



# Licence

## *Environmental Protection Act 1986, Part V*

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**Licensee:**           **Wingstar Investments Pty Ltd**

**Licence:**           **L8518/2011/2**

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**Registered office:**   283 Rokeby Road  
                              SUBIACO, WA 6008

**ACN:**                 073 571 927

**Premises address:**   Cawse Nickel Operations  
                              Mining tenements M24/224, M24/389, M24/517, M24/519 and M24/544  
                              ORA BANDA 6431  
                              As depicted in Schedule 1.

**Issue date:**           Thursday, 13 February 2014

**Commencement date:** Friday, 21 February 2014

**Expiry date:**         Wednesday, 20 February 2019

**Prescribed premises category**

Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
5	Processing or beneficiation of metallic or non-metallic ore	50 000 tonnes or more per year	500 000 tonnes per annual period
6	Mine dewatering	50 000 tonnes or more per year	500 000 tonnes per annual period
31	Chemical manufacturing	100 tonnes or more per year	50 000 tonnes per annual period
52	Electrical power generation	20 MW or more in aggregate (using a fuel other than gas)	20 MW per annual period
63	Class 1 Inert landfill site	500 tonnes or more per year	5000 tonnes per annual period
67	Fuel burning	In aggregate 500 kg or more per hour (fuel with a sulphur content of 0.25% or more or In aggregate 2000 kg or more per hour (fuel with a sulphur content of less than 0.25%)	Not applicable



**Conditions**

This Licence is subject to the conditions set out in the attached pages.

Date signed: 12 November 2015

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Danielle Eyre

Senior Manager – Industry Regulation (Resource Industries)

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



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## Introduction

This Introduction is not part of the Licence conditions.

### DER's industry licensing role

The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

### Licence requirements

This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:

<http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.



Licence holders are also reminded of the requirements of section 53 of the Act which places 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.

#### **Licence fees**

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

#### **Ministerial conditions**

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

#### **Premises description and Licence summary**

The Cawse Nickel project (Cawse Nickel) is located approximately 55 km north west of Kalgoorlie and 10 km east of Ora Banda. Cawse Nickel is a nickel/cobalt project involving open cut mining of a lateritic nickel deposit at a rate of approximately 1 million tonnes per annum (tpa) to a maximum depth of 60 metres. The mined ore is beneficiated to produce approximately 500 000 tpa of concentrate for processing. Processing of the concentrate uses high pressure acid leaching (HPAL), purification and nickel/cobalt metal recovery. Operation of the premises began in February 1998 and continued until October 2008. The Premises ceased operation in 2008 and entered 'Care and Maintenance'.

Cawse Nickel comprises of;

- Open cut nickel-cobalt ore mining operations;
- A processing plant comprising of:
  - Ore pre-treatment facilities;
  - Acid leaching process;
  - A neutralisation and clean-up process;
  - A mixed nickel-cobalt hydroxide precipitation process (option to stop processing at this point and sell a nickel-cobalt hydroxide precipitate to existing refineries); and
  - An ammonia re-leach circuit.
- Water supply borefields;
- Solid and liquid waste disposal facilities including above ground and in-pit tailings facilities, overburden stockpiles, one evaporation pond with three cells and inert landfill;
- A gas supply pipeline and gas power station (4 gas fired 4.125MW gas turbines);
- Containerised wastewater treatment plant (WWTP) 25m<sup>3</sup>/day.
- On-site fuel and chemical storage facilities;
- Product and raw materials handling systems; and
- Supporting infrastructure (administration, plant control and support facilities, access and haul roads).

#### **Category 5 – Processing plant**

Cawse produced a mixed nickel-cobalt hydroxyl-carbonate from a lateritic nickel deposit using open cut mining techniques. Nickel and cobalt are extracted from the ore using a high pressure acid leaching process. Tailings are produced and discharged to the Tailings Storage Facilities (TSFs).

TSFs at Cawse consist of two paddock style and two in-pit facilities at Bunyip and Pegasus pits. Supernatant from the TSFs is decanted and discharged to the three celled evaporation pond.

As the site is in care and maintenance phase no mining activities or processing of ore are currently being undertaken.



### Category 6 – Mine dewatering

During operation of the site (pre 2008) groundwater was abstracted from many pits that extended into the aquifer (i.e Romulus Pit ). Dewatered water was disposed of to other pits within the site or to the raw water pond for use within the plant. No dewatering activities are currently being undertaken during the care and maintenance phase. The applicability of Category 6 needs to be reassessed prior to Wingstar restarting operation of the site.

### Category 31 – Chemical manufacturing

During operation of the site (pre 2008) a product of the ammonia leach circuit was a nickel-cobalt hydroxy-carbonate concentrate, which was sold offsite to Finland for processing. As Wingstar has no plans to restart operation in the immediate future it is unclear whether this category is applicable. It is recommended that re-assessment occurs when the site commences operation.

### Category 52 - Electrical power generation & Category 67 – Fuel burning

Cawse generates electricity from a cogeneration plant that consists of ;

- 4 natural gas fired 4.125 MW gas turbines.
- 4 heat recovery steam generators; and
- One mechanical vapour compression desalination plant.

The plant is capable of producing approximately 144 GWh per hour/year energy. As the site is in care and maintenance no energy is currently being produced. A diesel generator is onsite to provide electricity to run essential services.

### Category 63 – Class 1 Inert Landfill

A Class 1 inert landfill is located in the south western corner of the Northern Waste Rock Dump. This landfill is not used during care and maintenance. All waste goes off site to a licenced facility.

This Licence amendment is the result of an application to transfer L8518/2011/2 from Norilsk Nickel Cawse Pty Ltd to Wingstar Investments Pty Ltd. At this time DER has also converted the existing licence to a new format licence. During this process emissions and discharges from the premises have not been re-assessed. It is recommended that re-assessment occurs prior to the site re-commencing operation.

The licences and works approvals issued for the Premises since 08/08/2008 are:

Instrument log		
Instrument	Issued	Description
L7311/1998/9	08/08/2008	Licence re-issue – Cawse Cogeneration plant
L7310/1996/9	27/10/2010	Licence re-issue – Norilsk Cawse Nickel Operations
L8518/2011/1	18/02/2011	New application to combine Nickel Operations licence with Cogeneration plant licence.
L8518/2011/2	13/02/2014	Licence re-issue
L8518/2011/2	15/10/2015	Transfer of licence from Norilsk Nickel Cawse Pty Ltd to Wingstar Investments Pty Ltd and licence amendment to new format.

### Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

## END OF INTRODUCTION



# Licence conditions

## 1 General

### 1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

**'Act'** means the *Environmental Protection Act 1986*;

**'AHD'** means the Australian height datum;

**'annual period'** means the inclusive period from 1 April until 31 March in the following year;

**'AS/NZS 5667.1'** means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

**'AS/NZS 5667.11'** means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

**'averaging period'** means the time over which a limit is measured or a monitoring result is obtained;

**'CEO'** means Chief Executive Officer of the Department of Environment Regulation;

**'CEO'** for the purpose of correspondence means;  
Chief Executive Officer  
Department Administering the Environmental Protection Act 1986  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Email: [info@der.wa.gov.au](mailto:info@der.wa.gov.au) ;

**'environmentally hazardous material'** means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. At the Premises this includes process liquors and slurries.

**'freeboard'** means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

**'Licence'** means this Licence numbered L8518/2011/2 and issued under the Act;

**'Licensee'** means the person or organisation named as Licensee on page 1 of the Licence;

**'NATA'** means the National Association of Testing Authorities, Australia;

**'NATA accredited'** means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

**'normal operating conditions'** means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;



**'NOx'** means oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide and expressed as nitrogen dioxide;

**'Premises'** means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

**'Schedule 1'** means Schedule 1 of this Licence unless otherwise stated;

**'Schedule 2'** means Schedule 2 of this Licence unless otherwise stated;

**'spot sample'** means a discrete sample representative at the time and place at which the sample is taken;

**'STP dry'** means standard temperature and pressure (0°Celsius and 101.325 kilopascals respectively), dry;

**'USEPA'** means United States (of America) Environmental Protection Agency;

**'usual working day'** means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia;

- 1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the the standard in force from time to time during the term of this Licence.
- 1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.
- 1.1.5 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:
- (a) pollution;
  - (b) unreasonable emission;
  - (c) discharge of waste in circumstances likely to cause pollution; or
  - (d) being contrary to any written law.

## **1.2 General conditions**

- 1.2.1 The Licensee shall operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.
- 1.2.2 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.
- 1.2.3 The Licensee shall:
- (a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and
  - (b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.<sup>1</sup>

Note1: *The Environmental Protection (Unauthorised Discharges) Regulations 2004* make it an offence to discharge certain materials into the environment.





### 1.3 Premises operation

- 1.3.1 The Licensee shall ensure that all pipelines containing environmentally hazardous materials are either:
- (a) equipped with telemetry systems and pressure sensors along pipelines to allow the detection of leaks and failures; and/or
  - (b) equipped with automatic cut-outs in the event of a pipe failure; and/or
  - (c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections; and/or
  - (d) visually inspected at the point of discharge on an hourly basis while the premises is in care and maintenance.
- 1.3.2 The Licensee shall ensure that storage of all process liquids and slurries are provided with secondary containment measures that:
- (a) have available storage capacity of at least 110 per cent of the storage vessel or 25 per cent of the total tankage within the containment system, whichever is larger;
  - (b) ensure that incompatible materials cannot mix;
  - (c) are constructed so that any walls, base and sump are sufficiently impermeable to contain a spill and are resistance to stored materials;
  - (d) are designed and operated to ensure that:
    - (i) any bunds or walls drain to a collection point (sump);
    - (ii) bund valves are not left open to permanently drain rainwater;
    - (iii) pipework does not penetrate the bund walls; and
    - (iv) where tank connections points are installed, they are installed within the bund to ensure containment in the event of pipe connection failure or spills during transfer.
  - (e) are constructed to catch leaks from tanks and/or fittings; and
  - (f) are constructed to include appropriate energy dissipation controls (such as internal walls) to ensure containment of stored material which may be released during a catastrophic vessel failure.
- 1.3.3 The Licensee shall ensure that tailings, decant water and effluent are only discharged into containment cells, dams or ponds with the relevant infrastructure requirements and at the locations specified in Table 1.3.1

Table 1.3.1: Containment infrastructure		
Containment cell or dam number(s)	Material	Infrastructure requirements
Tailing Storage Facilities (TSF) 1 and 2	Tailings	Clay lined.
2 In Pit TSFs (Bunyip and Pegasus Pits)	Tailings	Constructed in accordance with relevant Part V approvals.
Raw water pond	Untreated groundwater	Lined with 1mm HDPE to achieve a permeability of at least $<10^{-9}$ m/s or equivalent
Process water pond	Untreated groundwater	Lined with 1mm HDPE to achieve a permeability of at least $<10^{-9}$ m/s or equivalent
Evaporation Pond Cells 1 - 3	Decant water, seepage recovery water from paddock TSFs and excess process water or brine from process plant.	Clay lined.
WWTP evaporation ponds	Treated wastewater from WWTP	Clay lined.
Stormwater drainage evaporation ponds (four)	Potentially contaminated stormwater from drainage system within processing plant area.	Clay lined.

- 1.3.4 The Licensee shall manage all TSFs, evaporation ponds and process/raw water ponds Table 1.3.1 such that a minimum top of embankment freeboard of 300mm or a 1 in 100 year/72 hour storm event (whichever is greater) is maintained.





- 1.3.5 The Licensee shall manage TSF1 and 2 such that:
- (a) a seepage collection and recovery system is provided and used to capture seepage from the TSF;
  - (b) seepage is returned to the TSF, transferred to the evaporation ponds or re-used in process; and
  - (c) the supernatant pond on the TSF is minimised as far as practicable.
- 1.3.6 The Licensee shall:
- (a) undertake inspections as detailed in Table 1.3.2;
  - (b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
  - (c) maintain a record of all inspections undertaken.

**Table 1.3.2: Inspection of infrastructure**

Scope of inspection	Type of inspection	Frequency of inspection
Tailings pipelines	Visual integrity	Daily when in operation Weekly when in care and maintenance
Borefield pipelines and pump stations	Visual integrity	Daily when in operation Monthly when in care and maintenance
TSF Embankment freeboard	Visual to confirm required freeboard capacity is available	Daily when in operation Weekly when in care and maintenance
Fuel and chemical storage areas	Visual integrity	Daily when in operation Weekly when in care and maintenance

- 1.3.7 The Licensee shall ensure that where wastes produced on the Premises are not taken off-site for lawful use or disposal, they are managed in accordance with the requirements in Table 1.3.3.

**Table 1.3.3: Management of Waste**

Waste Type	Management Strategy	Requirements <sup>1</sup>
Inert waste type 1 Inert waste type 2 Clean Fill	Receipt, handling, associated storage and disposal of waste by landfilling	Storage of waste prior to landfilling shall be away from areas subject to flooding or erosion. No more than 5000 tonnes per year of all waste types cumulatively shall be disposed of by landfilling. Disposal of waste by landfilling shall only take place within the landfill area located within the south western corner of the Northern Waste Rock Dump. Waste shall be placed in a defined trench or within an area enclosed by earthen bunds. The Licensee shall ensure that the tipping area is less than 30 metres in length.
Hydrocarbon contaminated waste (e.g waste lubricants and hydrolic fluids, spent coolant/inhibitors, spilled process materials)	Storage and disposal	Temporarily stored within a bunded hardstand area and disposed of by export off-site by a licensed carrier.
Sewage	Physical, biological and chemical treatment	No more than 25 m <sup>3</sup> of effluent shall be treated per day.

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.



## 2 Emissions

### 2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit specified in any part of section 2 of this Licence.

### 2.2 Point source emissions to air

2.2.1 The Licensee shall ensure that where waste is emitted to air from the emission points in Table 2.2.1 it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emission points to air			
Emission point reference and location on Map of Emission Points (Schedule1)	Emission Point	Height (m)	Source
A1	Powerhouse gas turbine stack	24.3	Gas Turbine
A2	Ammonia leach scrubber vent stack	41	Ammonia Leaching circuit
A3	Autoclave blowdown vent stack (main stack)	35	High Pressure acid leaching area
A4	Autoclave emergency vent stack	34.5	High Pressure acid leaching area

2.2.2 The Licensee shall not cause or allow point source emissions to air greater than the limits listed in Table 2.2.2.

Table 2.2.2: Point source emission limits to air			
Emission point Reference	Parameter	Limit (including units)	Averaging period
A3	Particulates	250 mg/m <sup>3</sup>	Stack test (60 minute average)
	Nickel and its compounds (expressed as the metal in each case)	20 mg/m <sup>3</sup>	Stack test (60 minute average)

## 3 Monitoring

### 3.1 General monitoring

3.1.1 The licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11;
- (c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.

3.1.2 The Licensee shall ensure that:

- (a) quarterly monitoring is undertaken at least 45 days apart; and
- (b) six monthly monitoring is undertaken at least 5 months apart.

3.1.3 The Licensee shall record production or throughput data and any other process parameters relevant to any non-continuous or CEMS monitoring undertaken.

3.1.4 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.



- 3.1.5 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

### 3.2 Monitoring of point source emissions to air

- 3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Table 3.2.1: Monitoring of point source emissions to air				
Emission point reference	Parameter	Units <sup>1</sup>	Frequency <sup>2</sup>	Method
A1	Oxides of sulfur (SO <sub>x</sub> )	mg/m <sup>3</sup>	Annually when operating	USEPA Method 6
	Oxides of nitrogen (NO <sub>x</sub> )	g/s		USEPA Method 8/7E or 7D
	Carbon monoxide (CO)			USEPA Method 10
A2	Ammonia	mg/m <sup>3</sup> g/s	Annually when operating	USEPA Method 29
A3	Nickel sulfate	mg/m <sup>3</sup> g/s	Annually when operating	USEPA Method 29
	Sulfuric acid mist			USEPA Method 8
	Particulates			USEPA Method 5 or USEPA Method 17

Note 1: All units are referenced to STP dry

Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.

- 3.2.2 The Licensee shall ensure that sampling required under Condition 3.2.1 of the Licence is undertaken at sampling locations in accordance with the AS 4323.1 or relevant part of the CEMS Code.
- 3.2.3 The Licensee shall ensure that all non-continuous sampling and analysis undertaken pursuant to condition 3.2.1 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

### 3.3 Ambient environmental quality monitoring

- 3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Monitoring of ambient groundwater quality				
Monitoring point reference and location on Map of Monitoring Points (Schedule 1)	Parameter	Units	Averaging period	Frequency
BPMB01, BPMB02, BPMB03, BPMB04	Standing water level <sup>1</sup>	m(AHD) m(AHD)	Spot sample	Quarterly when operating Six monthly when in care and maintenance
MB1, MB2, MB3, MB4, MB5, MB6, MB7, MB8, MB9, MB10, MB11, MB12, MB13, MB14, MB15, BPMB5, BPMB6, BPMB7 and BPMB8B	Standing water level <sup>1</sup>		Spot sample	Quarterly when operating Six monthly when in care and maintenance
	pH	-		
	Total dissolved solids	mg/L		
	Aluminium			
	Arsenic			
	Cadmium			
	Chromium			
	Copper			
	Iron			



	Lead			
	Magnesium			
	Mercury			
	Nickel			
	Silicon			
	Sodium			
	Zinc			

Note 1: Standing water level shall be determined prior to collection of water samples

## 4 Information

### 4.1 Records

- 4.1.1 All information and records required by the Licence shall:
- be legible;
  - if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
  - except for records listed in 5.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
  - for those following records, be retained until the expiry of the Licence and any subsequent licence:
    - off-site environmental effects; or
    - matters which affect the condition of the land or waters.
- 4.1.2 The Licensee shall ensure that:
- any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
  - any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.
- 4.1.3 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.
- 4.1.4 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

### 4.2 Reporting

- 4.2.2 The Licensee shall submit to the CEO an Annual Environmental Report within 61 calendar days after the end of the annual period. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

Table 4.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form <sup>1</sup>
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 3.2.1	Monitoring data for emissions to air	
Table 3.8.1	Monitoring data for ambient groundwater monitoring	
4.1.3	Compliance	Annual Audit Compliance Report (AACR)
4.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2



- 4.2.3 The Licensee shall ensure that the Annual Environmental Report also contains:
- (a) any relevant process, production or operational data recorded under Condition 3.1.3; and
  - (b) an assessment of the information contained within the report against previous monitoring results and Licence limits.

#### 4.3 Notification

- 4.3.2 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 4.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement <sup>1</sup>	Format or form <sup>2</sup>
2.1.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day.  Part B: As soon as practicable	N1
-	Intention for the site to recommence normal operations from care and maintenance status.	At least 60 calendar days prior to site recommencing operations.	None specified
3.1.5	Calibration report	As soon as practicable.	

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act

Note 2: Forms are in Schedule 2

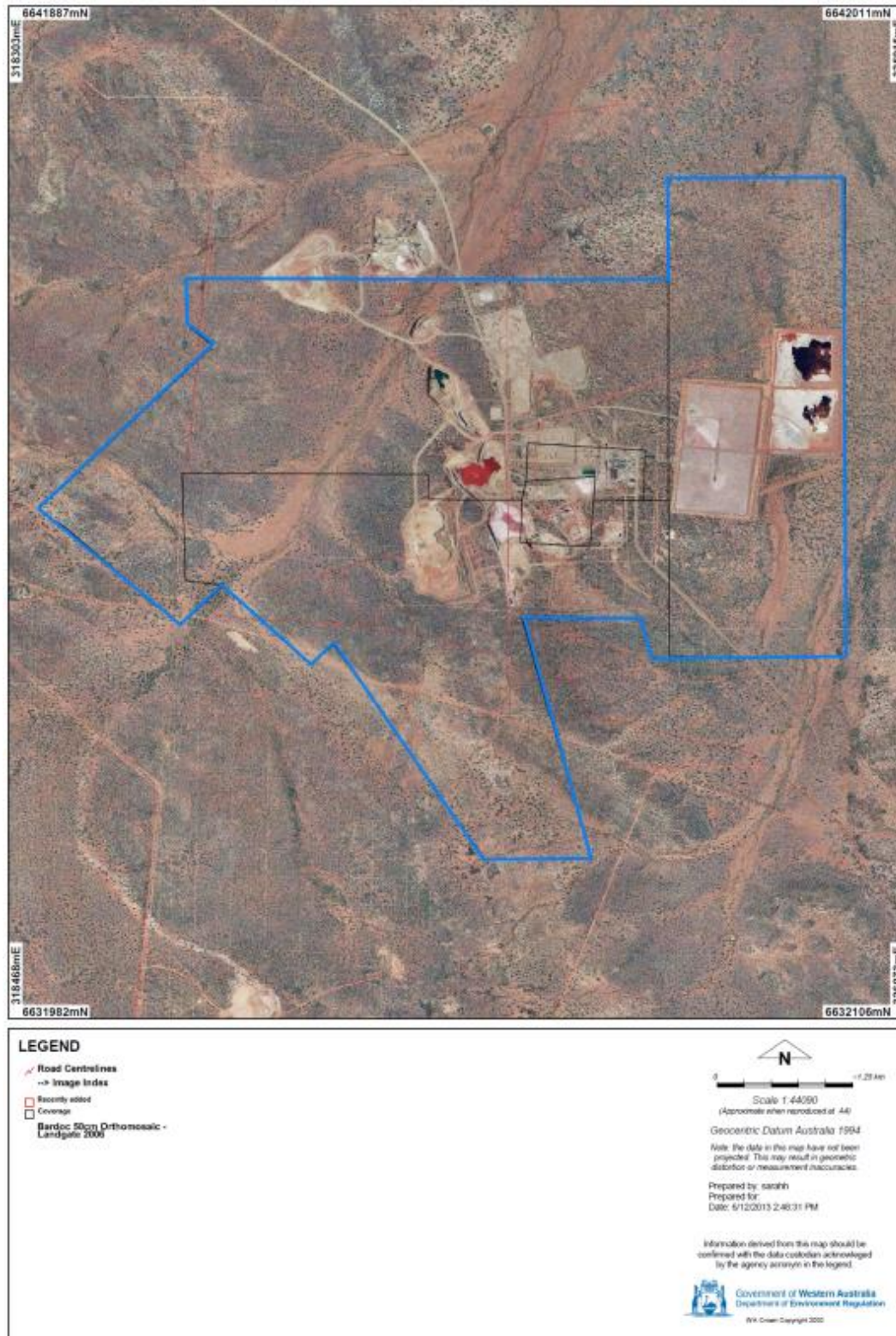




## Schedule 1: Maps

### Premises map

The Premises is shown in the maps below. The blue line depicts the Premises boundary.



### Maps of emission points



The locations of the emission points defined in Tables 2.2.1 are shown below.







## Maps of monitoring locations

The locations of the monitoring points defined in Tables 3.8.1 are shown below in Figure 1 and 2.



Figure 1: location of monitoring bore sites surrounding TSF1, TSF2 and processing plant.

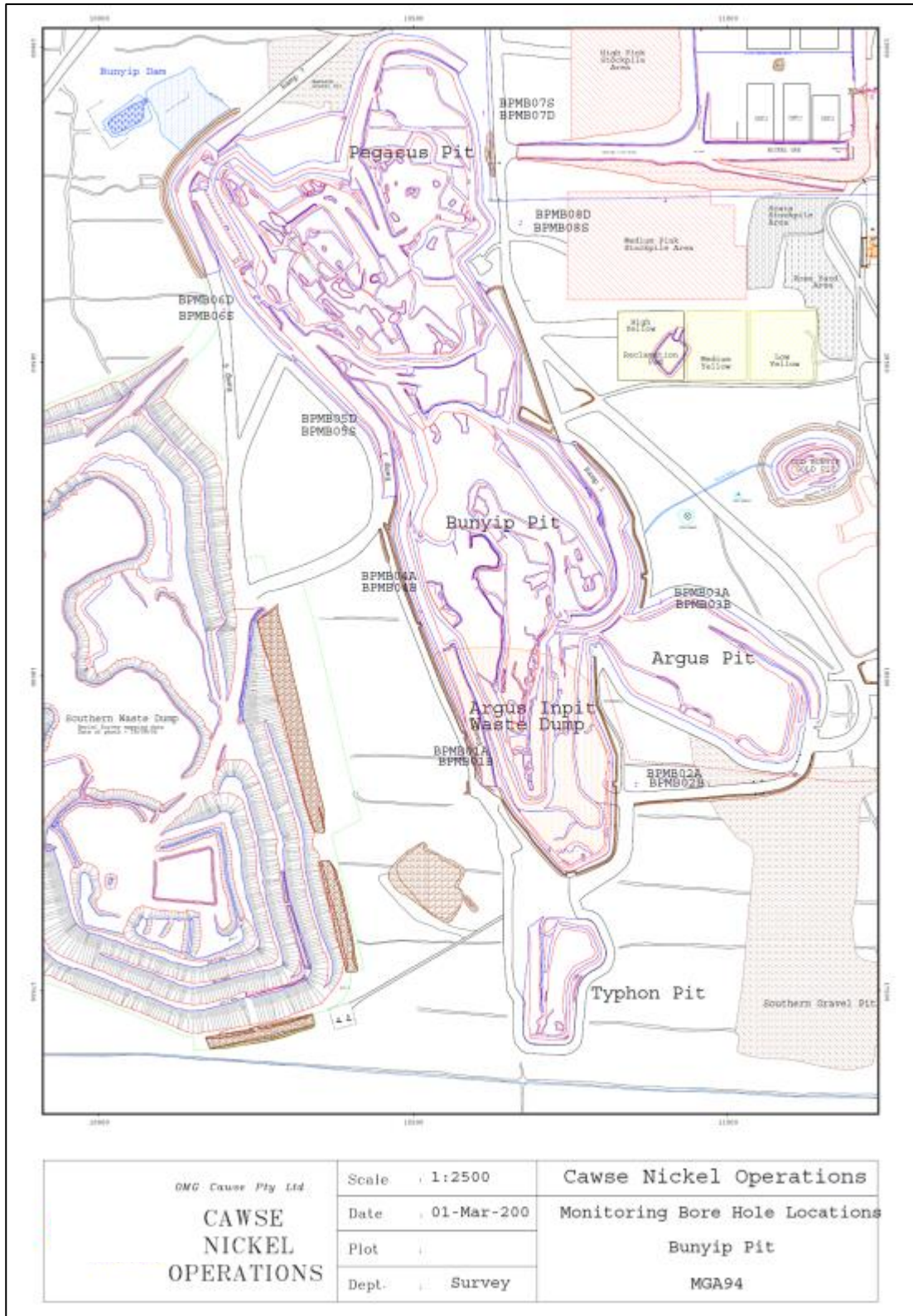


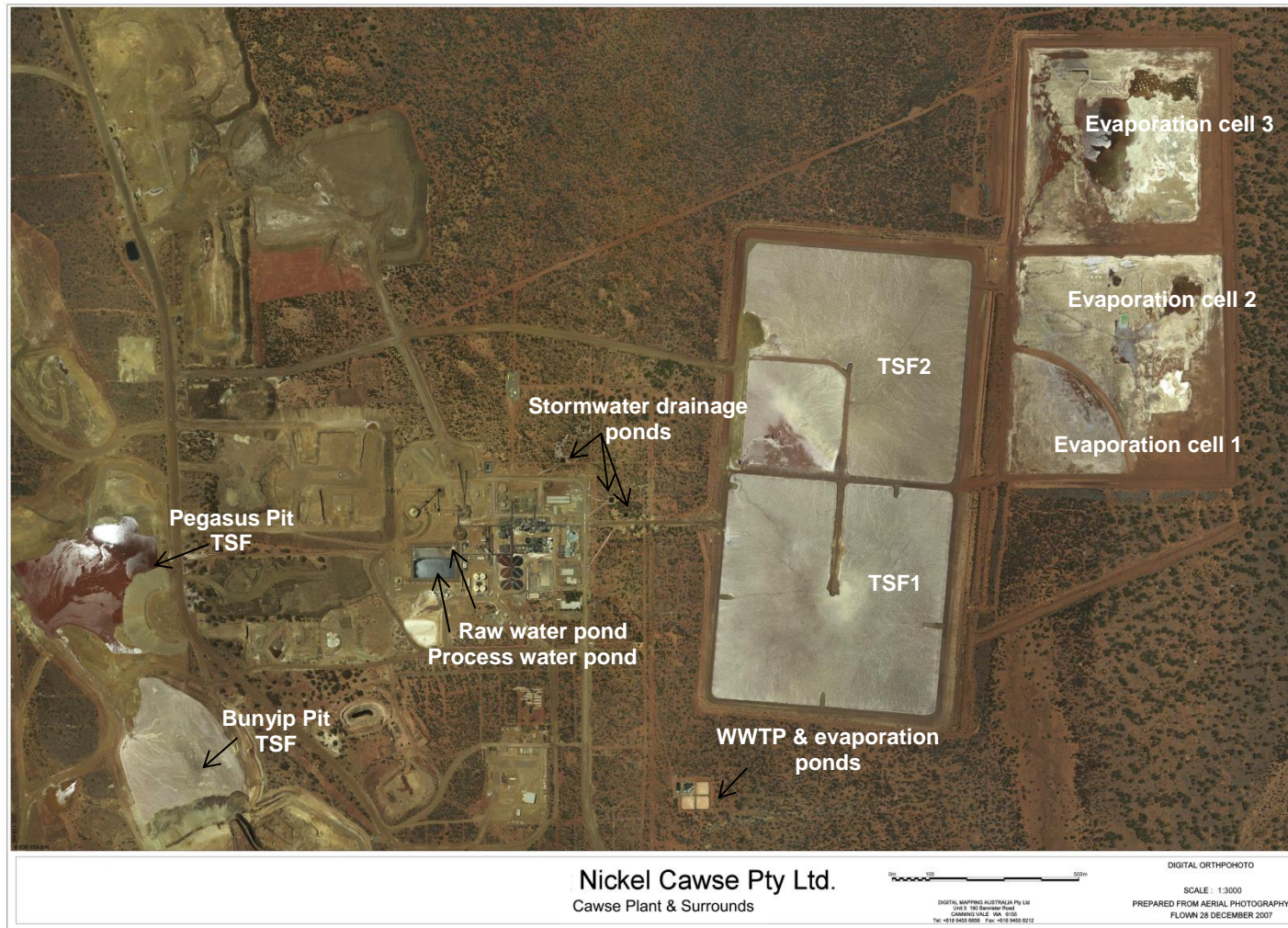
Figure 2: Location of monitoring bores surrounding inpit TSFs





### Map of containment locations

The locations of the containment infrastructure as defined in Table 1.3.1 is shown below





## Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

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### ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

#### SECTION A

##### LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name:	ABN:
Trading as:	
Reporting period: _____ to _____	

##### STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes ☐ Please proceed to Section C

No ☐ Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:



## SECTION B

### DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____	<input type="checkbox"/> No
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the non compliance, and what was the environmental impact:	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram):	
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance:	
i) Action taken or that will be taken to prevent recurrence of the non compliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:



## SECTION C

### SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; or by two directors of the licensee; or by a director and a company secretary of the licensee, or if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	by the chief executive officer of the licensee; or by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of \$50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

POSITION: \_\_\_\_\_

POSITION: \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

SEAL (if signing under seal)



Licence: L8518/2011/2  
Form: N1

Licensee: Wingstar Investments Pty Ltd  
Date of breach:

**Notification of detection of the breach of a limit.**

These pages outline the information that the operator must provide.  
Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

**Part A**

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

**Part B**

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Wingstar Investments Pty Ltd	
Date	





# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:**     **Wingstar Investments Pty Ltd**

**Licence:**        **L8518/2011/2**

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**Registered office:**     283 Rokeby Road  
                                     SUBIACO, WA 6008

**ACN:**                      073 571 927

**Premises address:**     Cawse Nickel Operations  
                                     Mining tenements M24/224, M24/389, M24/517, M24/519 and M24/544.  
                                     ORA BANDA 6431

**Issue date:**              Thursday, 13 February 2014

**Commencement date:** Friday, 21 February 2014

**Expiry date:**             Wednesday, 20 February 2019

### **Decision**

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue an amended licence. DER considers that in reaching this decision, it has taken into account all relevant considerations and that the Licence and its Conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by:                      Christine Pustkuchen  
   Licensing Officer

Decision Document authorised by:                      Danielle Eyre  
   Delegated Officer



## Contents

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1 Purpose of this Document	2
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## 1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

## 2 Administrative summary

Administrative details															
Application type	<div>Works Approval <input type="checkbox"/></div> <div>New Licence <input type="checkbox"/></div> <div>Licence amendment <input checked="" type="checkbox"/></div> <div>Works Approval amendment <input type="checkbox"/></div>														
Activities that cause the premises to become prescribed premises	<table border="1"> <thead> <tr> <th>Category number(s)</th> <th>Assessed design capacity</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>500 000 tonnes per annual period</td> </tr> <tr> <td>6</td> <td>500 000 tonnes per annual period</td> </tr> <tr> <td>31</td> <td>50 000 tonnes per annual period</td> </tr> <tr> <td>52</td> <td>20 MW per annual period</td> </tr> <tr> <td>63</td> <td>5000 tonnes per annual period</td> </tr> <tr> <td>67</td> <td>Not applicable</td> </tr> </tbody> </table>	Category number(s)	Assessed design capacity	5	500 000 tonnes per annual period	6	500 000 tonnes per annual period	31	50 000 tonnes per annual period	52	20 MW per annual period	63	5000 tonnes per annual period	67	Not applicable
	Category number(s)	Assessed design capacity													
	5	500 000 tonnes per annual period													
	6	500 000 tonnes per annual period													
	31	50 000 tonnes per annual period													
	52	20 MW per annual period													
63	5000 tonnes per annual period														
67	Not applicable														
Application verified	Date: N/A														
Application fee paid	Date: N/A														
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>														
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>														
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														
Commercial-in-confidence claim outcome	N/A.														
Is the proposal a Major Resource Project?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														



Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input checked="" type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: 0429 EPA Report No: 825
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i> )?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO <sub>2</sub> requirements of Kwinana EPP.		

### 3 Executive summary of proposal and assessment

The Cawse Nickel project (Cawse Nickel) is located approximately 55 km North West of Kalgoorlie and 10 km east of Ora Banda. Cawse Nickel is a nickel/cobalt project involving open cut mining of a lateritic nickel deposit at a rate of approximately 1 million tonnes per annum (tpa) to a maximum depth of 60 metres. The mined ore is beneficiated to produce approximately 500 000 tpa of concentrate for processing. Processing of the concentrate uses high pressure acid leaching (HPAL), purification and nickel/cobalt metal recovery. Operation of the premises began in February 1998 and continued until October 2008. The Premises ceased operation in 2008 and entered 'Care and Maintenance'.

Cawse Nickel project comprises of:

- Open cut nickel-cobalt ore mining operations;
- A processing plant comprising of:
  - Ore pre-treatment facilities;
  - Acid leaching process;
  - A neutralisation and clean-up process;
  - A mixed nickel-cobalt hydroxide precipitation process (option to stop processing at this point and sell a nickel-cobalt hydroxide precipitate to existing refineries); and
  - An ammonia re-leach circuit.
- Water supply borefields;
- Solid and liquid waste disposal facilities including above ground and in-pit tailings facilities, overburden stockpiles, one evaporation pond with three cells and inert landfill;
- A gas supply pipeline and gas power station (4 gas fired 4.125MW gas turbines);
- Containerised wastewater treatment plant (WWTP) 25m<sup>3</sup>/day
- On-site fuel and chemical storage facilities;
- Product and raw materials handling systems; and
- Supporting infrastructure (administration, plant control and support facilities, access and haul roads).



### **Category 5 – Processing plant**

Cawse produced a mixed nickel-cobalt hydroxyl-carbonate from a lateritic nickel deposit using open cut mining techniques. Nickel and cobalt are extracted from the ore using a high pressure acid leaching process. Tailings are produced and discharged to the Tailings Storage Facilities (TSFs).

TSFs at Cawse consist of two paddock style and two in-pit facilities at Bunyip and Pegasus pits. Supernatant from the TSFs is decanted and discharged to the three celled evaporation pond.

As the site is in care and maintenance phase no mining activities or processing of ore are currently being undertaken.

### **Category 6 – Mine dewatering**

During operation of the site (pre 2008) groundwater was abstracted from many pits that extended into the aquifer (i.e. Romulus Pit). Dewatered water was disposed of to other pits within the site or to the raw water pond for use within the plant. No dewatering activities are currently being undertaken during the care and maintenance phase. The applicability of Category 6 needs to be reassessed prior to Wingstar restarting operation of the site.

### **Category 31 – Chemical manufacturing**

During operation of the site (pre 2008) a product of the ammonia leach circuit was a nickel-cobalt hydroxy-carbonate concentrate, which was sold offsite to Finland for processing. As Wingstar has no plans to restart operation in the immediate future it is unclear whether this category is applicable. It is recommended that re-assessment occurs when the site commences operation.

### **Category 52 - Electrical power generation & Category 67 – Fuel burning**

Cawse generates electricity from a cogeneration plant that consists of:

4 natural gas fired 4.125 MW gas turbines.

4 heat recovery steam generators; and

One mechanical vapour compression desalination plant.

The plant is capable of producing approximately 144 GWh per hour/year energy. As the site is in care and maintenance phase no energy is currently being produced. A diesel generator is onsite to provide electricity to run essential services.

### **Category 63 – Class 1 Inert Landfill**

A Class 1 inert landfill is located in the south western corner of the Northern Waste Rock Dump. This landfill is not used during care and maintenance. All waste goes off site to a licenced facility.

This Licence amendment is a result of a transfer of the licence from Norilsk Nickel Cawse Pty Ltd to Wingstar Investments Pty Ltd. At this time the licence has been converted to the new format. This decision document outlines the process taken to undertake this conversion. During this process emissions and discharges from the premises have not been re-assessed. It is recommended that re-assessment occurs prior to the site re-commencing operation.



## 4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General Conditions	L1.2	<p>Condition 1.2.1 requires pollution control and monitoring equipment to be maintained. This condition replaces condition 4 on the previous Licence.</p> <p>Condition 1.2.2 requires the recovery and disposal of spills. This condition replaces Condition 15(b).</p> <p>Condition 1.2.3 has been added to the Licence to replace conditions 10, 12(b), 13(a), 13(b), 14(a) and 14(b) which relate to preventing stormwater run-off from becoming contaminated by the operations and the containment and disposal of contaminated stormwater. Condition 1.2.5 will ensure that contaminated stormwater will be treated prior to disposal off-site.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised discharges) Regulations 2004</i>.</p>
Premises operation	L1.3	<p>Condition 1.3.1 requires the management of pipelines that contain environmentally hazardous materials. This Condition replaces conditions 16 and 18(a) in the previous Licence. An additional clause has been added to the condition to allow Wingstar to visually inspect the point of discharge of pipelines where telemetry systems and automatic cut-outs are not operating during care and maintenance.</p> <p>Condition 1.3.2 relates to the storage of process liquids and slurries. This condition replaces conditions 15(a) and 15(c) on the previous Licence. Storage of chemicals and hydrocarbons are covered by the <i>Dangerous Goods Safety Act 2004</i>.</p> <p>Condition 1.3.3 relates to the containment infrastructure requirements of tailings,</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised discharges) Regulations 2004</i>.</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>decant water and effluent. This condition replaces condition 7 in the previous Licence.</p> <p>Condition 1.3.4 relates to the management of containment infrastructure (freeboard etc.). This condition replaces condition 9 in the previous Licence.</p> <p>Condition 1.3.5 relates to the management of leachate from the paddock TSFs onsite. This condition replaces condition 11 on the previous Licence.</p> <p>Condition 1.3.6 relates to the carrying out of inspections. This condition replaces Conditions 8 and 17 on the previous Licence. A modification to the frequency has been made to differentiate the requirements during care and maintenance and during operations.</p> <p>Condition 1.3.7 relates to the management of waste onsite. This condition replaces Conditions 12(a), 12(c), 12(d) and 20 in the previous Licence.</p>	
<b>Emissions general / Monitoring general</b>	L2.1.1	Limits will be set through condition 2.2.2 of the licence and therefore condition regarding recording and investigation of exceedances of limits has been included. This condition replaces part of condition 23 in the previous Licence.	N/A
<b>Point source emissions to air including monitoring</b>	L2.2.1- L2.2.2 L3.2.1 – L3.2.3	Conditions 2.2.1 and 2.2.2 authorise emission points to air with set emission limits. These conditions replace part of conditions 5(a) and 6 of the previous Licence. A correction has been made to the names of the two emission points within the plant, and these have been updated on the licence to clarify the location of discharge points. Wingstar has confirmed that the discharge point at the autoclave is the main stack – autoclave blowdown vent stack. The autoclave emergency vent stack (referenced in condition 5(a) in the original licence) only emits when the pressure in the autoclave is too high and therefore can't be monitored under normal conditions. It would not be feasible to sample during such an event. Therefore Wingstar considers that this discharge point refers to	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised discharges)</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>the main stack on the autoclave as historically this is where sampling has occurred (pre 2008 by Norilsk). The autoclave emergency vent stack has also been listed as a authorised discharge point during operations however no monitoring from this stack will be required.</p> <p>Conditions L3.2.1 relate to the monitoring of emissions to air. This condition replaces part of previous Licence conditions 5(a), 5(c) and 6. The wording of these original conditions was unclear as to which discharge point the limits apply to. The mention of the main stack and converter stack is confusing as the autoclave blowdown vent stack is the main stack. There is no 'converter stack' on the autoclave according to Wingstar. To clarify this the wording of the condition has been changed to apply the limit to the autoclave blowdown stack only.</p> <p>As a part of this amendment a reduction in the suite of analytes monitored has also occurred. Chromium, cobalt, iron and lead have proven to only be emitted in trace quantities over the last four years of operation (2001-2005), hence they have been removed and no longer require monitoring. Antimony, arsenic, cadmium and mercury have so far been undetected during operation and therefore these have also been removed (along with the corresponding limit).</p> <p>Condition 3.2.2-3.2.3 relate to AS 4323.1 and NATA accreditation for sampling of air emissions. These conditions are standard conditions when air emission sampling is required on a site.</p> <p>As the site has been in care and mainanence since 2008 and no air emission monitoring has occurred since then it is recommended that air emissions and their monitoring is re-assessed prior to the restart of operation. At this stage Wingstar have no plans to start operating.</p>	<p><i>Regulations 2004</i></p> <p>Air Quality Division technical advice, OMG Cawse Nickel Kalgoorlie, Autoclave Modelling and Benchmarking Study, 2006</p>





DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Point source emissions to surface water including monitoring	N/A.	There are no point source emissions to surface water from the premises. No specified conditions relating to point source emissions to surface water has been included in the licence.	N/A.
Point source emissions to groundwater including monitoring	N/A.	There are no point source emissions to groundwater from the premises. No specified conditions relating to point source emissions to groundwater have been included in the licence.	N/A.
Emissions to land including monitoring	N/A.	There are no point source emissions to land from the premises. No specified conditions relating to point source emissions to land has been included in the licence.	General provisions of the <i>Environmental Protection Act 1986</i> .  <i>Environmental Protection (Unauthorised discharges) Regulations 2004</i>
Fugitive emissions	N/A.	<b>Operation</b> <u>Emission Description</u> <i>Emission:</i> Dust emissions generated by; material handling, crushing, conveyor loading points and vehicle movement. <i>Impact:</i> Nuisance dust crossing the premises boundary and impacting the offsite environment. <i>Controls:</i> During operation - use of water cart, water sprays on conveyor and dust filter on crusher.	General provisions of the <i>Environmental Protection Act 1986</i> .



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Risk Assessment</u>  <i>Consequence:</i> Insignificant  <i>Likelihood:</i> Unlikely  <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u>            No specified conditions are required for the licence.</p> <p><u>Residual Risk</u>  <i>Consequence:</i> Insignificant  <i>Likelihood:</i> Unlikely  <i>Residue Risk Rating:</i> Low</p> <p>Conditions 1 and 2 of the previous Licence related to the management of fugitive dust emissions. These conditions have not been included on the Licence as dust emissions on this site have been assessed as low risk. Low risk fugitive emissions are not subject to specific regulation through conditions instead relying on the general provisions of the <i>Environmental Protection Act 1986</i>.</p>	
<b>Odour</b>	N/A.	As the previous Licence did not impose controls on odour, no specified Conditions have been included in the section. Condition 1.2.1 applies.	N/A.
<b>Noise</b>	N/A.	As the previous Licence did not impose controls on noise, no specified conditions have been included in this section. The <i>Environmental Protection (Noise) Regulations 1997</i> and condition 1.2.1 apply.	N/A.
<b>Monitoring general</b>	L3.1.1-3.1.4	<p>Condition 3.1.1(c) is included on licences where air emission monitoring is required. This condition replaces condition 5(c) on the previous Licence.</p> <p>Condition 3.1.1 are standard conditions that are included on licences where ambient groundwater monitoring is required. These Conditions replace Conditions 19(b) and (c) in the previous Licence.</p>	Australian Standard AD/NZS 5667.1 – Water Quality Sampling – Guidance on the Design of



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		Condition 3.1.2-3.1.4 are conditions that are included on licences where air emission monitoring and ambient quality monitoring is required.	sampling, programs, sampling techniques and the preservation and handling of samples.  Australian Standard AS/NZS 5667.11 – Water Quality – Sampling – Guidance on the sampling of groundwaters
<b>Monitoring of inputs and outputs</b>	N/A.	As the previous Licence did not have conditions requiring input and output monitoring no specified conditions have been included in this section.	N/A.
<b>Process monitoring</b>	N/A.	As the previous Licence did not have conditions requiring process monitoring no specified conditions have been included in this section.  It is recommended that process monitoring is re-assessed when Wingstar begins operation as conditions regarding the monitoring of the volume of tailings deposited into all TSFs and amount of decant water and seepage recovery water deposited into evaporative ponds may be relevant.	N/A.
<b>Ambient quality monitoring</b>	L3.3.1	Condition 3.3.1 has been included for ambient groundwater quality monitoring. This condition replaces condition 19(a) on the previous Licence.	General provisions of the <i>Environmental Protection Act</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
			1986.  <i>Environmental Protection (Unauthorised discharge) Regulations 2004</i>
<b>Meteorological monitoring</b>	N/A.	As the previous Licence did not have conditions requiring meteorological monitoring no specified conditions have been included in this section.	N/A.
<b>Improvements</b>	N/A.	No improvement conditions are required to be added to the licence.	N/A.
<b>Information</b>	L4	<p>Condition 4.2.1 relates to the requirement of an annual environmental report (AER) (which includes the Annual Audit Compliance report (AACR)) to be submitted at the end of the annual period. This Condition replaces Conditions 21 and 22 of the previous Licence. Condition 4.2.1 also replaces part of old Conditions 5(b), 15(d), 18(b) and 19(d) which outlined what the AER needed to include.</p> <p>Condition 4.3.1 which relates to the notification of licence limits to the CEO, replaces part of condition 23 of the previous Licence. Condition 4.3.1 also relates to the notification of any failure of pollution control equipment (e.g. bunds) to the CEO. This condition replaces part of condition 15(d) and 18(b).</p> <p>Condition 4.3.1 also sets out the requirement for the Licensee to notify the CEO at least 60 days prior to the site recommencing operations. This Condition replaces condition 24 of the previous Licence.</p>	N/A.
<b>Licence Duration</b>	N/A.	No change has been made to the licence duration.	N/A



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
13/08/2015	Proponent's consultant sent a copy of draft instrument via email	<u>Main comments summary</u> 1) Comment on condition 1.2.1 - Pollution control and monitoring equipment such as conveyor spraying systems, inline analysers etc are not in operation during care and maintenance. Maybe this condition should be reworded to reflect that most of these things are not operational, nor required during care and maintenance as there are no activities occurring that require them. 2) Comment on condition 1.3.1 - This does not cater for approved buried pipelines or borefield line in care and maintenance as it is manually operated and inspected during operation. The Telemetry and automatic cut-outs are controlled by the control systems when the plant is operational. These systems are not in operation during care and maintenance. 3) Comment on condition 3.2.1 - Emission points should be separated , only ammonia was required to be tested from A2, refer to Licence 7310(7). More recent licences did not include monitoring of the ammonia (A2) Stack, refer to L8518(2).	1) Wording of condition 1.2.1 has been kept the same as the condition should be interpreted that only pollution control equipment (such as conveyor spraying systems and inline analysers) and monitoring equipment that is operated during <u>operation</u> should be maintained. Pollution control equipment that is used during care and maintenance, i.e containment infrastructure, still requires ongoing maintenance during the care and maintenance phase and therefore this condition is required on the licence. 2) An additional clause has been added to the condition (1.3.1) to allow for daily visual inspection of buried pipelines during care and maintenance phase. 3) The requirement for monitoring ammonia at emission point A3 has been kept on the licence as ammonia was listed as a contaminant to monitor on the latest version of the licence. The previous condition referred to the pressure leach vent scrubber stack as the ammonia leach vent scrubber stack therefore ammonia has been included on the recent licence.
16/10/2015	Proponent sent copy of 21 day package via mail.	No comments received.	Not applicable.



## 6 Risk Assessment

*Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management*

**Table 1: Emissions Risk Matrix**

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High