Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence Number	L9093/2017/1
Licence Holder	Thompson & Redwood (2001) Pty Ltd
ACN	099 064 374
Registered business address	220 Almeria Parade UPPER SWAN WA 6090
File Number	DER2017/001588
Duration	6/12/2017 to 5/12/2037
Date of issue	6/12/2017
Prescribed Premises	Category 23
Premises	Thompson & Redwood Part of Lot 6 on Plan 3220 Certificate of Title Volume 1467 Folio 815 220 Almeria Parade UPPER SWAN WA 6090 As defined by the coordinates in Schedule 1

This Licence is granted to the Licence Holder, subject to the following conditions, on 6/12/2017, by:

Date signed: 6 December 2017

Paul Byrnes
MANAGER LICENSING (PROCESS INDUSTRIES)
REGULATORY SERVICES (ENVIRONMENT)
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Explanatory notes

These explanatory notes do not form part of this Licence.

Defined terms

Definition of terms used in this Licence can be found at the start of this Licence. Terms which are defined have the first letter of each word capitalised throughout this Licence.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986* (WA) (EP Act). The Department also monitors and audits compliance with licences, takes enforcement action and develops and implements licensing and industry regulation policy.

Licence

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased, or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered, or permitted to be altered, from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987* (WA) (EP Regulations).

This Licence does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007;*
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Licence Holder to ensure that any action or activity referred to in this Licence is permitted by, and is carried out in compliance with, other statutory requirements.

The Licence Holder must comply with the Licence. Contravening a Licence Condition is an offence under s.58 of the EP Act.

Responsibilities of a Licence Holder

Separate to the requirements of this Licence, general obligations of Licence Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Licence Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under section 61; and
- restrictions on making certain changes to Prescribed Premises unless the changes are in accordance with a works approval, Licence, closure notice or environmental protection notice (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Licence Holder has a duty to report to DWER all discharges of waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences, including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.

- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA).*
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA).*

Section 53 of the EP Act provides that a Licence Holder commits an offence if Emissions are caused, or altered from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a Closure Notice or an Environmental Protection Notice.

Defences to certain offences may be available to a Licence Holder and these are set out in the EP Act. Section 74A(b)(iv) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Licence Holder can prove that an Emission or Discharge occurred in accordance with a Licence.

This Licence specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of Specified Emissions and Discharges, in order for the defence to offence provision to be available.

Authorised Emissions and Discharges

The Specified and General Emissions and Discharges from Primary Activities conducted on the Prescribed Premises are authorised to be conducted in accordance with the Conditions of this Licence.

Emissions and Discharges caused from other activities not related to the Primary Activities at the Premises have not been Conditioned in this Licence. Emissions and Discharges from other activities at the Premises are subject to the general provisions of the EP Act.

Amendment of licence

The Licence Holder can apply to amend the Conditions of this Licence under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Licence at any time on the initiative of the CEO without an application being made.

Amendment Notices constitute written notice of the amendment in accordance with s.59B(9) of the EP Act.

Duration of Licence

The Licence will remain in force for the duration set out on the first page of this Licence or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

Suspension or revocation

The CEO may suspend or revoke this Licence in accordance with s.59A of the EP Act.

Fees

The Licence Holder must pay an annual licence fee. Late payment of annual licence fees may result in the licence ceasing to have effect. A licence that has ceased to have effect due to non-payment of annual licence fees continues to exist; however, it ceases to provide a defence to an offence under s.74A of the EP Act.

Late fees are a component of annual licence fees and should a Licence Holder fail to pay late fees within the time specified the licence will similarly cease to have effect.

Definitions and interpretation

Definitions

In this Licence, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Annual Period	means a 12 month period commencing from 4 December each year until 3 December the following year.
Anniversary Date	Means 4 December of each year.
Condition	means a condition to which this Licence is subject under s.62 of the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the *Environmental Protection Act 1986* Locked Bag 33 Cloisters Square PERTH WA 6850 info-der@dwer.wa.gov.au
Compliance Report	means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO (guidelines and templates may be available on the Department's website).
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Licence Holder in writing and sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to: (a) compliance with the EP Act or this Licence; (b) the Books or other sources of information maintained in accordance with this Licence; or (c) the Books or other sources of information relating to Emissions from the Premises.
DWER	Department of Water and Environmental Regulation.
EP Act	means the *Environmental Protection Act 1986* (WA).
EP Regulations	means the *Environmental Protection Regulations 1987* (WA).
Material Change	means a change to the activities carried out on the Premises as described by the Primary Activities set out in Schedule 2 and: (a) that may result in an increased risk to public health, amenity or the environment; and (b) includes the types of changes specified in Schedule 2; and (c) does not include the excluded changes specified in Schedule 2.
Primary Activities	refers to the Prescribed Premises activities listed on the front of this Licence as described in Schedule 2, at the locations shown in Schedule 1.
Reportable Event	means an exceedance above the target limit specified in Column 4 of Table 6, in Schedule 3.

Interpretation

In this Licence:

(a) the words ‘including’, ‘includes’ and ‘include’ will be read as if followed by the words ‘without limitation’;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a Condition, each row in a table constitutes a separate Condition;

(d) any reference to an Australian or other standard, guideline or code of practice in this Licence means the version of the standard, guideline or code of practice in force at the time of granting of this Licence and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Licence; and

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Emissions

1. The Licence Holder must not cause any Emissions from the Primary Activities on the Premises except for specified Emissions and general Emissions described in Column 1 of Table 2 subject to the exclusions, limitations or requirements specified in Column 2 of Table 2.

Table 2: Authorised Emissions table

Column 1	**Column 2**
Emission type	**Exclusions/Limitations/Requirements**
Specified Emissions	
Point source emissions to air from the grain cleaning equipment and the mill tower	Subject to Condition 2 and Condition 3
General Emissions (excluding Specified Emissions)	
Emissions which: • arise from the Primary Activities set out in Schedule 2; or • arise from a Material Change (except where Condition **Error! Reference source not found.** applies).	Emissions excluded from General Emissions are: • Unreasonable Emissions; or • Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or • Discharges of Waste in circumstances likely to cause Pollution; or • Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or • Emissions or Discharges which do not comply with an Approved Policy; or • Emissions or Discharges which do not comply with a prescribed standard; or • Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or • Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the Environmental *Protection (Unauthorised Discharges) Regulations 2004*.

Infrastructure and equipment

2. The Licence Holder must ensure that any discharge to air from the unit processes specified in column 1 of Table 3 must pass through the treatment system specified in column 2 of Table 3 prior to entering the environment.

Table 3: Dust collection systems

Column 1	**Column 2**
Unit process	**Dust collection**
Westrup cleaner used in the grain cleaning process	Cyclone
Pellet mills	Cyclone
Hammer mill used in the grinding process	Baghouse

3. The Licence Holder must ensure that the dust collection system specified in Condition 2 is maintained in good working order.

4. The Licence Holder must ensure that chute extensions installed on equipment used for bulk loading of product into trucks, for minimising fugitive dust emissions during truck loading, are maintained in good working order.

Specified actions

5. The Licence Holder must ensure that any spillage of material in areas that can be accessed by rainfall must be cleaned up as soon as practicable and as a minimum on a daily basis.

6. The Licence Holder must ensure that any runoff of wastewater from the process area and any contaminated or potentially contaminated stormwater must be contained within the Containment Pond as identified on the Premises map in Schedule 1.

7. The Licence Holder must ensure that, no later than 90 business days from the date of grant of this Licence, pipelines or impervious culverts are constructed to convey wastewater from the process area to the Containment Pond as identified on the Premises map in Schedule 1.

8. The Licence Holder must maintain boundary markers on the ground to clearly identify the premises boundary as identified on the Premises map in Schedule 1.

Record-keeping

9. The Licence Holder must maintain accurate and auditable Books including the following records, information, reports and data required by this Licence:

(a) the calculation of fees payable in respect of this Licence;
(b) the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 3 of this Licence;
(c) complaints received under Condition 10 of this Licence; and
(d) any Material Change.

In addition, the Books must:

(e) be legible;
(f) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;
(g) be retained for at least 3 years from the date the Books were made; and
(h) be available to be produced to an Inspector or the CEO.

10. The Licence Holder must record the number and details of any complaints received by the Licence Holder relating to its obligations under this Licence and its compliance with Part V of the EP Act at the Premises, and any action taken by the Licence Holder in response to the complaint. Details of complaints must include:

(a) an accurate record of the concerns or issues raised, for example a copy of any written complaint or a written note of any verbal complaints made;
(b) the name and contact details of the complainant, if provided by the complainant;
(c) the date of the complaint; and
(d) the details and dates of the actions taken by the Licence Holder in response to the complaints.

11. The Licence Holder must submit to the CEO, no later than 90 days after the Anniversary Date, an Annual Audit Compliance Report indicating the extent to which the Licence Holder has complied with the Conditions in this Licence for the preceding Annual Period.

12. The Licence Holder must comply with a Department Request, within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

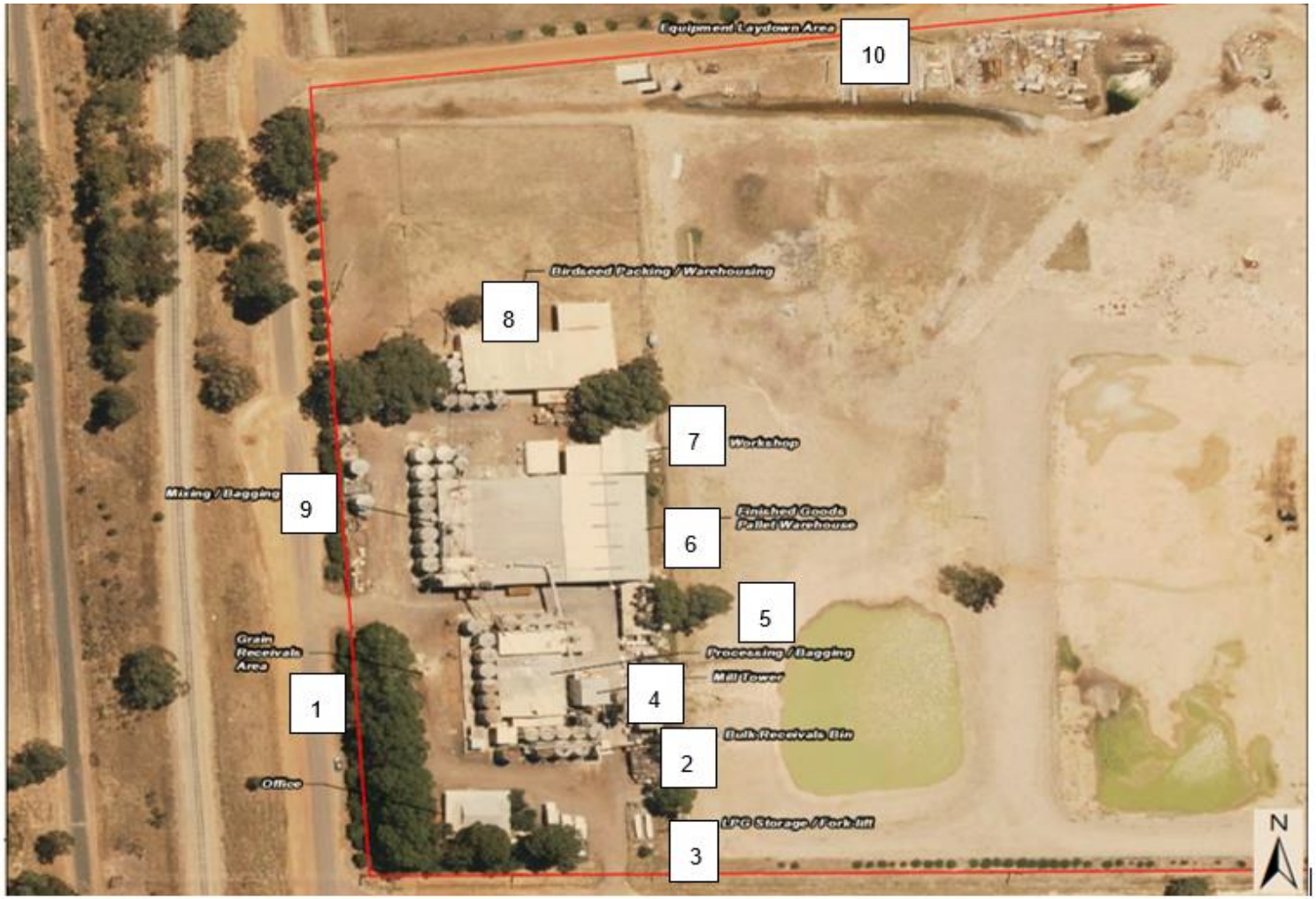
Schedule 1: Maps

Premises map

The Premises are depicted on the map below and boundary coordinates are depicted in Table 4.

Table 4: Premises Boundary coordinates		
Reference	**Northing**	**Easting**
1	6,486,469	407,673
2	6,486,482	407,841
3	6,486,242	407,847
4	6,486,240	407,688

General layout map



Schedule 2: Primary Activities

At the time of assessment, Emissions and Discharges from the following Primary Activities were considered in the determination of the risk and related Conditions for the Premises.

The Primary Activities are listed in Table 5:

Table 5: Primary Activities

Primary Activity	Nominal Throughput
Category 23: Animal Feed Manufacturing: premises (other than premises within category 15 or 16) on which animal food is manufactured or processed.	70,000 tonnes per year

Infrastructure and equipment

The Primary Activity infrastructure and equipment situated on the Premises is listed in Table 6.

Table 6: Infrastructure and equipment

	Infrastructure and equipment	Plan reference
1	Grain receivables area	General layout map in Schedule 1
2	Bulk receivables bins	
3	Liquid Petroleum Gas (LPG) and Fork-lift storage	
4	Mill tower	
5	Processing and bagging warehouse	
6	Finished Goods and Pellet warehouse	
7	Workshop	
8	Bird seed packing warehouse	
9	Mixing/ Bagging area	
10	Equipment laydown area	
11	Steam boiler	

Site layout

The Primary Activity infrastructure and equipment are set out on the Premises in accordance with the site layout specified on the General layout map in Schedule 1.

Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Licence

Division 3, Part V *Environmental Protection Act 1986*

Licence Number	L9093/2017/1
Applicant	Thompson & Redwood (2001) Pty Ltd
ACN	099 064 374
File Number	DER2017/001588
Premises	Thompson & Redwood Part of Lot 6 on Plan 3220 Certificate of Title Volume 1467 Folio 815 220 Almeria Parade UPPER SWAN WA 6090 As defined by the coordinates in Schedule 1 of the Licence
Date of Report	6 December 2017
Status of Report	Final

Table of Contents

1. Definitions of terms and acronyms

In this Decision Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AER	Annual Environment Report
AS 4156.6 – 2000	Australian Standard AS 4156.6 – 2000: Determination of Dust/moisture Relationship for Coal.
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CS Act	*Contaminated Sites Act 2003* (WA)
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of, and during this Review
m^3	cubic metres
mtpa	million tonnes per annum
NEPM	National Environmental Protection Measure
Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
PM	Particulate Matter
PM_{10}	used to describe particulate matter that is smaller than 10 microns (µm) in diameter
Primary Activities	as defined in Schedule 2 of the Licence
Risk Event	As described in *Guidance Statement: Risk Assessment*
UDR	*Environmental Protection (Unauthorised Discharges) Regulations 2004* (WA)

2. Purpose and scope of assessment

On 8 September 2017, DWER received an application for a licence (the Application) under Part V, Division 3 of the EP Act, from Thompson & Redwood (2001) Pty Ltd (the Applicant). The Application seeks a Licence for its existing animal feed manufacturing facility at 220 Almeria Parade in Upper Swan.

This Decision Report details assessment of potential environmental and public health impacts associated with premises operations and considers existing infrastructure and management control measures demonstrated to be implemented by the Applicant.

2.1 Application details

Table 2 lists the documents submitted during the assessment process.

Table 2: Documents and information submitted during the assessment process

Document/information description	Date received
Application Form, version 7 dated July 2017	1 September 2017
Supporting information: Licence Application Environmental Supporting Document authored by 360 Environmental, dated September 2017	1 September 2017

3. Background

The Applicant has owned and operated an animal feed manufacturing facility at 220 Almeria Parade, Upper Swan since 1985. The Applicant has noted that the mill, packaging building and warehouse were originally constructed in 1988. The facility was further developed in 1998 and included the expansion of the packaging shed. Construction of the workshop, mill tower and plant room were undertaken in 2003. A seed shed was constructed in 2006.

Table 3 lists the prescribed premises categories that have been applied for.

Table 3: Prescribed Premises Category in the Licence

Classification of Premises	Description	*Nominal throughput*
23	Animal Feed Manufacturing: premises (other than premises within category 15 or 16) on which animal food is manufactured or processed.	70,000 tonnes per year

4. Overview of Premises

4.1 Operational aspects

The feedmill processes over 40,000 tonnes of grain per year and produces over 90 different product lines including steam rolled grain, grist and whole grain products, muesli, pelletised products and birdseed mixes.

Grain is processed through a cleaning system to remove any unwanted foreign matter, including stalks and husks, prior to it being bagged and sold. Grain is also processed through a hammer mill for inclusion in pelletised products via a computer controlled batching system. After grinding and mixing, a pelleting process converts the loose mash mixture into individual pellets. Products containing steam rolled grain are further cleaned and bagged prior to sale. Steam rolled grain is also mixed with other seeds, fibre, molasses and oil.

Manufacturing operations generally occur 5 days a week with 3 shifts of about 8 hours each covering each 24-hour period. Shifts commence on Sunday midnight and continue to Friday midnight. Table 4 shows typical operations schedule at the facility.

Table 4: Thompson & Redwood Feed mill Typical Operations Schedule (weekdays)

Shift	Typical Operations Within Shift
8.00am-4.00pm	Grain cleaning Despatch Muesli production and pelleting
4.00pm-12.00am	Milling operations
12.00am-8.00am	Milling operations
Saturday (daytime)	Scheduled maintenance

The grain receivables area and bulk receivable bins (for vitamins, mineral premixes and other additives) are located in the southern portion of the premises. Two LPG storage tanks are located on site to store fuel for forklifts and firing of the steam boiler.

4.2 Infrastructure

The Thompson & Redwood Feed mill facility infrastructure, as it relates to Category 23 activities, is detailed in Table 5 and with reference to the Site Plan (attached in the Issued Licence).

Table 5 lists infrastructure associated with each prescribed premises category.

Table 5: Thompson & Redwood Feed mill infrastructure

	Infrastructure	Site Plan Reference
	Prescribed Activity Category 23	
1	Grain receivables area	As shown in Figure 1
2	Bulk receivables bins	
3	Liquid Petroleum Gas (LPG) and Fork-lift storage	
4	Mill tower	
5	Processing and bagging warehouse	
6	Finished Goods and Pellet warehouse	
7	Workshop	
8	Bird seed packing warehouse	
9	Mixing/ Bagging area	
10	Equipment laydown area	
	Related activities (excluded from the licence)	
Combustion of natural gas for operation of the steam boiler		
11	Steam boiler	Small scale unit that is not prescribed *per se*.

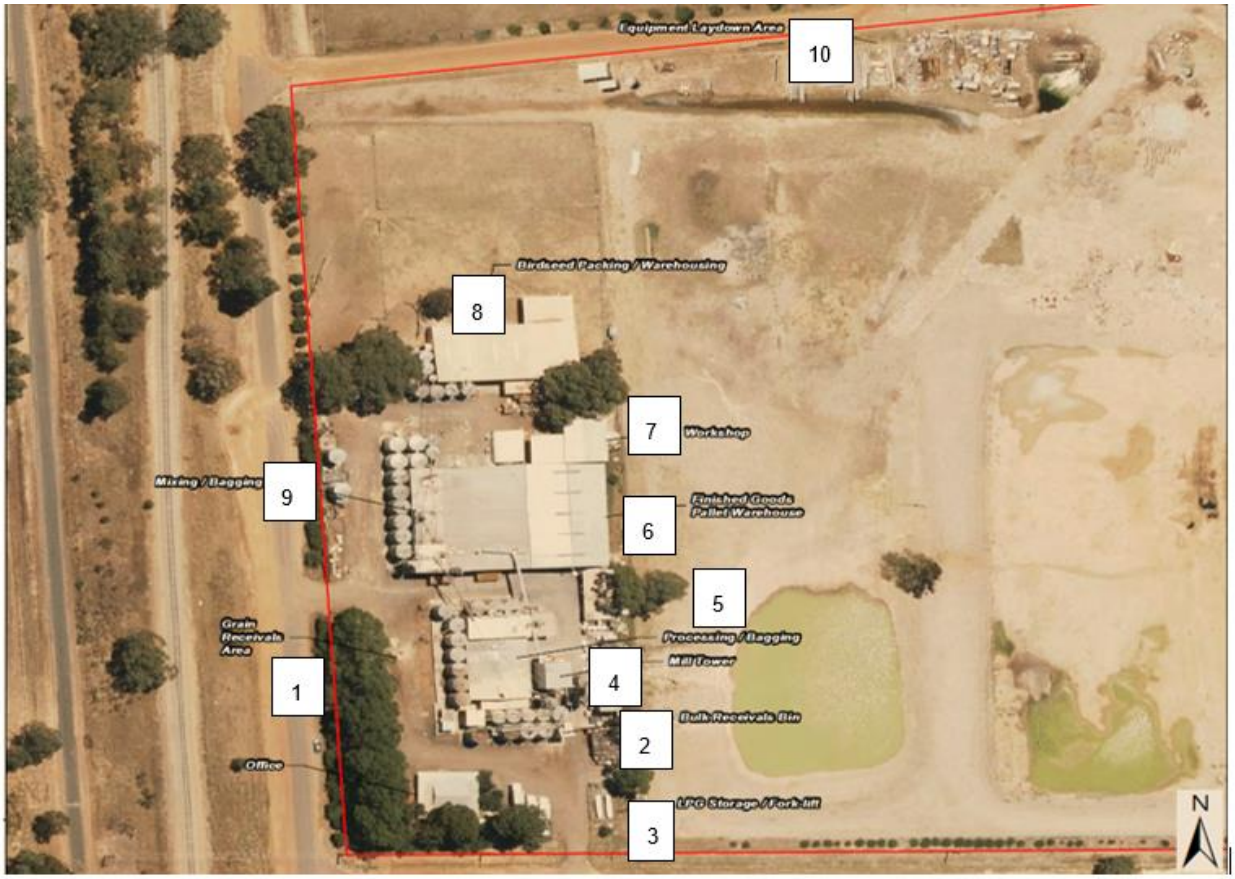


Figure 1 Site layout

4.3 Exclusions from the Licensed Activity

The scope the assessment excludes those activities on the premises which are not significant and not directly related to the prescribed activity. They are:

- workshop and offices;
- fuel stores;
- backfilling of existing clay extraction pits with clean fill material sourced from outside the premises which the Applicant has confirmed to have been authorised by the City of Swan;
- management of sewage from administrative offices on the premises; and
- agricultural activities undertaken on site.

5. Legislative context

5.1 Contaminated sites

There are no identified areas of soil or groundwater contamination on the premises pursuant to the provisions of the *Contaminated Sites Act 2003*.

5.1.1 Planning approvals

The City of Swan Local Planning Scheme No. 17 (District Zoning Scheme), as amended 15 September 2017, has authorised use of *portion of Lot 6 on Plan 3220* for the *additional use* of 'stockfeed manufacturing and wholesale activity.'

5.2 Part V of the EP Act

5.2.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations. The guidance statements which inform this assessment are detailed in Appendix 1.

5.2.2 Compliance history

Departmental records do not show complaints or other compliance related matters.

5.2.3 Clearing

Clearing of native vegetation has not been sought in licence application. The Applicant notes that substantial clearing of Lot 6 was undertaken prior to 1965.

6. Consultation

The Licence Application was advertised for public comment on 25 September 2017 and also referred to the City of Swan for comment. No comments were received.

7. Location and siting

7.1 Siting context

The Thompson & Redwood feedmill is located in Upper Swan, approximately 27km north east of Perth CBD, in an area zoned 'General Rural' under the City of Swan's Local planning Scheme 17. The areas surrounding the premises are zoned 'Urban' to the west, 'Rural' to the north, south and east and 'Parks and Recreation' to the east under the Metropolitan Region Scheme. Surrounding land uses include residential dwellings, nature reserves, irrigated modified pastures, grazing modified pastures, irrigated viticulture, quarries and contain a number of reservoirs and dams. A freight railway line is located to the west of the premises, parallel to Almeria Parade, about 50m from the premises.

7.2 Residential and sensitive Premises

The distances to residential and sensitive receptors are detailed in Table 6.

Table 6: Receptors and distance from activity boundary

Sensitive Land Uses	Distance from Prescribed Activity
Residential premises including one short stay accommodation and three residential dwellings	Located within 500m from the feed mill complex. The nearest dwelling being about 200m north west of the feed mill. The City of Swan has zoned area to the west of the Railway Parade for future residential development (see Figure 2). The minutes of Ordinary Meeting of Council dated 15 March 2017 note that the Council has resolved to recommend to the WAPC to approve the structure plan subject to recommended conditions. This is likely to introduce additional residential receptors within the 500m separation distance from the premises.

Figure 2 Location of feedmill in relation to proposed residential development

7.3 Specified ecosystems

Specified ecosystems are areas of high conservation value and special significance that may be impacted as a result of activities at or Emissions and Discharges from the Premises. The distances to specified ecosystems are shown in Table 7. Table 7 also identifies the distances to other relevant ecosystem values which do not fit the definition of a specified ecosystem.

The table has also been modified to align with the *Guidance Statement: Environmental Siting.*

Table 7: Environmental values

Specified ecosystems	**Distance from the Premises**
Conservation Category Wetland	Located approximately 350m north of the feed mill and follows the Ellen Brook waterway and the surrounding foreshore area
Western Swamp Tortoise Policy Area	The premises are wholly located within the Western Swamp Tortoise Policy Area as specified in the *Environmental Protection (Western Swamp Tortoise Habitat) Policy Approval Order 2011.*
Bush forever site (ID300 and 301)	Located adjacent to the premises towards the south-east and north
Ellen Brook Nature Reserve	Located to the south and east of the premises
Threatened Ecological Communities (TECs) and Priority Ecological Communities	Three TECs known to occur within 5km radius of the premises include: • Banksia Woodlands of the Swan Coastal Plain; • Clay Pans of the Swan Coastal Plain; and • Corymbia calophylla- Xanthorrhoea preissii woodlands and shrub lands of the Swan Coastal Plain The premises have been historically cleared of native vegetation.
Biological component	**Distance from the Premises**
Threatened/Priority Fauna	13 threatened fauna species and 5 priority fauna species are known to occur within 5km of the premises.

7.4 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 8.

Table 8: Groundwater and water sources

Groundwater and water sources	**Distance from Premises**	**Environmental value**
Major watercourses/waterbodies	Ellen Brook intersects the lot boundary and is located approximately 220m from the feed mill	Major ephemeral water course
Groundwater	Groundwater depth ranges from 2.3mgbl to 9mbgl	Water is marginally saline (500-1000mg/L) and has low iron staining risk. Thompson and Redwood hold groundwater abstraction licence number 110321 allocating 7,650kl/ year. Groundwater from the bore is used in the process for steam injection of product and wash-down water.

7.5 Soil type

Table 9 details soil types and characteristics relevant to the assessment.

Table 9: Soil and sub-soil characteristics

Groundwater and water sources	Environmental Value
Soil type classification	The site is mapped within the Pinjarra System which is classified as poorly drained coastal plain with variable alluvial and Aeolian soils
Acid sulfate soil risk	Middle portion of the lot is mapped as having 'high to moderate' risk of acid sulfate soils within 3 m of the natural soil surface

8. Risk assessment

8.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER will identify all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment.

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission. Where there is no actual or likely pathway and/or no receptor, the emission will be screened out and will not be considered as a Risk Event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission will not be risk assessed further and will be screened out through Table 10.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Table 10 below.

Table 10: Identification of emissions, pathway and receptors during operation

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
Ingredient intake, handling, storage and transfer	Raw material storage and handling	Dust:	Nearest dwelling ~200m from activity boundary.	Air/ wind dispersion	Amenity impact	Yes	See section 8.4
		Noise			Amenity impact	No	Small scale plant not generating significant amounts of noise. Significant separation distance to existing and planned residential premises. No noise complaints. The *Environmental Protection (Noise) Regulations 1997* apply.
		Stormwater contaminated with spilt grain	Ellen Brook- 200m north of the feedmill.	Surface water flow	Degradation of Ellen Brook water quality	Yes	See section 8.5
Feed processing and manufacture	Manufacturing areas	Odour	Nearest dwelling ~200m from activity boundary.	Air/ wind dispersion	Amenity impact	No	No significant odour sources on site. Animal by-products not used in the process. Significant separation distance to existing and planned residential premises. No odour complaints.
		Noise			Amenity impacts	No	See above.
		Combustion gases from steam boiler			Degradation of local ambient air quality	No	Design capacity of the boiler is below Category 67 threshold. Air emissions from boiler operation not considered significant. General provisions of the EP Act apply.
		Stormwater contaminated with spilt grain	Ellen Brook	Surface water flow	Degradation of Ellen Brook water quality	Yes	See section 8.5
Finished product storage despatch	Load out and transfer of products	Dust	Nearest dwelling ~200m from activity boundary.	Air/ wind dispersion	Amenity impact	Yes	See section 8.4
		Noise			Amenity impact	No	See above.
		Stormwater contaminated with spilt grain	Ellen Brook	Surface water flow	Degradation of Ellen Brook water quality	Yes	See section 8.5
Stormwater containment pond	Uncontrolled seepage and spillage from the pond.	Stormwater contaminated with spilt grain	Groundwater	Seepage	Degradation of groundwater quality	No	Pond is a disused clay pit. Seepage is not like to occur because of the nature of the soils (clays).
			Ellen Brook	Surface water flow	Degradation of Ellen Brook water quality	No	No evidence of spillage occurring from the containment pond.

8.2 Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 11 below.

Table 11: Risk rating matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

DWER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 12 below.

Table 12: Risk criteria table

Likelihood		**Consequence**		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		**The following criteria has been used to determine the consequences of a Risk Event occurring:**		
			Environment	**Public health* and amenity (such as air and water quality, noise, and odour)**
Almost Certain	The risk event is expected to occur in most circumstances	Severe	• **onsite impacts**: catastrophic • **offsite impacts local scale**: high level or above • **offsite impacts wider scale:** mid-level or above • Mid to long-term or permanent impact to an area of high conservation value or special significance^ • Specific Consequence Criteria (for environment) are significantly exceeded	• Loss of life • **Adverse health effects:** high level or ongoing medical treatment • Specific Consequence Criteria (for public health) are significantly exceeded • **Local scale impacts:** permanent loss of amenity
Likely	The risk event will probably occur in most circumstances	Major	• **onsite impacts**: high level • **offsite impacts local scale**: mid-level • **offsite impacts wider scale**: low level • Short-term impact to an area of high conservation value or special significance^ • Specific Consequence Criteria (for environment) are exceeded	• **Adverse health effects:** mid-level or frequent medical treatment • Specific Consequence Criteria (for public health) are exceeded • **Local scale impacts**: high level impact to amenity
Possible	The risk event could occur at some time	Moderate	• **onsite impacts**: mid-level • **offsite impacts local scale**: low level • **offsite impacts wider scale**: minimal • Specific Consequence Criteria (for environment) are at risk of not being met	• **Adverse health effects:** low level or occasional medical treatment • Specific Consequence Criteria (for public health) are at risk of not being met • **Local scale impacts:** mid-level impact to amenity

Likelihood	
The following criteria has been used to determine the likelihood of the Risk Event occurring.	
Unlikely	The risk event will probably not occur in most circumstances
Rare	The risk event may only occur in exceptional circumstances

Consequence		
The following criteria has been used to determine the consequences of a Risk Event occurring:		
	Environment	**Public health* and amenity (such as air and water quality, noise, and odour)**
Minor	• **onsite impacts**: low level • **offsite impacts local scale**: minimal • **offsite impacts wider scale**: not detectable • Specific Consequence Criteria (for environment) likely to be met	• Specific Consequence Criteria (for public health) are likely to be met • **Local scale impacts:** low level impact to amenity
Slight	• **onsite impact**: minimal • Specific Consequence Criteria (for environment) met	• **Local scale**: minimal to amenity • Specific Consequence Criteria (for public health) met

^ Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting.*
* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines.* **"**onsite**"** means within the Prescribed Premises boundary.

8.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment table 13 below:

Table 13: Risk treatment table

Rating of Risk Event	Acceptability	Treatment
Extreme	Unacceptable.	Risk Event will not be tolerated. DWER may refuse application.
High	May be acceptable. Subject to multiple regulatory controls.	Risk Event may be tolerated and may be subject to multiple regulatory controls. This may include both outcome-based and management conditions.
Medium	Acceptable, generally subject to regulatory controls.	Risk Event is tolerable and is likely to be subject to some regulatory controls. A preference for outcome-based conditions where practical and appropriate will be applied.
Low	Acceptable, generally not controlled.	Risk Event is acceptable and will generally not be subject to regulatory controls.

8.4 Risk Assessment- Fugitive Dust

8.4.1 Description of risk of fugitive emissions

Fugitive dust emissions are possible from unloading, handling or transfer of bulk raw materials (grain, seeds, additives). Fugitive dust emissions are also expected from the grain cleaning, grinding process and the pellet milling area.

8.4.2 Identification and general characterisation of emission

The feedmill manufactures over 90 different animal product lines including steam rolled grains

and pellets. Fugitive dust emissions are likely to be sporadic events of short duration.

8.4.3 Description of potential adverse impact from the emission

Fugitive dust emissions occur because grain and other raw materials have fine particulate matter contained within. If, in the unlikely event of dust being emitted, it only has the potential to cause a nuisance in the environment. Currently the nearest residential dwelling is ~150m from the feedmill which has been operating since 1988. The Delegate Officer also noted that Departmental records do not show complaints associated with the feedmill.

The City of Swan has zoned area to the west of the Railway Parade (west of the premises) for future residential development which will result in additional dwellings being constructed in close proximity to the feedmill.

8.4.4 Criteria for assessment

The general provisions of the EP Act relating to dust unreasonably interfering with health, welfare, convenience, comfort or amenity apply. No specific criteria exists to determine or assist with the determination of amenity impacts *per se*.

8.4.5 Applicant controls

The occupier has the following measures to manage fugitive dust emissions:

- Dust emissions are managed through a combination of totally enclosed in line processes and a dust extraction system;
- Grain handling is via enclosed augers, conveyors and grains are stored in enclosed silos;
- A cyclone is used to minimize dust produced by grain cleaning equipment during operation. The dust removed from the cyclone is then transferred to a storage silo and added back into the manufacturing process;
- Lids have been constructed for storage bags/ silos to control fugitive dust arising from pneumatically conveying rolled grains;
- Dust extraction system (fan baffle and a cyclone) has been applied to the pellet mill hand tip area and access points where additional ingredients are added to the mixer via a hand tip auger have been covered;
- Two cyclones are currently used to reduce dust from milling of grain for manufacturing pellets. The occupier has planned to replace these with a baghouse scheduled to be commissioned in the first week of December 2017. The grinder will be shut down until baghouse installation is complete;
- Shute Sock (shute extensions) have been attached to the out-loading silos which minimise dust during the loading of processed animal feeds loose into trucks;
- Each work station is cleaned daily and any residue swept and collected;
- Traffic limits are maintained on site to minimise dust lift off;
- Trafficable areas have bitumen profile to minimise dust; and
- Trafficable areas are swept mechanically on a regular basis to prevent dust build up.

8.4.6 Key findings

The Delegated Officer has reviewed the information regarding the risk of fugitive dust emissions and has found:

1. Existing sensitive receptors are located within the recommended separation distance of about 150m from the premises.
2. Existing premises operations have not resulted in complaints relating to dust.

8.4.7 Consequence

The Delegated Officer considers that fugitive dust emissions from the premises may result in local scale impacts to amenity of receptors. The Delegated Officer therefore considers the consequence to be **minor.**

8.4.8 Likelihood of Risk Event

Considering the operator controls, location and scale of operations and operating history since 1988, the Delegated Officer considers that the risk event could occur in exceptional circumstances. The Delegated Officer therefore considers the likelihood to be **rare**.

8.4.9 Overall rating of risk of fugitive dust emissions impact

In accordance with the Risk Matrix in Table 11, the Delegated Officer has determined that the overall rating for the risk of fugitive dust emissions impacting receptors is **low.**

8.5 Risk Assessment- Discharge of contaminated stormwater and process waste water to land

8.5.1 Description of risk of discharge of contaminated stormwater to land

Stormwater contaminated animal feed can contribute nutrients and sediments to Ellen Brook (220m north), a major tributary to the Swan River. Small volume of process wastewater generated from boiler condensate and wash down activities is channeled into a disused clay pit on the premises.

8.5.2 Identification and general characterisation of emission

Runoff from process area may contain spilt feed, products, additives and may have elevated nutrient concentrations and suspended solids. Runoff from building rooves and concrete areas and boiler condensate may contain hydrocarbons.

8.5.3 Description of potential adverse impact from the emission

Ellen Brook is a watercourse that supports conservation category wetland. The premises are also within the Western Swamp Tortoise Policy Area. Degradation of surface water quality of Ellen Brook could impact aquatic biota and other dependent ecosystems.

Discharge of contaminated stormwater from process areas into existing unlined clay extraction pits may result in seepage of nutrients into groundwater which is shallow (2.3mbgl to 9mbgl). There is potential that local groundwater flows have hydraulic links to Ellen Brook thus having indirect impact on surface water quality.

8.5.4 Criteria for assessment

The release of stormwater from the premises is an unwanted event as it is likely to have a detrimental impact in the environment. As a general rule, the site should be managed with an impervious controlled drainage area draining to a containment pond of sufficient capacity to hold stormwater that occurs in a wet winter and as a result of extreme rainfall event.

In a general manner, the premises drains stormwater eastwards towards a disused clay pit. The clay pit appears to have sufficient capacity, as there is no evidence of it spilling into the general environment. The Delegated Officer notes that the soils in the area are of heavy clay type soils and considers that sufficient clay remains in the disused clay pit for the pond to be considered as impermeable.

8.5.5 Applicant controls

Stormwater runoff from the premises is contained within a containment pond on the premises. The containment pond is a disused clay pit. Open culverts are used to prevent ingress of stormwater into the premises/ process areas.

8.5.6 Key findings

The Delegated Officer has reviewed the information regarding the risk of stormwater emissions and has found:

1. Contaminated stormwater runoff may impact surface water quality of Ellen Brook.
2. Impervious drains are needed from the feedmill to the containment pond.

8.5.7 Consequence

The Delegated Officer considers that discharge of contaminated stormwater from the premises may result in offsite local scale environmental impacts. The Delegated Officer therefore considers the consequence to be **minor.**

8.5.8 Likelihood of Risk Event

Considering the operator controls, location and scale of operations, the Delegated Officer considers that the risk event may occur in exceptional circumstances. The Delegated Officer therefore considers the likelihood to be **rare**.

8.5.9 Overall rating of risk of odour emissions impact

In accordance with the Risk Matrix in Table 11, the Delegated Officer has determined that the overall rating for the risk of fugitive dust emissions impacting receptors is **low.**

8.6 Summary of acceptability and treatment of Risk Events

A summary of the risk assessment and the acceptability or unacceptability of the risk events set out above, with the appropriate treatment and control, are set out in Table 14 below.

Table 14: Risk assessment summary

	Description of Risk Event			Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)	Resulting Regulatory Controls
	Emission	**Source**	**Pathway/ Receptor (Impact)**				
1.	Fugitive dust	Materials handling and materials handling equipment	Air/wind dispersion	See section 8.4.5	Minor consequence Rare likelihood **Low risk**	Acceptable subject to applicant controls	Licence to specify: • Any spillage of material in outdoors area or areas that can be accessed by rainfall are cleaned up as a minimum on a daily basis • Maintaining following fugitive dust control systems: ○ Cyclone on the Westrup cleaner in the grain cleaning process; ○ Cyclone on pellet mills; ○ Two cyclones installed to treat exhaust from hammer mills used in the grinding process until they are replaced with a baghouse scheduled to be commissioned in December 2017; and • Complaints management
2.	Contaminated stormwater	Process area	Surface water flow	Impermeable containment pond	Minor consequence Rare likelihood **Low risk**	Acceptable subject to regulatory controls	Licence to specify: 1. Any spillage of material in outdoors area or areas that can be accessed by rainfall are cleaned up as a minimum on a daily basis 2. Containing wastewater from process area and contaminated stormwater within the containment pond on the premises 3. Constructing culverts or pipelines to transfer wastewater from process area to the containment pond on the premises

8.7 Licence controls

8.7.1 Dust management- Infrastructure and specified actions

The following environmental controls, infrastructure and equipment should be maintained and operated onsite for dust management:

- Emissions from following unit processes must be treated through dust collection systems prior to entering the environment:
  i. Cyclone on the Westrup cleaner used in the grain cleaning process;
  ii. Cyclone on pellet mills;
  iii. Baghouse on hammer mill used in the grinding process; and
- Shute extensions installed for bulk loading or product into trucks are maintained in good working order.

8.7.2 Wash water and stormwater management- specified actions

The following environmental controls, infrastructure and equipment should be maintained and operated onsite for spill management:

- Any spillages of material in areas that can be accessed by rainfall must be cleaned up as soon as practicable and as a minimum on a daily basis;
- Any runoff of wastewater from the process area and any contaminated or potentially contaminated stormwater must be contained within the containment pond as indicated on the map of emission points; and
- Pipelines or culverts are constructed to convey wastewater from the process area to the containment pond.

9. Determination of Licence conditions

The conditions in the issued Licence in Attachment 1 have been determined in accordance with the *Guidance Statement: Setting Conditions*.

The *Guidance Statement: Licence Duration* has been applied and the issued licence expires in 20 years from date of issue. This is consistent with the planning approval for the premises which is not time restricted.

Table 15 provides a summary of the conditions to be applied to this licence.

Table 15: Summary of conditions to be applied

Condition Ref	Grounds
Environmental Compliance Condition 1	Environmental compliance is a valid, risk-based condition to ensure appropriate linkage between the licence and the EP Act.
Infrastructure and Equipment 2,3 and 4	These conditions are valid, risk-based and contain appropriate controls.
Specified actions 5,6,7and 8	These conditions are valid, risk-based and contain appropriate controls.
Record keeping 9,10,11 and 12	These conditions are valid and are necessary administration and reporting requirements to ensure compliance.

DWER notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, DWER may initiate amendments to the licence under the EP Act.

10. Applicant's comments

The Applicant was provided with the draft Decision Report and Licence on 1 November 2017 for comments. The Applicant/provided comments on 21 November 2017. No significant changes requested.

11. Conclusion

This assessment of the risks of activities on the Premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this Decision Report (summarised in Appendix 1).

This assessment was also informed by a site inspection undertaken by the Delegated Officer on 19 September 2017.

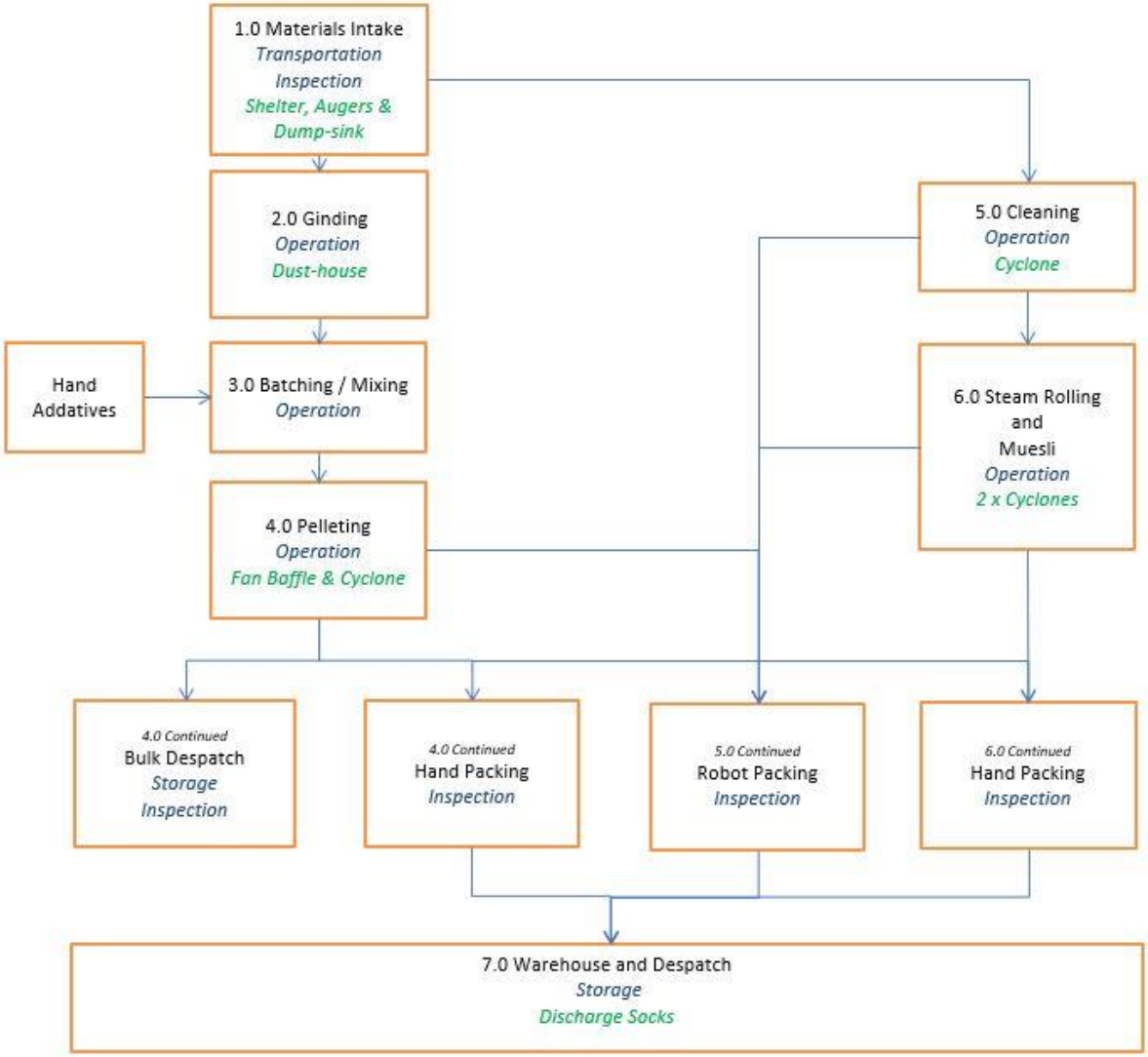
Based on this assessment, it has been determined that the Issued Licence will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Paul Byrnes
MANAGER LICENSING (PROCESS INDUSTRIES)
REGULATORY SERVICES (ENVIRONMENT)
Delegated Officer
under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	DER 2015	accessed at www.dwer.wa.gov.au
2.	DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.	DER 2015	
3.	DER, August 2016. *Guidance Statement: Licence duration.* Department of Environment Regulation, Perth.	DER 2016	
4.	DER, November 2016. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.	DER 2016	
5.	DER, November 2016. *Guidance Statement: Decision Making*. Department of Environment Regulation, Perth.	DER 2016	

Appendix 2: Process flow diagram with location of dust control equipment



Attachment 1: Issued Licence L9093/2017/1