to be provided to divert surface water clear of all buildings and structures, and dispose of such water in a way that avoids the likelihood of damage or nuisance to any other structures or property.

REASON: To ensure a safe and sustainable storm water drainage system.

# 38. RMS Condition - Quantities Log

The operator is to record and maintain a log of the quantities of material and traffic movement to and from of the subject site. This log is to be kept on site and be available for inspection at the request of the consent authority.

**REASON:** RMS requirement for appropriate record keeping.

# PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE

# 39. RMS Condition - Intersection Design

As a minimum, the intersection of the Burley Griffin Way and Sandy Creek Road is to be constructed and line marked as a public road intersection with a sealed Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services for the posted speed zone. The intersection is to be designed and constructed to the standard required for an approved road train route.

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	All proposed intersection designs shall be submitted to Council and RMS for approval and works completed within six (6) months of the date of this Notice of Determination and <b>prior</b> to the issue of an Occupation Certificate.  REASON: RMS requirement for appropriate intersection design and treatment to ensure the safe movement of vehicles accessing the site.	
40.	RMS Condition - Intersection Line Marking	
	The intersection of the Burley Griffin Way and Sandy Creek Road shall be designed and constructed so that vehicles turning through the intersection are not required to cross to the opposing travel lane in order to perform a turn manoeuvre. The intersection shall be line marked in accordance with Australian standards.	
	All proposed intersection designs shall be submitted to Council and RMS for approval and works completed within six (6) months of the date of this Notice of Determination and <b>prior</b> to the issue of an Occupation Certificate.	
	<b>REASON:</b> RMS requirement for appropriate intersection design and treatment to ensure the safe movement of vehicles accessing the site.	- 100 4111
41.	RMS Condition - Site Entry Intersection Design and Line Marking	
	As a minimum, the intersection of the driveway to the site of the rail loading facility and Sandy Creek Road is to be designed and constructed as a public road intersection with a Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment in accordance with the Austroads Guide to Road Design for the posted speed zone. The design vehicle for the intersection shall be the largest vehicle likely to access the subject site.	
	All proposed intersection designs shall be submitted to Council for approval and works completed within six (6) months of the date of this Notice of Determination and <b>prior to the</b> issue of an Occupation Certificate.	
	<b>REASON:</b> RMS requirement for appropriate intersection design and treatment to ensure the safe movement of vehicles accessing the site. Compliance with Council Engineering Guidelines for Subdivisions and Development Standards 2011.	
42.	Damage to Road Infrastructure	
	Any damage or disturbance to the road reserve of the Burley Griffin Way is to be restored to match surrounding landform in accordance with Council requirements.	
	REASON: To ensure public infrastructure is maintained appropriately.	
43.	Fire Safety Certificates  On completion of construction of the building alterations the owner of the building is required to submit to the Principal Certifying Authority (PCA) a Fire Safety Certificate(s) with respect to each essential fire safety measure installed in association with the building - as listed on the Fire Safety Schedule attached to the Construction Certificate. Such certificate(s) must be submitted to the PCA prior to occupation or use of the subject building. Copies of the subject Fire Safety Certificate(s) must also be forwarded by the owner to Council (if not the appointed PCA) and the Commissioner of Fire and Rescue NSW and displayed within the subject building in a prominent position.	
44.	Occupation Certificate Application	
	Application for any Occupation Certificate shall be submitted to and approved by the Principal Certifying Authority prior to occupation of the building. It is the responsibility of the developer to apply to their Principal Certifying Authority (PCA) for an Occupation Certificate.  **REASON: Compliance with Section 109M of the Environmental Planning & Assessment Act 1979.	
45.	Occupation	
73,	The use or occupation of the subject premises is not to commence until such time as the terms of the development consent have been complied with and an Occupation Certificate	

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has been issued by the Principal Certifying Authority (PCA).

It is the responsibility of the developer to apply to their Principal Certifying Authority (PCA) for an Occupation Certificate.

**REASON**: To ensure that the work forming the conditions of consent has been completed prior to the use of the development. Section 91(3)(f) of the Environmental Planning and Assessment Act 1979, as amended.

# **ONGOING REQUIREMENTS**

#### 46. **Hours of Operation**

Operating hours of the grain loading facility including the weighbridge and sample stand to be limited as follows:

- a. Daily during normal operations 7.00am to 6.00pm.
- b. Daily during peak (harvest) season 7.00am to 10.00pm.
- c. Council and adjoining landowners are to be consulted in the event that 24 hour operations are required during peak (harvest) season prior to commencement of such operations.

**REASON:** To preserve the amenity of the area.

# 47. Annual Fire Safety Statements

- a. The owner of the building is required to submit to Council at least once in each period of 12 months following the completion of the building an Annual Fire Safety Statement(s) with respect to each essential fire safety measure associated with the building.
- b. Copies of the subject Annual Fire Safety Statements must also be forwarded by the owner to the Commissioner of the Fire and Rescue NSW and displayed within the subject building in a prominent position. In this regard Fire and Rescue NSW has requested that only electronic copies of the statement be forwarded, with their dedicated email address for such Statements being: afss@fire.nsw.gov.au

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# 22. Temporary Closet

Temporary closet accommodation being provided throughout the course of building operations by means of a chemical closet complying with the requirements of the Department of Environment and Climate Change.

**REASON**: To ensure all workers on site have access to toilet facilities.

#### **DURING WORKS**

# 23. Complaints Management System

A Complaints Management System is to be set up and maintained in accordance with the system outlined in the Statement of Environmental Effects. Records shall be kept up to date and available for inspection by Council at any time during **construction** or operation of the facility.

**REASON**: To ensure complaints are managed and addressed appropriately.

# 24. DA Record to be Kept On-Site

The builder must at all times maintain, on the job, a legible copy of the plan and specification approved with the Construction Certificate.

**REASON**: Because it is in the public interest that a copy of the construction certificate plans are available. Section 79C(1)(e) of the Environmental Planning and Assessment Act 1979, as amended.

# 25. Hours of Operation – Construction

Construction work shall only be carried out within the following times:

Monday to Saturday:

7.00am to 6.00pm

Saturday:

7.00am to 1.00pm if inaudible on residential premises, otherwise

8.00am to 1.00pm

Sunday or Public Holidays:

No demolition or construction work permitted.

The above restrictions may be subject to review and variation by Council upon assessment of the level of annoyance if any that may arise.

REASON: Council requirement to reduce likelihood of noise nuisance and to preserve the amenity of the area.

# 26. **Building Inspections**

The following Critical Stage Inspections are required to be carried out by the Principal Certifying Authority to enable the issue of an **O**ccupation Certificate:

- a. After excavation for, and prior to the placement of, any footings.
- b. Prior to pouring any in-situ reinforced concrete building element.
- c. After the building work has been completed and prior to any occupation certificate being issued in relation to the building work.

**NO**TE: If Council is nominated as the Principal Certifying Authority, 48 hours prior notice for all of the above inspections (where applicable) shall be given.

NOTE: An Occupation Certificate in relation to the building will not be issued unless all of the above stages have been inspected.

**REASON:** Because it is in the public interest that the development complies with **S**ection 109E(3)(d) of the Environmental Planning And Assessment Act 1979, as amended.

# 27. | Aboriginal Heritage

In the event of any Aboriginal archaeological material being discovered during earthmoving/construction works, all work in that area shall cease immediately in line with the Unexpected Finds Protocol. The Office of Environment and Heritage (OEH) notified of the discovery as soon as practicable. Work shall only recommence upon the authorisation of the OEH.

**REASON**: Council and statutory requirement to protect Aboriginal heritage.

# 28. Rubbish and Debris

All building work rubbish and debris, including that which can be windblown, shall be contained on site at all times prior to disposal at Council's Waste Management Centre.

**NOTE**: No building rubbish or debris shall be placed or permitted to be placed on any adjoining public reserve, footway or road.

**REASON**: To ensure that the building site and adjoining public places are maintained in ac clean and tidy condition so as not to interfere with the amenity of the area. Section 79C (1)(e) of the Environmental Planning and Assessment Act 1979, as amended.

#### 29. **Erosio**n and Sediment Control

Erosion and sediment control measures shall be undertaken and maintained in respect to any part of the land where the natural surface is disturbed or earthworks are carried out. Materials from the site are not to be tracked into the road by vehicles entering or leaving the site. At the end of each working day any dust, dirt or other sediment shall be swept off the road, contained on the site and not washed down any stormwater pit or gutter.

NOTE: All erosion and sediment control measures must be in place prior to earthworks commencing.

**REASON**: To protect the environment and any Council infrastructure and to ensure all system functions remain in good working order.

#### 30. Waste General

Waste construction materials, including soil arising from the development, must be disposed of at an appropriately licensed waste facility.

**REASON**: To ensure environmentally safe disposal.

# 31. Stormwater

All storm water shall be managed on site and is to be provided to divert surface water clear of all buildings and structures, and dispose of such water in a way that avoids the likelihood of damage or nuisance to any other structures or property.

**REASON**: To ensure a safe and sustainable storm water drainage system.

#### PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE

# 32. | Fire Safety Certificates

On completion of construction of the building alterations the owner of the building is required to submit to the Principal Certifying Authority (PCA) a Fire Safety Certificate(s) with respect to each essential fire safety measure installed in association with the building - as listed on the Fire Safety Schedule attached to the Construction Certificate. Such certificate(s) must be submitted to the PCA prior to occupation or use of the subject building. Copies of the subject Fire Safety Certificate(s) must also be forwarded by the owner to Council (if not the appointed PCA) and the Commissioner of Fire and Rescue NSW and displayed within the subject building in a prominent position.

# 33. Occupation Certificate Application

Application for any Occupation Certificate shall be submitted to and approved by the Principal Certifying Authority prior to occupation of the building. It is the responsibility of the developer to apply to their Principal Certifying Authority (PCA) for an Occupation Certificate.

REASON: Compliance with Section 109M of the Environmental Planning & Assessment Act 1979.

# 34. Occupation

The use or occupation of the subject premises is not to commence until such time as the terms of the development consent have been complied with and an Occupation Certificate has been issued by the Principal Certifying Authority (PCA).

**REASON**: To ensure that the work forming the conditions of consent has been completed prior to the use of the development. Section 91(3)(f) of the Environmental Planning and Assessment Act 1979, as amended.

# **ONGOING REQUIREMENTS**

# 35. Hours of Operation

Operating hours of the grain loading facility including the weighbridge and sample stand to be limited as follows:

- a. Daily during normal operations 7.00 am to 6.00 pm. 🦠
- b. Daily during peak (harvest) season 7.00 am to 10.00 pm.
- c. Council and adjoining landowners are to be consulted in the event that 24 hour operations are required during peak (harvest) season prior to commencement of such operations.

**REASON:** To preserve the amenity of the area.

#### 36. Annual Fire Safety Statements

The owner of the building is required to submit to Council at least once in each period of 12 months following the completion of the building an Annual Fire Safety Statement(s) with respect to each essential fire safety measure associated with the building.

Copies of the subject Annual Fire Safety Statements must also be forwarded by the owner to the Commissioner of the Fire and Rescue NSW and displayed within the subject building in a prominent position. In this regard Fire and Rescue NSW has requested that only electronic copies of the statement be forwarded, with their dedicated email address for such Statements being: afss@fire.nsw.gov.au

DA/030/2016/2017

# SCHEDULE 1 CONDITIONS OF CONSENT — DA 057/2016/2017

Cond #	Details	Met
ADMINI	ISTRATIVE OR GENERAL CONDITIONS	
	rt includes general background controls and minor administrative matters or procedures the ment is clearly identified and specified.	hat ensure the
1.	Approved Plans and Documentation  The development must be carried out in accordance with the approved plans specifications as follows:	and
	Ref Drawing/Document Title Prepared/Drawn Version Dat No. By	е
	17-254 Statement of Environmental Effects – ngh Environmental Final 8/06/1 Redevelopment of Barellan Yard, Barellan	۱7
	16-019 Site Development - Barellan – Plans:  15-046-c02 – Construction Notes  15-046-c03 – General Arrangement – Rev  B  15-046-c04 – Plan View – Entry Road and Typical Pavement Section  15-046-c05 – Plan View – Southern Road and Typical Pavement Section  15-046-c06 – Plan View – Southern Road and Typical Pavement Section  15-046-c07 – Plan View – Northern Road and Typical Pavement Section  15-046-c08 – Culverts Sections  15-046-c09 – Entry Road Box Cross Sections  15-046-c10 – Northern Road Box Cross Sections  15-046-c11 – Southern Road Box Cross Sections	
	REASON: To ensure the development is carried out in accordance with the approved plans. Se 79C(1)(c) and 79C(1)(e) of the Environmental Planning and Assessment Act 1979, as amended.	ection
2.	Building General  All building work must be carried out in accordance with the provisions of the Nat Construction Code.  REASON: Statutory requirement of Clause 145 of the Environmental Planning and Assess Regulation 2000.	
3.	Amenity General  The development is to be conducted in a manner that will not interfere with the amenithe locality by reason of the emission of noise, vibration, smell, fumes, smoke, vapour, st soot, ash, dust, waste water, waste products, grit, oil, by causing interference to television radio reception or otherwise.	eam,
	REASON: So that the development does not reduce the amenity of the area. Section 79C(1)(b) a Environmental Planning and Assessment Act 1979, as amended.	of the

#### 4. Contaminated and Hazardous Materials

Should any contaminated, scheduled, hazardous or asbestos material be discovered before or during construction works, the Applicant and Contractor shall ensure the appropriate Regulatory Authority (ep OEH-Environment Protection Authority, WorkCover, Council, NSW Fire Brigade etc) is notified, and that such material is contained, encapsulated, sealed, handled or otherwise disposed of to the requirements of such Authority. (Note: Such materials cannot be disposed of to landfill unless the particular facilities are licensed to receive that type and class of waste).

**REASON**: Ensure statutory requirements are observed and the contamination of the environment is prevented.

#### 5. Stormwater and Water Supply General

All stormwater drainage and water plumbing work shall be carried out by a licensed plumber and drainer.

REASON: Statutory requirement of Section 634 Local Government Act 1993

#### 6. Solid Waste

All solid waste from construction and operation of the proposed development shall be assessed, classified and disposed of in accordance with the EPA - Waste Classification Guidelines. Whilst recycling and reuse are preferable to landfill disposal, all disposal options (including recycling and reuse) must be undertaken with lawful authority as required under the Protection of the Environment Operations Act.

REASON: Council requirement to require compliance with the POEO Act

#### 7. Excavation General

If an excavation associated with the erection of the building extends below the surface level of an adjoining allotment of land and/or the base of the footings of a building on the site or on an adjoining allotment of land, the person causing the excavation to be made:

- a. must preserve and protect the adjoining building and land from damage; and
- b. if necessary, must underpin and support the building and land in an approve manner.

For the purposes of this condition, allotment of land includes a public road and any other public place.

The requirements of this condition does not apply if the person having the benefit of the development consent owns the adjoining land or the owner of the adjoining land has given consent in writing to that condition not applying.

**REASON:** To ensure compliance with the Environmental Planning and Assessment Act, 1979. This is a prescribed condition.

# 8. Excavation and Backfilling

All excavations and backfilling associated with the proposed development must be executed safely and in accordance with appropriate professional standards.

**REASON:** To ensure safe working practice and to comply with the prescribed conditions as set out under the Environmental Planning and Assessment Act, 1979.

# 9. **Ground Disturbance**

Any proposed ground disturbance activities must be confined to the areas assessed and should the impacted area change or increase, then further assessment will be required in relation to native flora and fauna, and cultural heritage matters.

**REASON: OE**H requirement under the **N**ational Parks and Wildlife Act 1974 and Threatened Species Conservation Act 1995.

10.	Hollow Bearing Trees - Protocol	
	The hollow-bearing tree removal protocol outlined in the Statement of Environmental Effects is to be followed.	
	REASON: OEH requirement under the Threatened Species Conservation Act 1995.	
11.	Hollow Bearing Trees - Removal	
	The removal of hollow-bearing trees is not to occur during spring to early summer to avoid the main breeding period for hollow-dependent fauna.	
	REASON: OEH requirement under the Threatened Species Conservation Act 1995.	
12.	Unexpected Finds Protocol  An Unexpected Finds Protocol is to be developed in the event Aboriginal sites or objects are encountered during construction or operation of the proposed grain facility.  REASON: OEH requirement under the National Parks and Wildlife Act 1974.	
13.	Lighting Adjoining Public Roads  No external lighting is permitted at night of any infrastructure associated with the project that may cause distraction to road users other than low intensity security lighting.  REASON: To ensure the road safety is maintained.	
PRIOR	TO THE ISSUE OF A CONSTRUCTION CERTIFICATE	
14.	Construction Certificate Required	
	No activity is to be carried out on site until the Construction Certificate has been issued, other than:	
	<ul><li>a. Site investigation for the preparation of the construction, and/or</li><li>b. Implementation of environmental protection measures, such as erosion control, etc that are required by this consent</li></ul>	
	REASON: To ensure the construction certificate is issued prior to the commencements of works.	
15.	RMS Condition - Road Infrastructure Cost Responsibility	
	All works associated with the project shall be at no cost to the Roads and Maritime Services.  REASON: RMS requirement to ensure the appropriate acceptance of responsibility of costs for public infrastructure provision and maintenance.	
16.	Fire Safety Measures	
	A list of Fire Safety Measures must be submitted <b>p</b> rior to the issue of a Construction Certificate pursuant to clause 139 of the Environmental Planning and Assessment Regulation 2000. The Regulation prescribes that the information to be submitted must include:	
	a. A list of any existing fire safety measures provided in relation to the land or any existing building on the land; and	
	b. A list of the proposed fire safety measures to be provided in relation to the land and any building on the land as a consequence of the building work.	
	REASON: Requirement of the Environmental Planning and Assessment Regulation 2000.	
17.	Section 94A Contribution	
	Pursuant to the Council's plan under Section 94A of the Environmental Planning and Assessment Act, the applicant shall submit a detailed cost report in accordance with Schedule 2 as required by item 2.11 of the Plan. The cost report shall be prepared by a suitably qualified person. The applicable contribution shall be confirmed by Council and payable prior to the issue of the Construction Certificate.	
	REASON: To meet the requirements of Council's Section 94A plan.	

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#### PRIOR TO THE COMMENCEMENT OF WORKS

There are a number of matters that need to be completed before your project can physically commence. These are set out in the following conditions.

# 18. RMS Condition - Traffic Management

A Traffic Management Plan shall be prepared in consultation with the relevant road authorities (Council and Roads and Maritime Services) and rail authorities to outline measures to manage traffic related issues associated with the development, particularly in respect to Sandy Creek Road. The plan shall address all light and heavy traffic generation to the development site and detail the potential impacts associated with the development, the mitigation measures to be implemented, and the procedures to monitor and ensure compliance. This plan shall address, but not necessarily be limited to;

- a. Details of measures to minimise the potential for interaction of vehicular traffic with train schedule through the rail level crossing on Sandy Creek Road, eg timing of movement of vehicles outside of train schedules.
- b. Details of measures to be employed to ensure safety of road users and minimise potential conflict with project generated traffic,
- c. The management and coordination of the movement of vehicles for construction and worker related access to the site and to limit disruption to other motorists, emergency vehicles, school bus timetables and school zone operating times,
- d. loads, weights and lengths of haulage and construction related vehicles and the number of movements of such vehicles,
- e. any proposed precautionary measures such as signage to warn road users such as motorists about the activities for the project,
- f. a Driver Code of Conduct to address such items as; appropriate driver behaviour including adherence to all traffic regulations and speed limits, maintaining appropriate distances between vehicles, etc and appropriate penalties for infringements of the Code,
- g. details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the facility.

**REASON:** RMS requirement to ensure appropriate management of traffic.

# 19. RMS Condition - Railway Crossing

A Safety Management Plan is to be prepared for the railway level crossing on Sandy Creek Road prior to the commencement of works on the development site and the preparation of the Traffic Management Plan. The plan shall be consistent with the requirements of the NSW Railway Safety Act, 2008. As a minimum this plan shall set out the risks identified at the railway crossing, the measures taken to manage those risks and the responsibilities for the management of those risks.

**REASON:** RMS requirement to ensure safety at railway level crossings.

#### 20. RMS Condition - Road Upgrades

Prior to the commencement of construction on-site, the Applicant must undertake all works to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles to meet any reasonable requirements that may be specified by the relevant roads authority. The design and specifications, and construction, of these works must be completed and certified by an appropriately qualified person to be to a standard to accommodate the traffic generating requirements of the project. On Classified Roads the geometric road design and pavement design must be to the satisfaction of the Roads and Maritime Services.

REASON: RMS requirement to ensure appropriate standard of road infrastructure is maintained.

21.	RMS Condition - Dust Management Plan	
	A management plan to provide measures to suppress dust generation from the development site particularly towards the Burley Griffin Way shall be prepared and implemented to the satisfaction of Council and Roads and Maritime Services.	
	REASON: RMS requirement to ensure dust generation from traffic is managed appropriately.	
22.	RMS Condition - Works Authorisation Deed	
	The Burley Griffin Way is part of the State Road network. For works on the State Road network the developer is required to enter into a Works Authorisation Deed (WAD) with Roads and Maritime Services before finalising the design or undertaking any construction work within or connecting to the road reserve. The developer will be required to submit detailed design plans and all relevant additional information as may be required in the Works Authorisation Deed documentation, for each specific change to the state road network for assessment. The applicant is to contact the Land Use Manager for the South West Region on Ph. 02 69236611 for further detail.  **REASON: RMS works approval requirement on State Roads.**	
23.		
23.	RMS Condition - Roads Act Approval  Any works within the road reserve of the Burley Griffin Way requires approval under Section 138 of the Roads Act, 1993 from the road authority (Council) and concurrence from Roads and Maritime Services prior to commencement of any such works. The developer is responsible for all public utility adjustment/relocation works, necessitated by the development and as required by the various public utility authorities and/or their agents.	
	REASON: Statutory requirement for works approval within road reserves.	
24.	Crown Lands  Application to be made with the Department of Industry – Lands for a licence to undertake works/activities on the Crown road portion, prior to the purchase and closure of the Crown Road.  REASON: To ensure appropriate procedures are followed in relation to the use of Crown roads	
	to the satisfaction of the responsible authority.	
25.	Erection of Signs for Development	
	The two following signs must be erected in a prominent position on site so they can be read easily by anyone on any public road or other public place adjacent to the developed site.	
	a. The name of the Principal Contractor and a telephone number where that person may be contacted outside working hours, and	
	b. Stating that unauthorised entry to the site is prohibited.	
	REASON: To ensure compliance with Section 80A(11) of the Environmental Planning and Assessment Act 1979, as amended.	
26.	Rubbish Container	
	A site rubbish container shall be provided on the site for the duration of the construction works and be in place prior to the commencement of any works on site.	
	REASON: Council requirement to prevent pollution of the environment by wind-blown litter.	
27.	Hoarding	
	A hoarding barricade or fence shall be erected between the building and any adjoining public place and/or around any road openings or obstructions if pedestrian or vehicular traffic is likely to be endangered, obstructed or inconvenienced by the proposed works. If necessary, an awning sufficient to prevent any material from, or in connection with the work falling onto the public place is also to be erected.	

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The work is to be kept lit during the time between sunset and sunrise if the work may be a source of danger to persons using the adjoining public place.

**REASON:** Council requirement for the protection of the public.

# 28. **Temporary Closet**

Temporary closet accommodation being provided throughout the course of building operations by means of a chemical closet complying with the requirements of the Department of Environment and Climate Change.

**REASON**: To ensure all workers on site have access to toilet facilities.

#### **DURING WORKS**

The development will need to meet certain standards. The following conditions set out matters that need to be done during the construction or implementation process.

# 29. **Complaints Management System**

A Complaints Management System is to be set up and maintained in accordance with the system outlined in the Statement of Environmental Effects. Records shall be kept up to date and available for inspection by Council at any time during construction or operation of the facility.

**REASON**: To ensure complaints are managed and addressed appropriately.

# 30. DA Record to be Kept On-Site

The builder must at all times maintain, on the job, a legible copy of the plan and specification approved with the Construction Certificate.

**REASON:** Because it is in the public interest that a copy of the construction certificate plans are available. Section 79C(1)(e) of the Environmental Planning and Assessment Act 1979, as amended.

# 31. Hours of Operation – Construction

Construction work shall only be carried out within the following times:

Monday to Saturday:

7.00am to 6.00pm

Saturday:

7.00am to 1.00pm if inaudible on residential premises,

otherwise

8.00am to 1.00pm

Sunday or Public Holidays:

No demolition or construction work permitted.

The above restrictions may be subject to review and variation by Council upon assessment of the level of annoyance if any that may arise.

**REASON:** Council requirement to reduce likelihood of noise nuisance and to preserve the amenity of the

# 32. **Building Inspections**

The following Critical Stage Inspections are required to be carried out by the Principal Certifying Authority to enable the issue of an **O**ccupation Certificate:

- a. After excavation for, and prior to the placement of, any footings.
- b. Prior to pouring any in-situ reinforced concrete building element.
- c. After the building work has been completed and prior to any occupation certificate being
- d. issued in relation to the building work.

**NOTE**: If Council is nominated as the Principal Certifying Authority, 48 hours prior notice for all of the above inspections (where applicable) shall be given.

**NOTE:** An **Occupation** Certificate in relation to the building will not be issued unless all of the above stages have been inspected.

**REASON**: Because it is in the public interest that the development complies with Section 109E(3)(d) of the Environmental Planning And Assessment Act 1979, as amended.

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# 33. Aboriginal Heritage

In the event of any Aboriginal archaeological material being discovered during earthmoving/construction works, all work in that area shall cease immediately and the Office of Environment and Heritage (OEH) notified of the discovery as soon as practicable. Work shall only recommence upon the authorisation of the OEH.

**REASON**: Council and statutory requirement to protect Aboriginal heritage.

#### 34. Rubbish and Debris

All building work rubbish and debris, including that which can be windblown, shall be contained on site at all times prior to disposal at Council's Waste Management Centre.

**NOTE**: No building rubbish or debris shall be placed or permitted to be placed on any adjoining public reserve, footway or road.

**REASON:** To ensure that the building site and adjoining public places are maintained in ac clean and tidy condition so as not to interfere with the amenity of the area. Section 79C (1)(e) of the Environmental Planning and Assessment Act 1979, as amended.

# 35. Erosion and Sediment Control

Erosion and sediment control measures shall be undertaken and maintained in respect to any part of the land where the natural surface is disturbed or earthworks are carried out. Materials from the site are not to be tracked into the road by vehicles entering or leaving the site. At the end of each working day any dust, dirt or other sediment shall be swept off the road, contained on the site and not washed down any stormwater pit or gutter. NOTE: All erosion and sediment control measures must be in place prior to earthworks

**REASON**: To protect the environment and any **C**ouncil infrastructure and to ensure all system functions remain in good working order.

#### 36. Waste General

commencing.

Waste construction materials including soil arising from the development, must be disposed of at an appropriately licensed waste facility.

**REASON:** To ensure environmentally safe disposal.

#### 37. Stormwater

All storm water shall be managed on site and is to be provided to divert surface water clear of all buildings and structures, and dispose of such water in a way that avoids the likelihood of damage or nuisance to any other structures or property.

**REASON**: To ensure a safe and sustainable storm water drainage system.

# 38. RMS Condition - Quantities Log

The operator is to record and maintain a log of the quantities of material and traffic movement to and from of the subject site. This log is to be kept on site and be available for inspection at the request of the consent authority.

**REASON**: RMS requirement for appropriate record keeping.

# PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE

#### 39. RMS Condition - Intersection Design

As a minimum, the intersection of the Burley Griffin Way and Sandy Creek Road is to be constructed and line marked as a public road intersection with a sealed Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services for the posted speed zone. The intersection is to be designed and constructed to the standard required for an approved road train route.

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	All proposed intersection designs shall be submitted to Council and RMS for approval and works completed within six (6) months of the date of this Notice of Determination and prior to the issue of an Occupation Certificate.
	<b>REASON:</b> RMS requirement for appropriate intersection design and treatment to ensure the safe movement of vehicles accessing the site.
40.	RMS Condition - Intersection Line Marking
	The intersection of the Burley Griffin Way and Sandy Creek Road shall be designed and constructed so that vehicles turning through the intersection are not required to cross to the opposing travel lane in order to perform a turn manoeuvre. The intersection shall be line marked in accordance with Australian standards.
	All proposed intersection designs shall be submitted to Council and RMS for approval and works completed within six (6) months of the date of this Notice of Determination and prior to the issue of an Occupation Certificate.
	<b>REASON:</b> RMS requirement for appropriate intersection design and treatment to ensure the safe movement of vehicles accessing the site.
41.	RMS Condition - Site Entry Intersection Design and Line Marking
	As a minimum, the intersection of the driveway to the site of the rail loading facility and Sandy Creek Road is to be designed and constructed as a public road intersection with a Basic Right Turn (BAR) and Basic Left Turn (BAL) intersection treatment in accordance with the Austroads Guide to Road Design for the posted speed zone. The design vehicle for the intersection shall be the largest vehicle likely to access the subject site.
	All proposed intersection designs shall be submitted to Council for approval and works completed within six (6) months of the date of this Notice of Determination and prior to the issue of an Occupation Certificate.
	REASON: RMS requirement for appropriate intersection design and treatment to ensure the safe movement of vehicles accessing the site. Compliance with Council Engineering Guidelines for Subdivisions and Development Standards 2011.
42.	Damage to Road Infrastructure
	Any damage or disturbance to the road reserve of the Burley Griffin Way is to be restored to match surrounding landform in accordance with Council requirements.
	REASON: To ensure public infrastructure is maintained appropriately.
43.	On completion of construction of the building alterations the owner of the building is required to submit to the Principal Certifying Authority (PCA) a Fire Safety Certificate(s) with respect to each essential fire safety measure installed in association with the building - as listed on the Fire Safety Schedule attached to the Construction Certificate. Such certificate(s) must be
	submitted to the PCA prior to occupation or use of the subject building. Copies of the subject Fire Safety Certificate(s) must also be forwarded by the owner to Council (if not the appointed PCA) and the Commissioner of Fire and Rescue NSW and displayed within the subject building in a prominent position.
44.	Occupation Certificate Application
	Application for any Occupation Certificate shall be submitted to and approved by the Principal Certifying Authority prior to occupation of the building. It is the responsibility of the developer to apply to their Principal Certifying Authority (PCA) for an Occupation Certificate.
	REASON: Compliance with Section 109M of the Environmental Planning & Assessment Act 1979.
45.	Occupation
	The use or occupation of the subject premises is not to commence until such time as the terms of the development consent have been complied with and an Occupation Certificate

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has been issued by the Principal Certifying Authority (PCA).

It is the responsibility of the developer to apply to their Principal Certifying Authority (PCA) for an Occupation Certificate.

**REASON**: To ensure that the work forming the conditions of consent has been completed prior to the use of the development. Section 91(3)(f) of the Environmental Planning and Assessment Act 1979, as amended.

#### **ONGOING REQUIREMENTS**

# 46. Hours of Operation

Operating hours of the grain loading facility including the weighbridge and sample stand to be limited as follows:

- a. Daily during normal operations 7.00am to 6.00pm.
- b. Daily during peak (harvest) season 7.00am to 10.00pm.
- c. Council and adjoining landowners are to be consulted in the event that 24 hour operations are required during peak (harvest) season prior to commencement of such operations.

**REASON:** To preserve the amenity of the area.

# 47. Annual Fire Safety Statements

- a. The owner of the building is required to submit to Council at least once in each period of 12 months following the completion of the building an Annual Fire Safety Statement(s) with respect to each essential fire safety measure associated with the building.
- b. Copies of the subject Annual Fire Safety Statements must also be forwarded by the owner to the Commissioner of the Fire and Rescue NSW and displayed within the subject building in a prominent position. In this regard Fire and Rescue NSW has requested that only electronic copies of the statement be forwarded, with their dedicated email address for such Statements being: afss@fire.nsw.gov.au

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# Appendix C CNET (noise) results



Project name	Example
Scenario name	Shallow excavation
Receiver address	GrainCorp development
Select area ground type	Rural
Select type of background noise level input	Representative Noise Environment

		Representative Noise Environment	User Input
Noise area category		R1	
	Day	40	
RBL or LA90 Background level (dB(A))	Evening	35	
	Night	30	
*	Day	50	
1 8 - 205 1 3 Mailes	Day (OOHW)	45	
LAeq(15minute) Noise mangement level (dB(A))	Evening	40	
	Night	35	

Is all plant at the same representative distance to the receiver? Y/N	Υ	ĺ
Representative distance (m)	250	All

All at Representative Distance

- (a) where representative noise environment is selected select the appropriate noise area category (cell C16). The works 'Representative Noise Environ.' provides a number of examples to help select the noise area category.
- (b) where user input is selected enter the measured background noise level for each time period (cells D17 to D19).
- Is all plant at the same representative distance to the receiver? Select Y or N (cell C24):
  - (a) where Y is selected enter the representative distance in cell C25.
  - (b) where N is selected enter the representative distance in cell 025.
- For the scenario (e.g. shallow excavation), select plant from the drop-down list in cells A28 to A47 (e.g. dump trucks + excavate (a) enter quantity for each selected plant in cells D28 to D47.
  - (b) where N is selected from step #6 enter the distance to receiver for each individual plant in cells E28 to E47.
    - (c) is there line of sight to receiver? select from drop down list in cells F28 to F47.
- 8. Identify the level above background and/or noise mangement level (see rows 57 to 62).
- 9. Identify and implement the relevant additional mitigation measures (see rows 63 to 65).
- 9. Document a summary report detailing:
  - (a) project description (including location, duration, hours of work, construction methodology, plant, potentially impacted
  - (b) background noise levels.
  - (c) noise management levels .
  - (d) predicted noise levels for each time period.
  - (e) sleep disturbance mitigation distance for night works.
  - (f) mitigation measures.
  - (g) Team member responsible for implementing mitigation measures and managing noise and vibration.

(Note that suitable noise management levels for other noise-sensitive businesses not identified in the Construction Noise Estimat investigated on a project-by-project basis. Please contact a Roads and Maritime noise speciliast for more information)

Type/ model plant (See Sources Sheet)	SWL LAeq (dB(A))	SPL @7m (dB(A))	Quantity	Individual distance to receiver (m)	Is there line of sight to receiver? Y/N	correction (dBA)	correction (dBA)	Distance used in calculation (m)	Contribution SPL (dB(A))
Compactor	113	88	2		Yes	3	0	250	52
637E Scraper	110	85	1		Yes	0	0	250	46
Roller	107	82	2		Yes	3	0	250	46
Grader	110	85	1	1	Yes	0	0	250	46
50t Dump truck	110	85	2	(E.	Yes	3	0	250	49
	-				Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
				YE.	Yes	0	0		-888
					Yes	0	0		-888
				THE STATE OF THE S	Yes	0	0		-888
					Yes	0	0		-888
			H		Yes	0	0		-888
				J. E. C.	Yes	0	0		-888
			,		Yes	0	0		-888
	-		. 44		Yes	0	0		-888
			11	i i	Yes	0	0		-888
					Yes	0	0		-888

Total SPL L Aeq(15minute) (dB(A))	56

Project name	Example
Scenario name	Shallow excavation
Receiver address	GrainCorp development
Select area ground type	Rural
Select type of background noise level input	Representative Noise Environment

		Representative Noise Environment	User Input
Noise area category		R1	
	Day	40	
RBL or LA90 Background level (dB(A))	Evening	35	
	Day Evening Night Day Day (OOHW) Evening	30	
i i	Day	50	
LAeq(15minute) Noise mangement level (dB(A))	Day (OOHW)	45	
L'Aequaminate) noise mangement lever (db(A))	Evening	40	
J.	Night	35	•

all plant at the same representative distance to the receiver? You Representative distance (m)	Υ	
Representative distance (m)	420	All at Representative Distance
	U.	

- (a) where representative noise environment is selected select the appropriate noise area category (cell C16). The worksheet titled 'Representative Noise Environ.' provides a number of examples to help select the noise area category.
- (b) where user input is selected enter the measured background noise level for each time period (cells D17 to D19).
- 6. Is all plant at the same representative distance to the receiver? Select Y or N (cell C24):
  - (a) where Y is selected enter the representative distance in cell C25.
  - (b) where N is selected go to step #7
- 7. For the scenario (e.g. shallow excavation), select plant from the drop-down list in cells A28 to A47 (e.g. dump trucks + excavator).
  - (a) enter quantity for each selected plant in cells D28 to D47.
  - (b) where N is selected from step #6 enter the distance to receiver for each individual plant in cells E28 to E47.
  - (c) is there line of sight to receiver? select from drop down list in cells F28 to F47.
- 8. Identify the level above background and/or noise mangement level (see rows 57 to 62).
- 9. Identify and implement the relevant additional mitigation measures (see rows 63 to 65).
- 9. Document a summary report detailing:
  - (a) project description (including location, duration, hours of work, construction methodology, plant, potentially impacted receivers, etc.).
  - (b) background noise levels.
  - (c) noise management levels.
  - (d) predicted noise levels for each time period.
  - (e) sleep disturbance mitigation distance for night works.
  - (f) mitigation measures.
  - (g) Team member responsible for implementing mitigation measures and managing noise and vibration.

(Note that suitable noise management levels for other noise-sensitive businesses not identified in the Construction Noise Estimator should be investigated on a project-by-project basis. Please contact a Roads and Maritime noise speciliast for more information)

Type/ model plant (See Sources Sheet)	SWL LAeq (dB(A))	SPL @7m (dB(A))	Quantity	Individual distance to receiver (m)	Is there line of sight to receiver? Y/N	Quantity correction (dBA)	Shielding correction (dBA)	Distance used in calculation (m)	Contribution SPL (dB(A))
Compactor	113	88	2		Yes	3	0	420	45
637E Scraper	110	85	1		Yes	0	0	420	39
Roller	107	82	2		Yes	3	0	420	39
Grader	110	85	1		Yes	0	0	420	39
50t Dump truck	110	85	2		Yes	3	0	420	42
					Yes	0	0	2	-888
					Yes	0	0		-888
					Yes	0	0		-888
				ľ.	Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0	9	-888
			A	0	Yes	0	0		-888
					Yes	0	0	20	-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0	0 0	-888
					Yes	0	0		-888
	§				Yes	0	0	2	-888
					Yes	0	0		-888
					Yes	0	0		-888

Total SPL L Aeq(15minute) (dB(A))	49
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Project name	Example
Scenario name	Shallow excavation
Receiver address	GrainCorp development
Select area ground type	Rural
Select type of background noise level input	Representative Noise Environment

		Representative Noise Environment	User Input
Noise area category		R1	
RBL or LA90 Background level (dB(A))	Day	40	
	Evening	35	
	Night	30	
	Day	50	
LAeq(15minute) Noise mangement level (dB(A))	Day (OOHW)	45	
LAeq(Isminute) Noise mangement level (db(A))	Evening	40	
	Night	35	

Is all plant at the same representative distance to the receiver? Y/N	Ÿ	
Representative distance (m)	250	All at Representative Distance

monitoring data is available). (a) where representative noise environment is selected - select the appropriate noise area category (cell C16). The worksheet titled

'Representative Noise Environ.' provides a number of examples to help select the noise area category.

(b) where user input is selected - enter the measured background noise level for each time period (cells D17 to D19).

6. Is all plant at the same representative distance to the receiver? Select Y or N (cell C24):

(a) where Y is selected - enter the representative distance in cell C25.

(b) where N is selected - go to step #7

7. For the scenario (e.g. shallow excavation), select plant from the drop-down list in cells A28 to A47 (e.g. dump trucks + excavator).

(a) enter quantity for each selected plant in cells D28 to D47.

(b) where N is selected from step #6 - enter the distance to receiver for each individual plant in cells E28 to E47.

(c) is there line of sight to receiver? select from drop down list in cells F28 to F47.

8. Identify the level above background and/or noise mangement level (see rows 57 to 62).

9. Identify and implement the relevant additional mitigation measures (see rows 63 to 65).

9. Document a summary report detailing:

(a) project description (including location, duration, hours of work, construction methodology, plant, potentially impacted receivers, etc.).

(b) background noise levels.

(c) noise management levels.

(d) predicted noise levels for each time period.

(e) sleep disturbance mitigation distance for night works.

(f) mitigation measures.

(g) Team member responsible for implementing mitigation measures and managing noise and vibration.

(Note that suitable noise management levels for other noise-sensitive businesses not identified in the Construction Noise Estimator should be investigated on a project-by-project basis. Please contact a Roads and Maritime noise speciliast for more information)

Type/ model plant (See Sources Sheet)	SWL LAeq (dB(A))	SPL @7m (dB(A))	Quantity	Individual distance to receiver (m)	Is there line of sight to receiver? Y/N	correction (dBA)	correction (dBA)	Distance used in calculation (m)	Contribution SPL (dB(A))
Generator	103	78	5		Yes	7	0	250	46
Front End Loader	113	88	3		Yes	5	0	250	54
Tracked Excavator	110	85	1		Yes	0	0	250	46
50t Dump truck	110	85	3		Yes	5	0	250	51
	0 2				Yes	. 0	0	0	-888
					Yes	0	0		-888
					Yes	0	0		-888
	i i				Yes	0	0		-888
					Yes	0	0		-888
	<u> </u>				Yes	0	0	8	-888
					Yes	0	0	5	-888
					Yes	0	0		-888
	4				Yes	0	0	4	-888
					Yes	0	0	î	-888
				1	Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0	),	-888
					Yes	0	0		-888
			ĵ.		Yes	0	0		-888
					Yes	0	0	8	-888

Total SPL L Aeq(15minute) (dB(A))	57
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Project name	Example		
Scenario name	Shallow excavation		
Receiver address	GrainCorp development		
Select area ground type	Rural		
Select type of background noise level input	Representative Noise Environment		

		Representative Noise Environment	User Input
Noise area category		R1	
	Day	40	
RBL or LA90 Background level (dB(A))	Evening	35	
	Night	30	
L Aeq(15minute) Noise mangement level (dB(A))	Day	50	
	Day (OOHW)	45	
	Evening	40	
Į.	Night	35	

Is all plant at the same representative distance to the receiver? Y/N	Y	
Representative distance (m)	420	All at Representative Distance

Total SPL L Aeg(15minute) (dB(A))

50

- (a) where representative noise environment is selected select the appropriate noise area category (cell C16). The worksheet titled 'Representative Noise Environ.' provides a number of examples to help select the noise area category.
- (b) where user input is selected enter the measured background noise level for each time period (cells D17 to D19).
- 6. Is all plant at the same representative distance to the receiver? Select Y or N (cell C24):
  - (a) where Y is selected enter the representative distance in cell C25.
  - (b) where N is selected go to step #7
- 7. For the scenario (e.g. shallow excavation), select plant from the drop-down list in cells A28 to A47 (e.g. dump trucks + excavator).
  - (a) enter quantity for each selected plant in cells D28 to D47.
  - (b) where N is selected from step #6 enter the distance to receiver for each individual plant in cells E28 to E47.
  - (c) is there line of sight to receiver? select from drop down list in cells F28 to F47.
- 8. Identify the level above background and/or noise mangement level (see rows 57 to 62).
- 9. Identify and implement the relevant additional mitigation measures (see rows 63 to 65).
- 9. Document a summary report detailing:
  - (a) project description (including location, duration, hours of work, construction methodology, plant, potentially impacted receivers, etc.).
  - (b) background noise levels.
  - (c) noise management levels,
  - (d) predicted noise levels for each time period.
  - (e) sleep disturbance mitigation distance for night works.
  - (f) mitigation measures.
  - (g) Team member responsible for implementing mitigation measures and managing noise and vibration.

(Note that suitable noise management levels for other noise-sensitive businesses not identified in the Construction Noise Estimator should be investigated on a project-by-project basis. Please contact a Roads and Maritime noise speciliast for more information)

Type/ model plant (See Sources Sheet)	SWL LAeq (dB(A))	SPL @7m (dB(A))	Quantity	Individual distance to receiver (m)	Is there line of sight to receiver? Y/N	Quantity correction (dBA)	Shielding correction (dBA)	Distance used in calculation (m)	Contribution SPL (dB(A))
Generator	103	78	5		Yes	7	0	420	39
Front End Loader	113	88	3		Yes	5	0	420	47
Tracked Excavator	110	85	1		Yes	0	0	420	39
50t Dump truck	110	85	3		Yes	5	0	420	44
					Yes	0	0		-888
					Yes	0	0	8	-888
1	40			6	Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
	i i				Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
	*				Yes	0	0	0 0	-888
	i i		180		Yes	0	0	8 8	-888
l .					Yes	0	0		-888
					Yes	0	0		-888

Project name	Example
Scenario name	Shallow excavation
Receiver address	GrainCorp development
Select area ground type	Rural
Select type of background noise level input	Representative Noise Environment

		Representative Noise Environment	User Input
Noise area category		R1	
	Day	40	
RBL or LA90 Background level (dB(A))	Evening	35	
	Night	30	
LAeq(15minute) Noise mangement level (dB(A))	Day	50	
	Day (OOHW)	45	
	Evening	40	
	Night	35	

Y	
250	All at Representative Distance
	Y 250

	monitoring data is available).
1	<ul><li>(a) where representative noise environment is selected - select the appropriate noise area category (cell C16). The worksheet titl</li></ul>
1	"Representative Noise Environ." provides a number of examples to help select the noise area category.

(b) where user input is selected - enter the measured background noise level for each time period (cells D17 to D19).

6. Is all plant at the same representative distance to the receiver? Select Y or N (cell C24):

is all plant at the same representative distance to the receiver? Select Y or N (cell G24)

(a) where Y is selected - enter the representative distance in cell C25.

(b) where N is selected - go to step #7

7. For the scenario (e.g. shallow excavation), select plant from the drop-down list in cells A28 to A47 (e.g. dump trucks + excavator).

(a) enter quantity for each selected plant in cells D28 to D47.

(b) where N is selected from step #6 - enter the distance to receiver for each individual plant in cells E28 to E47.

(c) is there line of sight to receiver? select from drop down list in cells F28 to F47.

8. Identify the level above background and/or noise mangement level (see rows 57 to 62).

9. Identify and implement the relevant additional mitigation measures (see rows 63 to 65).

9. Document a summary report detailing:

(a) project description (including location, duration, hours of work, construction methodology, plant, potentially impacted received

(b) background noise levels.

(c) noise management levels .

(d) predicted noise levels for each time period.

(e) sleep disturbance mitigation distance for night works.

(f) mitigation measures.

(g) Team member responsible for implementing mitigation measures and managing noise and vibration.

(Note that suitable noise management levels for other noise-sensitive businesses not identified in the Construction Noise Estimator should investigated on a project-by-project basis. Please contact a Roads and Maritime noise speciliast for more information)

Type/ model plant (See Sources Sheet)	SWL LAeq (dB(A))	SPL @7m (dB(A))	Quantity	Individual distance to receiver (m)	Is there line of sight to receiver? Y/N	Quantity correction (dBA)	Shielding correction (dBA)	Distance used in calculation (m)	Contribution SPL (dB(A))
Front End Loader	113	88	2		Yes	3	0	250	52
50t Dump truck	110	85	2		Yes	3	0	250	49
Tracked Excavator	110	85	1		Yes	0	0	250	46
	-			,	Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
	-				Yes	0	0		-888
				三 三	Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0	*	-888
					Yes	0	0	1	-888
					Yes	0	0	i i	-888
					Yes	0	0	1	-888
					Yes	0	0		-888
					Yes	0	0		-888

Total SPL L Aeq(15minute) (dB(A))	55
-----------------------------------	----

Project name	Example
Scenario name	Shallow excavation
Receiver address	GrainCorp development
Select area ground type	Rural
Select type of background noise level input	Representative Noise Environment

		Representative Noise Environment	User Input
Noise area category		R1	
RBL or LA90 Background level (dB(A))	Day	40	
	Evening	35	
	Night	30	
LAeq(15minute) Noise mangement level (dB(A))	Day	50	
	Day (OOHW)	45	
	Evening	40	
Į.	Night	35	

Is all plant at the same representative distance to the receiver? Y/N	Υ	
Representative distance (m)	420	All at Representative Distance

- (a) where representative noise environment is selected select the appropriate noise area category (cell C16). The worksheet titled 'Representative Noise Environ.' provides a number of examples to help select the noise area category.
- (b) where user input is selected enter the measured background noise level for each time period (cells D17 to D19).
- 6. Is all plant at the same representative distance to the receiver? Select Y or N (cell C24):
  - (a) where Y is selected enter the representative distance in cell C25.

  - (b) where N is selected go to step #7
- 7. For the scenario (e.g. shallow excavation), select plant from the drop-down list in cells A28 to A47 (e.g. dump trucks + excavator).
  - (a) enter quantity for each selected plant in cells D28 to D47.
  - (b) where N is selected from step #6 enter the distance to receiver for each individual plant in cells E28 to E47.
  - (c) is there line of sight to receiver? select from drop down list in cells F28 to F47.
- 8. Identify the level above background and/or noise mangement level (see rows 57 to 62).
- 9. Identify and implement the relevant additional mitigation measures (see rows 63 to 65).
- 9. Document a summary report detailing:
  - (a) project description (including location, duration, hours of work, construction methodology, plant, potentially impacted receivers, etc.).
  - (b) background noise levels.
  - (c) noise management levels.
  - (d) predicted noise levels for each time period.
  - (e) sleep disturbance mitigation distance for night works.
  - (f) mitigation measures.
  - (g) Team member responsible for implementing mitigation measures and managing noise and vibration.

(Note that suitable noise management levels for other noise-sensitive businesses not identified in the Construction Noise Estimator should be investigated on a project-by-project basis. Please contact a Roads and Maritime noise speciliast for more information)

Quantity Shielding

Type/ model plant (See Sources Sheet)	SWL LAeq (dB(A))	SPL @7m (dB(A))	Quantity	Individual distance to receiver (m)	Is there line of sight to receiver? Y/N	correction (dBA)	correction (dBA)	Distance used in calculation (m)	SPL (dB(A))
Front End Loader	113	88	2		Yes	3	0	420	45
50t Dump truck	110	85	2		Yes	3	0	420	42
Tracked Excavator	110	85	1		Yes	0	0	420	39
AND REPORTED BY SHARE SHOWN					Yes	0	0		-888
					Yes	0	0		-888
	8 0				Yes	0	0	8	-888
	0				Yes	0	0		-888
	Į.				Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
	Ť.				Yes	0	0	î'	-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888
	4		9		Yes	0	0	4	-888
					Yes	0	0		-888
					Yes	0	0		-888
					Yes	0	0		-888

Total SPL L Aeq(15minute) (dB(A)	Total	SPL	L Aeg(15minute)	(dB	(A)
----------------------------------	-------	-----	-----------------	-----	-----

# **Appendix D AHIMS search results**



Your Ref/PO Number : 22-115

Client Service ID: 676167

Date: 19 April 2022

NGH Environmental - Wagga Wagga

Po Box 470

Bega New South Wales 2550

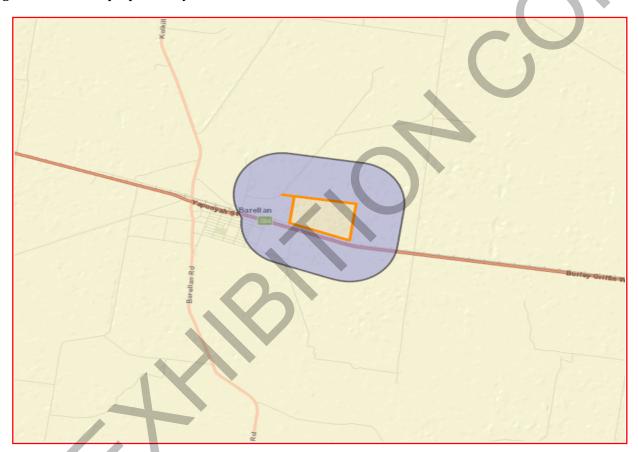
Attention: Alyce Gill

Email: alyce.g@nghconsulting.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot: 2, DP:DP1033278, Section: - with a Buffer of 1000 meters, conducted by Alyce Gill on 19 April 2022.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0 Aboriginal sites are recorded in or near the above location.
--

0 Aboriginal places have been declared in or near the above location. \*

#### If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

#### Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal
  places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as
   a site on AHIMS

ABN 34 945 244 274

Email: ahims@environment.nsw.gov.au

Web: www.heritage.nsw.gov.au

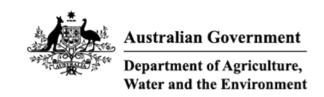
• This search can form part of your due diligence and remains valid for 12 months.

## Appendix E Flora list

Exotic	Scientific Name	Common Name
Trees		
	Callitris columellaris	White Cypress Pine
	Eucalyptus populnea	Poplar Box
Herbs and forbs		
*	Alternanthera pungens	Khaki Weed
	Atriplex spinibractea	Spiny-fruit Saltbush
*	Brassica rapa	Canola
*	Conyza bonariensis	Fleabane
*	Echium plantagineum	Patterson's Curse
	Pseudognaphalium luteoalbum	Jersey Cudweed
	Salsola australis	Prickly Saltwort
*	Silybum marianum	Variegated Thistle
	Vittadinia cuneata	Fuzzweed
	Wahlenbergia sp.	
Grasses		
*	Chloris gayana	Rhodes Grass
	Enteropogon ramosus	Curly Windmill Grass
	Panicum sp.	
Sedges		
	Carex sp.	A Carex
	Juncus sp.	A Rush

## **Appendix F Background searches**





# **EPBC Act Protected Matters Report**

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 14-Apr-2022

**Summary** 

**Details** 

**Matters of NES** 

Other Matters Protected by the EPBC Act

**Extra Information** 

Caveat

**Acknowledgements** 

## **Summary**

### Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the <u>Administrative Guidelines on Significance</u>.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	4
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	25
Listed Migratory Species:	10

### Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A <u>permit</u> may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	17
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

### **Extra Information**

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	3
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

## **Details**

## Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)		[ Resource Information
Ramsar Site Name	Proximity	Buffer Status
Banrock station wetland complex	500 - 600km upstream from Ramsar site	In feature area
Hattah-kulkyne lakes	300 - 400km upstream from Ramsar site	In feature area
Riverland	500 - 600km upstream from Ramsar site	In feature area
The coorong, and lakes alexandrina and albert wetland	600 - 700km upstream from Ramsar site	In feature area

### Listed Threatened Ecological Communities

[Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	Community likely to occur within area	In feature area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community may occu within area	ırln feature area
Weeping Myall Woodlands	Endangered	Community may occu within area	ırln feature area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area	In feature area

### Listed Threatened Species

[ Resource Information ]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name Threatened Category Presence Text Buffer Status

BIRD

Scientific Name	Threatened Category	Presence Text	Buffer Status
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pedionomus torquatus Plains-wanderer [906]	Critically Endangered	Species or species habitat may occur within area	In feature area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Polytelis swainsonii			
Superb Parrot [738]	Vulnerable	Species or species habitat known to occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
FISH			
Galaxias rostratus			
Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow [84745]	Critically Endangered	Species or species habitat may occur within area	In feature area
Maccullochella macquariensis		1	
Trout Cod [26171]  Macquaria australasica	Endangered	Species or species habitat may occur within area	In buffer area only
Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area	In feature area
FROG			
Litoria raniformis Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat may occur within area	In buffer area only
MAMMAL			
Nyctophilus corbeni			
Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area	In feature area
Phascolarctos cinereus (combined popul	ations of Old NSW and th	ACT)	
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat may occur within area	In feature area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In feature area
PLANT			
Austrostipa wakoolica [66623]	Endangered	Species or species habitat likely to occur within area	In feature area

	imeatories estegery		
Caladenia arenaria			
Sand-hill Spider-orchid [9275]	Endangered	Species or species habitat may occur within area	In buffer area only
Lepidium aschersonii			
Spiny Pepper-cress [10976]	Vulnerable	Species or species habitat may occur within area	In feature area
<u>Lepidium monoplocoides</u> Winged Pepper-cress [9190]	Endangered	Species or species habitat may occur within area	In feature area
Swainsona murrayana Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Listed Migratory Species		[ Res	source Information ]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds	Threatened Category	TOSCHOO TOXU	Danci Otatas
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Hirundapus caudacutus			
White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Motacilla flava			
Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca			
Satin Flycatcher [612]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area

Threatened Category

Presence Text

**Buffer Status** 

Scientific Name

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos			
Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Gallinago hardwickii			
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area	In feature area
Numenius madagascariensis			
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area

## Other Matters Protected by the EPBC Act

## Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
Communications, Information Technology and the Arts - Telstra Corporation	n Limited	
Commonwealth Land - Australian Telecommunications Commission [15360	)]NSW	In buffer area only

Listed Marine Species	•	[Res	source Information
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis			
Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osc Black-eared Cuckoo [83425]	<u>culans</u>	Species or species habitat likely to occur within area overfly marine area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area overfly marine area	In buffer area only
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In buffer area only
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Myiagra cyanoleuca			
Satin Flycatcher [612]		Species or species habitat may occur within area overfly marine area	In feature area
Neophema chrysostoma			
Blue-winged Parrot [726]		Species or species habitat likely to occur within area overfly marine area	In feature area
Numenius madagascariensis			
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Rostratula australis as Rostratula bengha	alensis (sensu lato)	1	
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area

## Extra Information

EPBC Act Referrals			[Resou	rce Information ]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Not controlled action (particular manne	er)			
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

### Caveat

#### 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

#### 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

#### 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

#### 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

## Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- -Office of Environment and Heritage, New South Wales
- -Department of Environment and Primary Industries, Victoria
- -Department of Primary Industries, Parks, Water and Environment, Tasmania
- -Department of Environment, Water and Natural Resources, South Australia
- -Department of Land and Resource Management, Northern Territory
- -Department of Environmental and Heritage Protection, Queensland
- -Department of Parks and Wildlife, Western Australia
- -Environment and Planning Directorate, ACT
- -Birdlife Australia
- -Australian Bird and Bat Banding Scheme
- -Australian National Wildlife Collection
- -Natural history museums of Australia
- -Museum Victoria
- -Australian Museum
- -South Australian Museum
- -Queensland Museum
- -Online Zoological Collections of Australian Museums
- -Queensland Herbarium
- -National Herbarium of NSW
- -Royal Botanic Gardens and National Herbarium of Victoria
- -Tasmanian Herbarium
- -State Herbarium of South Australia
- -Northern Territory Herbarium
- -Western Australian Herbarium
- -Australian National Herbarium, Canberra
- -University of New England
- -Ocean Biogeographic Information System
- -Australian Government, Department of Defence
- Forestry Corporation, NSW
- -Geoscience Australia
- -CSIRO
- -Australian Tropical Herbarium, Cairns
- -eBird Australia
- -Australian Government Australian Antarctic Data Centre
- -Museum and Art Gallery of the Northern Territory
- -Australian Government National Environmental Science Program
- -Australian Institute of Marine Science
- -Reef Life Survey Australia
- -American Museum of Natural History
- -Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
- -Tasmanian Museum and Art Gallery, Hobart, Tasmania
- -Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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Canberra City ACT 2601 Australia
+61 2 6274 1111



Scientific	CommonName	BC listing	EPBC listing
Lophochroa leadbeateri	Major Mitchell's Cockatoo	V	
Polytelis swainsonii	Superb Parrot	V	V
Lophochroa leadbeateri	Major Mitchell's Cockatoo	V	
Lophochroa leadbeateri	Major Mitchell's Cockatoo	V,P,2	
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	
Polytelis swainsonii	Superb Parrot	V	V
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	
Diuris tricolor	Pine Donkey Orchid	V	
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	







# Transitional native vegetation regulatory map

### Legend

- Cadastre
- Local Land Services Regions
- Local Government Area

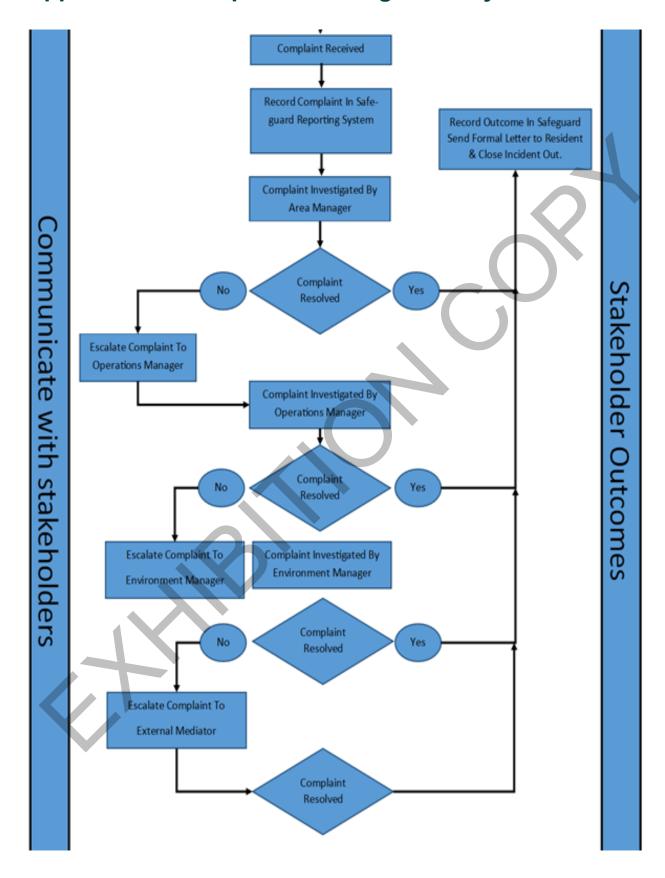
#### Transitional native vegetation regulatory map

- steep or highly erodible land, protected riparian land or special category land (category 2-vulnerable regulated land)
- category 2-sensitive regulated land
- category 2-sensitive regulated land and steep or highly erodible land, protected riparian land or special category land (category 2-vulnerable regulated land)
- Land excluded from LLS Act
- Werriwa & Monaro CEEC Advisory Layer

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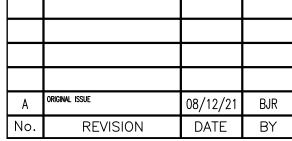
### Appendix G Complaints management system



## **Appendix H Drainage plans**







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SCALE
1:4,000 (A3 SHEET)

GRAINCORP BARELLAN
PROPOSED DEVELOPMENT

DRAINAGE LAYOUT SHEET 1 OF 1

drawing no. 0646\_3.1

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## **Appendix I** Environmental Management Plan







# ENVIRONMENTAL MANAGEMENT PLAN NEW SOUTH WALES REGIONAL FACILITIES (SOUTHERN REGION)

8 December 2021

Environmental Management Plan New South Wales Regional Facilities (Southern Region)

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#### **DOCUMENT REVISION AND APPROVAL**

This plan is reviewed by a suitably qualified person under the following circumstances:

- Routine annual review;
- Any major change to operations that influences the site's environmental impact; or
- Any change to legislation or approvals/licences that will affect site operations.

Author	Reviewer	Summary of changes	Revision Date	Revision version
Liz Mullan	Mellissa Zulpo	Initial Draft for GrainCorp review	27/03/2020	Draft
Liz Mullan	Jon Alexander	Final Draft for GrainCorp finalisation	26/6/2020	Final Draft
Jason Dickie	Michael Kennedy	Issue for use	14/09/2020	0

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#### 1. Introduction

#### 1.1. ABOUT GRAINCORP PTY LTD

GrainCorp is a public company listed on the Australian Stock Exchange. The company's core business is the receival and storage of grain and related commodities within Australia and New Zealand. It also provides logistics and marketing of these products.

#### 1.2. Purpose

The purpose of this Environmental Management Plan (EMP) is to provide effective strategies and plans for managing key environmental risks associated with operation and maintenance of grain facilities in NSW.

#### 1.3. OBJECTIVES

The objective of this EMP is to address and manage any potential environmental risks associated with the operations and maintenance of regional grain facilities and to meet the overall GrainCorp Safety, Health and Environmental (SHE) objectives which include:

- Minimising environmental impacts;
- Undertaking operations in accordance with any approval or legislated requirements;
- Ensuring all activities are undertaken in accordance with GrainCorp's Environmental Policy.

#### 1.4. SCOPE

The scope of this EMP is the environmental management of all operational and maintenance activities undertaken by GrainCorp within NSW regional facility site boundaries.

#### 1.5. ENVIRONMENTAL POLICY

GrainCorp has an environmental policy that details the commitment to continual improvement in environmental performance and compliance with applicable legal requirements. The Environmental Policy shall be displayed at all sites and shall be communicated to staff and other interested parties via inductions and ongoing awareness programs. All contractors/suppliers who complete work at the site shall provide a conforming environmental policy or shall adhere to GrainCorp's Environmental Policy.

https://www.graincorp.com.au/safety-health-environment/

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#### 1.6. REGIONAL SITE LOCATIONS

GrainCorp operates 49 regional grain facilities in southern New South Wales (NSW) including North East region (Victoria region but located in NSW). These operational sites are listed in Table 1.

Table 1: NSW (South) regional grain facilities

Region	Facility
Southern New South Wales	4
Parkes	<ul> <li>Parkes</li> <li>Rend Bend</li> <li>Wirrinya</li> <li>Caragabal</li> <li>Trundle</li> <li>Peak Hill</li> </ul>
Cunningar	<ul> <li>Nyrang Creek</li> <li>Greenthorpe</li> <li>Noonbinna</li> <li>Cowra</li> <li>Maimuru</li> <li>Cootamundra</li> <li>Cunningar</li> </ul>
Wyalong	<ul> <li>Euabalong West</li> <li>Condobolin</li> <li>Lake Cargelligo</li> <li>Tullibigeal</li> <li>Naradhan</li> <li>Kikoira</li> <li>Calleen</li> <li>West Wyalong</li> </ul>
Temora	<ul> <li>Quandialla</li> <li>Bribbaree</li> <li>Milvale</li> <li>Temora</li> <li>Barmedman</li> <li>Mirrool</li> <li>Ardlethan</li> </ul>
Griffith	<ul> <li>Hillston</li> <li>Merriwagga</li> <li>Goolgowi</li> <li>Yenda</li> <li>Yanco</li> <li>Barellan</li> </ul>
Junee	<ul> <li>Coleambally</li> <li>Narrandera</li> <li>Grong Grong</li> <li>Coolamon</li> <li>Marrar</li> <li>Junee</li> </ul>
Boree Creek	<ul><li>Boree Creek</li><li>Lockhart</li><li>Milbrulong</li><li>Henty West</li></ul>

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Region	Facility	
	<ul><li>Rand</li><li>Brocklesby</li></ul>	
North East (Victoria 'region' but located in NSW)		
North East	<ul><li>Oaklands</li><li>Tocumwal</li><li>Deniliquin</li><li>Barnes Crossing</li></ul>	

The locations of GrainCorp's regional grain facilities in NSW are shown on Figure 1 (Moree North region facilities), Figure 2 (Narrabri region facilities), Figure 3 (Burren Junction region facilities), Figure 4 (Werris Creek region facilities), Figure 5 (Dubbo region facilities), Figure 6 (Parkes/Cunningar/Temora regions), Figure 7 (Wyalong/Griffith regions) and Figure 8 (Junee/Boree/North East regions).

#### 1.7. GENERAL OPERATIONS

The regional grain facility operations generally involve storage, treatment, loading and unloading of bulk materials.

Operational activities at regional sites may include:

- Receival of truck loads through a sampling station and weighbridge;
- Unloading of grain into receival hoppers from trucks or rail wagons;
- Transfer of grain from hoppers by conveyors to storage silos or bunker pads;
- · Loading of grain to trucks or rail wagons for distribution;
- Delivery of fertiliser by trucks to storage sheds and collection by trucks for distribution;
- Storage of bulk materials in silos, bunkers and sheds; and
- Treatment of grain for pests by a fumigation process.

Ancillary activities may include:

- Loading of grain dust to trucks for beneficial reuse;
- Loading of waste grain to trucks for beneficial reuse;
- Workshop activities for maintenance and service of plant and equipment;
- Washdown of plants and equipment at workshops;
- Operation of a water truck for dust suppression (smaller facilities may use contractor);
- Fuel storage and fuelling of plant and equipment;
- Chemical storage and handling;
- Waste collection and storage;

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- Washdown of conveyors, vehicles, equipment and hardstand areas; and
- Weed and pest control.

Activities at non-operational facilities that are kept in care and maintenance for future operations may include:

- Weed and pest control;
- · Mowing and landscape maintenance; and
- Security and access control.

Internal roads within regional facilities are generally dirt and gravel. Stormwater traversing the sites is directed via drainage channels to on-site dams for storage prior to re-use on site or discharge off-site.

#### 1.1. SENSITIVE RECEPTORS

Operational sites are required to ensure their activities do not cause environmental nuisance impacts from noise, dust, odour and light at a Sensitive Receptor. Sensitive Receptors may include residential dwellings, educational facilities, health care facilities, hotel/motel accommodation, libraries, churches, childcare centres, conservation areas or public parks.

Environmental management measures must be developed for noise, dust, odour and light generating activities at GrainCorp's regional facilities. Each facility shall identify nearby Sensitive Receptors (as described above) that may be affected by environmental nuisance impacts and ensure that such impacts are minimised through the implementation of Management Plans provided in Section 4 of this EMP.

Environmental Management Plan New South Wales Regional Facilities (Southern Region)

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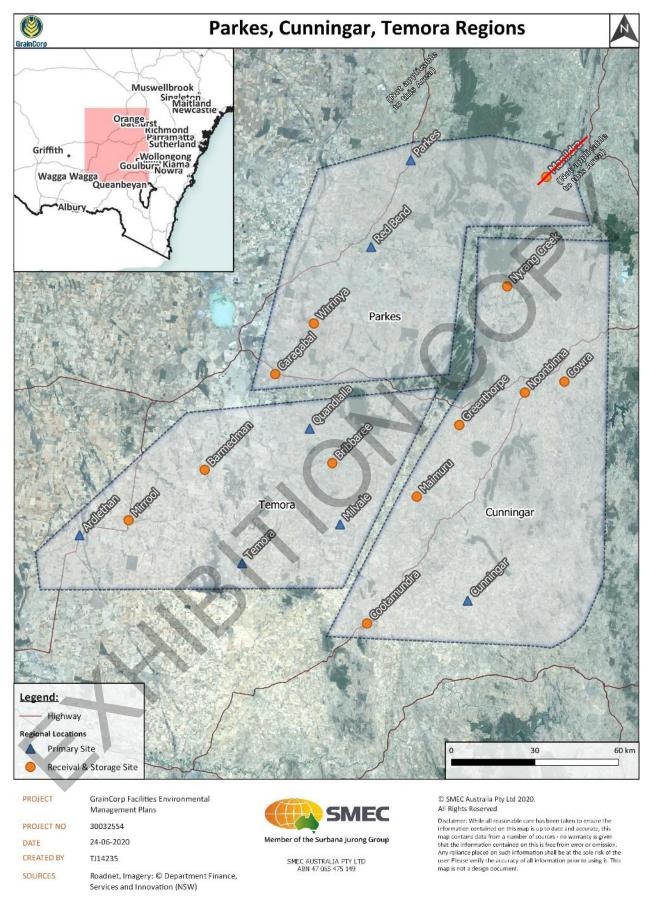


Figure 1: Parkes/Cunningar/Temora regions

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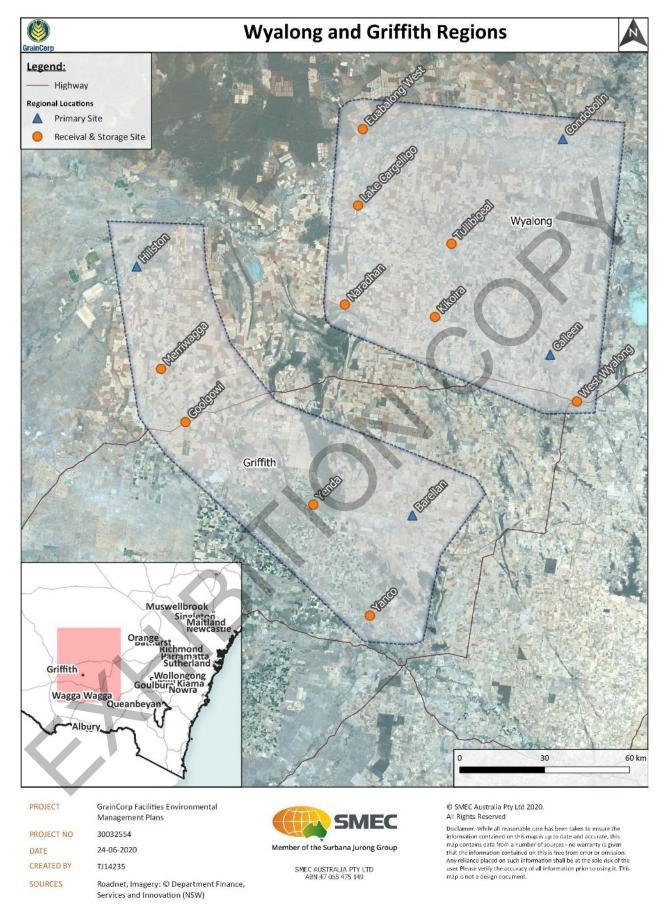


Figure 2: Wyalong/Griffith regions

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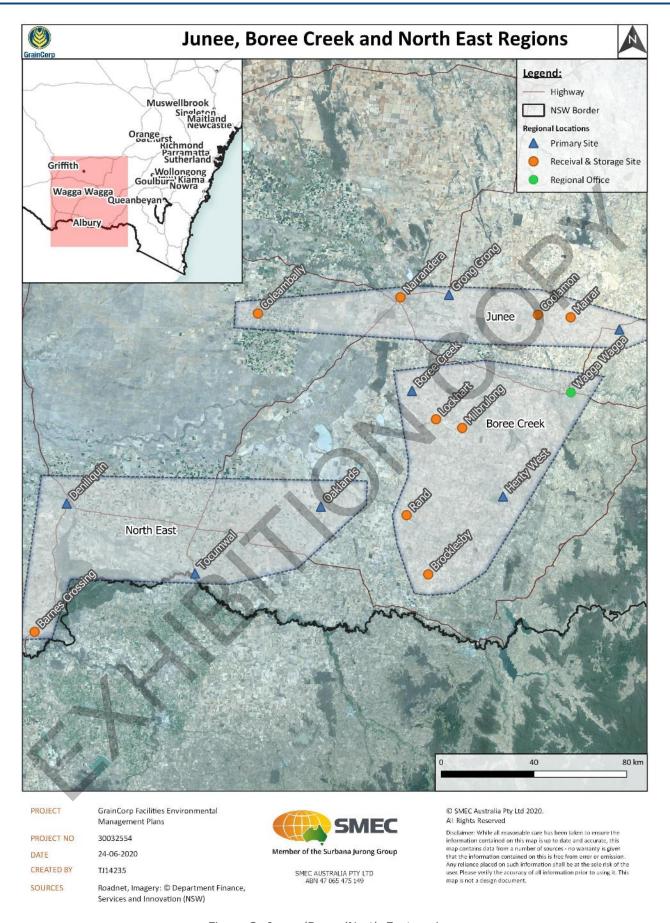


Figure 3: Junee/Boree/North East regions.

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#### 2. STATUTORY REQUIREMENTS

#### 2.1. APPLICABLE LEGISLATION

There are no licences or permits for regional grain facilities however, the sites must be operated in accordance with applicable environmental legislation. The key environmental legislation applicable to operation of regional grain facilities in NSW is outlined in Table 2 below and summarised in the following sections.

Table 2: Environmental Legislation and other Requirements

Aspect	Applicable legislation, standards and guidelines
All	Protection of the Environment Operations Act 1997
Air Emissions	Agricultural and Veterinary Chemicals Code Act 1994 Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995
Noise	Protection of the Environment Operations Act 1997
Soil and Groundwater	Contaminated Land Management Act 1997 Soil Conservation Act 1938
Waterways/ Stormwater	Marine Pollution Act 2012 Water Management Act 2000
Waste	Protection of the Environment Operations (Waste) Regulation 2014 Waste Avoidance and Resource Recovery Act 2001
Flora, Fauna and Land Management	Biodiversity Conservation Act 2016 Pesticides Act 1999

#### 2.1.1. Protection of the Environment Operations Act 1997

Under the POEO Act there is a duty to <u>immediately</u> notify of a pollution incident occurring in the course of an activity that cases or threatens 'material harm' to the environment. Material harm is defined under Section 147 of the POEO Act as follows:

'harm to the environment is material if-

- (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
- (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and
- (b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.
- (2) For the purposes of this Part, it does not matter that harm to the environment is caused only in the premises where the pollution incident occurs'

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Section 148 of the POEO Act clarifies that the occupier of the premises on which an incident occurs, must immediately after becoming aware of the incident, notify each relevant authority of the incident and all relevant information about it.

Section 139 of the POEO Act requires that the operator of any plant must maintain the plant in proper condition and operate the plant in a manner that prevents the emission of noise from the plant.

Section 129 of the POEO Act provides offensive odour must not be emitted from the premises except where the emission is in accordance with the conditions of an environment protection licence (EPL).

Section 120 of the POEO Act requires that pollution of waters and/or land must not occur as a result of activities on site.

#### 2.1.2. Agricultural and Veterinary Chemicals Code Act 1994

The Agricultural and Veterinary Chemicals Code Act 1994 provides for evaluation, registration and control of agricultural and veterinary chemical products. A Permit to allow minor use of an AGVET Chemical Product may be issued under this Act.

## 2.1.3. Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995

The Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 provides for controls on the manufacture, import and export of ozone depleting substances and synthetic greenhouse gases. This Regulation regulates the use and discharge of methyl bromide.

#### 2.1.4. Contaminated Land Management Act 1997

Under the *Contaminated Land Management Act 1997*, landowners and persons conducting contaminating activities are required to notify the EPA of any contamination of land. The EPA retains records of contaminated sites and may require a contaminated land assessment to be conducted where contamination has occurred on a site.

#### 2.1.5. Soil Conservation Act 1938

Site activities must be conducted to ensure that soil erosion or land degradation is mitigated or avoided.

#### 2.1.6. Water Management Act 2000

The *Water Management Act 2000* provides for protection of watercourses and associated ecosystems from contaminating activities and regulates the efficient and equitable sharing of water resources. A Water Access Licence may be required for extraction of water.

#### 2.1.7. Protection of the Environment Operations (Waste) Regulation 2014

Waste tracking is required for transport of waste types identified under Schedule 1 of the *Protection of the Environment Operations (Waste) Regulation 2014.* A consignment authorisation is required to transport trackable waste to a licenced waste management facility. Waste transport certificates must be maintained for trackable wastes transported for off-site disposal.

#### 2.1.8. Waste Avoidance and Resource Recovery Act 2001

Under the *Waste Avoidance and Resource Recovery Act 2001*, disposal of waste from site operations must be conducted to ensure efficient use of resources and prevent environmental harm.

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#### 2.1.9. Biodiversity Conservation Act 2016

Under the provisions of the *Biodiversity Conservation Act 2016*, threatened or protected animals must not be harmed and threatened or protected plants must not be picked. Proposed clearing may require a detailed assessment if minimum lot thresholds are exceeded and biodiversity offsets may be required.

#### 2.1.10. Pesticides Act 1999

The *Pesticides Act 1999* regulates the use of pesticides and prohibits harm to people, property, animals or plants from pesticide use. A certificate of competence is required to authorise the use of certain pesticides.

#### 2.1.11. Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) protects matters of national environmental significance (MNES). Actions that may have a significant impact on MNES require assessment under the EPBC Act.

#### 3. ENVIRONMENTAL RISK ASSESSMENT

A risk assessment has been conducted in accordance with the GrainCorp Risk Assessment Matrix (Appendix 1) to identify and evaluate the risks associated with GrainCorp operational activities at regional facilities. The methods for identifying environmental risks are to:

- Identify business activities and processes;
- Understand and inspect these activities and processes in operation; and
- Identify controls and assess risk.

All new risks identified will be controlled through the risk management process. All environmental risks are assessed in accordance with the GrainCorp Risk Assessment Matrix (Appendix 1) and given a score of 1 to 25. Any aspect identified as having a risk ranking of 20 or over (inherent risk – without controls) is defined as a significant environmental aspect.

The inherent risk levels (prior to implementing controls) for all risks associated with operational activities are described in Table 3. Those aspects with a significant risk ranking are the key focus for GrainCorp's environmental management for the implementation of controls to reduce the risk.

Table 3: Inherent environmental risks (no controls) - significant environmental aspects

Area/ Process	Activity	Potential Impacts	Likelihood	Consequence	Risk Level
rail	Loading/ unloading rail wagons and trucks	Degrade air quality (dust)	Almost certain	Minor	16
	Wagons/ truck tailgate banging	Noise impacting area	Almost certain	Minor	16
Silos	Using agrivac	Noise impacting area	Likely	Major	21
Dust extraction	Equipment failure	Degrading air quality (dust)	Almost certain	Moderate	20
Dust extraction	Unloading waste dust	Degrading air quality (dust)	Almost certain	Minor	16

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Area/ Process	Activity	Potential Impacts	Likelihood	Consequence	Risk Level
Dust extraction	General operation	Noise impacting area	Almost certain	Minor	16
Conveyors	Product transfer	Degrade air quality (dust)	Almost certain	Minor	16
Conveyors	Dry clean-down	Degrade air quality (dust)	Almost certain	Minor	16
Conveyors	Wet clean-down	Degrade water quality	Likely	Moderate	17
Plant/ equipment washdown	Plant / equipment washdown	Land and ground water quality	Likely	Moderate	17
Pest control	Fugitive gas release during fumigation	Damage/ death flora and fauna	Possible	Major	18
Pest control	Fumigant venting	Degrading air quality	Likely	Moderate	17
Pest control	Fumigant venting	Damage/ death flora and fauna	Likely	Moderate	17
Pest control	Chemical spills	Damage/ death flora and fauna	Unlikely	Major	14
Bunkers	Generating solid waste	Reducing landfill capacity	Almost certain	Minor	16
Bunkers	Grain movement to/ from trucks	Degrading air quality (dust)	Almost certain	Moderate	20
Bunkers	Plant/ equipment movement	Degrading air quality (dust)	Almost certain	Moderate	20
Bunkers	Vehicle tracking	Degrading water quality	Almost certain	Minor	16
Waste storage	Waste storage	Generate/ emit odour	Almost certain	Minor	16
General operations	Vehicle/ plant movements on site roads	Degrading air quality (dust)	Almost certain	Moderate	20
General operations	Refuelling plant on site	Degrading water/ land/ ground water through spills	Likely	Moderate	17

All identified risks require environmental management measures to ensure that potential impacts are avoided or minimised. This EMP provides control measures to address these environmental risks in Section 3.

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#### 4. MANAGEMENT PLANS

Management plans for identified environmental risks are detailed in this section by elements. The elements specific for regional grain facilities included within this EMP are:

- Waterways and Stormwater;
- Noise;
- Waste;
- Air emissions (dust, odour and light);
- Air emissions (fumigants);
- Flora, Fauna (including pests) and Land Management; and
- Fertiliser storage and handling.

#### 4.1. WATERWAYS AND STORMWATER

Objectives	Demonstrate how Regional Grain Facilities, through the identification of suitable management strategies, intends to minimise the potential environmental impact of the pollutant and stormwater discharge generated as a result of site operations.
	as a result of site operations.
Scope	Bulk grain and materials storage, handling and movement of bulk materials at Regional Grain Facilities throughout NSW.
Environmental	The following aspects of GrainCorp operations have the potential to result in
Aspects/source	impacts on stormwater and waterways:
of Stormwater	
Contamination	<ul> <li>Grain storage bunkers;</li> </ul>
	Grain storage silos;
	<ul> <li>Product transfer conveyors;</li> </ul>
	Truck loading/unloading;
	Rail loading/unloading;
	• Truck and plant movements on site;
	Fertiliser shed storage (some facilities);
	Fertiliser shed loading/unloading (some facilities);
	Workshops activities;  Wash days of assessments.
	Washdown of conveyors;  Cite also give for all decreases.
	Site cleaning/washdown;  Plant/agging and words down:
	Plant/equipment washdown;  Waste storage and transport.
	Waste storage and transport;  Chamical and five storage and handling.
	<ul><li>Chemical and fuel storage and handling;</li><li>Hazardous waste storage and handling; and</li></ul>
	<ul> <li>On-site dams (some facilities) and stormwater drainage.</li> </ul>
Environmental	Contamination of stormwater and release of contaminants to
Potential	waterways; and
Impacts	<ul> <li>Degradation of water quality of receiving waterways.</li> </ul>
Performance	
	<ul> <li>Stormwater and dam water discharged from the sites must not contain contaminants.</li> </ul>
Indicators	Contain Containinants.

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**Management Approach** 

Management Approach Requirement/Controls	Responsibilities
Requirement/Controls	Responsibilities
Prevent the release of contaminants from site activities to site drainage channels, stormwater systems and dams through containment of hazardous materials (e.g. phosphine) at the point of use.	Site Manager
Provide diversion structures to separate clean stormwater from potentially contaminated areas within the site.	Site Manager
Provide diversion structures to divert stormwater crossing disturbed areas within the site to drainage channels which discharge to site dams to allow settlement of sediment prior to discharge. Where sites do not have settlement dams, sediment control devices should be installed to capture sediment prior to discharge to stormwater drains / channels.	Site Manager
Undertake regular maintenance of on-site drainage channels to ensure no obstructions occur and built-up sediment is removed.	Site Manager
Where possible, ensure the site is sealed and/or graded to prevent ponding or pooling of water on site.	Site Manager
Where possible, provide filters or catchment devices for spilt product at grain loading/ unloading areas.	Site Manager
Filters and screens shall be periodically cleaned in accordance with site hygiene procedures.	Site Manager
Implement a hierarchy of dry cleaning, air cleaning and wet cleaning for all site washdown. Dry cleaning of any spillage shall precede water washdown on site.	All Staff
Wet cleaning shall not be conducted within 20m of a waterway/drainage line unless containment of washdown water is in place.	All Staff
Ensure covers, where provided, on external conveyors remain in place while product is moving.	All Staff
Monitor the variable feed/ speed rate of conveyors to prevent spillage of product.	All Staff
Conduct visual monitoring of all loading/unloading operations (road and rail) and conveyor transfer of product to detect product spillage.	All Staff
Ensure that well-stocked Spill Kits are available at all locations where there is a risk chemical contaminant spill and ensure all staff are trained in the use of spill kits. Maintain spill kits materials and re-stock after every use.	Site Manager
Where possible, activities that may result in release of pollutants shall be undertaken on hardstand with secondary containment to prevent release to receiving environments.	All Staff
Undertake clean-up of any spillage of waste, contaminants or other materials as soon as practicable.	All Staff

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Requirement/Controls	Responsibilities
Promptly clean-up all contaminant spills and report all hazardous contaminant spills to supervisors/ managers as soon as practicable. Ensure that all spillages are recorded through Sphera.	All Staff
Conduct clean-up of spillage onto roads using road sweepers. (brooms)	All Staff
Provide driver awareness to drivers to ensure that trucks and wagons are cleaned down prior to leaving site.	Site Manager
Where required, give instruction to drivers to clean down trucks and wagons prior leaving the site.	Site Manager
Monitor weather conditions and, at the discretion of the Site Manager, cease loading/unloading activities during periods of rainfall or high winds.	Site Manager
Utilise the drive-over hopper (where available) at grain storage bunkers.	Site Manager
Temporary stockpiling of materials in open areas must be carried out on an impervious area (compacted clay or other low permeability material) that is graded to avoid rainwater ponding.	Site Manager
Provide bunding of hardstand area to contain stockpiled material and prevent the release of materials to waterways and stormwater drains.	Site Manager
Provide an impervious cover over stockpiled material stored on the hardstand area and ensure it is in place at the end of each day when required and/or during wet weather.	Operations Manager
Chemicals, fuel and other hazardous substances shall be stored within roofed impervious bunded areas to provide containment in the event of any spills to exclude stormwater. Hazardous waste storage shall be undertaken in covered bunded areas.	Site Manager
Provide bunding of chemical and fuel drum storages with bund capacity sufficient to contain 110% of the largest container stored within the bund. All bunding must be constructed of materials which are impervious to the materials stored.	Site Manager
All bunding must be roofed where practicable. Where it is impractical to completely roof a bunded area, ensure that any stormwater captured within the bund is free from contaminants or wastes prior to any release. Provide a collection sump in the floor of the bunding to facilitate the removal of liquids. The bund floor must be graded so that the fall is towards the collection sump.	Site Manager
Where possible, all empty drums stored within the site must be on a concrete hardstand area with their lids fixed in place.	Site Manager
Carry out maintenance and cleaning of vehicles and plant or equipment in contained areas to prevent the release of contaminants to waterways, roadside gutters or the stormwater drainage system.	All Staff
All equipment (conveyors, chutes, hoppers, roads) shall undergo regular inspection and maintenance to ensure optimal condition and operating efficiency.	Maintenance Manager

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Requirement/Controls	Responsibilities
Where fertiliser is stored/handled on site, ensure the fertiliser shed is dry cleaned after each truck loading period.	Site Manager
Where fertiliser is stored/handled on site, ensure loading of product is undertaken inside the fertiliser shed where practicable.	Site Manager
Ensure that all stormwater runoff from the site is diverted to drainage channels. Ensure that contaminants from site cleaning and washdown practices are not discharged to waterways or stormwater drains.	Site Manager
Conduct induction and awareness training to ensure all Staff are aware of their obligations under the <i>Environmental Controls – Waterways and Stormwater</i> (this section of the EMP).	SHE Manager/ Site Manager
Conduct inspection of waterways and stormwater drains and control measures in accordance with the regular inspection checklists	SHE Manager/ Site Manager

Monitoring	<ul> <li>Monitoring of loading/unloading activities and product transfer within the site to detect any product spillage (daily during site operations).</li> </ul>
	<ul> <li>Monitor weather conditions on site and cease activities during periods of rainfall or high winds (daily during site operations).</li> <li>Inspection of workshop areas, chemical and fuel storage areas and waste storage areas to detect any spillage of hazardous</li> </ul>
	<ul> <li>substances (daily during site operations).</li> <li>Conduct visual monitoring of any waterways and stormwater drains for visual evidence of product, chemicals, fuel or waste spillage (daily during site operations).</li> </ul>
Corrective Action	<ul> <li>Where stormwater impacts are detected through visual monitoring, an investigation shall be conducted to identify the source of contamination and additional controls shall be implemented as required.</li> </ul>

#### Supporting documentation

Environmental Management Plan New South

Stormwater supporting documents include but are not limited to:

Number	Title
GNC-SHEQ-5-11-F04	Environmental Inspection Checklist
GNC-SHEQ-8-04	Water Management Standard
GNC-SHEQ-8-06	Waste Management Standard
GNC-SHEQ-8-12	Spill Management Standard
GNC-SHEQ-8-03	Environmental Monitoring Standard

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#### 4.2. Noise

Objectives	Demonstrate how Regional Grain Facilities, through the identification of suitable management strategies, intends to minimise the potential environmental nuisance impacts from noise generating activities.
Scope	Bulk grain and materials storage, handling and movement of bulk materials at Regional Grain Facilities throughout NSW.
Environmental Aspects/source of Excessive Noise	The following aspects of GrainCorp operations have the potential to result in impacts from noise emission generated at the site under normal operating conditions.  Operation of plant and equipment; Operation of product conveyors (rollers); Use of Agri-Vac dust sucker at silos; Movement of road trucks and rail wagons; Vehicle movement within the site; Loading/unloading operations; Workshop/maintenance activities; and Use of power tools, compressed air and mechanical fans.
Environmental Potential Impacts	<ul> <li>Noise pollution causing environmental nuisance impacts at nearby sensitive receptors.</li> </ul>
Performance Indicators	No noise complaints as a result of GrainCorp site operations.

#### **Management Approach**

Controls	Responsibilities
Conduct all site activities during permitted hours of operation.	Site Manager
Maintenance works shall be undertaken within the workshop area where practicable.	All Staff
Conduct loading/unloading activities in enclosed sheds where available.	All Staff
Where possible, utilise quieter Agri-Vac systems when in proximity to the site perimeter.	All Staff
Avoid using Agri-Vac (green dust sucker) in built-up areas and use yellow dust sucker instead.	All Staff
Ensure that noise suppression devices such as enclosures and shielding, where provided, is in place on plant and equipment prior to commencement of operations.	Site Manager
Where possible, schedule all potentially noisy maintenance work during daylight hours to minimise impact on sensitive receptors.	Maintenance Manager
Schedule preventative maintenance to ensure plant (including conveyor rollers) and equipment is kept in optimal condition.	Maintenance Manager

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Controls	Responsibilities
Road truck tailgates are to be secured with chains at all times to prevent banging.	All staff
Where applicable, road truck speed limits (20 km/h access road) to be enforced within the site to reduce noise emissions.	All staff
All non-essential equipment to be turned off when not in use (e.g. Conveyors dust plants).	All staff
Where applicable, install and use automatic shut off system for key noise generating equipment.	All staff
Noise complaints received shall be reported to Site Manager as soon as possible and monitoring conducted as directed by the administering authority.	All staff
Stakeholder feedback and complaints will be managed through the Sphera system.	Operations Manager
Conduct induction and awareness training to ensure all Staff are aware of their obligations under the <i>Environmental Controls – Noise</i> section of this EMP	SHE Manager/ Site Manager
Conduct monitoring of noise generating activities and noise control measures in accordance with the regular site inspection checklists.	SHE Manager/ Site Manager

Monitoring	<ul> <li>Where required, conduct monitoring of noise generating activities to detect excessive noise that may cause environmental nuisance (daily during site operations).</li> <li>Conduct inspection of noise control measures in accordance with the environmental inspection checklists (weekly during site operations).</li> </ul>
Corrective Action	<ul> <li>Investigation all noise complaints to identify the source of noise and implement additional noise controls as required. Noise controls may include screening, enclosures and noise suppression devices on plant and equipment.</li> </ul>

#### **Supporting documentation**

Noise supporting documents include but are not limited to:

Number/Reference	Title
GNC-SHEQ-5-11-F04	Environmental Inspection Checklist
GNC-SHEQ-8-03	Environmental monitoring
GNC-SHEQ-8-07	Environmental Noise Management

Document Type: Tool



#### **4.3. WASTE**

Objectives	Demonstrate how Regional Grain Facilities, through the identification of suitable management strategies, intends to minimise the potential environmental impacts from waste (including hazardous waste) storage, handling and transport.
Scope	Bulk grain and materials storage, handling and movement of bulk materials at Regional Grain Facilities throughout NSW.
Environmental aspects/ source of waste	The following aspects of GrainCorp operations have the potential to result in impacts on the environment from waste generated onsite:  Hazardous waste storage including chemicals, hydrocarbons or oils; Waste grain from storage facilities; Waste dust from storage facilities; Waste tarps from storage bunkers; and General waste from site administration.
Environmental Potential Impacts Performance Indicators	<ul> <li>Depletion of non-renewable resources;</li> <li>Excess disposal of waste to landfill; and</li> <li>Contamination of land and waterways.</li> <li>Reduction, reuse and recycling of waste materials;</li> <li>No dispersal of waste materials to receiving environments;</li> <li>Disposal of all waste materials at licenced waste facilities; and</li> <li>Regulated waste transport and disposal in accordance with the <i>Protection of the Environment (Waste) Regulation 2014</i> (Waste Regulation).</li> </ul>

#### **Management Approach**

Controls	Responsibilities
Provide appropriate numbers and types of skips for segregation of general waste and recycling in a designated waste compound and arrange for collection by a licenced waste contractor at appropriate frequencies to prevent overflow of waste materials.	Site Manager
Ensure that waste skips are appropriately labelled.	Site Manager
The designated waste compound shall be located away from drainage lines and waterways.	Site Manager
Ensure that waste materials are placed in correct skips to prevent cross-contamination and ensure that lids/covers are always in place.	All Staff
Provide a hazardous waste disposal area (where required) within the site that is appropriately bunded and covered to exclude stormwater.	Site Manager
Provide spill kits in near proximity of the hazardous waste disposal area.	Site Manager
Prevent the release of contaminants from site activities to site drainage channels, stormwater systems and dams through containment of hazardous materials (e.g. phosphine) at the point of use.	Site Manager

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Controls	Responsibilities
All waste materials generated by site operations must be disposed of at an approved waste disposal or waste recycling facility that is licenced to lawfully accept such waste or recyclables.	Site Manager
Waste shall not be burnt on site or removed for burning off-site.	Site Manager
Housekeeping shall be undertaken to remove product residues from all areas for appropriate disposal by a licenced waste contractor. Removal of residues shall be conducted using dry cleaning methods	All staff
Promptly clean-up all spills and report all spills to supervisors/ managers. Ensure that all spillages are recorded through Sphera.	Site Manager
Grain waste shall be provided where appropriate to local users for beneficial reuse including use as stock feed or other alternative use.	Site Manager
Re-use or repair of damaged/degraded tarps shall be undertaken or tarps shall be removed by a licenced contractor for recycling.	Site Manager
Hazardous substances shall be collected for disposal by an approved waste contractor licenced to accept hazardous waste.	Site Manager
Copies of the licenses of waste transporters, disposers and recyclers should be available for viewing when required.	Area Manager
Ensure that all regulated waste transported from site has a waste tracking certificate completed for each waste type and a Waste Register is maintained of all trackable wastes.	Site Manager
Conduct induction and awareness training to ensure all Staff are aware of their obligations under these <i>Environmental Controls – Waste.</i>	SHE Manager/ Site Manager
Weekly inspections of all areas shall be undertaken to identify waste materials not adequately contained within designated waste storage areas.	SHE Manager/ Site Manager
Ensure that Waste Classification is conducted in accordance to the 'Waste Classification Guidelines'.	Area Manager

Monitoring	Waste tracking (volume, type, class, etc.)
	<ul> <li>Inspection of waste storage areas (daily during site walk-around).</li> </ul>
	<ul> <li>Hygiene inspection (daily during site walk-around).</li> </ul>
<b>Corrective Action</b>	Update waste register.
	<ul> <li>Obtain copies of waste removalist / transporter Environmental Protection</li> </ul>
	Licences.
	<ul> <li>Implement monthly environmental checklist inspections.</li> </ul>
	<ul> <li>Implement additional controls if inspections detect dispersal of waste</li> </ul>
	materials to receiving environments.

#### **Supporting documentation**

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Waste supporting documents include but are not limited to:

Number	Title



GNC-SHEQ-5-11-F04	Environmental Inspection Checklist
Records	Waste receipts, prescribed waste tracking documents
GNC-SHEQ-8-	Wasta Managament Ctandard
06CCPD1	Waste Management Standard
GNC-SHEQ-8-	Facility and the state of the state of
03CCPD2	Environmental Monitoring Standard



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#### 4.4. AIR EMISSIONS (DUST, ODOUR AND LIGHT)

Objectives	Demonstrate how Regional Grain Facilities, through the identification of suitable management strategies, intends to minimise the potential environmental impacts of air emissions as a result of dust and odour generating activities.
Scope	Bulk grain and materials storage, handling and movement of bulk materials at Regional Grain Facilities throughout NSW.
Environmental aspects/ sources of fugitive dust	The following aspects of GrainCorp operations have the potential to result in air quality impacts from emissions of dust and odour:  Loading/unloading of trucks and rail wagons; Product transfer via conveyors; Product stockpiles in storage bunkers; Waste dust loading; Odour from waste storage areas; and Product storage and handling.
Environmental Potential Impacts	<ul> <li>Degradation of local air quality; and</li> <li>Odour and dust nuisance impacts.</li> </ul>
Performance Indicators	No dust or odour complaints as a result of GrainCorp site operations.

#### **Management Approach**

Controls	Responsibilities
Implement appropriate air emission control measures to ensure that dust or particulate matter does not emanate beyond the site boundaries. Such measures may include:	
<ul> <li>use of shielding and windbreaks;</li> </ul>	
<ul> <li>use of dust collection/fan systems;</li> </ul>	Site Manager
Use of road dust suppression;	
<ul> <li>Monitoring weather / prevailing weather conditions;</li> </ul>	
Optimising/ minimising grain movements.	
Ensure that release of airborne contaminants do not cause a noxious or offensive odour beyond the site boundaries. Any complaints of dust or odour shall be managed in accordance with Section 6.3 – Community and Complaints Management.	Site Manager
Ensure that all control measures are in place to minimise or prevent the release of windblown dust and particulate matter emission to the atmosphere during loading, transfer and unloading activities.	Site Manager
Where practicable, provide hard ground surface at high traffic areas within the site to minimise the release of wind-blown or traffic generated dust to the atmosphere.	Site Manager

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Controls	Responsibilities
Ensure all sealed traffic areas are cleaned (using dry sweepers) as required to minimise the release of dust and particulate matter to the atmosphere.	Site Manager
Where identified as a potential concern, provide driver education around the importance of securely fixing tailgates and loads before leaving the site to prevent windblown releases and spillage of materials.	Site Manager
Ensure that covers on external conveyors, where provided, remain in place while product is moving	Site Manager
Implement hygiene management practices after loading/unloading to reduce build-up product as possible sources for dust emission.	All Staff
Undertake rail unloading in the partially enclosed shed, where available.	All Staff
During truck loading, smooth inflow speed shall be maintained.	Site Manager
Weather conditions shall be monitored prior to and during loading/unloading activities and loading/ unloading operations modified or ceased during periods of high wind.	Site Manager
Minimise product drop height during loading/unloading activities.	All Staff
Collect, remove and dispose of dust and other product waste to prevent release to the atmosphere or the stormwater system.	All Staff
Schedule regular maintenance to ensure plant is in optimal condition.	Maintenance Supervisor
Conduct clean-up of spillage onto local roads using road sweepers to minimise dust lift-off from trafficable surfaces.	Site Manager
Utilise a water truck, as required, to provide dust suppression of road surfaces in dry, windy conditions.	Site Manager
Maintain vehicle speed limits (<20km/hr) within the site to minimise dust generation from road surfaces.	Site Manager
Where lighting must be used for night-time operations, ensure that light placement utilises baffles and directional control to prevent obtrusive light impacts on nearby residences and road users.	Site Manager
Conduct waste management in accordance with the <i>Environmental Controls – Waste</i> and management of pests in accordance with the <i>Environmental Controls – Flora, Fauna and Land Management</i> to prevent odour from site activities.	Site Manager
Conduct visual inspection of all dust generating activities to detect dust leaving the site boundaries and implement additional controls as required.	Site Supervisor
Conduct induction and awareness training to ensure all Staff are aware of their obligations under the <i>Environmental Controls – Air Emissions</i> (Dust and Odour) (this section of the EMP)	SHE Manager/ Site Manager

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Monitoring	<ul> <li>Weather conditions shall be monitored prior to and during loading/unloading activities and, at the discretion of the site manager, operations are to be modified or ceased during periods of high wind (daily during site operations).</li> <li>Conduct monitoring of dust generating activities to detect excessive dust that may cause environmental nuisance (daily during site operations).</li> <li>Conduct inspection of dust control measures in accordance with the environmental inspection checklists (daily during site operations).</li> </ul>
Corrective Action	<ul> <li>Investigation all dust and odour complaints to identify the source of air emissions and implement additional dust/odour controls as required. Dust controls may include water spraying, sealing of exposed surfaces and/or containment of loading, unloading and storage activities. Manage complaints in accordance with Section 6.3.</li> </ul>

#### **Supporting documentation**

Air emissions (dust and odour) supporting documents include but are not limited to:

Number	Title	
GNC-SHEQ-5-11-F04	Environmental Inspection Checklist	
GNC-SHEQ-8-08	Air Management Standard	
GNC-SHEQ-8-03	Environmental Monitoring Standard	

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#### 4.5. AIR EMISSIONS (FUMIGANTS)

Objectives	Demonstrate how Regional Grain Facilities, through the identification of suitable management strategies, intends to minimise the potential environmental impact of air emissions as a result of fumigation activities.
Scope	Bulk grain and materials storage, handling and movement of bulk materials at Regional Grain Facilities throughout NSW.
Environmental aspects	Ventilation to air of fumigant gasses methyl bromide and phosphine associated with the fumigation of stored grain.
Environmental Potential Impacts	<ul> <li>Release of contaminants and degradation of air quality; and</li> <li>Spillage of contaminants to land and water.</li> </ul>
Performance Indicators	No release of contaminants to receiving environments.

#### **Management Approach**

Controls	Responsibilities
Ensure that only an Appropriately Licensed Fumigator, employed or contracted by GrainCorp, conducts fumigation activities at the site.	Grain Protection Manager / Site Manager
Conduct all fumigation in accordance with the Fumigation Practice Standards and Safe Work Method Statement (refer Fumigation Manual).	Grain Protection Manager / Site Manager
Conduct all fumigation in accordance with the Fumigation Safe Work Method Statement (SWMS CDID-7-53).	Fumigator/ Site Manager
Carry out fumigation of materials to ensure that contaminants are not released to the environment in concentrations that will or may cause environmental harm.	Fumigator/ Site Manager
Carry out water deactivation of phosphine blankets to ensure that water and residue from the process is not release to land or site drainage channels.	Fumigator/ Site Manager
Ensure that prior to use of methyl bromide for fumigation of bulk materials at any site, a permit is obtained to allow use of this chemical. Fumigation with methyl bromide must be undertaken in accordance with all conditions (including dosage rates) of the chemical use permit.	Fumigator/ Site Manager
Fumigators must be provided with a copy of the fumigators training manual and undertake training and certification prior to conducting fumigation at the site.	Grain Protection Manager
Ensure that fumigant concentrations are monitored during ventilation for all fumigation discharges.	Fumigators

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Controls	Responsibilities
Fumigation monitoring equipment shall be installed, maintained and calibrated in accordance with manufacturers specifications.	Maintenance Supervisor / Grain Protection Manager
Conduct fumigation compliance and system auditing to detect any non-compliance.	SHE Manager/ external auditor

Monitoring	•	Monitoring of fumigation process by the Licenced Fumigator in accordance with the Fumigation Practice SWP and Fumigation SWMS (during fumigation activities).
Corrective Action	•	Remedial actions shall be undertaken in accordance with the Fumigation Practice SWP and Fumigation SWMS.

#### **Supporting documentation**

Air emissions supported documents include but not limited to:

Number	Title
GNC-SHEQ-5-11-F04	Environmental Inspection Checklist
	Fumigation Practice SWP and Fumigation SWMS
GNC-SHEQ-07-06F	Grain Protection Standard
GNC-SHEQ-8-06	Waste Management Standard
GNC-SHEQ-8-12	Spill Management Standard
GNC-SHEQ-8-03	Environmental Monitoring Standard

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#### 4.6. FLORA, FAUNA AND LAND MANAGEMENT

Objectives	Demonstrate how Regional Grain Facilities, through the identification of suitable management strategies, intends to minimise the potential environmental impact of operations on the local flora and fauna, in addition to land disturbances.	
Scope	Bulk grain and materials storage, handling and movement of bulk materials at Regional Grain Facilities throughout NSW.	
Environmental	The following aspects of GrainCorp operations have the potential to result in	
Aspects/sources of	impacts on the environment from management of land onsite:	
Flora, Fauna and		
Land Degradation	<ul> <li>Infestation of weeds;</li> </ul>	
_	Harbouring vermin; and	
	Removal of native vegetation.	
Environmental	<ul> <li>Loss of native vegetation through contamination or clearing</li> </ul>	
Potential Impacts	<ul> <li>Death or injury of native fauna from site activities</li> </ul>	
	Increased vermin activity	
	Contamination of land	
Performance	No evidence of land degradation.	
Indicators	<ul> <li>No unauthorised vegetation clearing.</li> </ul>	
	<ul> <li>No death of existing native Flora and Fauna.</li> </ul>	

#### **Management Approach**

Controls	Responsibilities
Prevent the release of contaminants to land that may cause environmental harm or contribute to land contamination.	Site Manager
The release of wash down waters to land must not be carried out within 20 metres of waterways or stormwater channels/ drains unless a physical barrier is in place to contain these waters and prevent discharge to waterways or stormwater channels/ drains.	All Staff
Do not release wash down waters to land if soil moisture conditions are such that surface runoff or ponding is likely to occur or during periods of wet weather.	All Staff
Ensure that the contaminant release area is maintained in a proper and efficient condition so as to provide adequate assimilation, percolation, evaporation and transpiration of the released contaminants.	Site Manager
Manage pests/vermin in accordance with site hygiene and pest control procedures.	Site Manager
Implement rodent / bird control programs within the site.	Site Manager
Ensure that silos are sealed to exclude pests/vermin.	Site Manager
Install mesh screens and scalping screens at high risk points as required to exclude pests/vermin.	Site Manager
Housekeeping shall be undertaken to remove product spillage/wastes from all areas to reduce the risk of pest/vermin infestations.	Site Manager

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Controls	Responsibilities
Conduct regular inspections for weeds, presence of vermin, erosion, or other land disturbance.	All staff
Conduct regular weed control and pest control programs within the site.	Fumigator
Monitor the health of vegetation within and directly adjacent the site to detect any decline in vegetation health.	Site Manager
Site vegetation may only be removed with the approval of the Site Manager	All Staff/ Site
with consultation with the SHE Team	Manager
Avoid interactions with any fauna identified on site and contact the Site Supervisor if interactions result in death or injury of fauna.	All Staff

Monitoring	<ul> <li>Visual monitoring of site vegetation and fauna interactions to determine decline in vegetation health and/or death or injury to fauna (weekly during site operations).</li> <li>Visual monitoring of land application areas to detect ponding/pooling of water (daily during land application).</li> <li>Monthly hygiene inspections to detect infestations of pests/vermin on site.</li> </ul>
Corrective Action	<ul> <li>Flora and fauna impacts are to be managed through the site incident reporting system (Sphera).</li> <li>Implement additional controls as required to respond to flora and fauna incidents or infestation of pests/vermin</li> <li>Undertake land contamination remediation work as required.</li> </ul>

#### **Supporting documentation**

Flora, Fauna and Land Management supporting documents include but are not limited to:

Number	Title
GNC-SHEQ-5-11-F04	Environmental Inspection Checklist
	Fumigation Practice SWP and Fumigation SWMS
GNC-SHEQ-07-06	Grain Protection Standard
GNC-SHEQ-8-06	Waste Management Standard
GNC-SHEQ-8-12	Spill Management Standard
GNC-SHEQ-8-03	Environmental Monitoring Standard

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#### 4.7. FERTILISER STORAGE AND HANDLING

Objectives	Demonstrate how Regional Grain Facilities, through the identification of suitable management strategies, intends to minimise the potential environmental impacts of air, land and water contamination as a result of fertiliser storage and handling.
Scope	Bulk grain and materials storage, handling and movement at Regional Grain Facilities throughout NSW.
Environmental aspects/ sources of fugitive dust	The following aspects of GrainCorp operations have the potential to result in air quality impacts from spillage of fertiliser:  Loading/unloading of fertiliser trucks; Fertiliser transfer and handling within storage sheds; and Fertiliser stockpiles in storage sheds.
Environmental Potential Impacts	Degradation of local air, land and water environments.
Performance Indicators	<ul> <li>No degradation of receiving environments as a result of GrainCorp site operations.</li> </ul>

#### **Management Approach**

Controls	Responsibilities
Store all fertiliser product in an enclosed shed capable of minimising entry of rain/stormwater and direct sunlight.	Site Manager
Maintain fertiliser storage sheds in clean condition to minimise dust generation, tracking out of product and tracking in of dirt.	Site Manager
Maintain storage temperature between 5°C and 30°C and avoid high temperatures within storage sheds.	Site Manager
Do not store incompatible fertilisers (such as urea and ammonium phosphate) in near proximity of each other.	All Staff
Loading/unloading of fertiliser shall be conducted in a controlled manner to avoid spillage, dust generation and cross-contamination of products.	All Staff
Ensure trucks used for transport of fertiliser are cleaned of foreign material prior to loading fertiliser.	All Staff
Ensure that trucks unloading fertiliser are cleaned of product prior to leaving the site.	All Staff
Where required, provide training of truck drivers to ensure loads are covered to avoid fertiliser spillage and to protect from weather conditions during transport.	Site Manager
Ensure that fertiliser classified as a Dangerous Goods are transported in accordance with the provisions in the Australian Dangerous Goods Code.	Site Manager
Conduct induction and awareness training to ensure all Staff are aware of their obligations under the <i>Environmental Controls – Fertiliser storage and handling</i> (this section of the EMP)	SHE Manager/ Site Manager

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Monitoring	•	Visual monitoring of storage sheds and product handling activities to detect spillage, tracking or cross-contamination (Daily during site operations).
	•	Monitoring of weather conditions to detect extreme conditions that may affect fertiliser properties (Daily during site operations).
Corrective Action	•	Environmental impacts are to be managed through the site incident reporting system (Sphera).  Implement additional controls as required to respond to incorrect storage and handling of fertiliser as detected by monitoring.

#### **Supporting documentation**

Fertiliser storage and handling supporting documents include but are not limited to:

Number	Title	
GNC-SHEQ-5-11-F04	Environmental Inspection Checklist	
GNC-SHEQ-8-06	Waste Management Standard	
GNC-SHEQ-8-12	Spill Management	
GNC-SHEQ-8-03	Environmental monitoring	
GNC-SHEQ-8-04	Water Management Standard	
GNC-SHEQ-8-08	Air Management Standard	

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#### 5. IMPLEMENTATION AND OPERATION OF THE EMP

#### **5.1.** ROLES AND RESPONSIBILITIES

The following roles have responsibilities with respect to the implementation and operation of the EMP, in addition to the responsibilities listed in each management plan (section 4).

#### AREA MANAGER is responsible for:

- Ensuring compliance with legal, including licence, obligations;
- Ensuring the EMP is implemented, including provision of resources to verify, monitor, and improve the plan;
- Addressing any environmental issues arising from regulatory authorities;
- · Reporting to regulatory authorities;
- · Liaise with community members; and
- Ensuring all actions arising from reviews, audits, regulator directions, and other sources, are implemented at their site.

### **SITE MANAGER / FUNCTIONAL MANAGERS / SUPERVISORS** (including the Operations Manager) are responsible for:

- Ensuring that all personnel under their control are suitably trained and competent, including in environmental management;
- Ensuring compliance with the site EMP and SHEQ management system;
- Managing site activities, including dealing with minor spills, leaks, land management, etc.; and
- Verifying that environmental controls are in place, functioning as intended, and achieving the desired outcomes.

#### **ENVIRONMENTAL ADVISOR** is responsible for:

- Advising the SHE Manager and Site Manager /Area Manager on specific environmental issues and risk affecting the site, and the associated requirements to address the issues or risk;
- Ensuring that the site is up to date with the latest compliance requirements;
- Conducting 2nd party audits;
- Providing site support for external audits and regulatory inspections; and
- Supporting the site in identification of environmental aspects and impacts, as well as assessing their risk.

#### **SHE MANAGER** is responsible for:

- Conducting or organising internal audit of the site's compliance with the plan and the SHEQ management system;
- Monitoring corrective actions progress for the site; and

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• Providing / sourcing expert advice as required.

#### **LICENCED FUMIGATOR** is responsible for:

- Ensuring every fumigation is performed in accordance with the procedures detailed in the Fumigation Practice Standard Work Procedure (SWP 0319) and steps in the related Fumigation Safe Work Method Statement (SWMS CDID-7-53);
- Directly supervise fumigation activities performed by fumigation personnel; and
- Ensuring suitable records are maintained for all fumigations.

#### ALL SITE PERSONNEL (including management and contractors) are responsible for:

- Complying with site rules, induction information, training, work procedures, permits, signage, and instructions given by GrainCorp management representatives;
- Ensuring their acts and emissions do not lead to environmental harm; and
- · Reporting hazards and incidents.

#### **5.2.** COMPETENCE, TRAINING AND AWARENESS

All personnel working on site shall complete a site induction which includes fundamental safety, health and environmental components. Staff shall also attend an Integrated Management System training session which provides detailed information on safety and environmental standards that are applicable as minimum requirements by all GrainCorp operational sites. In addition, all GrainCorp staff shall complete an online environmental risk 'E-Learn'.

The Safety, Health & Environment (SHE) Manager and Environmental Advisor shall provide support and training for staff when completing small and large task specific risk assessments. The Environmental Advisor shall also provide detailed technical environmental advice to support continuous environmental improvement.

The Environmental Advisor shall facilitate an obligation and consent register workshop where the Site Manager and key Operational Supervisors are trained in the function and of the operation of the obligation register. Additionally, the Environmental Advisor shall undertake training sessions with the Site Manager into the content of the Environmental Management Plan (this document).

Awareness training and any specific training shall be recorded in a training register maintained by the Administration Assistant or Site Manager. Opportunities for training shall be continuously identified and courses introduced regularly to complement the existing material and knowledge.

All training requirements shall be documented via a Training Matrix which includes formal SHE and Operator Competency training and separately a Training Matrix for Toolbox Talks. The matrices are maintained by PeopleHub Resources and Site Managers.

To support continuous environmental compliance, the fumigation training manual shall be updated regularly, and only licensed, competent and experienced fumigators participate in any fumigation related activities.

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#### 6. COMMUNICATION

#### 6.1. Internal Communication and Notification

Internal communication of environmental issues and opportunities will be done both formally and informally through:

- · Weekly Operations Meetings;
- Toolbox Talks;
- Environmental Workshop and Training Sessions; and
- Environmental Site Inspections.

All communications pathways mentioned above allow for two-way communication.

Notifications will be made to relevant staff of any environmental incident or near miss through the automated escalation of the computerised incident reporting system (Sphera).

The EMP and the Risk Assessment are to be communicated to relevant key staff and contractors when significant changes occur.

Where an environmental incident has occurred, internal incident notification is to be detailed within the online reporting tool – SPHERA.

#### 6.2. EXTERNAL NOTIFICATION AND REPORTING

GrainCorp will notify the administering authority <u>immediately</u> after becoming aware of any emergency or incident that results, or has the potential to result, in material environmental harm as defined under Section 147 of the POEO Act. The definition of 'material harm' is not always simple so, prior to notifying the administering authority (NSW EPA) always refer to the GrainCorp Incident Management Chart (Appendix 3). Where GrainCorp is satisfied that material harm has been caused or threatened, only the Area Manager, SHE Manager or Environmental Advisor are authorised to notify the administering authority.

The notification of emergencies or incidents must include the following information:

- the name of the person/facility reporting the incident;
- the location of the emergency or incident;
- the name and telephone number of the designated contact person;
- · the time of the release;
- the time the person became aware of the release;
- the suspected cause of the release;
- the environmental harm and/or environmental nuisance caused, threatened, or suspected to be caused by the release; and
- actions taken to prevent further any release and mitigate any environmental harm and/or environmental nuisance caused by the release.

GrainCorp shall provide written reports detailing corrective actions and any monitoring undertaken of environmental incidents where directed by the relevant administering authority.

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#### 6.3. COMMUNITY AND COMPLAINTS MANAGEMENT

The regional facility site phone numbers are available to receive phone calls including complaints at any time during operating hours. The phone numbers are available on GrainCorp's website (<a href="https://grains.graincorp.com.au/locations/">https://grains.graincorp.com.au/locations/</a>) and are also displayed in a prominent position on signage located on the front gates.

All complaints received by GrainCorp will be recorded and logged in Sphera with the following details:

- time, date and nature of complaint;
- type of communication (telephone, letter, personal etc.);
- name, contact address and contact telephone number of complainant (if the complainant does not wish to be identified then "Not identified" is to be recorded);
- response and investigation undertaken as a result of the complaint;
- name of person responsible for investigating complaint; and
- action taken as a result of the complaint investigation and signature of responsible person.

#### 7. DOCUMENT AND RECORDS MANAGEMENT

All documents relating to environmental management are maintained on a SharePoint System on the GrainCorp Intranet or Document Central and on the Terminal local filing system.

Records will be retained for a minimum period of seven (7) years.

The EMP and the Risk Assessment are to be updated annually or as required by the Environmental Advisor.

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#### 8. EMERGENCY RESPONSE

#### 8.1. EVACUATION PLAN

In the event an evacuation is necessary the site's Evacuation Plan shall be observed. The plan is displayed at the site office.

#### 8.2. TRAINING

Staff shall be initially trained in correct emergency response procedures, including the use of personal protective equipment, and provided practice training once a year. Staff engaged in work associated with dangerous goods shall be trained prior to commencement of work. A record of all training provided shall be maintained.

#### 8.3. INCIDENT MANAGEMENT/EMERGENCY RESPONSE PROCEDURES

Emergency Response procedures to various potential emergencies and hazards are provided in the table below.

Table 4: Emergency Response Procedures

Material / Item	Potential Emergencies / Hazards	Appropriate Response
Oil (workshop)	Spill may pollute surface water if it reaches	Contain with absorbent boom and clean
	stormwater drain.	up with absorbent material.
Degreaser	Spill may pollute surface water if it reaches	Mop up spill.
	stormwater drain.	
Petroleum Spirit	Flammable.	Provide respirators, call fire brigade.
Diesel	Flammable.	Provide respirators, call fire brigade.
Petrol	Flammable.	Provide respirators, call fire brigade.
Glysophate	(Refer to SDS).	(Refer to SDS).
Sodium	(Refer to SDS).	(Refer to SDS).
Hypochlorite		
Paint	Flammable.	(Refer to SDS).
Reldan	(Refer to SDS).	(Refer to SDS).
Diacon	(Refer to SDS).	(Refer to SDS).
Talon	(Refer to SDS).	(Refer to SDS).
Bromakil	(Refer to SDS).	(Refer to SDS).
Methyl Bromide	Uncontrolled release to air.	Provide respirators, evacuate.
Dust plant	Failure causing particulate release to air.	Shut down.
Hydraulic oil line	Burst line causing oil spill; will pollute	Contain and clean up with absorbent
-	surface water if it reaches drain.	material.
Silos	Explosion causing particulate release to air.	Call fire brigade, evacuate.

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#### 8.4. SAFETY DATA SHEETS PROCEDURES

A log shall be kept of all materials and substances delivered to/stored on site. All Safety Data Sheets (SDS) for chemicals used on site shall be accessible on ChemAlert with access provided to all relevant site personnel. The procedures for collection, containment and disposal are described in the SDS. These procedures should be followed in the event of an emergency involving the product.

#### **8.5.** EMERGENCY CONTACT LIST

The list of people and agencies to contact in the event of an emergency is shown on the Emergency Contact List in the table below.

If an emergency has the potential to affect the immediate neighbours, they shall be informed of it. Each regional site shall identify site neighbours and maintain a neighbour's emergency contact list at the site office.

Table 5: Emergency Contact List

Contact	Phone Number
Fire	000
Police	000
Ambulance	000
SES	000 (Life-threatening)
313	132 500 (Flood /Storm)
Hospital (NSW Health)	000
Poisons	13 11 26
Chemical Hazards & Emergency Management Unit (CHEM Unit)	000
(Fire Brigade)	
Environment Protection Authority	13 15 55
Roads and Maritime Services	www.rms.nsw.gov.au

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#### **8.6.** EMERGENCY EQUIPMENT AND LOCATIONS

A checklist of required emergency equipment is provided below:

- Respirators (Fit for purpose);
- Personal Protective Equipment (See site specific requirements);
- Fire Protection Equipment:
  - Smoke detectors
  - Alarms
  - Hoses
  - Sprinklers
  - Fire extinguishers
  - Hydrants
- Spill Containment /Clean Up Equipment:
  - Absorbents
  - Neutralising agents
  - Salvage drums
  - Drain plugs/mats

Note: Consult your Site Manager/SHE Advisor for equipment location and availability.

Personal protective equipment shall be maintained and checked regularly.

Other relevant locations for emergency related items are:

- Assembly areas; and
- Emergency Equipment Storage areas.

Note: Consult your Site Manager/SHE Advisor for Assembly area and equipment location.

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#### 9. EVALUATION OF PERFORMANCE OF THE EMP

#### 9.1. AUDITS AND INSPECTIONS

The environmental audit program for regional grain facilities uses a risk-based approach to identify and prioritise different audit types, scopes and timings. The program identifies the types, objectives, criteria, scopes, and frequency of audits.

Table 6: Evaluation of Performance of the EMP - Audits and Inspections

	PHYSICAL CONTROLS INSPECTION	COMPLIANCE & SYSTEM AUDITS					
Objective:	To check the functionality of physical controls.	To assess compliance of regional grain facilities site operations with legal obligations.					
Criteria:	Ongoing adequacy and suitability that physical controls are in use in managing identified potential environmental impacts at regional grain facilities.	Compliance of facility and operation with relevant legislation and management system obligations.					
	Assessment of physical controls across the regional grain facilities sites.	The scope of each compliance and system audit will be determined using the Internal Audit Procedure PROC 1.04 based on the assessed risk of the obligations to be audited, and AS/NZS ISO 19011:2014 Guidelines for auditing management systems.					
	Review of corrective actions against controls required for rectification from the previous inspections.	Assessment of compliance over period since the last audit.					
	Templates and Forms	Templates and Forms					
	Environmental Inspection Checklist -	Audit Report Template.					
Scope:	Form V16.09  Log Sheets (as per each area)	Each audit scope contains as a minimum:					
	Workplace Inspection (as per each area)	Compliance risk(s) and/or system components to be audited					
		Audit objective and criteria					
		Physical area of facility to be audited					
_		Audit team competency requirements					
		Personnel required to participate in the audit					
		Timing of the audit					

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	PHYSICAL CONTROLS INSPECTION	COMPLIANCE & SYSTEM AUDITS
	Visual check of the work site to ensure standards are being met and whether any issues with physical controls are identified with consideration to	The auditor will audit to the AS/NZS ISO 19011:2014 and/or AS/NZS ISO 14001:2016 standards.
	adequacy.	This will involve consideration of:
		Current compliance obligations
		Records of environmental incidents or near-misses
Method:		Records to demonstrate compliance with relevant legislation
		Continued appropriateness and effectiveness of environmental controls
		Any changes to licence conditions, technology, equipment, procedures, staff and/or other requirements
		Management reviews
Auditor:	SHE Manager and/or Area Supervisor (or delegate)	The auditor must be suitably qualified, experienced and independent of the regional grain facilities site operations to carry out the audit. Compliance auditors must also be suitably qualified internal subject matter experts (SMEs) independent of the area or activity to be audited (e.g. Environmental & Sustainability Manager or
	Constally Worthly	Environmental Advisor).
Frequency:	Generally Monthly.  Timing can be varied (within reason) to capture different site activities and conditions.	Frequency and timing of compliance and system audits are conducted every 2 years.
	Operator Rounds are conducted every shift.	
Reporting Requirements:	Audit results will be recorded on the checklist and kept as a record on Sharepoint. Any corrective actions will be entered into Sphera (Computerised incident management system) or SAP work request system.	Audit results will be documented and retained as an audit report as per the Document Management Procedure. Any corrective actions will be entered into Sphera (Computerised incident management system).

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PHYSICAL CONTROLS INSPECTION	COMPLIANCE & SYSTEM AUDITS
	The audit report will include as a minimum:
	Auditor/s and Auditees
	Audit date and time
	Audit objective, scope, methodology
	Physical controls inspected
	Audit findings (including reference to evidence)
	<ul> <li>Non-conformances and observations</li> </ul>
	Audit conclusions

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#### 9.2. Monitoring Program

Monitoring is conducted under the requirements of each of the Management Plans (Section 5) to monitor effectiveness of the controls in place and is summarised as follows:

Table 7: Monitoring Program

Aspect	Methodology	Frequency	Responsibility		
	Monitoring of loading/unloading activities and product transfer within the site to detect any product spillage.	Daily during loading/unloading	All Site Personnel		
	Monitor weather conditions and cease activities during periods of rainfall or high winds.	Daily during site operations	Site Manager		
Waterways and Stormwater	Inspection of workshop areas, chemical and fuel storage areas and waste storage areas to detect any spillage of hazardous substances.	Daily during site operations	Site Manager		
	Conduct visual monitoring of stormwater drains for visual evidence of product, chemicals, fuel or waste spillage.	Daily during site operations	Site Manager		
Noise	Conduct monitoring of noise generating activities to detect excessive noise that may cause environmental nuisance.	Daily during site operations	Site Manager		
Noise	Conduct inspection of noise control measures in accordance with the environmental inspection checklists.	Weekly during site operations	Site Manager		
	Waste tracking (volume, type, class, etc.).	During all waste transport off-site	Site Manager		
Waste	Inspection of waste storage areas.	Daily, site walk- around	Site Manager / Environmental Advisor		
4	Hygiene inspection.	Daily, site walk- around	Site Manager		
	Weather conditions shall be monitored prior to and during loading/unloading activities and operations modified or ceased during periods of high wind.	Daily during site operations	Site Manager		
Air (Dust and Odour)	Conduct monitoring of dust generating activities to detect excessive dust that may cause environmental nuisance.	Daily during site operations	Site Manager		
	Conduct inspection of dust control measures in accordance with the environmental inspection checklists	Daily during site operations	Site Manager		

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Aspect	Methodology	Frequency	Responsibility
Air (Fumigants)	Monitoring of fumigation process by the Licenced Fumigator in accordance with the Fumigation Practice SWP and Fumigation SWMS.	During fumigation activities	Licenced Fumigator
	Visual monitoring of site vegetation and fauna interactions to determine decline in vegetation health and/or death or injury to fauna.	Weekly	Site SHE Manager/ Environmental Advisor
Flora, Fauna and Land	Visual monitoring of land application areas to detect ponding/pooling of water.	Daily during land application	Site SHE Manager/ Environmental Advisor
	Monthly hygiene inspections to detect infestations of pests/vermin on site.	Monthly	Site Manager
Fertiliser	Visual monitoring of storage sheds and product handling activities to detect spillage, tracking or crosscontamination.	Daily during site operations	Site Manager
	Monitoring of weather conditions to detect extreme conditions that may affect fertiliser properties.	Daily during site operations	Site Manager

#### 9.3. CONTINUOUS IMPROVEMENT

A review of this EMP must be conducted annually or in response to any changes in legislation, site operations or any non-compliance with the requirements of this EMP.

Environmental Action Plans are prepared by GrainCorp in response to environmental incidents or breaches of environmental legislation. All actions that result in new or modified site procedures or additional environmental controls must be incorporated into environmental management systems through review and continual improvement of this EMP.

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### **Appendix 1: NSW South Regional Aspect and Impact Register**

Area/ process	ID	Aspect	Impact	The category the hazard fall into (e.g. water, air)	Activity that produces environmental impacts	Normal/Abnorm al situation	Likelihoo d	Consequenc e	Risk Rating - Inherent Risk (No Controls	Control measures in place	Likelihood	Consequence	Risk Rating - Residua I	Date of Analysis	SIGNIFICANT? (Y/N)
	1.1	Spills/leaks of fuels, oils, from rail wagons	Degrade soil and groundwater quality	Land/Groundwater	Hydraulic hose failure	Abnormal	Possible	Moderate	12	Gravel roads, spills to be cleaned up and contaminated road base disposed off;     Spill material available;     Spill material to be disposed off as prescribed waste.	Possible	Minor	8	25/09/202 0	N
1. Grain Receivals/Dispatc h (Rail)	1.2	Fugitive dust emissions	Degrade air quality	Air	Loading/Unloading rail wagons	Normal	Almost Certain	Minor	16	- Undertaken in partially enclosed shed (where available); - Use of telescopic (lowering) chutes where available; - Chute designed to limit grain fall speed and funnel dust plume (where available); - Hygiene practices (sweeping and removing material) to prevent excessive build up of dust material.	Likely	Minor	11	25/09/202 0	N
	1.3	Generate / emit noise	Public nuisance/advers e public health impact	Noise	Wagon/ locomotive movement	Normal	Almost Certain	Minor	16	Rail loading/unloading undertaken in partially enclosed shed when possible.     Follow Standard Work Instructions.     Undertaken during approved hours of operation only	Likely	Minor	11	25/09/202 0	N
	1.4	Spill of grain to natural water body	Degrade natural water body quality	Water	Loading/Unloading rail wagons	Abnormal	Possible	Negligible	4	- Inspections of works area; - Removal of all spilt material as soon as practicable; - Regular site hygiene; - Follow site hygiene procedures; - Positive communication with locomotive operator.	Unlikely	Negligible	2	25/09/202 0	N
	2.1	Spills/leaks of fuels, oils, from road vehicles	Degrade soil and groundwater quality	Land/Groundwater	Hydraulic hose failure	Abnormal	Possible	Minor	8	- Gravel roads, spills to be cleaned up and contaminated road base disposed off; - Hopper area concreated; - Spill material available; - Spill material to be disposed off as prescribed waste.	Unlikely	Minor	5	25/09/202 0	N
2. Grain Receivals/Dispatc h (Road)	2.2	Fugitive dust emissions	Degrade air quality	Air	Unloading of trucks	Normal	Almost Certain	Minor	16	- Semi enclosed shed or awning (where available); - Hopper, semi enclosed (where available); - Hopper area concreated (where available); - Removal of all spilt material as soon as practicable; - Follow site hygiene procedures; - Follow loading/unloading procedures.	Likely	Minor	11	25/09/202 0	N



Area/ process	ID	Aspect	Impact	The category the hazard fall into (e.g. water, air)	Activity that produces environmental impacts	Normal/Abnorm al situation	Likelihoo d	Consequenc e	Risk Rating - Inherent Risk (No Controls	Control measures in place	Likelihood	Consequence	Risk Rating - Residua I	Date of Analysis	SIGNIFICANT? (Y/N)
	2.3	Fugitive dust emissions	Degrade air quality	Air	Loading of trucks	Normal	Almost Certain	Minor	16	- Where available, undertake in semi enclosed shed or awning; - Control grain feed rate/speed; - Clean up all spilt material as soon as practicable; - Follow site hygiene procedures; - Follow loading/unloading procedures.	Likely	Minor	11	25/09/202 0	N
	2.4	Generate / emit noise	Public nuisance/advers e public health impact	Noise	Banging truck tail gates/bodies	Normal	Almost Certain	Minor	16	- All tailgates with chains to restrict opening gap (approx. 100 mm) to be secured before leaving the hopper; - Positive communication with truck drivers in relation to limiting noise (where needed); - Truck driver supervision by hopper operators.	Likely	Minor	11	25/09/202 0	N
	2.5	Spill of grain to natural water body	Degrade natural water body quality	Water	Poor housekeeping - grain spillage	Abnormal	Unlikely	Minor	5	- Inspections of works area; - Removal of all spilt material as soon as practicable; - Regular site hygiene; - Follow site hygiene procedures; - Truck driver supervision by hopper operators; - Positive communication with truck operator.	Unlikely	Negligible	2	25/09/202 0	N
3. Grain storage - Silos	3.1	Generate / dispose solid waste	Diminish land use capacity (landfill), loss of product	Land	Poor housekeeping - other product spillage	Normal	Likely	Minor	11	- Dust and Damaged grain procedure/claim notice; - Preventative maintenance for plant and equipment to reduce grain residue waste; - Use dry cleaning to pick up clean grain residues; - Return grain residues; - Return grain residues to storage where possible; - Store in fit-for-purpose ground bins or silos; - Grain dust to be delivered to organic recyclers for mixing into garden soils, potting mix and compost products or appropriate alternative (where applicable); - DDG recovered (where possible) and provided for beneficial reuse (e.g. saleable as feed).	Likely	Negligible	7	25/09/202 0	N
	3.2	Spill of grain to natural water body	Degrade natural water body quality	Water	Spillage of grains during storage activity	Abnormal	Possible	Minor	8	- Management as per site hygiene procedures; - Clean up spills as soon as possible; - Dust and damaged grain procedure/claim notice; - Preventative maintenance for plant and equipment to reduce grain residue waste.	Unlikely	Minor	5	25/09/202 0	N



Area/ process	ID	Aspect	Impact	The category the hazard fall into (e.g. water, air)	Activity that produces environmental impacts	Normal/Abnorm al situation	Likelihoo d	Consequenc e	Risk Rating - Inherent Risk (No Controls	Control measures in place	Likelihood	Consequence	Risk Rating - Residua I	Date of Analysis	SIGNIFICANT? (Y/N)
	3.3	Generate / emit noise	Public nuisance/advers e public health impact	Noise	Use of custom vac for cleaning or empty silos	Normal	Likely	Major	21	- Locate the vac unit as far as possible from sensitive receptors; - Undertake scheduled maintenance as per manufacturers instructions; - Undertaken plant prestart checks; - Only operate by a competent person; - Only operate during approved hours of operations and schedule noisy work during day light hours; - Positive community engage and communication.	Likely	Minor	11	29/10/202 0	Y
	3.4	Generate / emit Dust	Degrade air quality	Air	Bulk Product Storage (Silo)	Normal	Possible	Moderate	12	Dust extraction system in place;     Hygiene practices to prevent excessive build up of dust material;     Ongoing maintenance of dust extraction system.	Unlikely	Moderate	9	25/09/202 0	N
	4.1	Generate / emit Dust	Degrade air quality	Air	Equipment Failure	Abnormal	Almost Certain	Moderate	20	- Maintain as per manufacturers recommendations; - PMs and SAP for cleaning regimes and maintenance (maintenance notification); - Clean and replace bags.	Possible	Minor	8	25/09/202 0	Υ
	4.2	Generate / emit Dust	Degrade air quality	Air	Loading of waste product	Normal	Almost Certain	Minor	16	- Collect, remove and dispose of dust and other product waste in a manner that does not enable waste to be released into the atmosphere or stormwater system (where possible); - Dust removed from site as a beneficial reuse.	Likely	Minor	11	25/09/202 0	N
4. Dust extraction	4.3	Generate / emit noise	Public nuisance/advers e public health impact	Noise	General operation	Normal	Almost Certain	Minor	16	- Follow standard work instructions; - Regular maintenance of system (PM and SAP).	Likely	Minor	11	25/09/202 0	N
system (where present on site)	4.5	Generate / dispose solid waste (Dust)	Diminish land use capacity (landfill), loss of product	Waste	Poor housekeeping - other product spillage	Abnormal	Almost Certain	Negligible	10	- Dust and Damaged grain procedure/claim notice; - Preventative maintenance for plant and equipment to reduce grain residue waste; - Use dry cleaning to pick up clean grain residues. Return grain residues to storage where possible; - Store in designated ground bins or silos; - Grain dust to be delivered to organic recyclers for mixing into garden soils, potting mix and compost products or appropriate alternative; - DDG recovered (where possible) and provided for benificial reuse (e.g. saleable as feed).	Likely	Negligible	7	25/09/202 0	N

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Area/ process	ID	Aspect	Impact	The category the hazard fall into (e.g. water, air)	Activity that produces environmental impacts	Normal/Abnorm al situation	Likelihoo d	Consequenc e	Risk Rating - Inherent Risk (No Controls	Control measures in place	Likelihood	Consequence	Risk Rating - Residua I	Date of Analysis	SIGNIFICANT? (Y/N)
	5.1	Generate / emit Dust	Degrade air quality	Air	Product transfer on conveyor	Normal	Almost Certain	Minor	16	Operate dust extraction system (were available)     Covers on external conveyors, Uncovered conveyors within structures (were available).     SAP preventative maintenance on conveyors	Likely	Minor	11	25/09/202 0	N
5. Conveyors	5.2	Generate / emit Dust	Degrade air quality	Air	Conveyor Clean down (dry)	Normal	Almost Certain	Minor	16	Work in accordance with SWMS for hygiene     Monitor prevailing wind direction during cleaning.	Likely	Minor	11	25/09/202 0	N
	5.3	Generate / discharge wastewater	Degrade natural water body quality	Water	Conveyor Clean down (water)	Normal	Likely	Moderate	17	Provide filters or catchment devices for silt and spilt product (where available) on applicable drains     Boot pits/drains pumped out and used as dust suppressant.	Likely	Minor	11	25/09/202 0	N
	5.4	Generate / emit noise	Public nuisance/advers e public health impact	Noise	Conveyor rollers	Normal	Almost Certain	Negligible	10	Undertake scheduled maintenance;     Monitor for faulty rollers during operation.	Likely	Negligible	7	25/09/202 0	N
6. Workshop	6.1	Spills of chemicals/oils	Pollution of water	Water	General activities	Abnormal	Likely	Minor	11	- Chemical storage facilities; - Provider engaged for removing waste Spill kits located around site Workshops on concrete/asphalt hard stand.	Possible	Minor	8	25/09/202 0	N
	6.2	Generation/emit Noise	Public nuisance/advers e public health impact	Noise	General activities	Normal	Likely	Minor	11	Undertake activities within workshop confines.	Possible	Minor	8	25/09/202 0	N
	7.1	Spill (contaminate) soil (from chemicals, fuel, heavy metals etc)	Degrade soil and groundwater quality	Soil and Groundwater	General activities	Abnormal	Possible	Moderate	12	- Bunded container; - Proper storage containers; - Sealed surfaces; - Spill kit.	Unlikely	Moderate	9	25/09/202 0	N
	7.2	Spill to (contaminate) Stormwater - discharged off site	Degrade natural water body quality	Water	General activities	Abnormal	Possible	Moderate	12	- Bunded container; - Proper storage containers; - Sealed surfaces; - Spill kit.	Unlikely	Moderate	9	25/09/202 0	N
7. Chemical and fuel storage and handling areas	7.3	Spill (fuel) to soil	Degrade soil and groundwater quality	Soil and Groundwater	Mobile fuel trailers	Abnormal	Possible	Moderate	12	- Bunded container; - Sealed surfaces (where available); - Procedures for mobile refuel; - Environmental Inspection Checklist; - Spill kit.	Unlikely	Moderate	9	25/09/202 0	N
	7.4	Spill (fuel) - to stormwater or water body	Degrade natural water body quality	Water	Mobile fuel trailers	Abnormal	Possible	Moderate	12	- Bunded container; - Sealed surfaces (where available); - Procedures for mobile refuel; - Located far away from drains or waterway; - Environmental Inspection	Unlikely	Moderate	9	25/09/202 0	N

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										Checklist; - Spill kit.					
										1					
	8.1	Generation/dispos al of wastewater (prescribed industrial waste)	Contamination of Land	Land	Cleaning of truck/equipment/plant	Normal	Possible	Moderate	12	- Plant/ equipment is dry cleaned initially; - Washdown of plant/ equipment done on concrete area; - Inspection of washdown area for oily residue; - Collection and correct disposal of wastewater.	Unlikely	Moderate	9	25/09/202 0	N
8. Washdown	8.2	Uncontrolled wash water release to Stormwater	Pollution of waters	Water	Cleaning of truck/equipment/plant	Abnormal	Possible	Moderate	12	- Plant/ equipment is dry cleaned initially; - Washdown of plant/ equipment done on concrete area; - Inspection of washdown area for oily residue; - Collection and correct disposal of wastewater; - Washdown area with no stormwater discharge point.	Unlikely	Moderate	9	25/09/202 0	N
	8.3	Uncontrolled wash water release to Soil and Groundwater	Pollution of soil/groundwater	Land & Groundwater	Cleaning of truck/equipment/plant	Abnormal	Likely	Moderate	17	- Appropriate containment; - Loader cleaning done on concrete area; - no collection or interceptor at hardstand; - Inspection of washdown area for oily residue; - Spill kit material utilised for absorbing oily residues;	Unlikely	Moderate	9	25/09/202 0	N
	9.1		Ozone depletion	Air	Connecting disconnecting fumigation equipment/leaks during fumigation process	Abnormal	Possible	Minor	8	- Fumigation undertaken as per approved JSEA/SOP; - Pressure test silos/line/equipment; - Fumigator competency training; - Schedule maintenance records/reports.	Unlikely	Minor	5	29/10/202 0	N
9. Pest Control	9.2	Fugitive release of gas	Degrade air quality	Air	Connecting disconnecting fumigation equipment/leaks during fumigation process	Abnormal	Possible	Moderate	12	- Fumigation undertaken as per approved JSEA/SOP; - Pressure test silos/line/equipment; - Fumigator competency/ training; - Schedule maintenance records/reports.	Unlikely	Moderate	9	29/10/202	N
	9.3		Damage/death flora and fauna	Air	Connecting disconnecting fumigation equipment/leaks during fumigation process	Abnormal	Possible	Major	18	- Fumigations undertaken as per approved JSEA/SOP; - Pressure test silos/line/equipment; - Fumigator competency/ training; - Schedule maintenance records/reports.	Unlikely	Major	14	29/10/202 0	N



Area/ process	ID	Aspect	Impact	The category the hazard fall into (e.g. water, air)	Activity that produces environmental impacts	Normal/Abnorm al situation	Likelihoo d	Consequenc e	Risk Rating - Inherent Risk (No Controls	Control measures in place	Likelihood	Consequence	Risk Rating - Residua I	Date of Analysis	SIGNIFICANT? (Y/N)
	9.4		Ozone depletion	Air	Fumigant venting	Normal	Likely	Minor	11	- Fumigation undertaken as per approved JSEA/SOP; - Pressure test silos/line/equipment; - Fumigator competency/ training; - Schedule maintenance records/reports; - TMS controlled release;	Possible	Minor	8	29/10/202 0	N
	9.5	Controlled release of gas	Degrade air quality	Air	Fumigant venting	Normal	Likely	Moderate	17	- Fumigation undertaken as per approved JSEA/SOP; - Pressure test silos/line/equipment; - Fumigator competency/ training; - Schedule maintenance records/reports; - TMS controlled release;	Possible	Moderate	12	29/10/202 0	N
9	9.6		Damage/death flora and fauna	Air	Fumigant venting	Normal	Likely	Moderate	17	- Fumigation undertaken as per approved JSEA/SOP; - Pressure test silos/line/equipment; - Fumigator competency/ training; - Schedule maintenance records/reports; - TMS controlled release;	Possible	Moderate	12	29/10/202 0	N
	9.7	Storage of fumigants - Spills  Application of contact pesticides/ herbicides	Ozone depletion	Air	General Activities	Abnormal	Unlikely	Minor	5	- Storage as per approved label/ JSEA/SOP / SDS - Secured storage shed	Rare	Negligible	1	29/10/202 0	N
	9.8		Degrade air quality	Air	General Activities	Abnormal	Unlikely	Moderate	9	- Storage in steel pallet; - Secured storage shed	Rare	Minor	3	29/10/202 0	N
	9.9		Damage/death flora and fauna	Air	General Activities	Abnormal	Unlikely	Major	14	Storage in steel pallet;     Secured storage shed	Rare	Major	13	29/10/202 0	N
	9.1		Pollution of soil/groundwater	Land & Groundwater	Controlling pest and weeds	Abnormal	Possible	Moderate	12	Pest control undertaken as per approved label/ JSEA/SOP /SDS     Monitoring prevailing wind/ weather conditions     Direct contact application	Unlikely	Moderate	9	15/01/202 1	N
	9.1 1		Pollution of waters	Water	Controlling pest and weeds	Abnormal	Unlikely	Moderate	9	- Pest control undertaken as per approved label/ JSEA/SOP / SDS - Monitoring prevailing wind/ weather conditions - Direct contact application	Rare	Moderate	6	15/01/202 1	N



Area/ process	ID	Aspect	Impact	The category the hazard fall into (e.g. water, air)	Activity that produces environmental impacts	Normal/Abnorm al situation	Likelihoo d	Consequenc e	Risk Rating - Inherent Risk (No Controls	Control measures in place	Likelihood	Consequence	Risk Rating - Residua I	Date of Analysis	SIGNIFICANT? (Y/N)
	10.1	Generation of solid waste	Reduce use of landfill space	Land	Poor housekeeping/produc t spoilages/use of tarps	Normal	Almost certainly	Minor	16	- Reuse of tarps. At least more than once; - Using tarps as a base; - broken tyres used as ballast/weights; - Recycling of tarps at the end of useful life Preventative maintenance for plant and equipment to reduce grain residue waste; - Use dry cleaning to pick up clean grain residues. Return grain residues to storage where possible - Store in designated ground bins or silosGrain dust to be delivered to organic recyclers for mixing into garden soils, potting mix and compost products or appropriate alternative; - Dust and Damaged grain beneficial reuse; - Grain recovered and saleable as feed.	Unlikely	Minor	5	25/09/202 0	N
10. Bunker	10.2	Generation of dust	Degrade air quality	Air	Grains movement to/from trucks	Normal	Almost Certain	Moderate	20	- Covering bunker when are not in use; - Reducing grain drop height from grain stacker; - Operator education to reduce dust; - Monitoring wind speed and direction; - Follow bunker JSEA/SOP;	Unlikely	Moderate	9	25/09/202 0	Y
	10.3	Generation of dust	Degrade air quality	Air	Plant/equipment movement (Inside Bunker)	Normal	Almost Certain	Moderate	20	- Covering bunker when are not in use; - Reducing grain drop height from grain stacker; - Operator education to reduce dust; - Monitoring wind speed and direction; - Follow bunker JSEA/SOP; - Vehicle and plant speed limits.	Unlikely	Moderate	9	29/10/202 0	Y
	10.4	Generation of noise	Noise pollution causing public nuisance and health impact	Noise	Plant/equipment/truc ks movement (Inside Bunker)	Normal	Possible	Minor	8	- Reduced speed limits (20km/h); - Traffic Management Plan; - White Noise Reversing Beepers; - Operating during approval hours.	Unlikely	Negligible	2	25/09/202 0	N
	10.5	Spills/leaks of fuels, oils	Pollution of soil/groundwater	Soil and Groundwater	Plant/equipment movement (Inside Bunker)	Abnormal	Possible	Moderate	12	- Spill kits available on site; - Ensure prestart check are undertaken; - Clean any spills as soon as practical; - Refuelling to be undertaken on impervious surface; - All contaminated soil to be removed and Spill material to be disposed off as prescribed waste.	Possible	Minor	8	25/09/202 0	N



Area/ process	ID	Aspect	Impact	The category the hazard fall into (e.g. water, air)	Activity that produces environmental impacts	Normal/Abnorm al situation	Likelihoo d	Consequenc e	Risk Rating - Inherent Risk (No Controls	Control measures in place	Likelihood	Consequence	Risk Rating - Residua I	Date of Analysis	SIGNIFICANT? (Y/N)
	10.6	Spill of grain to natural water body	Degrade natural water body quality	Water	Vehicle tracking grain/gravel/dirt	Normal	Almost certainly	Minor	16	- management as per site hygiene procedures; - Driver awareness/truck clean down prior to leaving area; - Clean up any spills ASAP.	Possible	Negligible	4	29/10/202 0	N
	10.7	Generation of odours	Community nuisance by odours	Air	General Activities	Normal	Possible	Minor	8	- Housekeeping; - Tarps Management maintain cover of stockpiles form weather events	Unlikely	Minor	5	25/09/202 0	N
	11.1	Leaching from storage material	Pollution of soil/groundwater	Land/Groundwater	Unappropriated waste storage	Abnormal	Possible	Moderate	12	- Storage of all hazardous material as per SHE waste management standard; - Storage of material to be under cover where possible; - Ensure provision of adequate waste receptacles and with lids; - Ensure waste type are separated.	Unlikely	Moderate	9	29/10/202 0	N
11. Waste Storage (degraded	11.2	Leaching from storage material	Pollution of land or water	Water	Unappropriated waste storage	Abnormal	Possible	Moderate	12	- Storage of all hazardous material as per SHE waste management standard; - Storage of material to be under cover where possible; - Ensure provision of adequate waste receptacles; - Ensure waste type are separated; - Ensure the waste storage area is located far away from any natural water body or any stormwater drains.	Unlikely	Moderate	9	29/10/202 0	Ν
Grain/dust/Gener al waste/regulated waste/recycling etc)	11.3	Generate / emit Dust	Degrade air quality	Air	Unappropriated storage of grains/ dust waste	Normal	Possible	Minor	8	- Designated storage areas; - Storage of material to be under cover where possible; - Control of dust trough wet down the material; - ensure disposal of material as soon as practicable.	Unlikely	Negligible	2	25/09/202 0	N
	11.4	Generate / emit odour	Public nuisance/advers e public health impact	Air	Waste Storage	Normal	Almost Certain	Minor	16	- Removal accumulated waste promptly from site; - Management as per site hygiene procedures; - Storage of material to be under cover where possible; - Ensure provision of adequate waste receptacles and with lids; - Ensure waste type are separated.	Rare	Minor	3	25/09/202 0	N
	11.5	Disposal of ordinary general waste	Diminish land use capacity (landfill)	Land	General Activities	Normal	Likely	Minor	11	Segregation of general waste and recyclables;     Recycling materials such as paper and carboard;     Removal accumulated waste promptly from site.	Possible	Minor	8	25/09/202 0	N



Area/ process	ID	Aspect	Impact	The category the hazard fall into (e.g. water, air)	Activity that produces environmental impacts	Normal/Abnorm al situation	Likelihoo d	Consequenc e	Risk Rating - Inherent Risk (No Controls	Control measures in place	Likelihood	Consequence	Risk Rating - Residua I	Date of Analysis	SIGNIFICANT? (Y/N)
	11.6	Disposal of Liquid Prescribed industrial waste	Pollution of soil/groundwater	Land/Groundwater	Generation of controlled waste such as residual oil, chemicals etc	Normal	Possible	Moderate	12	- Segregation of liquid prescribed industrial waste such as oil waste and wastewater; - Appropriate containment; - EPA authorised contractor engaged to collect prescribed waste.	Unlikely	Moderate	9	25/09/202 0	N
	11.7	Prescribed solid waste generation/dispos al	Pollution of soil/groundwater	Land/Groundwater	Use of chemical, oil, paint therefore generation of empty contains and oil rags	Normal	Possible	Moderate	12	- Appropriate containment; - Drum muster for chemical containers; - Oily rag bin; - EPA authorised contractor engaged to empty Oil Waste Bin	Unlikely	Moderate	9	25/09/202 0	N
	12. 1	Generation of noise by use of Vehicles/Plant	Noise pollution causing public nuisance and health impact	Noise	Movement of vehicles/truck/plants on site	Normal	Likely	Negligible	7	Regular servicing;     White noise reversing beepers;     Working during permitted hours.	Possible	Negligible	4	25/09/202 0	N
	12. 2	Generate / emit Dust	Degrade air quality	Air	Movement of vehicles/truck/plants on unsealed roads (outside and inside site)	Normal	Almost Certain	Moderate	20	- Limit Speed around site; - Dust suppression truck (water truck); - Driver education related to dust generation on road.	Possible	Moderate	12	25/09/202 0	Y
	12. 3	Spill of fuel from Vehicles/Plant - Refuelling	Degrade natural water body quality and/or pollution to land	Water/Land/Groundwat er	Refuelling plant or vehicles from service truck or on site fuel storage.	Abnormal	Likely	Moderate	17	- Machinery operator reports; - Regular servicing; - Refuelling SWMS; - Spill kits on site.	Unlikely	Moderate	9	25/09/202 0	N
12. General	12. 4	Spill of fuel from Vehicles/Plant - Refuelling	Degrade natural water body quality and/or pollution to land	Water/Land/Groundwat er	Break down of machinery and fix machinery on the area where is broken	Abnormal	Likely	Moderate	17	- As far as practicable undertake maintenance within workshop;     - Appropriate protection for possible leaks (mats, portable bunds etc)     - Maintenance done on concrete area as practicable;     - Spill kit material utilised for absorbing of any spills.	Unlikely	Moderate	9	29/10/202 0	N
	12. 5	Generation/emit contaminated stormwater - discharged off site	Degrade natural water body quality and/or pollution to land	Water/Land/Groundwat er	Unappropriated storage of chemicals, spills or leaks of oil, etc no clean up of spills or no detection of leaks around the site.	Normal	Possible	Moderate	12	Regular inspections and maintenance of pits and screens;     PMs for cleaning pits and gutters;     Maintenance of erosion and sediment controls.	Unlikely	Moderate	9	25/09/202 0	N
	12. 6	Provision of food and favourable habitat for vermin	Contamination of product, potential vectors of disease	Pests	General Activities	Normal	Likely	Minor	11	- Manage as per site 5S hygiene standards; - Monthly inspections, 3rd party Tech Services; - Rodent control program (Tech Service).	Possible	Minor	8	25/09/202 0	N
	12. 7	Spread of Weed	Reduce natural diversity by smothering native plants	Land	General Activities	Normal	Likely	Negligible	7	- General site hygiene Program; - Physical/chemical weed control.	Possible	Negligible	4	25/09/202 0	N



## **Appendix 2: GrainCorp Risk Assessment Matrix**

	Estama.		No. domestic		No will will of
CONSEQUENCE	Extreme	Major	Moderate	Minor	Negligible
	Fatality or significant permanent injury.	Injury resulting in a loss of one or more full shifts – (i.e. a Lost Time Injury – LTI)	Injuries requiring Medical Treatment (MTI) but where no time was lost.	Injury requiring First Aid treatment only.	
Safety	Involves a fire, explosion or smoulder (smoke or fumes) and one other trigger in this level 5 section.	Involves a fire, explosion or smoulder (smoke or fumes) and one other trigger in this level 4 section.	Involves a fire, explosion or smoulder (smoke or fumes) and one other trigger in this level 3 section.	Involves a fire, explosion or smoulder (smoke or fumes) and one other trigger in this level 2 section.	Injury requiring no treatm report only.
Health	Severe illness or chronic exposure resulting in fatality or significant life shortening effects.	Illness or significant adverse health effect needing a high level of medical treatment or management.	Mild illness or health effect and/or some functional impairment that needs some treatment but is usually easily managed, medically.	Minor illness or health effect with no functional impairment, treatment is optional, with no medical intervention.	Illness or effect with limit no impact on ability to fur – no treatment necessa
Environment	Loss of containment / spills meeting any of the Property Damage, Regulatory or Community / Reputation criteria below. Destruction of important populations of habitat, species, or natural environment.	Loss of containment / spills meeting any of the Property Damage, Regulatory or Community / Reputation criteria below. Localised and measurable mediumtern impact on habitat, species or natural environment.	Loss of containment / spills meeting any of the Property Damage, Regulatory or Community / Reputation criteria between Localised and measurable short-term impact on habitat, species or natural environment.	Loss of containment / spills meeting any of the Property Damage, Regulatory or Community / Reputation criteria below.  Localised but immeasurable impact on or impairment of habitat, species or natural environment.	Loss of containment / s meeting any of the Prop Damage, Regulatory Community / Reputati criteria below. No discernible impact o impairment of habitat, sp or natural environmen
Property Damage	Damage to or loss of GrainCorp or third- party property, products, plant or equipment, including lean-up costs, remedial / corrective actions, cumulatively >\$500,000.	Damage to or loss of GrainCorp or third-party property, products, plant or equipment, including lean-up costs, remedial / corrective actions, cumulatively between \$50,000 and \$500,000.	Damage to or loss of GrainCorp's or third-party property, products, plant or equipment, including clean-up costs, remedial / corrective actions, cumulatively between \$10,000 and \$50,000.	Damage to or loss of GrainCorp's or third-party property, products, plant or equipment, including clean-up costs, remedial / corrective actions, cumulatively <\$10,000.	Damage to or loss of GrainCorp's or third-pa property, products, plar equipment, including clea costs, remedial / correc actions, deemed negligi
Assets and Supply Chain	Extended loss of use of assets, significant supply chain / business interruption or widespread and sustained electronic systems outage with a time impact of >48 hours or total financial impact >\$1M.	Extended loss of use of assets, significant supply chain interruption / business interruption or widespread and sustained electronic systems outage with a time impact of >24 hours or total financial impact between \$1M and \$500,000.	Loss of use of assets, supply chain / business interruption or sustained electronic systems outage with a time impact of >12 hours or total financial impact of between \$500,000 and \$200,000.	Loss of use of assets, supply chain / business interruption or electronic outage with a time impact of >6 hours or total financial impact of between \$200,000 and \$50,000.	Loss of use of assets, si chain / business interrupt electronic outage wit negligible time impact financial impact <\$50,0
Regulatory & Legal^	Is 'notifiable' to an Authority / Regulator AND the Authority / Regulator attends the scene of the incident AND/OR commences an investigation. Involves a non-compliance of a licence, authority, permit, approval or law that has either the actual / potential for a civil penalty or fine the maximum of which is > \$50,000 or a criminal penalty. All incidents of suspected or actual fraud, bribery or corruption, events of significant illegal activity, or data breach / privacy breach events.	Is 'notifiable' to an Authority / Regulator or the Authority / Regulator or the Authority / Regulator issues a notice or intends to/or attends the scene / conducts an inspection. Involves a non-compliance of a licence, authority, permit, approval or law that has either the actual/potential for a givil penalty or fine the maximum of which is <\$5,000. Significantly exceeded legislated criteria or state policy limit.	Involves a non-compliance of a licence, authority, permit, approval or law that may result in a minor penalising action (quantum not determined), and any intervention by an Authority or Regulator is limited to a fiel der peopt (or similar). A visit by a regulator following a complaint that results in no penalty but where a report is issued with follow up action. Exceeded elegislated criteria or state policy limit.	Involves a non-compliance of a licence, authority, permit, approval or law with no penalising action, and no intervention by an Authority or Regulator. A visit by a regulator following a complaint that results in no penalty or follow up action. Legislated criteria or state policy limit at risk of not being met.	Minor breaches of com policy or procedure t individual staff members no external actions or in
Community / Reputation	Extended national adverse media coverage. Brand devalued. Significant disruption to public activities or a third party's or our own business operations.	Sustained adverse, local to national media reference. Brand image has potential of being tarnished. Minor disruption to public activities or a third party's or our own business operations.	A clustering of complaints. Potential adverse local media reference. Potential for brand to be questioned.	Isolated complaint from an individual with the potential for adverse community discussion. Isolated adverse local media reference.	Isolated complaint from a individual.
Product Safety, Quality or Contamination	A product recall or product withdrawal is planned or has been initiated following determination that the affected product could harm human health.	A product contamination, product specification or product qualify failure event that has the potential to impact customers or the public with a financial impact >\$200,000.	A contamination, specification or quality incident that results in a potential or actual claim (or rework) of up to \$100,000 and can be resolved internally (i.e. without external expert support).	A customer complaint or incident resulting in a potential or actual claim (or rework) under \$5,000 (e.g. credit note or product reject), which has no harm to human health or the public.	Minor incident with no re impact on the custom
External Disasters	A natural disaster event (flood, fire, earthquake), terrorism, pandemic or threat of extortion, and one other trigger under this level 5 section.	A natural disaster event (flood, fire, earthquake), terrorism, pandemic or threat of extortion, and one other trigger under this level 4 section.	A natural disaster event (flood, fire, earthquake), terrorism, pandemic or threat of extortion, and one other trigger under this level 3 section.	A natural disaster event (flood, fire, earthquake), terrorism, pandemic or threat of extortion, and one other trigger under this level 2 section.	A natural disaster event fire, earthquake), terror pandemic or threat of extortion, and one other under this level 1 sect

TABLE 2: RISK MAT	TABLE 2: RISK MATRIX - Qualitative Risk Matrix – Levels Of Risk									
Likelihood Consequence	Rare The consequence is not expected to occur or to occur less than once in 3 years.	Unlikely The consequence is expected to occur more than once in 3 years but less than once a year.	Possible The consequence is expected to occur more than once a year but less than once in 3 months	Likely The consequence is expected to occur more than once in 3 months but less than once a week.	Almost Certain The consequence is expected to occur on a weekly basis or more frequently.					
Extreme	M (15)	M (19)	H (22)	H (24)	H (25)					
Major	M (13)	M (14)	M (18)	H (21)	H (23)					
Moderate.	VL (6)	L (9)	L (12)	M (17)	H (20)					
Minor	VL (3)	VL (5)	L (8)	L (11)	M (16)					
Negligible	VL (1)	VL (2)	VL (4)	L (7)	L (10)					

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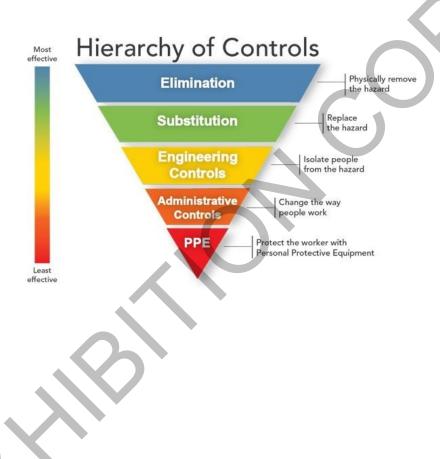
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TABLE 3: PRIORITY ACTION MATRIX							
Н	HIGH RISK	Review activity immediately. Advise local management. Immediate control action needed					
М	MEDIUM RISK	Review existing controls. Apply hierarchy of controls to reduce risk to ALARP*					
L	LOW RISK	Consider existing controls to determine adequacy					
VL	VERY LOW RISK	Monitor existing controls					

<sup>\*</sup> ALARP = As Low As Reasonably Practicable - All hazards must have associated risk controlled to ALARP.



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## **Appendix 3: GrainCorp Incident Management Chart**

#### Incident Classification Matrix and Notification Table

This matrix is designed to ensure that significant incidents are immediately notified and escalated within the organisation and that the appropriate investigation, shared learnings and actions are progressed to prevent incident recurrence. The matrix envisages that the notification allows our people at the front line to manage the incident while ensuring that senior management and, if appropriate, the CEO and members of the Board, are informed in a timely manner.

Use the Incident Classification Matrix below to classify the incident (default to the higher level if in doubt). Please note that some trigger events need another trigger in that section to apply. After you classify the incident refer to the Incident Notification Table below to determine who needs to be notified. Please note that if reporting an 'actual event' (not a 'potential event') by phone, leaving a voice message is insufficient – you must speak directly to the nominated person, or their delegated representative. If you cannot speak to the nominated person, a text message (SMS) is acceptable only provided that a reply text is received indicating that the nominated person received and understood your text. If you are unable to make DIRECT VERBAL OR TEXT contact with the person next in line, escalate to the next level again. Continue doing so until DIRECT VERBAL OR TEXT contact is made at the next level.

Note: a 'Critical Incident' is defined as a level 5 incident involving safety, health or environmental impacts only - events resulting in commercial losses where there are no SHE implications are not critical incidents

INCIDENT CLASSIFICATION Actual or Potential (Worst	Extreme	Major (Level	Moderate	Minor (Level	Negligible
Credible) Consequence	(Level 5)	4)	(Level 3)	2)	(Level 1)
	Fatality or significant permanent injury.	Injury resulting in a loss of one or more full shifts – (ie a Lost Time Injury – LTI)	Injuries requiring Medical Treatment (MTI) but where no time was lost.	Injury requiring First Aid treatment only.	
Safety	Involves a fire, explosion or smoulder (smoke or fumes) and one other trigger in this level 5 section.	Involves a fire, explosion or smoulder (smoke or fumes) and one other trigger in this level 4 section.	Involves a fire, explosion or smoulder (smoke or fumes) and one other trigger in this level 3 section.	Involves a fire, explosion or smoulder (smoke or fumes) and one other trigger in this level 2 section.	Injury requiring no treatment - report only.
Health	Severe illness or chronic exposure resulting in fatality or significant life shortening effects.	Illness or significant adverse health effect needing a high level of medical treatment or management.	Mild illness or health effect and/or some functional impairment that needs some treatment but is usually easily managed, medically.	Minor illness or health effect with no functional impairment, treatment is optional, with no medical intervention.	Illness or effect with limited or no impact on ability to function – no treatment necessary.
Environment	Loss of containment / spills meeting any of the Property Damage, Regulatory or Community / Reputation criteria below.  Destruction of important populations of habitat, species, or natural environment.	Loss of containment / spills meeting any of the Property Damage, Regulatory or Community / Reputation criteria below. Localised and measurable mediumtern impact on habitat, species or natural environment.	Loss of containment / spills meeting any of the Property Damage. Regulatory or Community / Reputation criteria below. Localised and measurable short-term impact on habitat, species or natural environment.	Loss of containment / spills meeting any of the Property Damage, Regulatory or Community / Reputation criteria below.  Localised but immeasurable impact on or impairment of habitat, species or natural environment.	Loss of containment / spills meeting any of the Property Damage, Regulatory or Community / Reputation criteribelow.  No discernible impact on or impairment of habitat, species or natural environment.
Property Damage	Damage to or loss of GrainCorp or third- party property, products, plant or equipment, including lean-up costs, remedial / corrective actions, cumulatively >\$500,000.	Damage to or loss of GrainCorp or third-party property, products, plant or equipment, including clean-up costs, remedial / corrective actions, cumulatively between \$50,000 and \$500,000.	Damage to or loss of GrainCorp's or third-party property, products, plant or equipment, including clean-up costs, remedial / corrective actions, cumulatively between \$10,000 and \$50,000.	Damage to or loss of GrainCorp's or third-party property, products, plant or equipment, including clean-up costs, remedial / corrective actions, cumulatively <\$10,000.	Damage to or loss of GrainCorp's or third-party property, products, plant or equipment, including clean-up costs, remedial / corrective actions, deemed negligible.
Assets and Supply Chain	Extended loss of use of assets, significant supply chain / business interruption or widespread and sustained electronic systems outage with a time impact of >48 hours or total financial impact >51M.	Extended loss of use of assets, significant supply chain interruption / business interruption or widespread and sustained electronic systems outage with a time impact of >24 hours or total financial impact between \$1M and \$500,000.	Loss of use of assets, supply chain / business interruption or sustained electronic systems outage with a time impact of >12 hours or total financial impact of between \$500,000 and \$200,000.	Loss of use of assets, supply chain / business interruption or electronic outage with a time impact of >6 hours or total financial impact of between \$200,000 and \$50,000.	Loss of use of assets, supply chain / business interruption o electronic outage with negligible time impact or financial impact <\$50,000.
Regulatory & Legal^	Is 'notifiable' to an Authority / Regulator AND the Authority / Regulator attends the scene of the incident AND/OR commences an investigation. Involves a non-compliance of a licence, authority, permit, approval or law that has either the actual / potential for a civil penalty or fine the maximum of which is > 50,000 or a criminal penalty. All incidents of suspected or actual fraud, bitchey or corruption, events of significant illegal activity, or data breach / privarcy breach events.	Is 'notifiable' to an Authority / Regulator or the Authority / Regulator or the Authority / Regulator issues a notice or intends to for attends the scene / conducts an inspection. Involves a non-compliance of a licence, authority, permit, approval or law that has either the actual potential for a civil penalty or fine the maximum of which is < \$50,000. Significantity exceeded legislated criteria or state policy limit.	Involves a non-compliance of a licence, authority, permit, approval or law that may result in a minor penalising action (quantum not determined), and any intervention by an Authority or Regulator is limited to a field report (or similar). A wist by a regulator following a complaint that results in no penalty but where a report is issued with follow up action. Exceeded legislated criteria or state policy limit.	Involves a non-compliance of a licence, authority, permit, approval or law with no penalising action, and no intervention by an Authority or Regulator.  A visit by a regulator following a compliant that results in no pen	Minor breaches of company policy or procedure by individual staff members with no external actions or impact.
Community / Reputation	Extended national adverse media coverage. Brand devalued. Significant disruption to public activities or a third party's or our own business operations.	Sustained adverse, local to national media reference. Brand image has potential of being tarnished. Minor disruption to public activities or a third party's or our own business operations.	A clustering of complaints. Potential adverse local media reference. Potential for brand to be questioned.	Isolated complaint from an individual with the potential for adverse community discussion. Isolated adverse local media reference.	Isolated complaint from a loca individual.
Product Safety, Quality or Contamination	A product recall or product withdrawal is planned or has been initiated following determination that the affected product could harm human health.	A product contamination, product specification or product quality failure event that has the potential to impact customers or the public with a financial impact >\$200,000.	A contamination, specification or quality incident that results in a potential or actual claim (or rework) of up to \$100,000 and can be resolved internally (i.e. without external expert support).	A customer complaint or incident resulting in a potential or actual claim (or rework) under \$5,000 (e.g. credit note or product reject), which has no harm to human health or the public.	Minor incident with no resulting impact on the customer.
External Disasters	A natural disaster event (flood, fire, earthquake), terrorism, pandemic or threat of extortion, and one other trigger under this level 5 section.	A natural disaster event (flood, fire, earthquake), terrorism, pandemic or threat of extortion, and one other trigger under this level 4 section.	A natural disaster event (flood, fire, earthquake), terrorism, pandemic or threat of extortion, and one other trigger under this level 3 section.	A natural disaster event (flood, fire, earthquake), terrorism, pandemic or threat of extortion, and one other trigger under this level 2 section.	A natural disaster event (flood fire, earthquake), terrorism, pandemic or threat of extortion, and one other trigge under this level 1 section.

INCIDENT NOTIFICATION TABLE  ✓ Immediate phone call (email of Sphera Report within	n 24 hours)		eme el 5)	Majo	r (Level 4)	Mode (Leve				
Responsibility:	Notify incident to:	Actual Occurrence	Potential to Occur	Actual Occurrence	Potential to Occur	Actual Occurrence	Potential to Occur			
Site / Plant / Terminal Manager	Line Manager (eg: National/Regional Operations Mgr)	<b>~</b>	text / email only	<b>✓</b>	text / email only	text / email only	-			
Site / Plant / Terminal Manager (immediately)	Incident Reporting Hotline	+61 2 9266 9436	-	-	-	-	-			
Site / Plant / Terminal Manager (within 24 hours)	CEO (+61 419 133 433)	-		✓ LTI only	-	-	-			
Line Manager (eg: National/Regional Operations Mgr)	SHE Manager	~	text / email only	✓	text / email only	text / email only	-			
Line Manager (eg: National/Regional Operations Mgr)	GM Operations	<b>√</b>	text / email only	✓	text / email only	text / email only				
SHE Manager	GM SHE	<b>√</b>	text / email only	<b>√</b>	text / email only	text / email only	-			
GM, Operations	Chief Operations Officer	<b>~</b>	text / email only	✓	text / email only	-	-			
GM, SHE (GM, Ops for non-SHE incidents)	Chief People & Transformation Officer	<b>~</b>	text / email only	text / email only	text / email only	-	-			
GM, SHE (GM, Ops for non-SHE incidents)	General Counsel & Company Secretary	<b>√</b>	text / email only	text / email only	text / email only	-	-			
GM, SHE (GM, Ops for non-SHE incidents)	Snr Mgr Corporate Affairs & Investor Relations	<b>√</b>	text / email only	text / email only	text / email only	-	-			
GM, SHE (GM, Ops for non-SHE incidents)	Insurance Manager	<b>√</b>	text / email only	text / email only	text / email only	-	-			
Chief Operations Officer	CEO	<b>√</b>	text / email only	text / email only	text / email only	-	-			
Site Personnel	Emergency Services	İ	As re	equired (Police, An	nbulance, Fire Servi	ces)				
SHE Manager	Regulatory Authorities	As required (only after consultation with General Counsel) (eg: WHS, EPA, etc)								
General Counsel & Company Secretary	Board of Directors		As deemed app	ropriate (all fraud	and legal matters m	ust be notified)				
^For Fraud, Bribery, Corruption or Illegal Activity I	^For Fraud, Bribery, Corruption or Illegal Activity Events please refer to the Whistleblower Procedure I you would prefer to make a confidential disclosure – available on Jumbunna and the GrainCorp website.									
A decision to activ	Extreme (Level 5) and Major (Level 4) Incidents – Crisis Management Team Decision Point  A decision to activate the GrainCorp Crisis Management Team (CMT) will be made by the Crisis Management Team Leader (Risk & Assurance)									

INCIDENT REPORTING	Extreme	Major	Moderate	Minor	Negligible
	(Level 5)	(Level 4)	(Level 3)	(Level 2)	(Level 1)
SHEQ Incidents (including Regulator activity / correspondence received)		All incident	recorded in Sphera within 24 hours		

Environmental Management Plan New South Wales Regional Facilities (Southern Region)

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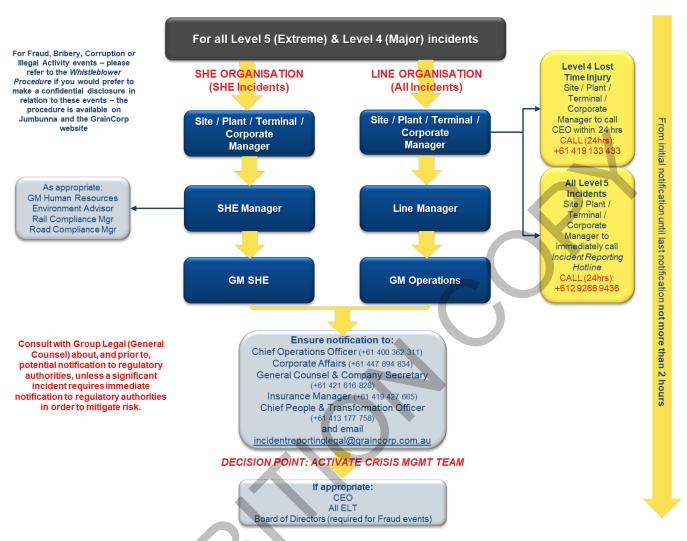
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#### Incident Notification and Escalation Flow

The flowchart below pictorially shows the incident reporting, notification and escalation requirements set out in the above incident notification table. Key phone numbers are also shown on the chart below



#### Incident Investigation and Follow up Tables

Following the initial reporting and escalation process, investigating the root cause of the incident and sharing the learnings across the business is an important step in continous improvement ensuring we learn from incidents and take action to prevent recurrence. The tables below provide an outline of the investigation requirements for each level of incident as well as the requirements to issue SHEQ Alerts and Shared Learnings as well as incident debriefs. Importantly actions to address identified root causes and key learnings must be entered in to Sphera, progressed and closed out in a reasonable timeframe. For further information on incident management, please contact your SHE Manager.

INCIDENT INVESTIGATION (All investigation reports to be uploaded to Sphera)	Extreme (Level 5)	Major (Level 4)	Moderate (Level 3)	Minor (Level 2)	Negligible (Level 1)		
Investigation Type	ICAM *	Basic Investigation*	Basic Investigation* (MTI only)				
Investigation Team Leadership	SHE Team	Regional / National Operations / Ports Manager	Sphera Report entry				
Investigation Team Membership		Local resources		, ,			
Investigation Completion Timeframe	Within 30 days	With	in 14 days				
Sign-off	Chief Operations Officer	GM Operations	Regional / National Operations / Ports Manager	Area / Site	Manager		
nvestigations can be downgraded or upgraded as agreed by both the GM C	perations and GM, SHE						
SHEQ ALERTS AND SHARING LEARNINGS	Extreme (Level 5)	Major (Level 4)	Moderate (Level 3)	Minor (Level 2)	Negligible (Level 1)		
SHEQ Alert (initial incident detail and immediate actions)	SHEQ Alert within 48 Hrs	SHEQ Alert as directed for trends					
SHEQ Learning (Release post Investigation with specific business actions)	SHEQ Learning	Nil					

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# **Appendix J** Transport Assessment





Transport Assessment
GrainCorp, Barellan

for
GrainCorp



## **Document Control**

Project No: 0273

**Project:** GrainCorp, Barellan

Client: GrainCorp

File Reference: P0273r1v2 GrainCorp Barellan Transport Assessment

# **Revision History**

Revision	Date	Details	Approved by
v1	20/05/2022	Draft 1	A. Reisch
v2	10/06/2022	Final 1	A. Reisch

This document has been prepared by arc traffic + traffic for the use of the stated Client only, and addresses the project specifically detailed in this document, and as such should not be considered in regard to any other project. This document has been prepared based on the Client's description of its requirements, information provided by the Client and other third parties. arc traffic + transport does not accept any responsibility for the use of or reference to this document other than intended by the stated Client.



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Appendix A: SIDRA Movement Output Summaries



## 1 Introduction

#### 1.1 Overview

arc traffic + transport has been engaged by GrainCorp to prepare a Transport Assessment in regard to a proposed expansion of storage capacity (the **Proposal**) within the existing GrainCorp facility at 10 Sandy Creek Road, Barellan (the **Site**).

Full details of the Proposal are provided in the broader Development Application (**DA**) prepared by GrainCorp, which will be submitted to Narrandera Shire Council (**Council**) for assessment.

#### 1.2 Transport Assessment Tasks

This Transport Assessment has been prepared to appropriately examine the traffic and transport characteristics of the existing Site and local road network operations, and any potential impacts arising from the Proposal; this has included the following:

- A detailed review of the operations of the Site over the past 10 years, with specific attention to operational peaks associated with seasonable harvest variations;
- The trip generation and distribution characteristics of the Site operations during harvest peak periods, and in turn the operation of key roads and intersections providing access between the Site and the sub-regional road network;
- The additional trip generation of the Site further to the provision of additional storage capacity, and the potential impact of those additional trips on the local road network; and
- Mitigation measures to ensure that the Proposal would not adversely impact either on or off-Site traffic operations

### 1.3 Reference Material

## 1.3.1 Transport Assessment Data

GrainCorp has provided arc traffic + transport with a significant amount of data relating to Site operations for the period 2012 – 2021 inclusive, which includes daily inbound and outbound truck movements. In addition, arc traffic + transport has sourced TfNSW traffic data available from Count Stations in Burley Griffith Way in the vicinity of the Site - and across the sub-region – to inform the assessment of potential traffic impacts.

### 1.3.2 Traffic and Transport Guidelines

In preparing this Transport Assessment, arc traffic + transport has referenced the following traffic and transport guidelines:

- Guide to Traffic Generating Developments 2002, Roads & Traffic Authority (RTA Guide);
- Austroads Guide to Road Design Part 3: Geometric Design (GRD 3);
- Austroads Guide to Road Design Part 4: Intersections & Crossings General (GRD 4);



- Austroads Guide to Road Design Part 4A: Unsignalised & Signalised Intersections (GRD 4A);
   and
- Australian Standard 2890.2: Parking Facilities Off-Street Commercial Vehicle Facilities (AS 2890.2).

#### 1.4 Inbound and Outbound Trucks

A key part of the assessment relates to the movement of trucks during the harvest peak periods and across the year. For ease of reference, we have referred to **inbound trucks** as those delivering grain from producers and other GrainCorp facilities **to** the Site, and **outbound trucks** as those delivering grain to domestic customers **from** the Site.

Noting that there no backloading of trucks, all trucks would actually generate 2 trips, i.e. an arrival and a departure trip, regardless of whether they are an inbound or outbound truck.





# 2 Existing Site Conditions

### 2.1 Site Location

The Site is located east of Sandy Creek Road, Barellan, approximately 52km north of Narrandera and 45km east of Griffith. The Site is shown in its local context in Figure 1, and sub-regional context in Figure 2.

Figure 1: Site Location - Local Context





Yenda B94 Barellan Mir Griffith Beckom Hanwood Ardlethan B87 Willbriggie Leeton Yanco Narrandera Gillenbah Matong Ganmain Coleambally

Figure 2: Site Location - Sub-Regional Context

### 2.2 Operations

During harvest season, the Site receives grain from producers across the region, and from other regional GrainCorp facilities, which is all transported to the Site by truck (i.e. inbound trucks). Upon arrival at the Site, the trucks are weighed and the quality of the grain is tested (at the Sample Stand), and then unloaded at the appropriate on-site storage area. The grain is then out loaded by either rail (using the adjacent siding facility) or by truck (i.e. outbound trucks).

During harvest season, the Site is open for the receipt of grain between 7:00am and 12:00am 7 days a week, and has in the past also operated 24/7 during peak harvest periods/years.

A more detailed review of the historical grain turnover at the Site is provided in Section 3.

#### 2.3 Access

## 2.3.1 Site Access

All Site access is provided by Sandy Creek Road, which in turn connects to Burley Griffin Way (Yapunyah Street) to the south of the railway line. The primary Site access driveway is located immediate north of the rail line, and provides access to the Sample Stand and then grain storage areas. A minor access point is provided to Sandy Creek Road to the north of the Site, but this is used only rarely by maintenance vehicles.



#### 2.3.2 Truck Routes

All of the key roads and intersections use by trucks travelling to and from the Site are designated by TfNSW as Restricted Access Vehicle (**RAV**) routes, and many are also approved Road Train routes, which means they can be used by the largest trucks accessing the Site (generally a 25m/26m B-Double). The gazetted RAV and Road Train routes in the vicinity of the Site are shown in the figures below.

Figure 3: Approved Restricted Access Vehicle Routes



Source: TfNSW

Figure 4: Approved Road Train Routes



Source: TfNSW



All RAV and Road Train routes are assessed regularly by TfNSW to ensure that they provide suitable geometry and general capacity to accommodate RAVs and Road Trains; as such, it is entirely appropriate for trucks travelling to and from the Site to use these routes through Barellan and other subregional centres.

#### 2.4 Key Roads

#### 2.4.1 Burley Griffin Way

Burley Griffin Way is a State Highway that generally runs east-west between Yass and Griffith. In the vicinity of the Site, it provides 1 wide and sealed traffic lane in each direction and sealed verges on both sides of the road, which in some instances provide de facto intersection turn lane infrastructure (see also Section 2.5.1). Burley Griffin Way has a posted speed limit of 50km/h through the Barellan Town Centre (the **Town Centre**), and 100km/h outside of the Town Centre.

#### 2.4.2 Sandy Creek Road

Sandy Creek Road is a local road that runs north-south between Lewes Road at Tallimba and Burley Griffin Way. In the vicinity of the Site, it provides 1 wide and sealed traffic lane in each direction, as well as wide sealed verges, and has a nominal speed limit of 50km/h as an immediate extension of the Town Centre local speed environment.

#### 2.5 Key Intersections

### 2.5.1 Burley Griffin Way & Sandy Creek Road

The intersection of Burley Griffin Way & Sandy Creek Road provides a large and sealed apron appropriate for the turning movements of large vehicles through the intersection. Nominal Basic Left (**BAL**) and Basic Right (**BAR**) turn lanes are available such that through vehicles in Burley Griffin Way are not impeded by vehicles turning to Sandy Creek Road, and sight distances to all approaches are provided in excess of Austroads requirements.



Figure 5: Intersection of Burley Griffin Way & Sandy Creek Road



Source: GrainCorp

### 2.5.2 Sandy Creek Road & Site

The intersection of Sandy Creek Road & Site also provides a very large and sealed apron appropriate for the turning movements of large vehicles to and from the Site. While the intersection does not provide formal auxiliary infrastructure (i.e. formal, marked turn lanes or the like in accordance with Austroads) all through and turn movements can be accommodated without impact through movements (in Sandy Creek Road), and sight distances are provided in excess of Austroads requirements.

Figure 6: Intersection Sandy Creek Road & Site



Source: GrainCorp



#### 2.6 Traffic Volumes

#### 2.6.1 Burley Griffin Way Average Annual Daily Traffic Volumes

In order to determine average traffic volumes in Burley Griffin Way at Sandy Creek Road, arc traffic + transport has referenced Average Annual Daily Traffic (**AADT**) data from TfNSW's Sample Count Station 95302, located in Burley Griffin Way immediately west of Mannings Road, which is available for the years 2006, 2007, 2010 and 2011.

To cross-reference this date, AADT data from Permanent Count Station T0254, located in Sturt Highway at Euroley, has also been reviewed, which includes traffic volumes for the period 2015 – 2022, and as such indicates broader growth trends for east-west movements in the sub-region that can equally be applied to the Burley Griffin Way data so as to provide current AADT estimates.

A summary of the AADT volumes at Sample Count Station 95302 is provided in Table 1, and a summary of the AADT volumes at Permanent Count Station T0254 is provided in Table 2.





Table 1: AADT Sample Count Station 95302, Burley Griffin Way West of Mannings Road

Year	Direction	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
	E	4	3	2	3	4	6	13	20	33	35	35	32	32	33	37	40	39	37	28	16	10	8	8	6	484
2006	W	4	3	3	3	5	9	17	26	29	31	30	30	29	31	32	37	37	33	27	19	15	12	8	6	476
	Total	8	6	5	6	9	15	30	46	62	66	65	62	61	64	69	77	76	70	55	35	25	20	16	12	960
	E	4	3	3	3	5	7	15	21	33	37	35	31	33	34	36	38	40	38	29	17	12	9	8	6	497
2007	W	4	3	4	4	7	12	18	26	31	31	30	30	30	31	35	38	36	33	27	19	16	13	9	7	494
	Total	8	6	7	7	12	19	33	47	64	68	65	61	63	65	71	76	76	71	56	36	28	22	17	13	991
	E	4	3	2	3	4	7	14	24	34	38	39	35	34	38	41	40	41	40	30	17	10	8	7	6	519
2010	W	4	3	3	3	5	8	15	28	33	35	32	32	32	32	35	40	40	37	28	20	17	12	8	6	508
	Total	8	6	5	6	9	15	29	52	67	73	71	67	66	70	76	80	81	77	58	37	27	20	15	12	1,027
	E	4	3	3	3	4	7	18	27	38	41	40	37	36	39	42	41	42	42	34	19	13	10	9	6	558
2011	W	4	4	3	3	5	9	16	28	30	35	34	34	34	34	37	41	42	38	30	22	18	14	9	6	530
	Total	8	7	6	6	9	16	34	55	68	76	74	71	70	73	79	82	84	80	64	41	31	24	18	12	1,088

Source: TfNSW



Table 2: AADT Permanent Count Station T0254, Sturt Highway at Euroley

Year	Direction	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total
	Е	6	5	5	5	8	9	11	19	34	41	42	38	38	40	45	48	48	39	28	20	19	16	11	8	583
2015	W	7	6	7	9	10	12	21	29	39	42	41	40	40	38	41	42	39	35	26	19	15	12	10	8	588
	Total	13	11	12	14	18	21	32	48	73	83	83	78	78	78	86	90	87	74	54	39	34	28	21	16	1,171
	Е																									
2016	W	7	7	7	10	9	16	29	33	41	42	43	43	41	40	43	42	41	36	27	20	15	13	11	8	624
,,	Total	7	7	7	10	9	16	29	33	41	42	43	43	41	40	43	42	41	36	27	20	15	13	11	8	624
	E	6	5	5	6	7	9	12	24	36	43	44	42	42	46	50	54	53	43	31	22	19	15	12	9	635
2017	W	7	6	6	9	10	15	30	32	42	43	43	44	43	41	44	44	42	36	27	21	16	13	10	8	632
•	Total	13	11	11	15	17	24	42	56	78	86	87	86	85	87	94	98	95	79	58	43	35	28	22	17	1,267
<u> </u>	Е	7	5	4	6	6	9	13	23	36	43	46	43	44	48	49	56	50	42	34	25	21	15	13	10	648
2018	W	7	7	7	9	10	14	28	32	41	42	42	44	42	39	44	46	42	37	30	23	19	15	11	9	640
•	Total	14	12	11	15	16	23	41	55	77	85	88	87	86	87	93	102	92	79	64	48	40	30	24	19	1,288
	Е	6	5	5	6	5	7	13	25	39	45	46	45	45	48	55	61	55	44	32	22	20	16	12	9	666
2019	W	7	6	6	9	12	18	35	35	46	47	46	45	44	42	45	45	44	39	29	21	18	14	11	8	672
.,	Total	13	11	11	15	17	25	48	60	85	92	92	90	89	90	100	106	99	83	61	43	38	30	23	17	1,338
	Е	7	6	6	9	11	18	33	32	39	37	37	37	36	35	39	40	39	32	25	20	16	13	10	8	585
2020	W	6	5	5	5	5	7	13	22	33	38	38	39	38	43	46	53	44	37	29	20	18	15	11	8	578
.,	Total	13	11	11	14	16	25	46	54	72	75	75	76	74	78	85	93	83	69	54	40	34	28	21	16	1,163
	Е	7	6	5	5	7	9	15	26	38	42	44	43	40	44	49	56	46	37	29	22	19	16	13	10	628
2021	W	7	7	9	11	12	18	34	34	41	40	40	40	39	39	42	44	41	35	27	22	18	14	10	9	633
	Total	14	13	14	16	19	27	49	60	79	82	84	83	79	83	91	100	87	72	56	44	37	30	23	19	1,261

Source: TfNSW



While there is little information available to indicate that the AADT volumes in Burley Griffin Way have significant changed since the last data records in 2011, the average growth in AADT in Sturt Highway for the period 2105 – 2021 was 1.28%; application of this growth rate to the Burley Griffin Way AADT volumes as a wort case indicates a current (2022) AADT of approximately 1,240 vehicle trips per day (**vpd**), and a 10 year (2032) AADT forecast of approximately 1,415vpd, in Burley Griffin Way at Sandy Creek Road.

#### 2.6.2 Burley Griffin Way Peak Hour Traffic Volumes

Both data sets indicate peak hour volumes represent approximately 8% of AADT volumes, suggesting a peak hour volume in Burley Griffin Way at Sandy Creek Road of approximately 100 vehicle trips per hour (**vph**) in 2022 and 112vph in 2032, with trips generally split across the day between eastbound and westbound trips.

#### 2.6.3 Sandy Creek Road

Based on the number of sites (and broader road network connections) provided with access via Sandy Creek Road (at Burley Griffin Way, and then north past the Site), the only traffic generated to Sandy Creek Road on a regular basis would be that generated by the Site, though minor additional peaks might be generated further to, for example, occasional events at the Showground.

A more detailed assessment of the trip generation of the Site is provided in Section 3.2.

#### 2.7 Road Network Operations

#### 2.7.1 General Road Operations

With reference to sections above, Burley Griffin Way and all other local roads operate with little if any constraint based on the significant capacity of these roads and what are very minimal traffic volumes during peak hours and across the day.

From a more quantitative perspective, Section 4 of the RTA Guide provides guidance on the determination of Level of Service (LOS) – i.e. the basic operation of a road – for rural highways such as Burley Griffin Way, and urban roads such as through the Town Centre. In regard rural highways, Section 4.2.4 of the RTA Guide states the following:

Table 4.5 sets out two-way hourly road capacities for two-lane roads for different levels of service, with a design speed of 100 km/hr, based on different terrain types. The capacity assumes a 60/40 directional split of traffic. Where design speeds of 80 km/hr are used, the resulting capacities are between 85-95% of the figures quoted, depending on the level of service.

Table 4.5 of the RTA Guide is reproduced below, noting Table 4.5 assumes the following factors, all of which apply to Burley Griffin Way through and on the approaches to Barellan:

- Level terrain has a minimum of 20% no overtaking;
- 3.7 m traffic lane widths with side clearances of at least 2m; and



• 60/40 directional split of traffic.

Table 3: RTA Guide Rural Highway Level of Service Two-Way Hourly Volumes

Terrain	Level of Service	Р	ercent of He	eavy Vehicle	es
rerrain	Level of Service	0	5	10	15
	В	630	590	560	530
Level	С	1030	970	920	870
Level	D	1630	1550	1480	1410
	E	2630	2500	2390	2290
	В	500	420	360	310
Rolling	С	920	760	650	570
Rolling	D	1370	1140	970	700
	E	2420	2000	1720	1510
	В	340	230	180	150
Mountainous	С	600	410	320	260
Mountainous	D	1050	680	500	400
	E	2160	1400	1040	820

Source: RTA Guide

In addition, and noting that the lower posted vehicle speed of 50km/h through the Town Centre, Table 4.4 of the RTA Guide provides LOS guidance for urban roads, and is reproduced below.

Table 4: RTA Guide Table 4.4. Urban Road Level of Service Hourly Volumes

Level of Service	One Lane (veh/hr)	Two Lanes (veh/hr)
A	200	900
В	380	1400
C	600	1800
D	900	2200
E	1400	2800

Source: RTA Guide

With reference to Section 2.6, the existing traffic volumes in Burley Griffin Way in the vicinity of the Site – both outside and within the Town Centre – represent only a minor percentage of the LOS B traffic volumes for rural highways, and only a fraction of the LOS A volumes for urban roads.

arc traffic + transport notes that traffic volumes in Burley Griffin Way (and Sandy Creek Road) increase significantly during harvest periods; a review of the LOS of both roads during the harvest peak periods is provided in Section 3.3.



#### 2.7.2 Intersection Operations

With reference to Section 3.3, even during peak harvest periods the trip generation of the Site is relatively moderate, and in turn the number of trips being generated to the intersection of Burley Griffin Way & Sandy Creek Road indicates that the intersection would essentially operate without any delays or queuing, and as such report a LOS A in accordance with TfNSW intersection assessment guidelines.

As with general roadway capacity, arc traffic + transport again notes that traffic volumes at the intersection of Burley Griffin Way & Sandy Creek Road also increase significantly during harvest periods; a review of the LOS of the intersection during the harvest peak periods is provided in Section 3.4

#### 2.8 Crash Data

Crash data for the period 2016 – 2020 inclusive is available from TfNSW's Centre for Road Safety, and has been reviewed to determine whether there have been crashes in the vicinity of the Site, and the underlying characteristics of those crashes.

A summary of crash locations and crash severity is provided in Figure 7.

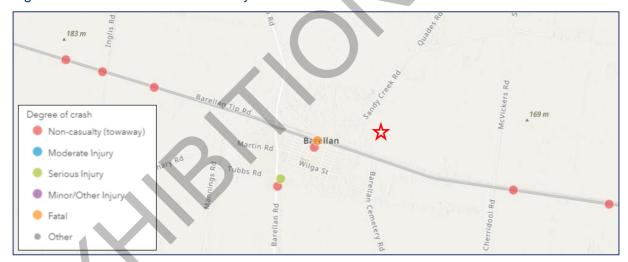


Figure 7: Crash Locations & Severity

Source: TfNSW

With reference to Figure 7 and the broader TfNSW crash data set, there were 2 significant crashes in the vicinity of the Site in the 5 year reporting period, with a *fatal* crash in Burley Griffin Way west of Sandy Creek Road in 2017, and a *serious injury* crash in Barellan Road in 2019; the detailed TfNSW crash information identifies mitigating circumstances of speeding and fatigue in these 2 crashes respectively. More broadly, all other crashes were reported as non-injury or tow-way crashes.

Overall, there is no information available in the TfNSW crash data to suggest any systemic safety issues relating to the use of the local road network, which is not surprising given the low traffic volumes and available road infrastructure.



## 3 Site Operations

In order to better understand Site operations over time, GrainCorp has provided arc traffic + transport with a 10 year data set (2012 – 2021 inclusive) so that the [traffic] characteristics associated with the quality of yearly harvests can be more easily identified. Sections below provide a summary of the recent operations of the Site further to a review of this data.

#### 3.1 Annual Product

#### 3.1.1 Annual Inbound Tonnage

A summary of annual inbound grain delivered truck between 2012 and 2021 is provided in Table 5 and Table 6, including grain being delivered directly by regional producers, and grain being delivered from other GrainCorp regional facilities (by GrainCorp).

#### 3.1.2 Annual Outbound Tonnage

A summary of annual outbound grain delivered by rail and truck between 2012 and 2021 is provided in Table 7 and Table 8.





Table 5: Annual Inbound Tonnage 2012 – 2016

Year	Quarter	Producers	%	GrainCorp	%	Total
	Qtr1	845	60%	567	40%	1,412
	Qtr2	151	3%	5,236	97%	5,388
2012	Qtr3		0%	7,760	100%	7,760
2(	Qtr4	158,525	92%	13,629	8%	172,154
	Total	159,521	85%	27,192	15%	186,714
	Qtr1	517	70%	217	30%	734
	Qtr2		0%	68	100%	68
2013	Qtr3		0%	119	100%	119
2	Qtr4	181,035	100%	329	0%	181,365
	Total	181,553	100%	733	0%	182,286
	Qtr1	279	63%	161	37%	440
	Qtr2					
2014	Qtr3		0%	131	100%	131
2	Qtr4	124,611	100%	40	0%	124,651
	Total	124,889	100%	332	0%	125,221
	Qtr1	23	100%		0%	23
	Qtr2	3	10%	23	90%	26
2015	Qtr3					
7	Qtr4	171,096	100%		0%	171,096
	Total	171,121	100%	23	0%	171,145
	Qtr1	66	100%		0%	66
	Qtr2					
2016	Qtr3		0%	9	100%	9
7	Qtr4	188,030	100%	380	0%	188,410
	Total	188,095	100%	389	0%	188,484



Table 6: Annual Inbound Tonnage 2017 – 2021

Year	Quarter	Producers	%	GrainCorp	%	Total
	Qtr1	5,441	100%		0%	5,441
	Qtr2	378	100%		0%	378
2017	Qtr3					1
2	Qtr4	53,113	99%	326	1%	53,439
	Total	58,932	99%	326	1%	59,258
	Qtr1	3,789	80%	963	20%	4,752
	Qtr2	117	100%		0%	117
2018	Qtr3	7	100%		0%	7
2	Qtr4	39,714	100%		0%	39,714
	Total	43,626	98%	963	2%	44,590
	Qtr1		0%	1,248	100%	1,248
	Qtr2					
2019	Qtr3		0%	1	100%	1
2	Qtr4	68,223	100%	45	0%	68,269
	Total	68,223	98%	1,295	2%	69,518
	Qtr1	145	81%	33	19%	179
	Qtr2		0%	41	100%	41
2020	Qtr3					
(4	Qtr4	233,992	100%		0%	233,992
	Total	234,137	100%	74	0%	234,211
	Qtr1	490	100%		0%	490
	Qtr2		0%	33,760	100%	33,760
2021	Qtr3		0%	15,085	100%	15,085
Ŋ	Qtr4	224,839	100%	383	0%	225,222
	Total	225,330	82%	49,227	18%	274,557



Table 7: Annual Outbound Tonnage 2012 - 2016

Year	Quarter	Rail	%	Truck	%	Total
	Qtr1	26,972	60%	17,656	40%	44,628
	Qtr2	41,154	83%	8,495	17%	49,649
2012	Qtr3	57,820	86%	9,676	14%	67,496
2	Qtr4	36,130	62%	22,166	38%	58,296
	Total	162,076	74%	57,993	26%	220,068
	Qtr1	54,617	84%	10,178	16%	64,795
	Qtr2	30,499	76%	9,662	24%	40,161
2013	Qtr3	13,941	57%	10,313	43%	24,254
2	Qtr4	38,164	92%	3,322	8%	41,486
	Total	137,221	80%	33,475	20%	170,696
	Qtr1	76,877	94%	4,966	6%	81,843
	Qtr2	22,216	72%	8,693	28%	30,909
2014	Qtr3	6,804	23%	22,612	77%	29,416
2	Qtr4	15,260	70%	6,416	30%	21,676
	Total	121,158	74%	42,686	26%	163,844
	Qtr1	37,692	78%	10,872	22%	48,563
	Qtr2	15,724	86%	2,584	14%	18,308
2015	Qtr3	14,155	45%	17,399	55%	31,554
7	Qtr4	19,033	71%	7,921	29%	26,953
	Total	86,603	69%	38,775	31%	125,378
	Qtr1	14,703	37%	25,162	63%	39,865
	Qtr2	5,751	11%	48,299	89%	54,050
2016	Qtr3	15,195	35%	28,628	65%	43,822
2	Qtr4	15,879	53%	14,270	47%	30,150
	Total	51,528	31%	116,359	69%	167,887



Table 8: Annual Outbound Tonnage 2017 - 2021

Year	Quarter	Rail	%	Truck	%	Total
	Qtr1	52,565	85%	9,451	15%	62,016
	Qtr2	45,794	64%	25,476	36%	71,269
2017	Qtr3	20,273	96%	941	4%	21,215
7	Qtr4	26,043	92%	2,182	8%	28,225
	Total	144,675	79%	38,050	21%	182,725
	Qtr1	15,957	86%	2,585	14%	18,542
	Qtr2	4,399	91%	440	9%	4,838
2018	Qtr3	19,161	79%	5,170	21%	24,332
7	Qtr4		0%	5,954	100%	5,954
	Total	39,517	74%	14,149	26%	53,667
	Qtr1	10,054	83%	2,062	17%	12,116
	Qtr2	14,305	87%	2,166	13%	16,471
2019	Qtr3	10,507	72%	4,050	28%	14,557
7	Qtr4		0%	1,382	100%	1,382
	Total	34,866	78%	9,659	22%	44,525
	Qtr1	7,012	61%	4,423	39%	11,435
	Qtr2	24,020	82%	5,277	18%	29,297
2020	Qtr3	5,155	77%	1,535	23%	6,690
(4	Qtr4	40,139	89%	4,877	11%	45,016
	Total	76,326	83%	16,112	17%	92,438
	Qtr1	80,031	100%	64	0%	80,095
	Qtr2	83,719	99%	1,052	1%	84,771
2021	Qtr3	73,941	100%	42	0%	73,983
Ö	Qtr4	41,920	94%	2,710	6%	44,630
	Total	279,612	99%	3,868	1%	283,479



#### 3.2 Truck Operations

#### 3.2.1 Inbound Trucks

As discussed, all inbound grain is transported to the Site by truck. With reference to the Site data set, inbound trucks operated by producers carry an average of 33t of grain, while inbound trucks from other GrainCorp facilities (operated by GrainCorp) carry an average of 54t of grain.

Based on these truck capacities, Table 9 and Table 10 provide a summary of total annual inbound truck trips between 2012 and 2021.

#### 3.2.2 Inbound Trucks

As shown in sections above, only a moderate percentage of outbound grain is transported from the Site by truck; with reference to the Site data set, all outbound trucks are operated by GrainCorp and also carry an average of 54t of grain.

Based on these truck capacities, Table 11 and Table 12 provide a summary of the total annual outbound truck trips between 2012 and 2021.

#### 3.2.3 Total Truck Trips

With reference to sections above, Table 13 and Table 14 provide a summary of the total annual truck trip generation of the Site (all inbound trucks and outbound trucks) for the period 2012 – 2021.





Table 9: Inbound Truck Trips 2012 - 2016

Year	Quarter	Producer Product (t)	Truck Capacity (t)	GrainCorp Product (t)	Truck Capacity (t)	Truck Trips
	Qtr1	845	33	567	54	72
	Qtr2	151	33	5,236	54	203
2012	Qtr3			7,760	54	287
8	Qtr4	158,525	33	13,629	54	10,112
	Total	159,521	15	27,192	2.55	10,675
	Qtr1	517	33	217	54	39
	Qtr2			68	54	3
2013	Qtr3			119	54	4
8	Qtr4	181,035	33	329	54	10,984
	Total	181,553	16	733	0.07	11,030
	Qtr1	279	33	161	54	23
	Qtr2					
2014	Qtr3		11.	131	54	5
8	Qtr4	124,611	33	40	54	7,554
	Total	124,889	16	332	0.04	7,581
	Qtr1	23	33			1
	Qtr2	3	33	23	54	1
2015	Qtr3					
N	Qtr4	171,096	33			10,369
	Total	171,121	16	23	0.00	10,372
	Qtr1	66	33			4
	Qtr2					
2016	Qtr3			9	54	0
8	Qtr4	188,030	33	380	54	11,410
	Total	188,095	16	389	0.03	11,414



Table 10: Inbound Truck Trips 2017 – 2021

Year	Quarter	Producer Product (t)	Truck Capacity (t)	GrainCorp Product (t)	Truck Capacity (t)	Truck Trips
	Qtr1	5,441	33			330
	Qtr2	378	33			23
2017	Qtr3					
2	Qtr4	53,113	33	326	54	3,231
	Total	58,932	16	326	0.09	3,584
	Qtr1	3,789	33	963	54	265
	Qtr2	117	33			7
2018	Qtr3	7	33			0
2	Qtr4	39,714	33			2,407
	Total	43,626	16	963	0.36	2,680
	Qtr1			1,248	54	46
	Qtr2					
2019	Qtr3			1	54	0
7	Qtr4	68,223	33	45	54	4,136
	Total	68,223	16	1,295	0.31	4,183
	Qtr1	145	33	33	54	10
	Qtr2			41	54	2
2020	Qtr3					
	Qtr4	233,992	33			14,181
	Total	234,137	16	74	0.01	14,193
	Qtr1	490	33			30
	Qtr2		33	33,760	54	1,250
2021	Qtr3		33	15,085	54	559
7	Qtr4	224,839	33	383	54	13,641
	Total	225,330	15	49,227	3.18	15,480



Table 11: Outbound Truck Trips 2012 – 2016

Year	Quarter	Tonnage (t)	Truck Capacity (t)	Truck Trips
	Qtr1	17,656	54	654
	Qtr2	8,495	54	315
2012	Qtr3	9,676	54	358
2	Qtr4	22,166	54	821
	Total	57,993		2,148
	Qtr1	10,178	54	377
	Qtr2	9,662	54	358
2013	Qtr3	10,313	54	382
2	Qtr4	3,322	54	123
	Total	33,475		1,240
	Qtr1	4,966	54	184
	Qtr2	8,693	54	322
2014	Qtr3	22,612	54	837
2	Qtr4	6,416	54	238
	Total	42,686		1,581
	Qtr1	10,872	54	403
	Qtr2	2,584	54	96
2015	Qtr3	17,399	54	644
8	Qtr4	7,921	54	293
	Total	38,775		1,436
	Qtr1	25,162	54	932
	Qtr2	48,299	54	1,789
2016	Qtr3	28,628	54	1,060
7	Qtr4	14,270	54	529
	Total	116,359		4,310



Table 12: Outbound Truck Trips 2017 – 2021

Year	Quarter	Tonnage (t)	Truck Capacity (t)	Truck Trips
	Qtr1	9,451	54	350
	Qtr2	25,476	54	944
2017	Qtr3	941	54	35
2	Qtr4	2,182	54	81
	Total	38,050		1,409
	Qtr1	2,585	54	96
	Qtr2	440	54	16
2018	Qtr3	5,170	54	191
2	Qtr4	5,954	54	221
	Total	14,149		524
	Qtr1	2,062	54	76
	Qtr2	2,166	54	80
2019	Qtr3	4,050	54	150
2	Qtr4	1,382	54	51
	Total	9,659		358
	Qtr1	4,423	54	164
	Qtr2	5,277	54	195
2020	Qtr3	1,535	54	57
	Qtr4	4,877	54	181
	Total	16,112		597
	Qtr1	64	54	2
	Qtr2	1,052	54	39
2021	Qtr3	42	54	2
Ö	Qtr4	2,710	54	100
	Total	3,868		143



Table 13: Total Annual Truck Tips 2012 – 2016

Year	Quarter	Trucks	Truck Trips
2012	Qtr1	363	726
	Qtr2	259	518
	Qtr3	323	646
	Qtr4	5,467	10,933
	Total	6,411	12,823
2013	Qtr1	208	416
	Qtr2	180	360
	Qtr3	193	386
	Qtr4	5,554	11,107
	Total	6,135	12,270
2014	Qtr1	103	207
	Qtr2	161	322
	Qtr3	421	842
	Qtr4	3,896	7,791
	Total	4,581	9,162
2015	Qtr1	202	404
	Qtr2	48	97
	Qtr3	322	645
	Qtr4	5,331	10,663
	Total	5,904	11,808
2016	Qtr1	468	936
	Qtr2	894	1,789
	Qtr3	530	1,061
	Qtr4	5,969	11,938
	Total	7,862	15,724



Table 14: Total Annual Truck Trips 2017 - 2021

Year	Quarter	Trucks	Truck Trips
2017	Qtr1	340	680
	Qtr2	483	966
	Qtr3	17	35
	Qtr4	1,656	3,312
	Total	2,496	4,993
2018	Qtr1	181	361
	Qtr2	12	
	Qtr3	96	192
	Qtr4	1,314	2,627
	Total	1,602	3,180
2019	Qtr1	61	123
	Qtr2	40	80
	Qtr3	75	150
	Qtr4	2,094	4,188
	Total	2,270	4,540
2020	Qtr1	87	174
	Qtr2	98	197
	Qtr3	28	57
	Qtr4	7,181	14,362
	Total	7,395	14,790
2021	Qtr1	16	32
	Qtr2	645	1,289
	Qtr3	280	560
	Qtr4	6,871	13,741
	Total	7,811	15,623



#### 3.3 Inbound Truck Peak Periods

In order to determine the potential impact of additional truck trips arising from the Proposal, arc traffic + transport has extracted truck trip data from the super-peak harvest period in the 4<sup>th</sup> Quarter of 2020. Table 15 provides a summary of the weekly inbound and outbound truck numbers and truck trips during this period.

Table 15: 2020 4th Quarter Weekly Truck Trips

Week Starting	Inbound Product (t)	Trucks	Outbound Product (t)	Trucks	Truck Trips
2/11/2020	36,478	1,033	963	18	2,066
9/11/2020	69,189	1,962	883	22	3,924
16/11/2020	85,201	2,455	81	3	4,910
23/11/2020	22,072	664	228	5	1,328

Further to the above, on each day between Monday 16 November 2020 and Saturday 21 November 2020 (inclusive) the Site generated more than 330 inbound trucks (but very few outbound truck trips), with a peak of 387 inbound trucks on Friday 20 November 2020, equating to some 774 truck trips.

arc traffic + transport notes that detailed information in regard to the time of inbound truck arrivals and departures is not available. As such, to provide an estimate of peak hour trip generation, we have considered the following:

- The Site is open for receipt of inbound trucks between 7:00am and 12:00am every day through the harvest peak period, i.e. 17 hours;
- Based on information provided to arc traffic + transport by GrainCorp, arrivals are generally steady from opening through to early evening, before reducing through to closing time; and

Further to the above, and to provide a conservative assessment, arc traffic + transport estimates that up to 10% of daily inbound truck arrivals could occur in a single peak hour; as such, the Site could generate 39 inbound trucks in a single hour during super-peak harvest conditions, or 78 truck trips.

#### 3.4 Harvest Peak Traffic Impacts

#### 3.4.1 General Road Operations

With reference to Section 2.7, Burley Griffin Way and all other local roads would operate with little if any constraint based on the significant capacity of these roads and what are very minimal traffic volumes during peak hours and across the day.



From a more quantitative perspective, these super-peak truck trips would increase traffic volumes in Burley Griffin Way from the current AADT estimate of 100vph to approximately 178vph. This total volume remains well below the LOS B capacity cap for rural highways (Table 3) and the LOC A capacity cap for urban conditions through the Town Centre itself (Table 4).

These peak hour conditions would only be experienced for a short period of the year; for the majority of the year, the daily and peak hour truck trip generation of the Site would only be a fraction of these peak levels.

#### 3.4.2 Intersection Operations

arc traffic + transport has assessed the operation of the intersection of Burley Griffin Way & Sandy Creek Road under super-peak conditions using the SIDRA intersection performance model. SIDRA provides a number of key outputs by which to measure the performance of an intersection, including:

- Average Vehicle Delay (AVD): AVD (or average delay per vehicle in seconds) for intersections is used to determine an intersection's Level of Service (see below). For signalised intersections, the AVD reported relates to the average of all vehicle movements through the intersection.
- > Level of Service (LOS): For intersections, LOS is a comparative measure that provides an indication of the operating performance, based on AVD.
- > 95%ile Queue Length: The 95%ile queue length is the length below which 95% of all observed cycle queue lengths fall, or 5% of observed queues exceed.

With regard to intersection LOS, Table 16 provides a summary of the SIDRA recommended criteria for the assessment of intersections.

Table 16: SIDRA Level of Service Criteria

Level	of Service	Average Delay (seconds per vehicle)	Traffic Signals & Roundabouts				
	A	less than 14	Good operation  Good with acceptable delays & spare capacity  Satisfactory				
	В	15 to 28					
	С	29 to 42					
	D	43 to 56	Operating near capacity  At capacity; at signals, incidents will cause excessive delays				
	E	57 to 70					
	L	37 10 70	Roundabouts require other control mode				
	F	More than 70	Unsatisfactory and requires additional capacity.				

Source: SIDRA Systems



For the assessment, arc traffic + transport has assigned the peak hour trips (per Section 3.3) as right turn trips (both to and from Burley Griffin Way) as an absolute worst case, noting that all available information indicates a relatively even split between arrivals/departures to the east and west. In addition, all approaches have been designated as single lane, i.e. a through vehicle movement in Burley Griffin Way would not be able to pass a turning vehicle, again an absolute worst case scenario given the available BAL and BAR provisions.

Further to the SIDRA analysis, arc traffic + transport has determined that the intersection operates at a LOS A even during these super-peak periods, with essentially no delays (worst delay of 6.8 seconds turning from Sandy Creek Road) or queues. Again, this good Intersection DOS is simply a function of the low traffic volumes (particularly in Burley Griffin Way) and the good intersection infrastructure.

The detailed SIDRA Movement Output summaries are provided in Appendix A.

#### 3.5 Rail Operations

As shown in Table 7 and Table 8, rail transport plays a significant role in Site operations, and specifically for outbound grain transport, averaging approximately 75% of outbound transport over the period 2012 – 2021, and an even higher percentage during peak harvest years. The majority of outbound grain transported by rail is to domestic and international customers, and trains operate 24/7 across the year.

There is no expectation that the Proposal will result in significant change to existing (peak) rail transport operations.





# 4 The Proposal

#### 4.1 Overview

The Proposal will provide some 232,000t of additional storage capacity within the existing Site so as to ensure (to as great an extent possible) that all demand for storage can be met at all times; this is particularly important during occasional super-peak harvest years where, historically, storage capacity has not been able to fully meet that demand, in part because back to back super-peak harvests have meant that the existing storage facilities are still carrying grain from previous years.

The location of the proposed new storage bunkers is shown in Figure 8.

Figure 8: The Proposal



Source: TCS

Importantly, the Proposal would not result in any fundamental changes to the broader operation of the Site, particularly during harvest periods; the only change will be the ability to store additional grain, which in turn means the potential for:

- An increase in the number of inbound trucks transporting grain to the Site for storage; and
- An increase in the number of outbound trucks transporting stored grain from the Site to domestic customers.



#### 4.2 Access

All access to the new storage area will continue to be provided via the existing Site access point at Sandy Creek Road and through the Sample Stand. The access aisles through the new storage area will operate one-way to reduced potential vehicle conflicts and maximise movement efficiency.

## 4.3 Additional Storage Capacity Demand

With reference to all available inbound and outbound data for the Site, and noting that the additional capacity would - as with existing storage capacity – increase and decrease over time, GrainCorp estimates that during a super-peak harvest year the additional storage capacity could provide for an additional 100,000 tonnes of inbound grain to be transported to the Site annually; as previously discussed, these super-peak conditions and anticipated to occur in a small number of years each decade.

In other above average harvest years, it is estimated that the additional storage capacity could provide for an additional 25,000 tonnes of inbound grain to be transport to the Site annually.

#### 4.4 Additional Truck Trip Generation

#### 4.4.1 Inbound Trucks

As discussed in Section 2.2, all grain stored at the Site is transported there by truck, with an average tonnage of 33t per vehicle (producers). As such, under super-peak conditions - and assuming that all grain is transport to the Site by producers - the additional storage capacity could result in the generation of an additional 3,030 inbound trucks during the super-peak harvest period.

To provide a conservative assessment, and with reference to the very constrained peak period during the 4<sup>th</sup> Quarter of 2020 (see Section 3.3), it is estimated that these additional inbound truck trips could be confined to a 6 week period during the broader [2 - 3 month] harvest period, and as such could result in an additional 72 inbound trucks arriving at the Site each day during this period, or an additional 144 truck trips each day during this period.

## 4.4.2 Outbound Truck Trips

The additional storage is not anticipated to result in any significant increase in daily or seasonal outbound truck trip generation. While the majority of outbound grain will continue to be transported by rail, the additional storage capacity would be utilised over extended periods (i.e. over numerous years) based on customer demands, and moreover any increase in [domestic customer] demand would be spread across the year rather than in short peak periods, as shown in the historical outbound truck movements reported in Table 11 and Table 12.

Noting further the use of larger capacity outbound trucks by GrainCorp, the additional storage provided by the Proposal is not anticipated to increase outbound truck trip generation by more than a handful of truck trips per day across the year.



#### 4.5 Traffic Impacts

#### 4.5.1 Road Capacity

With reference to the super-peak truck trip generation identified in Section 3.4, the additional storage capacity would potentially increase super-peak daily truck trips from 770 truck trips per day to 914 truck trips per day, and up to 15 additional truck trips in a peak hour.

These additional truck trips would increase peak hour traffic volumes in Burley Griffin Way from 178vph under existing super-peak conditions to 193vph. This total volume again remains well below the LOS B capacity cap for rural highways (Table 3) and LOS A cap for urban conditions through the Town Centre (Table 4). Again, these super-peak conditions would only be experienced for a short period of the year, and then only for 1-2 years each decade; for the majority of the year and over the course of many years, the truck trip generation of the Site would only be a fraction of these super-peak levels.

#### 4.5.2 Intersection Operations

For the assessment of the operation of the intersection of Burley Griffin Way & Sandy Point Road, arc traffic + transport has again assigned the additional peak hour trips (per Section 3.3) as right turn trips (both to and from Burley Griffin Way) and designated all approaches as single lane. The background traffic volumes in Burley Griffin Way have also been increased to reflect the 2032 forecast AADT volumes.

Further to the SIDRA analysis, arc traffic + transport has determined that the intersection operations will be effectively unchanged further to the Proposal, retaining a LOS A and only a minor increase in the worst delay (turning from Sandy Creek Road) to 7.3 seconds. Again, this good Intersection LOS is simply a function of the low traffic volumes (particularly in Burley Griffin Way) and the good intersection infrastructure.

The detailed SIDRA Movement Output summaries are provided in Appendix A.

#### 4.5.3 Traffic Impact Summary

With reference to sections above, the Proposal will have no significant impact on the operation of the local road network. Total traffic volumes in Burley Griffin Way and Sandy Creek Road remain well below the LOS B thresholds, and the intersection of Burley Griffin Way & Sandy Creek Road would continue to operate at LOS A with essentially no delays or queues.

#### 4.6 Additional Issues

#### 4.6.1 On-Site Queuing

The Site has significant on-site queuing capacity, and the movement of inbound trucks through the Sample Stands and to storage areas is extremely efficient, particularly since GrainCorp undertook upgrades of all inbound truck arrival infrastructure in 2017. As such, there is no potential for trucks to queue into Sandy Creek Road.



## 4.6.2 Scheduled Inbound and Outbound Trucks

As discussed in Section 3.2, GrainCorp operates a percentage of inbound trucks and all outbound trucks; this allows GrainCorp to schedule the movement of these trucks, and moreover ensures to as great an extent as possible that these truck trips are minimised during harvest (inbound truck) peak periods.





# 5 Conclusions

Further to our assessment of the Proposal, arc traffic + transport provides the following Conclusions:

- > The Site is provided with excellent access to the sub-regional road network via the intersection of Burley Griffin Way & Sandy Creek Road.
- > All key roads and intersections provide significant ancillary infrastructure to provide for the movement of large vehicles.
- > The Proposal will result in the potential for additional inbound truck trips to be generated during super-peak harvest periods, but these additional truck trips would not impact the existing LOS of either the key roads or the intersection of Burley Griffin Way & Sandy Creek Road.
- While the Proposal will result in the potential for additional outbound truck trips, these are expected to be very minor, and spread across the year such that only a handful of additional outbound truck trips might be generated on any single day.
- > The Site provides excellent on-site infrastructure and queuing capacity that ensures that all inbound truck movements/queues are contained within the Site.

In summary, arc traffic + transport has determined that the Proposal is entirely supportable further to traffic and transport considerations.





# Appendix A: SIDRA Movement Output Summaries





## Burley Griffin Way & Sandy Creek Road 2022 Super-Peak Harvest Peak Hour

#### MOVEMENT SUMMARY

**▽** Site: 1 [Burley Griffin Way & Sandy Creek Road 2022 (Site Folder: General)]

Site Super-Peak Harvest 2022 Site Category: Existing Design Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT V [ Total veh/h	OLUMES HV] %	DEMAND [ Total veh/h	FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK [ Veh. veh	OF QUEUE Dist ] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Burle	East: Burley Griffin Way													
5	T1	50	20.0	53	20.0	0.075	0.3	LOSA	0.3	5.0	0.16	0.21	0.16	49.4
6	R2	40	95.0	42	95.0	0.075	5.8	LOSA	0.3	5.0	0.16	0.21	0.16	46.8
Approach		90	53.3	95	53.3	0.075	2.8	NA	0.3	5.0	0.16	0.21	0.16	48.2
North: Sand	dy Creek R	Road					4							
7	L2	1	0.0	1	0.0	0.061	4.7	LOSA	0.2	4.2	0.30	0.56	0.30	48.9
9	R2	40	95.0	42	95.0	0.061	6.9	LOSA	0.2	4.2	0.30	0.56	0.30	45.1
Approach		41	92.7	43	92.7	0.061	6.8	LOSA	0.2	4.2	0.30	0.56	0.30	45.2
West: Burle	y Griffin W	/ay												
10	L2	1	0.0	1	0.0	0.031	4.6	LOSA	0.0	0.0	0.00	0.01	0.00	49.4
11	T1	50	20.0	53	20.0	0.031	0.0	LOSA	0.0	0.0	0.00	0.01	0.00	49.9
Approach		51	19.6	54	19.6	0.031	0.1	NA	0.0	0.0	0.00	0.01	0.00	49.9
All Vehicles		182	52.7	192	52.7	0.075	2.9	NA	0.3	5.0	0.15	0.23	0.15	47.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



# Burley Griffin Way & Sandy Creek Road 2032 Super-Peak Harvest Peak Hour + Proposal

#### MOVEMENT SUMMARY

**▽** Site: 1 [Burley Griffin Way & Sandy Creek Road 2032 (Site Folder: General)]

Site Super-Peak Harvest 2032 + Proposal Site Category: Existing Design Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT V [ Total veh/h	OLUMES HV] %	DEMAND [ Total veh/h	FLOWS HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK ( [ Veh. veh	OF QUEUE Dist ] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Burley	East: Burley Griffin Way													
5	T1	60	20.0	63	20.0	0.093	0.3	LOSA	0.4	6.4	0.19	0.21	0.19	49.3
6	R2	50	95.0	53	95.0	0.093	5.9	LOSA	0.4	6.4	0.19	0.21	0.19	46.7
Approach		110	54.1	116	54.1	0.093	2.9	NA	0.4	6.4	0.19	0.21	0.19	48.1
North: Sand	ly Creek F	Road					<							
7	L2	1	0.0	1	0.0	0.081	4.8	LOSA	0.3	5.6	0.34	0.58	0.34	48.6
9	R2	50	95.0	53	95.0	0.081	7.3	LOSA	0.3	5.6	0.34	0.58	0.34	44.9
Approach		51	93.1	54	93.1	0.081	7.2	LOSA	0.3	5.6	0.34	0.58	0.34	44.9
West: Burle	y Griffin V	Vay												
10	L2	1	0.0	1	0.0	0.037	4.6	LOSA	0.0	0.0	0.00	0.01	0.00	49.4
11	T1	60	20.0	63	20.0	0.037	0.0	LOSA	0.0	0.0	0.00	0.01	0.00	49.9
Approach		61	19.7	64	19.7	0.037	0.1	NA	0.0	0.0	0.00	0.01	0.00	49.9
All Vehicles		222	53.6	234	53.6	0.093	3.1	NA	0.4	6.4	0.17	0.24	0.17	47.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# **Appendix K Historic imagery**

# K.1 Barellan 1988



# K.2 Barellan 1993

