



# Works Approval

<b>Works Approval Number</b>	W6148/2018/1	
<b>Works Approval Holder</b>	Hanwha Mining Services Australia Pty Ltd	
<b>ACN</b>	169067252	
<b>Registered business address</b>	Pitcher Partners WA Pty Ltd Level 1 914 Hay Street PERTH WA 6000	
<b>File Number</b>	DER2018/000808	
<b>Duration</b>	11/07/2018 to	10/07/2021
<b>Date of issue</b>	11/07/2018	
<b>Prescribed Premises</b>	Category 75	
<b>Premises</b>	Hanwha Mining Services Lot 115 Mullewa-Wubin Road WUBIN WA 6612  Legal description - Part of Lot 117 on Deposited Plan 150270 and Part of Lot 115 on Deposited Plan 148784.  As defined by the coordinates in Schedule 1 of the Works Approval	

This Works Approval is granted to the Works Approval Holder, subject to the following conditions, on 11 July 2018, by:

Date signed: 11 July 2018

**Paul Byrnes**

**MANAGER, 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 Works Approval.

### Defined terms

---

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

### 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 and works approvals, takes enforcement action and develops and implements licensing and industry regulation policy.

### Works Approval

---

Section 52 of the EP Act provides that an occupier of any premises commits an offence if any work is undertaken on, or in relation to, the premises which causes the premises to become, or to become capable of being, Prescribed Premises, except in accordance with a works approval.

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 Works Approval 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 Works Approval Holder to ensure that any action or activity referred to in this Works Approval is permitted by, and is carried out in compliance with, statutory requirements.

The Works Approval Holder must comply with the Works Approval. Contravening a Works Approval Condition is an offence under s.55 of the EP Act.

### Responsibilities of Works Approval Holder

---

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

- the duties of an occupier under s.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 Works Approval Holder has a duty to report to the Department all Discharges of Waste that have caused or are likely to cause Pollution or 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 Works Approval 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 Works Approval Holder and these are set out in the EP Act. Section 74A(b)(iii) 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 Works Approval Holder can prove that an Emission or Discharge occurred in accordance with a Works Approval.

This Works Approval 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 the Works authorised through this Works Approval are authorised to be conducted in accordance with the Conditions of this Works Approval.

## Amendment of Works Approval

---

The Works Approval Holder can apply to amend the Conditions of this Works Approval 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 Works Approval at any time on the initiative of the CEO without an application being made.

## Duration of Works Approval

---

The Works Approval will remain in force for the duration set out on the first page of this Works Approval 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 Works Approval in accordance with s.59A of the EP Act.

# Definitions and interpretation

## Definitions

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

**Table 1: Definitions**

Term	Definition
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Condition	means a condition to which this Works Approval is subject under s.62 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> 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 Works Approval Holder in writing and sent to the Works Approval's address for notifications, as described at the front of this Works Approval, in relation to: (a) compliance with the EP Act or this Works Approval; (b) the Books or other sources of information maintained in accordance with this Works Approval; 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 <i>Environmental Protection Act 1986</i> (WA).
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA).
Premises	refers to the premises to which this Works Approval applies, as specified at the front of this Works Approval and as shown on the map in Schedule 1 to this Works Approval.
Works Approval	refers to this document, which evidences the grant of the works approval by the CEO under s.54 of the EP Act, subject to the Conditions.
Works Approval Holder	refers to the occupier of the Premises being the person to whom this Works Approval has been granted, as specified at the front of this Works Approval.

## Interpretation

In this Works Approval:

- the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- 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;
- where tables are used in a Condition, each row in a table constitutes a separate Condition;
- any reference to an Australian or other standard, guideline or code of practice in this Works Approval means the version of the standard, guideline or code of practice in force at the time of granting of this Works Approval and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Works Approval; and
- unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

# Conditions

## Infrastructure and equipment

1. The Works Approval Holder must install and undertake the Works for the infrastructure and equipment:
  - (a) specified in Column 1;
  - (b) to the requirements specified in Column 2;
 of Table 2 below.
2. The Works Approval Holder must not depart from the requirements specified in Column 2 of Table 2 except:
  - (a) where such departure does not increase risks to public health, public amenity or the environment; and
  - (b) all other Conditions in this Works Approval are still satisfied.
3. Subject to Condition 2, within 14 days of the completion of the Works specified in Column 1 of Table 2, the Works Approval Holder must provide to the CEO a report by an Engineer confirming each item of infrastructure or component of infrastructure specified in Column 1 of Table 2 below has been constructed with no material defects and to the requirements specified in Column 2.
4. Where a departure from the requirements specified in Column 2 of Table 2 occurs and is of a type allowed by Condition 2, the Works Approval Holder must provide to the CEO a description of, and explanation for, the departure along with the certification required by Condition 3.

**Table 2: Infrastructure and equipment requirements table**

Column 1	Column 2
Infrastructure/Equipment	Requirements (design and construction)
Ammonium nitrate storage dome	With concrete floor and intact external cladding to prevent wind blown dust emissions
Calcium Nitrate Storage Dome	With concrete floor and intact external cladding to prevent wind blown dust emissions
36 kL Diesel storage tank with a concrete bund	Bund has impervious walls and floor.
2 x 75 kL Mineral oil storage tanks and a concrete bund	Bund has impervious walls and floor.
Ammonium nitrate solution (ANSOL) storage area including 6 x 26 kL storage tanks with a concrete bund.	Bund has impervious walls and floor
Emulsifier storage area tank shed with concrete floor and wall bund	Bund has impervious walls and floor.
IBC storage area with concrete bund	Bund has impervious walls and floor.
Emulsion manufacturing plant comprising a boiler, diesel generator, fuel makeup area ANE blending plant.	Constructed inside a shed with concrete floor and intact external cladding to prevent wind blown dust. emissions
Bund and spoon drain surrounding the site to prevent stormwater ingress onto or off the site.	Earth bund and stone pitched spoon drain directing water to bio-infiltration basins.
Bio-infiltration basins	Constructed in sandy gravel base with a not less than 500 mm filter media layer
Hardstand	Covering areas marked on site plant in Schedule 1 and constructed of concrete for all sheds, domes and tank footings with compacted earth between. Unsealed hardstand to consist of not less than 150 mm compacted crushed rock over sub base of not less than 200 mm compacted sandy gravel.

## Emissions

5. The Works Approval Holder must not cause any Emissions from the Works authorised through this Works Approval except for specified Emissions and general Emissions described in Column 1 of Table 3, subject to the exclusions, limitations or requirements specified in Column 2, of Table 3.

**Table 3: Authorised Emissions table**

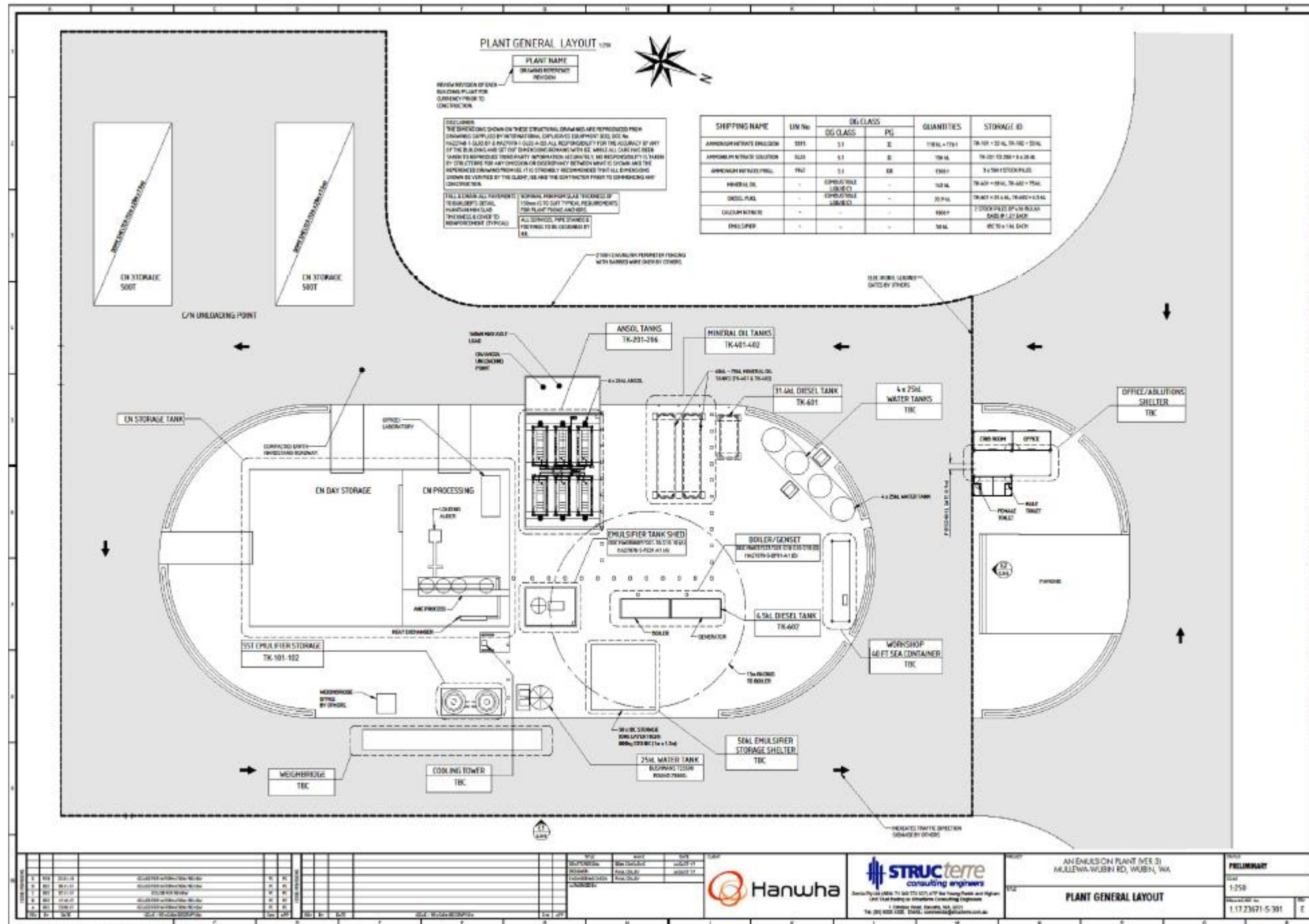
Column 1	Column 2
<b>General Emissions (excluding Specified Emissions)</b>	
Emissions which arise from undertaking the Works set out in Schedule 2.	<p>Emissions excluded from General Emissions are:</p> <ul style="list-style-type: none"> <li>• Unreasonable Emissions; or</li> <li>• Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or</li> <li>• Discharges of Waste in circumstances likely to cause Pollution; or</li> <li>• Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or</li> <li>• Emissions or Discharges which do not comply with an Approved Policy; or</li> <li>• Emissions or Discharges which do not comply with prescribed standard; or</li> <li>• Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or</li> <li>• Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</li> </ul>

## Record-keeping

6. The Works Approval Holder must maintain accurate Books including information, reports and data in relation to the Works and the Books must:
- be legible;
  - if amended, be amended in such a ways that the original and subsequent amendments remain legible or are capable of retrieval;
  - be retained for at least 3 years from the date the Books were made; and
  - be available to be produced to an Inspector or the CEO.
7. The Works Approval 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.



## Site Plan 1

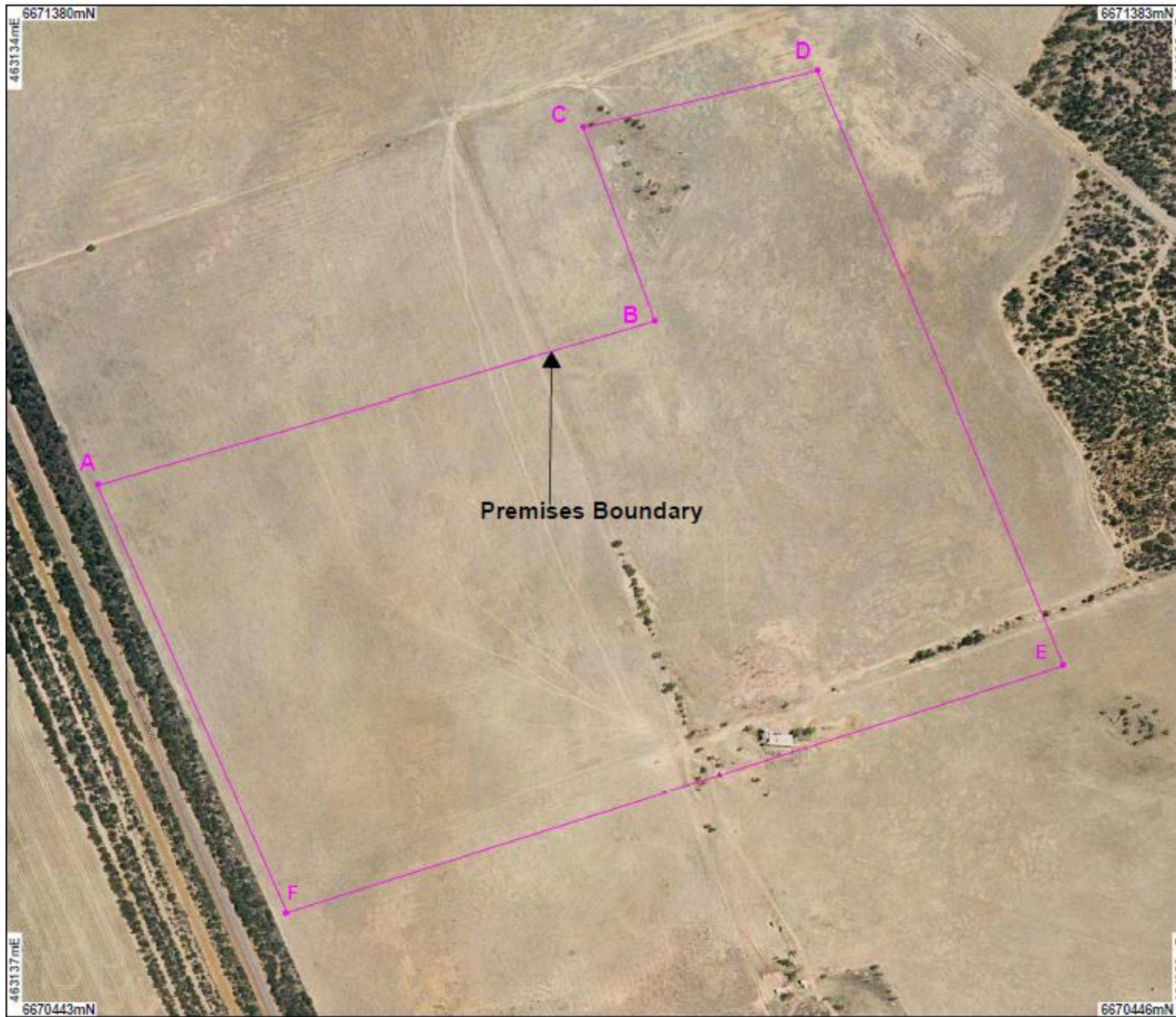


STORMWATER DRAINAGE PLAN 1/1000



## Premises map

The Premises are shown in the map below.



## Premises boundary

The Premises boundary is defined by the coordinates in Table 4.

**Table 4: Premises boundary coordinates**

	Latitude	Longitude
A	-30.0922°	116.6182°
B	-30.0908°	116.6228°
C	-30.0892°	116.6223°
D	-30.0888°	116.6242°
E	-30.0937°	116.6263°
F	-30.0958°	116.6197°



# Decision Report

Choose an item.

## Division 3, Part V *Environmental Protection Act 1986*

---

**Works Approval Number** W6148/2018/1

**Applicant** Hanwha Mining Services Australia Pty Ltd

**ACN** 169067252

**File Number** DER2018/000808

**Premises** Hanwha Mining Services  
Lot 115 Mullewa-Wubin Road  
WUBIN WA 6612

Legal description -  
Part of Lot 117 on Deposited Plan 150270 and Part of Lot 115  
on Deposited Plan 148784.  
As defined by the coordinates in Schedule 1 of the Works  
Approval

**Date of Report** 11 July 2018

**Status of Report** Final

## Table of Contents

<b>1. Definitions of terms and acronyms .....</b>	<b>3</b>
<b>2. Purpose and scope of assessment .....</b>	<b>4</b>
2.1 Application details .....	4
<b>3. Background .....</b>	<b>4</b>
<b>4. Overview of Premises .....</b>	<b>4</b>
4.1 Operational aspects .....	4
4.2 Infrastructure .....	5
<b>5. Legislative context .....</b>	<b>6</b>
5.1 Contaminated sites .....	6
5.2 Other relevant approvals .....	6
5.2.1 Planning approvals .....	6
<b>6. Part V of the EP Act .....</b>	<b>6</b>
6.1.1 Applicable regulations, standards and guidelines .....	6
6.1.2 Clearing .....	6
<b>7. Consultation .....</b>	<b>6</b>
<b>8. Location and siting .....</b>	<b>6</b>
8.1 Siting context .....	6
8.2 Residential and sensitive Premises .....	7
8.3 Specified ecosystems .....	8
8.4 Groundwater and water sources .....	8
8.5 Soil type .....	8
<b>9. Risk assessment .....</b>	<b>9</b>
9.1 Determination of emission, pathway and receptor .....	9
<b>10. Regulatory controls .....</b>	<b>12</b>
<b>11. Determination of Works Approval conditions .....</b>	<b>12</b>
<b>12. Applicant's comments .....</b>	<b>12</b>
<b>13. Conclusion .....</b>	<b>13</b>
<b>Appendix 1: Key documents .....</b>	<b>14</b>
<b>Attachment 1: Issued Works Approval W6148/2018/1 .....</b>	<b>15</b>

Table 1: Definitions .....	3
Table 2: Prescribed Premises Categories in the Existing Licence .....	4
Table 3: Proposed Ammonium Nitrate Emulsion Plant Infrastructure .....	5
Table 4: Relevant approvals and tenure.....	6
Table 5: Receptors and distance from activity boundary .....	7
Table 6: Environmental values .....	8
Table 7: Groundwater and water sources.....	8
Table 8: Identification of emissions, pathway and receptors during construction .....	9
Table 9: Identification of emissions, pathway and receptors during operation .....	10
Table 10: Summary of conditions to be applied.....	12



# 1. Definitions of terms and acronyms

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

**Table 1: Definitions**

Term	Definition
ACN	Australian Company Number
ANE	Ammonium nitrate emulsion
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CS Act	<i>Contaminated Sites Act 2003 (WA)</i>
Decision Report	refers to this document.
Delegated Officer	an Officer Delegated under section 20 of the EP Act.
Department	means the Department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DMIRS	The Department of Mines and Industry Regulation and Safety
DWER	The Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997 (WA)</i>
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Risk Event	As described in <i>Guidance Statement: Risk Assessment</i>
UDR	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)</i>

## 2. Purpose and scope of assessment

Hanwha Mining Services Pty Ltd (the Applicant) lodged an application for a works approval on 4 May 2018 to construct a facility for the manufacture of ammonium nitrate emulsion (Category 75). The proposed site is on the Mullewa–Wubin Road, 1 km north of Wubin and it is currently used for agricultural activities. It is shown on Figure 1. Native vegetation on the site was cleared many years ago to enable agricultural activities.

Upon completion of construction the Applicant is likely to register the premises and as such operation of the site would not be subject specific regulatory controls by of conditions attached to a licence.

The report that follows assesses the application and recommends that approval is granted, subject conditions.

### 2.1 Application details

The applications was lodged on 4 May and it contained an application form and supporting information. On 30 May 2018 Hanwha provided additional info by email including process flow details and structural plans.

Those documents that form the application and the Departmental Guidance Statements that have informed assessment of Application are set out in Appendix 1.

## 3. Background

The Applicant proposes to construct an ammonium nitrate emulsion plant with a nominal production capacity of 90,000 tonnes per annum, as well as storing mining related chemicals for sales and distribution.

The site has previously been used for agricultural activities and the majority of the native vegetation was removed many years ago.

Table 2 lists the prescribed premises category that has been applied for.

**Table 2: Prescribed Premises Categories in the Existing Licence**

Classification of Premises	Description	Nominal production capacity
Category 75	Chemical blending or mixing not causing discharge: premises on which chemicals or chemical products are mixed, blended or packaged in a manner that does not cause or is not likely to cause a discharge of waste into the environment.	90,000 tonnes per annum

## 4. Overview of Premises

### 4.1 Operational aspects

The proposed facility is to include a plant to manufacture ANE and also to warehouse mining related chemicals for sales and distribution.

Ammonium nitrate emulsion is manufactured by dissolving ammonium nitrate in water, heating it and then mixing it at high pressure with a range of oils and emulsifiers. This creates AN dissolved within a high viscosity water in oil emulsion with the consistency of a petroleum grease.

A range of mining chemicals will also be stored on site for sales and distribution to mine sites.

Finished products and mining chemicals will be transported directly to mine sites from the premises.

## 4.2 Infrastructure

The proposed site infrastructure, as it relates to Category 75, is detailed in Table 3 and with reference to the Site Plan (attached in the Issued Works Approval).

Table 3 lists infrastructure associated with each prescribed premises category.

**Table 3: Proposed Ammonium Nitrate Emulsion Plant Infrastructure**

	Infrastructure	Site Plan Reference
	<b>Prescribed Activity Category 75</b>	
1.	Ammonium Nitrate Storage Dome with concrete floor	Site Plan 1 on Schedule 1 of the issued Works Approval
2.	Calcium Nitrate Storage Dome with concrete floor	
3.	36 kL Diesel Storage tank with a concrete bund	
4.	2 x 75 kL Mineral Oil Storage tanks and a concrete bund	
5.	Ammonium Nitrate Solution (ANSOL) storage area including 6 x 26 kL storage tanks with a concrete bund.	
6.	Emulsifier Storage Area tank shed with concrete floor and wall bund	
7.	IBC storage area with concrete bund	
8.	Emulsion Manufacturing Plant comprising a boiler, diesel generator, fuel makeup area ANE blending plant.	
9.	Emulsion Manufacturing Plant comprising a boiler, diesel generator, fuel makeup area ANE blending plant.	
10.	Earth bund surrounding the site to prevent stormwater ingress onto or off the site.	Site Plan 2 on Schedule 1 of the issued Works Approval
11.	Bio-infiltration basins	
12.	Hardstand constructed of concrete for all sheds, domes and tank footings with compacted earth between.	
	<b>Other activities*</b>	
1.	Weighbridge	Site Plan 1 on Schedule 1 of the issued Works Approval
2.	Office facility	
3.	Water Tanks	

\*Note: Infrastructure not within the scope of the Works Approval

## 5. Legislative context

Table 4 summarises approvals relevant to the assessment other than approvals required under the EP Act, the CS Act and their subordinate legislation. .

**Table 4: Relevant approvals and tenure**

Legislation	Number	Subsidiary Approval
<i>Dangerous Goods Safety Act 2004</i>	Dangerous Goods	Letter form Manager Dangerous Goods, Dangerous Goods and Petroleum Safety dated 30 December 2015 giving in principal support for the location of the facility and noting that compliance with Act will be required for storage of Ammonium nitrate emulsion (UN3375) and other products on site.

### 5.1 Contaminated sites

Neither of the two lots that form the site for the facility have not been reported as contaminated under the provisions of the CS Act.

Acid sulfate soils are not likely to be encountered during construction of the ANE plant.

### 5.2 Other relevant approvals

#### 5.2.1 Planning approvals

The Shire of Dalwallinu granted planning approval to construct and operate an ammonium nitrate emulsion plant (including ancillary storage facility) on 26 June 2018 (DA151718)

## 6. Part V of the EP Act

### 6.1.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations.

The Departmental Guidance Statements that inform assessment of the Application are set out in Appendix 1.

### 6.1.2 Clearing

The Applicant has not sought to clear native vegetation under the provisions of the works approval and no permit to clear native vegetation has been granted. Clearing of native vegetation is required for a crossover or entry way to the site from the Mullewa–Wubin Road however, this is exempted from the requirement to hold a clearing permit.

## 7. Consultation

The application was advertised on the Departmental internet website and in the West Australian newspaper on 28 May 2018. Comment were also sought from the Shire of Dandaragan.

No submissions were received by the due date.

## 8. Location and siting

### 8.1 Siting context

The proposed site for the ANE plant is 1 km north of Wubin, approximately 275 km north-northeast of Perth, Western Australia. The ANE plant is to be constructed on previously

cleared agricultural land and it is surrounded by farm land and large nature reserves. The nearest residential dwellings are about 1 km away and nearest commercial or industrial land use is 800 metres to the south. The Application included an aerial image of the proposed site and surrounds which is reproduced in Figure 1 below.

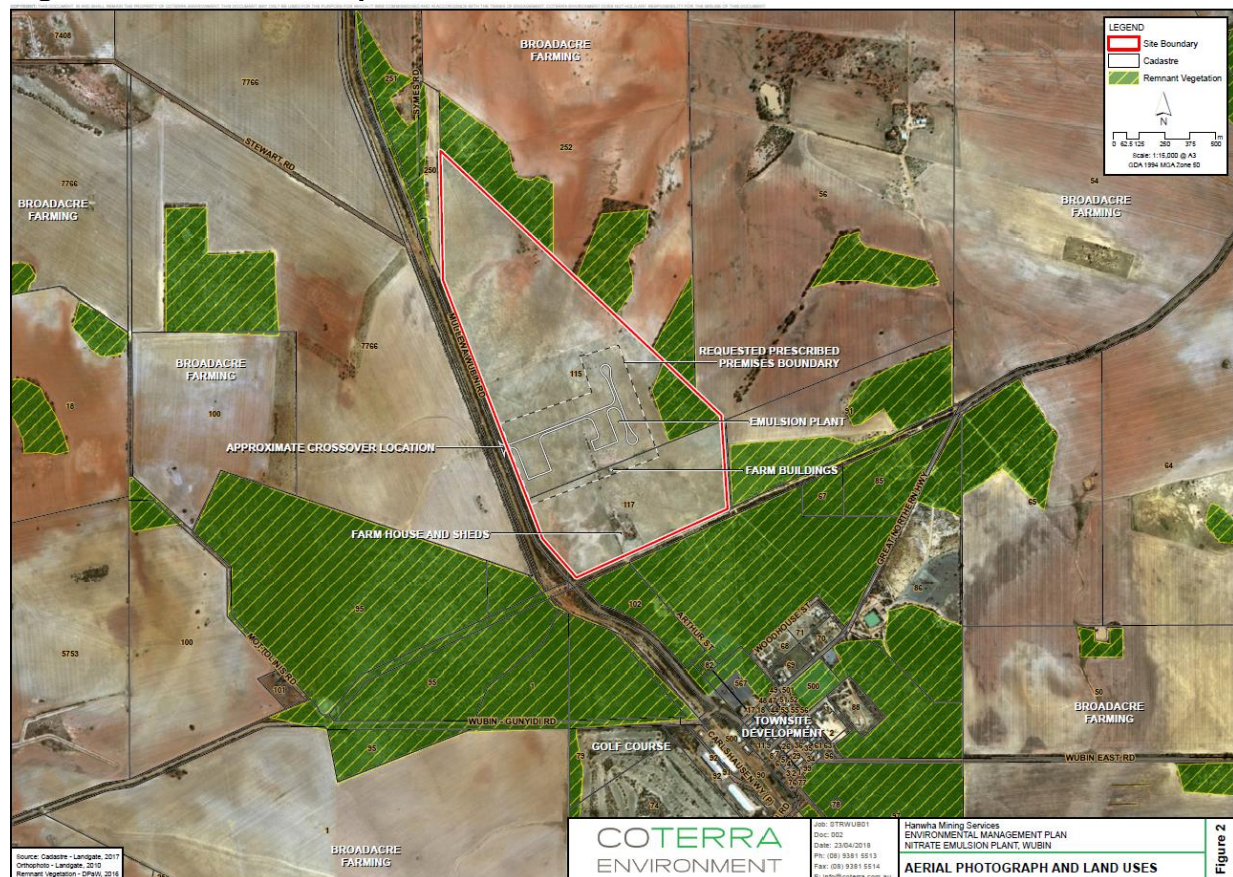
## 8.2 Residential and sensitive Premises

The distances to residential and sensitive receptors are detailed in Table 5.

**Table 5: Receptors and distance from activity boundary**

Sensitive Land Uses	Distance from Prescribed Activity
Residential dwellings: <ul style="list-style-type: none"> <li>A rural dwelling to the north west on the Mullewa-Wubin Road</li> <li>Nearest dwelling in the residential area of the Wubin town site to the south.</li> </ul>	<p>Approximately 1 km from the boundary</p> <p>Approximately 1 km from the boundary</p> <p>The applicants Separation Distance Report (Appendix K of the Application) that these dwellings are 1.3 km from the ammonium nitrate stores.</p>
Nearest commercial or industrial land use is a road train assembly yard operated by the Shire.	800m from the boundary to the south

**Figure 1: Location of Proposed Ammonium Nitrate Emulsion Plant**





### 8.3 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 6. Table 6 also identifies the distances to other sites which do not fit the specific definition of a specified ecosystem.

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

**Table 6: Environmental values**

Specified ecosystems	Distance from the Premises
Geomorphic Wetlands	The nearest geomorphic wetlands is 3.8 km south of the site
Biological component	Distance from the Premises
Threatened/Priority Fauna	Confirmed Carnaby's Cockatoo Breeding area 750 meters west.

### 8.4 Groundwater and water sources

The distances to groundwater and water sources are shown in 7.

**Table 7: Groundwater and water sources**

Groundwater and water sources	Distance from Premises	Environmental value
Groundwater	The nearest recorded bore site with is 600 m south of the site. The depth to groundwater is 22metre.	The shallow aquifer is mildly saline suitable for garden bore or stock watering.

### 8.5 Soil type

DWER GIS information indicates that the soil is classified Ms4 which is described as sandy silt – light cream to yellow brown, mottled low lying alluvium , clayey in parts.

## 9. Risk assessment

### 9.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER has identified all potential emissions pathways and potential receptors to establish whether there are credible Risk Events that require detailed risk assessment.

The identification of the sources, pathways and receptors to determine Risk Events which required detailed risk assessment are set out in Table 8 and Table 9 below.

**Table 8: Identification of emissions, pathway and receptors during construction**

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
<b>Construction, mobilisation and positioning of infrastructure</b>	Vehicle movements on unsealed access roads	Noise	No residences or other sensitive receptors in proximity	Air / wind dispersion	Amenity impacts	No	The separation distances between the proposed plant and residential areas is sufficiently large for there to be minimal to no impacts. (> 1 Km)  Note: construction will occur over a short period of time and construction works are limited. .  The Noise Regulations apply.
		Dust			Amenity impacts	No	
	Construction of new buildings, plant and infrastructure	Noise	No residences or other sensitive receptors in proximity	Air / wind dispersion	Amenity impacts	No	
		Dust			Amenity impacts	No	

**Table 9: 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		
Transport of products on and off the site.	Vehicle movements	Fugitive dust from roads and sources	Surrounding land or residential premises	Air / wind dispersion	Amenity	No	The hardstand and separation distance between the proposed plant and residential areas is sufficiently large for there to be minimal to no impacts
	Unloading and loading of calcium nitrate, ammonium nitrate, ANSOL, diesel, mineral Oil emulsifier and ANE	Fugitive chemical dusts	Surrounding land or residential premises	Air / wind dispersion	Amenity Contamination of land	No	Handling materials in packages rather than bulk and loading and unloading indoors as well as the separation distance to sensitive receptors is sufficiently large for there to be minimal or no impacts.
Mixing and blending of chemicals	Products to and from mixing chamber	Fugitive chemical dusts	Surrounding land or residential premises	Air / wind dispersion	Amenity Contamination of land	No	
	Mixing and blending	Fumes odours and gases	Surrounding land or residential premises	Air / wind dispersion	Amenity	No	The separation distance between the proposed plant and residential areas is sufficiently large for there to be minimal to no impacts. (> 1 Km)
		Discharges to air from diesel generator and oil heater.	Surrounding land or residential premises	Air / wind dispersion	Amenity	No	These are small emission sources with a large separation distance between them and residential areas so that there is likely to be minimal to no impacts (> 1 km)

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
		Noise	Residential or commercial premises	Air / wind dispersion	Amenity	No	The separation distance between the proposed plant and residential areas is sufficiently large for there to be minimal to no impacts. (> 1 km). The Noise Regulation apply.
<b>Storage of Raw Materials and Product</b>		Leaks and spills	Contamination of Land and groundwater	Surface water or groundwater movement	Contamination of land and groundwater	No	Bunding of liquid chemicals and concrete floors to material handling areas with ammonium nitrate solid and solutions are to be stored in accordance with Australian Standard A
<b>Overall Premises</b>		Contaminated Stormwater run-off	Contamination of Land and groundwater	Direct Discharge	Contamination of land and groundwater	No	The bunding of the premises to prevent stormwater running in the separate containment bunds, the low risk of potential contaminants and the use of bio-infiltration sumps to reduce nutrients is sufficient for there to be minimal to low impact.

In seeking to establish credible Risk Events above, the Delegated Officer has identified likely emissions and receptors that may be exposed to emission through an identified actual or likely pathway. No potential adverse effects to the receptor from exposure to likely emissions were identified in the Risk Assessment. As such, there is no Risk Event that warrants detailed assessment associated with this application. In making this determination, the Delegated Officer notes:

- that the proposed site is on vacant farm land, well separated from rural and residential dwellings and it is surrounded by other farms and nature reserves;
- the proposed site is about 275 km north east of Perth and 1 km north of the Town of Wubin where about 50 people reside.
- there are no surface water bodies, groundwater (22m below) or other environmental receptor in close proximity to the proposed site; and
- the site is also regulated by DMIRS for the storage of dangerous goods and manufacturing explosive related products.

## 10. Regulatory controls

The proposed plant is located in an isolated rural area with the nearest residences located 1 kilometre or more away. The proposed location is separated by 4 kilometres to surface water bodies.

The site consists of compacted hardstand not less than 350 mm thick, surrounded by a bund and drained to fully contain potential liquid spills and prevent contaminated stormwater leaving. Infiltration sumps will be planted with sedges to reduce possible nutrient contamination of stormwater prior to infiltration.

Liquid chemicals stored whether in tanks or packages will be stored in areas with concrete bunds to contain spills.

The operator will control windblown chemical dust be unloading and loading in enclosed area and storing solid materials in packages so there will be no handling of bulk solid materials.

The site is also subject to regulation by DMIRS.

On completion of construction the facility will become a registered premises under Regulation 5A of the EP Regulations. No further regulatory controls will be applied.

## 11. Determination of Works Approval conditions

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

The *Guidance Statement: Licence Duration* has been applied and the works approval has been granted for a 3 years duration.

Table 10 provides a summary of the conditions to be applied to the works approval. These conditions generally relate to securing the works, as detailed in the Application to the works approval. No Risk Events were identified in the detailed risk assessment and as such there are no further regulatory controls other than those mentioned in Table 10.

**Table 10: Summary of conditions to be applied**

Condition Ref	Grounds
Infrastructure and Equipment Condition 1 and 2	This condition is valid, risk-based and contains appropriate controls.
Compliance report Conditions 3 and 4	These conditions are valid and are necessary requirements to ensure compliance
Information and Reports Conditions 4, 5, 6 and 7	These conditions are valid and are necessary for 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 works approvals under the EP Act.

## 12. Applicant's comments

The Applicant was provided with the draft Decision Report and Works Approval on 5 July 2018. The Applicant replied on 9 July 2018 accepting the conditions of the works approval and requesting a minor administrative change.



## 13. Conclusion

This assessment of the risks of activities on the premises has been undertaken with due consideration of a number of factors, including the location of the premises, proposed activities, infrastructure, application documentation and policies set out in this report.

Based on this assessment, I have accepted the Application and granted a work approval subject to conditions commensurate with the determined controls and as necessary for administration and reporting requirements.

**Paul Byrnes**  
**MANAGER, PROCESS INDUSTRIES**  
**Regulatory Services (Environment)**

Officer delegated under section 20 of the *Environmental Protection Act 1986*

## Appendix 1: Key documents

---

	Document title	In text ref	Availability
1.	Application, document 1: Application form. Attachment A – Signed Works Approval Application Form	Application	DWER record A1668549
2.	Application, document 2: Supporting Application information.  Attachment B – Ammonium Nitrate Emulsion Plant Environmental Management Plan Lots 115 & 117 Mullewa-Wubin road, Wubin Revision 2 April 2018 Coterra Environment	Application	DWER record A1668550
3.	Application, document 3: Additional Supporting information.	Application	DWER record A1674843
4.	Application, document 4: Applicant's submission on drafts	Application	DWER record A1700495
5.	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	DER 2015a	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
6.	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	DER 2015b	
7.	DER, August 2016. <i>Guidance Statement: Licence duration</i> . Department of Environment Regulation, Perth.	DER 2016a	
8.	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	DER 2016b	
9.	DER, November 2016. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	DER 2016c	

## Attachment 1: Issued Works Approval W6148/2018/1

---