Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Works Approval

Division 3, Part V *Environmental Protection Act 1986*

Works Approval Number	W6279/2019/1
Applicant	Paddington Gold Pty Ltd
ACN	008 585 886
File Number	DER2019/000313
Premises	Enterprise Mine Site Legal description - Part of Mining tenements M24/29 and M24/170 as shown in Figure 2: CITY OF KALGOORLIE-BOULDER WA 6430
Date of Report	22 November 2019
Status of Report	Final

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1. Definitions of terms and acronyms

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

Table 1: Definitions

Term	Definition
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AER	Annual Environment Report
Applicant	Paddington Gold Pty Ltd
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
Existing Licence	Licence L8692/2012/1 issued under Part V, Division 3 of the EP Act and in force.
Minister	the Minister responsible for the EP Act and associated regulations
MP	Mining Proposal
Occupier	has the same meaning given to that term under the EP Act.
Prescribed Premises	has the same meaning given to that term under the EP Act.
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 *Guidance Statement: Risk Assessment*
TDS	Total dissolved solids
TSF	Tailings storage facility

2. Purpose and scope of assessment

The scope of this document is the assessment of the application from Paddington Gold Pty Ltd (Paddington) for a Works Approval to construct a paste fill plant at the Enterprise Mine Site (Enterprise) and create one new discharge point for the dewatering of the Enterprise Mine Underground.

Table 2 lists the documents submitted during the assessment process.

Table 2: Documents and information submitted during the assessment process

Document/information description	Date received
Application – New Works Approval – Norton Gold Fields Limited – Enterprise Underground Project – Main Application Form (DWER record – DWERDT160986)	20 May 2019
Enterprise paste plant works approval application, Paddington Gold Pty Ltd, May 2019 (Attached to Application form – DWER record – DWERDT160986) includes following documents as Appendices: Appendix 1 – Groundwater Licence: GWL160697(3) Appendix 2 – 2019 Memorandum: Assessment of Inflow Risks Enterprise Underground Mine, AQ2 Appendix 3 – Norton Gold Fields Mine Dewatering Procedure Appendix 4 – Enterprise Paste Fill Plant and Dewatering Commissioning Plan Appendix 5 – 2016 Enterprise Flora and Vegetation Survey, Botanica Consulting Appendix 6 – 2009 Enterprise Flora and Fauna Survey, GHD Appendix 7 – 2018 Annual Malleefowl Survey, Terrestrial Ecosystems Appendix 8 – Norton Gold Fields Risk Rating Matrix Appendix 9 – Norton Gold Fields Dust Suppression Procedure Appendix 10 – Norton Gold Fields Environment and Community Policy	20 May 2019
Documents provided in response to a request for further information.	14 October 2019

3. Overview of Premises

3.1 Background

Enterprise is owned by Paddington, a wholly owned subsidiary of Norton Gold Fields Limited. The Premises consists of an open pit gold mine, Enterprise open pit mine (located on M24/170), and Gimlet South pit (located on M24/29) which is used as a water source for dust suppression and a discharge point for dewatering from Enterprise Pit. The mining of the ore deposit at Enterprise has become uneconomical through open pit methods so Paddington is proposing to transition to underground mining. This will be achieved by cutting a portal and decline in the northern face of the existing Enterprise open pit. (Enterprise Underground MP, 2019). The development of the underground requires dewatering of the area to be mined and paste to fill mine cavities for stability.

3.2 Prescribed Premises details

The prescribed premises, as defined in the Existing Licence, is shown in Figure 1. The proposed expansion of the premises includes the Ora Banda TSF2 from which the tailings for the paste fill plant are to be sourced.

The Premises boundary does not include all areas of mining tenements M24/29 and M24/170

as the Ora Banda town site and the associated gazetted Ora Banda town site boundary is situated within M24/29. Given the location of the town site boundary and the size of these tenements relative to the prescribed activities within, Norton proposes that the new prescribed premises boundary be a portion of the tenements as outlined in Figure 2. (Norton Gold Fields, 2019).

3.3 Current activities

The Existing Licence (L8692/2012/1) was granted 7 August 2014 with categories as listed in Table 3 below**Error! Reference source not found.**. The pit was dewatered until June 2017 when mining was moved to a higher area of the pit.

The licence allows for dewatering discharge from the Enterprise Pit to the Gimlet South Pit. The dewatering is approved to 500,000 tonnes per year but inflow to the pit has not required this level of abstraction. As the water inflow to the mine is too low it is not discharged but it, plus the water from the nearby Gimlet South pit, is currently used for dust suppression.

3.4 Proposed activity

A paste fill plant is to be constructed to produce paste from dry tailings sourced from the Ora Banda TSF2. This tailings storage facility is within 750 – 800m south east of Gimlet South Pit. It was commissioned in 1988 and ceased operation in 1997. The expected production of paste from the plant is 650,000 tonnes per annum.

The operation of a paste fill plant will require the addition of Category 5 - Processing or beneficiation of metallic or non-metallic ore to the Licence. The sourcing of tailings from the Ora Banda TSF2 to provide material for the paste fill plant requires an extension of the premises from that covered by the Existing Licence (refer Figure 1 and Figure 2).

The expansion of the dewatering program requires a discharge point to be added to the Existing Licence where the underground mine water is to be discharged into the Enterprise pit. Dewatering infrastructure will not be altered other than the addition of pipes and pumps as needed to pump water from the Enterprise underground to the Enterprise pit. There will also be the piping necessary to pump water from the turkey's nest to the paste fill plant.

Table 3 lists the prescribed premises categories that have been applied for to be added/amended or remain unchanged on the Existing Licence.

Table 3: Prescribed Premises Categories in the/to be added to Existing Licence

Classification of Premises	**Description**	***Approved Premises production or design capacity or throughput***
Category 5 (to be added to the Existing Licence)	Processing or beneficiation of metallic or non-metallic ore: premises on which (a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed; or (b) tailings from metallic or non-metallic ore are reprocessed; or (c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	650,000 tonnes per annum
Category 6 – current on the Existing Licence	Mine Dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore.	500,000 tonnes per year
Category 12 – current on the Existing Licence	Screening, etc. of material: premises(other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	115,000 tonnes per annual period

3.5 Related facilities

Haulage of tailings from Ora Banda TSF2 requires use of existing Paddington haul roads and a crossing of the gazetted public road, Broad Arrow-Ora Banda Road. Paddington Gold have advised that an exemption under R49 of the Environmental Protection (Controlled Waste) Regulations 2004 will be submitted.

The ore from Enterprise is processed through the Paddington Mill, located approximately 29km from the Premises and 33km north-northwest of the City of Kalgoorlie-Boulder. Paddington Mill operates under the *Environmental Protection (Gold Extraction Operations) Exemption Order* 1993. Enterprise is one of several satellite operations owned by Paddington that feeds into the Paddington Mill. The other operations licensed by DWER as prescribed premises are:

- Golden Cities – W6244/2019/1 – category 6: mine dewatering;
- Bullant Underground – L8512/2010/2 – category 6: mine dewatering;
- Mount Pleasant – L8327/2008/2 – category 6: mine dewatering;
- Janet Ivy – L9028/2017/2 – category 6: mine dewatering.

Waste rock from the Enterprise waste rock landform is crushed and screened as needed to provide road base and stemming (finer crushed material to top off blast holes to contain the blast). The crushing and screening activity has a production capacity of 115,000 tonnes per year and the activity is carried out by a mobile plant in a campaign style of operation. There are no changes required to this activity.

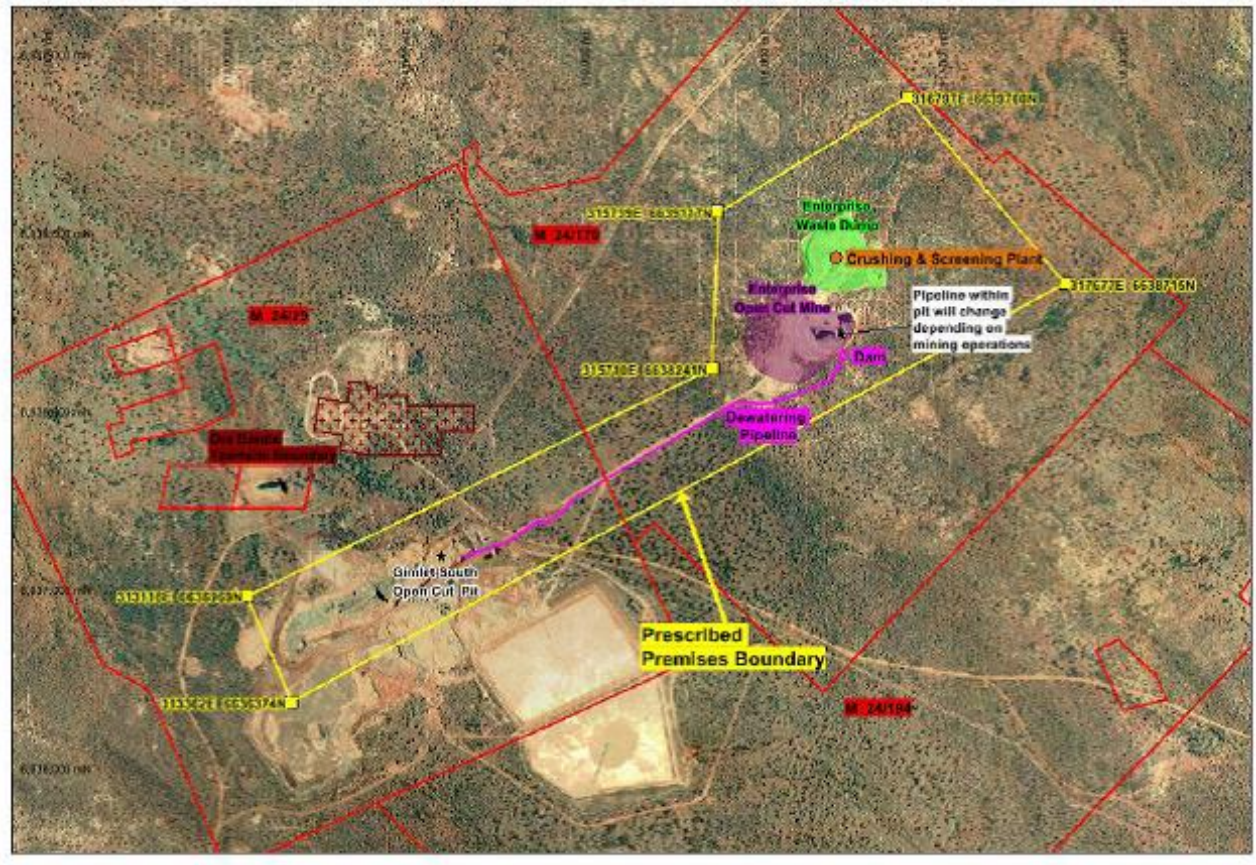

Figure 1 Premises boundary on Existing Licence

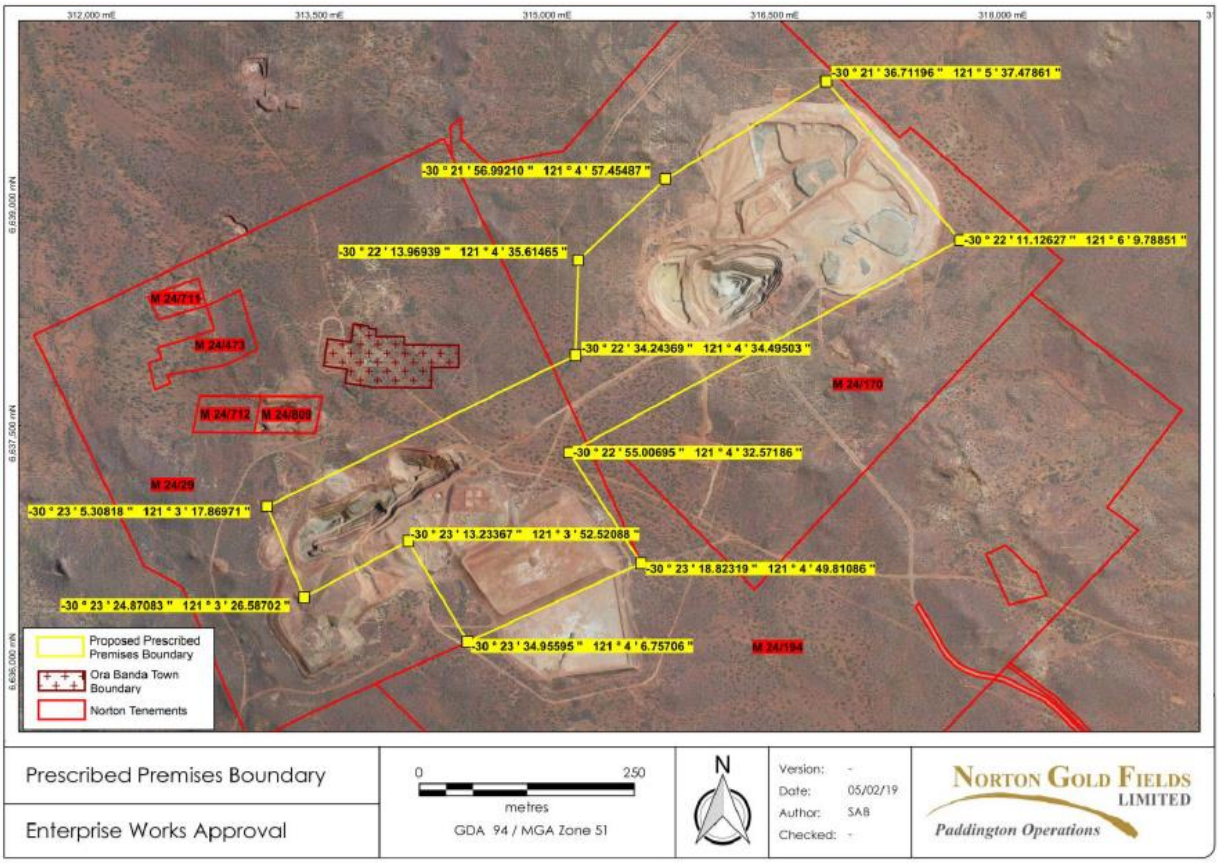

Figure 2: Proposed Premises boundary

3.6 Paste fill plant

The Enterprise underground mine operations require paste (tailings/cement mix) for backfilling mined out stopes (voids) to maintain mine stability. The paste fill plant is to be placed directly above the underground workings at the western end of the pit, with a bore at that point used to deliver paste to the underground. It will be a combination of fixed and mobile components to allow for potential relocation to other operations. The preparation of the paste is facilitated through a dedicated weighing/batching system mixing tailings (moisture content 15%-22%) sourced from the Ora Banda TSF2 with the addition of Portland cement in a 3% to 7% dry weight blend and mine dewater. To ensure a homogenous paste material, and that the tailings combine thoroughly with the cement, a shaft batch mixer will move the materials in an uninterrupted spiral motion at a low speed.

Infrastructure required for the paste fill includes:

- a screw conveyor cement silo, a mobile hopper (bunded) and dry tailings feeder system, a paste batch mixer (bunded), water tank (bunded), compressed air storage tank, QAQC lab, a sump (bunded) and dry tailings stockpile/storage area;
- Operator support infrastructure (including a crib room, control room, ablution block, safety shower);
- Process water line from existing Enterprise surface dam and Gimlet South pipeline to paste plant (bunded);
- Connections to Western Power grid or generators (to be determined); and
- Paste delivery system to Enterprise Underground consisting of a bore hole from the surface containing steel conduit with HDPE 250 mm pipeline fed through.

The paste fill plant will be controlled by a PLC software and instrumentation system to

determine accurately the specifications and moisture of the mix as well as to prevent plugged pipelines and excessive pressures on the line. The areas where reclaimed tailings, water and cement are to be combined into a paste product will be bunded to a capacity of 120% by volume of the material in the slurry/mixing tank. The concrete bunding will be at least 150mm thick with F62 mesh placed centrally with all concrete rated to 20MPa. Concrete in trafficable areas will be at least 200mm. Other hardstand areas of the paste fill plant will be in-situ clay soils of a permeability of at least 1×10^{-6} m/s which will be further worked by rolling and compaction to a depth of 150mm.

The tailings storage area will be approximately 80m x 80m with bund walls 2.5m high on three sides. It will be constructed to a permeability of at least 1×10^{-6} m/s with the bund walls being clay compacted using a 70 tonne D10 dozer. The foundations will be further worked by rolling and compacting to a depth of 150mm.

The proposed paste fill plant infrastructure is shown in Figure 3 (Norton Gold Fields, 2019).

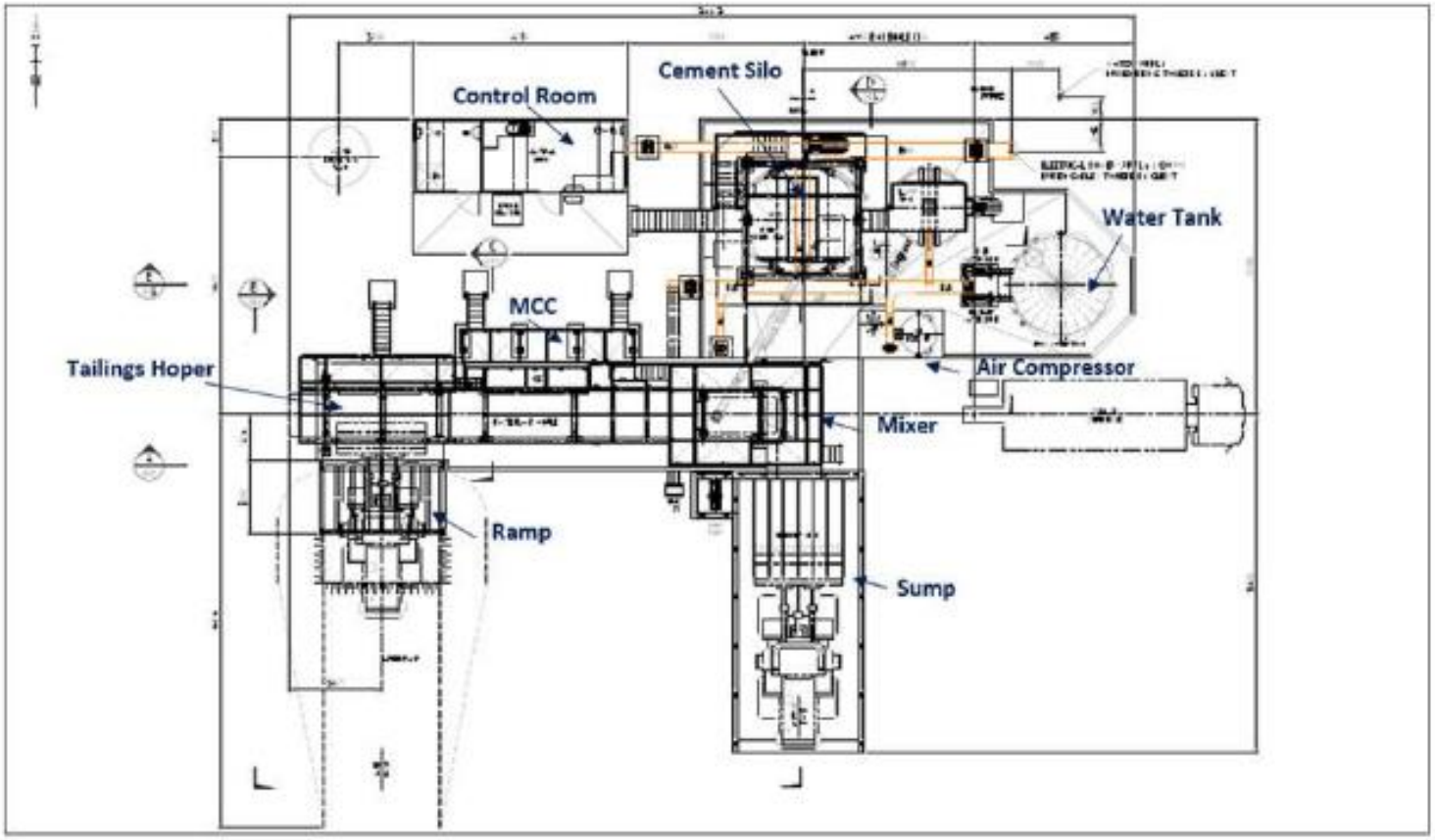

Figure 3: Proposed paste fill plant

3.7 Dewatering operations

3.7.1 Currently approved discharges

Dewatering is approved by the Existing Licence at a production capacity of 500,000 tonnes per year discharge. The extraction from the Enterprise open pit mine was 8,005kL in 2017 without any discharge and no water was extracted from June 2017, as mining moved to a higher area of the pit. There has been no direct discharge of dewatering since commencement of operations as all groundwater extracted is used for dust suppression (2018 AER, 2019 and Norton Gold Fields, 2019).

The dewater is pumped from the base of the pit to the turkey's nest at the crest of the Enterprise pit. The turkey's nest can gravity feed to the Gimlet South pit in the event a discharge of the dewater is needed. The turkey's nest is 1,500m^3 and HDPE lined, the pipeline from the sump in the Enterprise pit to the turkey's nest is 270m long, 200mm diameter HDPE. The pipeline from the turkey's nest to the Gimlet South pit is a 2.4km long, 200mm diameter HDPE pipe through which the water may be gravity fed.

Gimlet South water is being extracted by pumping to the turkey's nest to supplement the dust suppression for the operations as Enterprise water inflows are less than predicted prior to mining. Figure 4 is a diagram of the current dewatering of the underground mine.

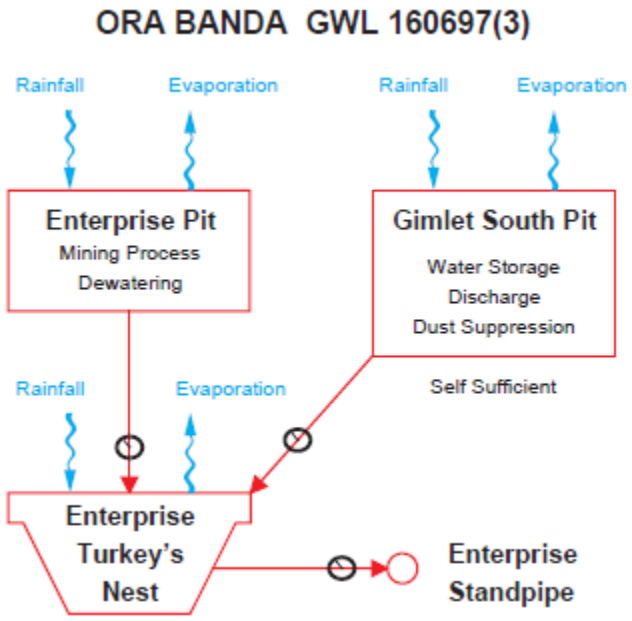

Figure 4: Water flow diagram of current dewatering for Enterprise Mine operations

3.7.2 Future dewatering

The water inflow to the Enterprise pit was estimated in 2011 to range from 700 – 1,200kL/d. The actual inflow was measured in 2016 – June 2017 at 70kL/d (<1L/s). It is estimated that the flow rate during underground mining will be 86.4 – 172.8kL/d (1-2L/s) possibly increasing to 864kL/d (10L/s). This gives an expected annual flow rate of 31,536 – 63,072kL, with a possible flow of 315,360kL per annum in the event of extreme flow. (2019 Memorandum: Assessment of Inflow Risks Enterprise Underground Mine, AQ2 - Appendix 2 of Norton Gold Fields, 2019) This water would discharge to the discharge point inside of the Enterprise pit. The estimated extreme flow is within the production or design throughput approved through the Existing Licence. Currently however it is estimated that the dewatering of Enterprise pit and underground will not provide sufficient water to meet dust suppression and paste production so water will be pumped from the Gimlet South rather than discharged to it.

The existing dewatering infrastructure is proposed to be retained but a further discharge point identified in the system where the Enterprise underground mine will dewater to the Enterprise open cut pit. Figure 5

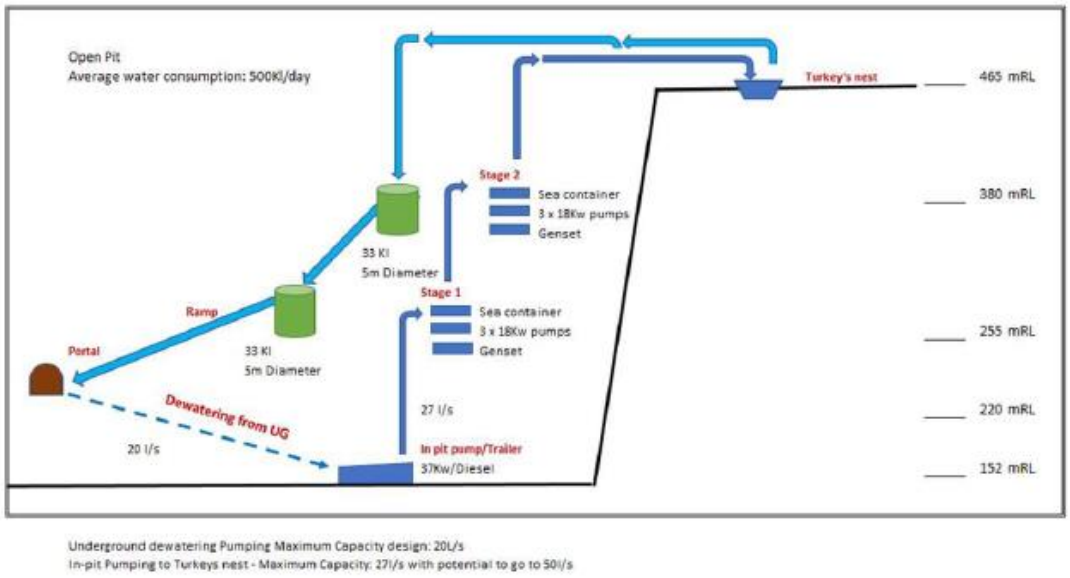

Figure 5: Flow diagram of the proposed dewatering from Enterprise Underground Mine

3.8 Infrastructure

The Enterprise mine infrastructure, as it relates to Category 5 and 6 activities, is detailed in Table 4 and with reference to the Site Plan (attached in the Issued Works Approval).

Table 4: Enterprise underground mine Category 5 and 6 infrastructure

Infrastructure	Site Plan Reference
Prescribed Activity Category 5	
Paste fill plant	Figure 6
Pipeline carrying dewater to paste fill plant tanks (transport infrastructure)	Not depicted
Prescribed Activity Category 6	
Pipeline to sump in Enterprise pit from Enterprise underground	Not depicted
Directly related activities	
Excavators for dry tailings from Ora Banda TSF2	Figure 6
Haul trucks for dry tailings	Figure 6
Standpipes to fill water trucks located at Enterprise pit	Not depicted
Other activities	
Crushing and screening plant (Licence L8692/2012/1)	Figure 6

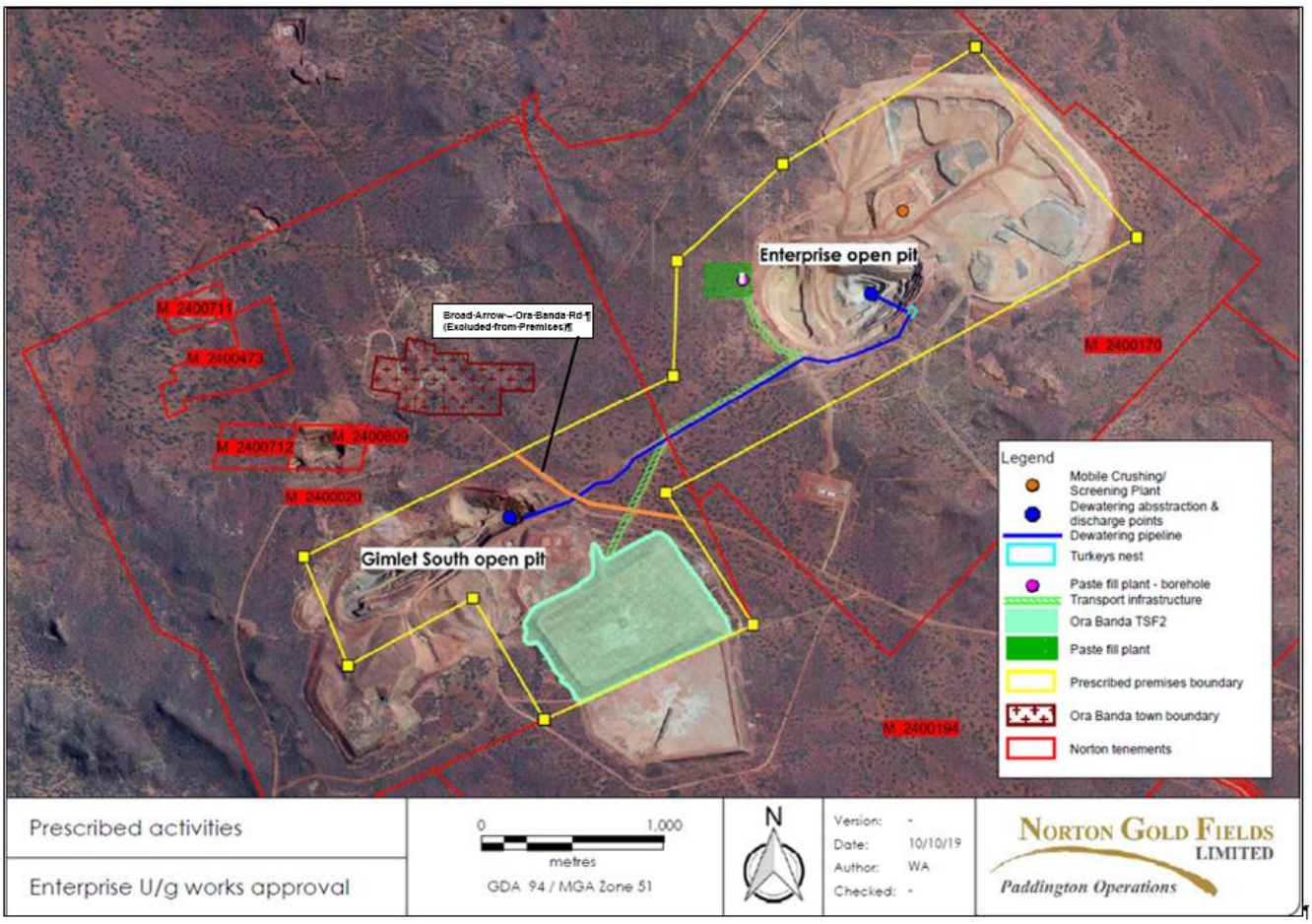

Figure 6: Site Plan

3.9 Exclusions to the Premises

The Industry Guide to Licensing states that 'Prescribed premises boundaries must….encompass a continuous area, except where the area is bisected by a road, rail or waterway reserve.' The Broad Arrow – Ora Banda Road traverses the Premises between the northern area where the Enterprise Pit and paste fill plant are situated and the southern area where the Gimlet South Pit and the Ora Banda TSF2 are. This is a public road used by tourists, mining related traffic/heavy vehicles and the local community. As a public road it is managed by the local government authority, the City of Kalgoorlie-Boulder and is not part of the premise. The City of Kalgoorlie-Boulder were invited to comment on the application for this works approval and responded that they had no concerns regarding it.

4. Legislative context

Table 5 summarises approvals relevant to the assessment.

Table 5: Relevant approvals and tenure

Legislation	Number	Subsidiary	Approval
Mining Act 1987	*"Enterprise Underground Mining Proposal – Version 1" (REG ID 78366) approved on 3 May 2019.*	Norton Gold Fields	To develop the ore resource presently mined through open pit methods at Enterprise pit through underground mining. Ore to be treated through the Paddington Mill. Covers tenements M24/29, M24/170 & M24/194

Legislation	Number	Subsidiary	Approval
Mining Act 1987	Mining tenements: M24/29 and M24/170	Paddington Gold Pty Ltd	Mining leases to allow: *"work and mine the land, take and remove minerals, and do all of the things necessary to effectually carry out mining operations in, on or under the land, subject to conditions of title." (DMIRS Mining tenements explained)* M24/29 expires 3 January 2026 M24/170 expires 2 November 2029
Rights in Water and Irrigation Act 1914	GWL160697(3)	Paddington Gold Pty Ltd	Licence to abstract water Taking water for: Dewatering for mining purposes and dust suppression for mining purposes. Expiry: 18 December 2022 Annual entitlement 400,000kL
Environmental Protection Act 1986	L8692/2012/1	Paddington Gold Pty Ltd	To undertake dewatering and crushing and screening. To be amended to add processing of tailings into paste fill
Environmental Protection Act 1986	CPS3560/5	Paddington Gold Pty Ltd	Permits clearing of up to 300ha in area including tenements M24/29 and M24/170

4.1 Contaminated sites

The premises is within a set of tenements that have been reported by Paddington Gold to DWER but have not been classified. The tenements were reported as the previous land use indicated the potential for contamination and are awaiting further classification by DWER. Site ID 5272.

4.2 Other relevant approvals

4.2.1 Department of Mines, Industry Regulation and Safety

A mining proposal was approved for the development of Enterprise Underground Mine on 3 May 2019. The Mining Proposal for the Enterprise Pit approved in 2017 is also still in effect.

4.3 Part V of the EP Act

4.3.1 Applicable regulations, standards and guidelines

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

The guidance statements which inform this assessment are:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Decision Making (June 2019)*
- *Guidance Statement: Risk Assessments (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

4.3.2 Works approval and licence history

Table 6 summarises the works approval and licence history for the premises.

Table 6: Works approval and licence history

Instrument	Issued	Nature and extent of works approval, licence or amendment
W5285/2012/1	24/12/2012	Works approval to allow construction of dewatering infrastructure and crushing and screening plant
L8692/2012/1	7/08/2019	Licence to dewater for mining and crush and screen waste rock for road base
W6279/2019/1	25/11/2019	Relates to this Decision Report for the construction of paste fill plant and adding a further dewatering discharge point

4.3.3 Key and recent works approvals

Works approval W5285/2012/1 was granted to Paddington Gold Pty Ltd to construct dewatering infrastructure and a mobile crushing facility at the Enterprise open cut mine and waste rock dump. The dewatering infrastructure consists of pumps and pipelines to make it possible to dewater from a sump in the base of the Enterprise pit to the Gimlet South Pit 2.5km to the west of Enterprise. The crushing and screening plant is situated in the waste rock dump and is moved within this area as needed.

After construction the Licence Holder was granted licence L8692/2012/1 with Categories 6 and 12.

4.3.4 Compliance inspections and compliance history

The provision of Annual Audit Compliance Reports (AACR) has not identified any non-compliances beyond minor technical non-compliances noted and corrected by the Licence Holder.

There have been no incidents recorded since a saline water spill in 2013 during construction of the dewatering system. Some impact to an area of native vegetation was noted but the area was highly disturbed by mining and pipeline corridor construction. The incident was closed after DER personnel attended the site to inspect the completed repairs to infrastructure.

4.3.5 Clearing

CPS3560/5 was granted for the clearing of up to 300ha of native vegetation. The area includes the section of vegetation to be cleared for construction of the paste fill plant.

5. Modelling and monitoring data

5.1 Monitoring of local ecosystem

Monitoring of the local ecosystem has been in the form of discrete vegetation surveys to supply information for government approvals and ongoing monitoring of fauna (malleefowl surveys) and groundwater (Operating Strategy approved under the DWER groundwater licence and discharge monitoring required by the Existing Licence).

5.1.1 Vegetation

As referenced in the Mining Proposal for the development of the Enterprise Open Pit the following vegetation surveys have been undertaken on the Enterprise Mine mining tenements:

A vegetation survey of a 921ha area was conducted by GHD in 2009 and included tenements M24/170 and M24/29. A subsequent vegetation survey of a 597ha area was conducted by Botanica Consulting in 2016 and included tenement M27/170. One Priority Flora taxon; *Notisia intonsa* (previously *Gnephosis intonsa)* (P3) is known to occur within the survey area based on previous GHD flora surveys in 2009. The location of this taxon was searched with no living specimens of this taxon located, it is however an annual species and the Botanica survey in 20161 was outside of the time when annuals could be expected to be present. (Enterprise underground MP, 2019)

The survey conducted by Botanica Consulting found that nine broad vegetation communities were identified within the survey area. These communities comprised of two different landform types and four major vegetation groups. These communities were represented by a total 28 Families, 43 Genera and 108 Taxa. Based on Keighery's vegetation health rating scale (1994), all nine vegetation communities were rated as 'Good' which depicts vegetation structures that have been significantly altered by very obvious signs of multiple disturbances, in this instance as a result of exploration activities, grazing, vehicle access, historic clearing and mining activities; however it retains its basic structure and has capacity to regenerate. (Enterprise open pit Stage 4 MP, 2017)

5.1.2 Malleefowl

Paddington Gold carries out an annual targeted malleefowl survey which was last carried out in November 2018, toward the beginning of the breeding season. Areas of focus included Enterprise, Carbine and Golden Cities. A total of 2,143 ha was surveyed between 16 – 24 November by Terrestrial Ecosystems.

Results for Enterprise Mine area showed five additional inactive mounds, bringing the total recorded number of identified mounds to 12. An extinct Malleefowl nest is located approximately 220 m north of the proposed paste fill plant area. (Figure 7). One mound previously recorded as recently active (in February 2018) is now inactive. This survey and others indicate that malleefowl are still present in the area, however, there is little evidence of many birds breeding. Higher ratios of active to inactive mounds have been noted in other areas of Western Australia which indicates the birds are under breeding stress. Given the lack of broad scale vegetation clearing, this stress is likely due to predation by cats, foxes and wild dogs. (2018 AER, 2019)

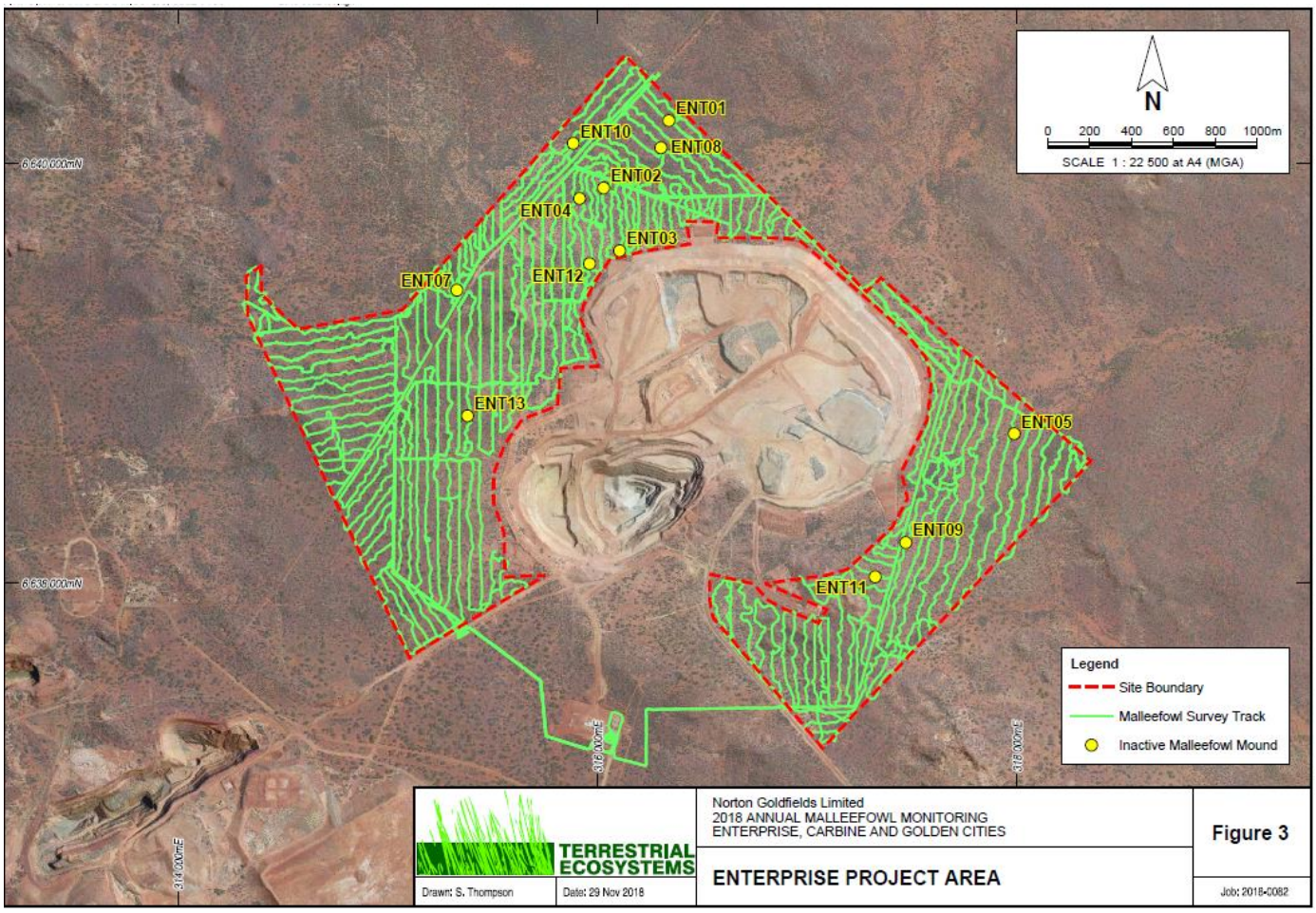

Figure 7: Position of located malleefowl mounds around Enterprise pit

5.2 Monitoring of discharges to groundwater

The Existing Licence has the following condition for monitoring of dewatering entering the Gimlet South Pit:

3.4.1 The Licensee shall undertake the monitoring in Table 3.4.1 according to the specifications in that table.

Table 3.4.1: Monitoring of point source emissions to groundwater

Emission point reference	Parameter	Units	Averaging period	Frequency
Gimlet South Pit	Volume of dewatering water	kL	Continuous	Monthly
	Freeboard	metres below crest level	Spot sample	Monthly
	pH		Spot sample	Six monthly
	Electrical conductivity	µS/cm	Spot sample	Six monthly

As the dewatering has not been discharged to Gimlet South Pit since the licence has been issued the information for background water quality and quantity has been drawn from the reporting required by the Operating Strategy authorised under GWL160697(3).

- The background groundwater quality and levels in the Enterprise Mine show groundwater in the area is brackish to saline with Total Dissolved Solids (TDS) content

varying from 7,000 to 27,000mg/L.

- The pH levels have ranged from 6.3 – 7.8, slightly acidic to neutral/slightly alkaline.
- The major ionic composition of the groundwater is salts of sodium and chloride with minor levels of sulphate, magnesium and calcium present. Most other ions are, by comparison, in low total concentrations.
- Prior to commencement of dewatering activities in 2013 the water level in the Enterprise pit was 376 – 377m RL, approximately 75m below the natural surface. This level is drawn down in the area surrounding the pit by the dewatering to allow mining but it is expected to recover once mining is ceased (Enterprise underground MP, 2019).

Figure 8 shows the salinity, standing water level (SWL), the rainfall and production (groundwater extraction) volumes. From this it can be seen that salinity is affected most by the rainfall pattern and the SWL by the extraction volumes. The SWL can also be seen to be recovering whenever the extraction is reduced or stopped, supporting claims by Paddington Gold that the background water levels will return to normal when the extraction from the pit and underground are finished.

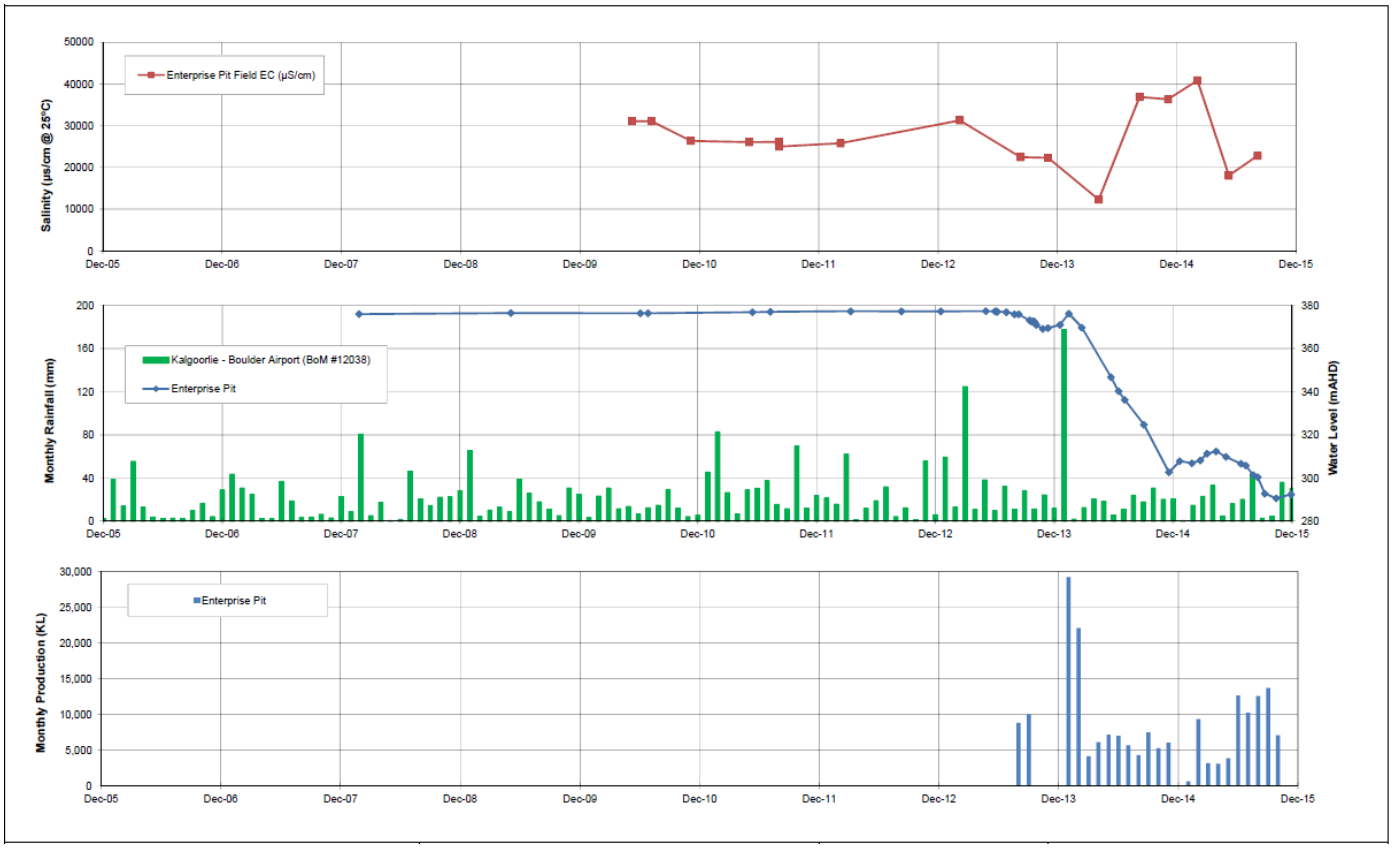

Figure 8: Salinity, SWL, Rainfall and extraction volumes of Enterprise pit Dec.'05 to Dec. '18

Post mining the surrounding groundwater levels will be remain greater than the water level in the pit due to loss from the pit due to evaporation. This makes it a groundwater sink so that the flow of groundwater is into the pit rather than from it making any potential contaminant contained within the pit unlikely to enter the surrounding groundwater.

Key finding:

Flora surveys *of the Enterprise Mine have found:*

- *the presence of one Priority 3 plant species Notisia intonsa. The species is not considered threatened.*
- *Vegetation in the area is generally in good to very good condition outside of mining disturbance and has capacity to regenerate*
- *There is no ongoing vegetation monitoring required by the Existing Licence.*

Fauna surveys: *There is an annual malleefowl monitoring programme which has identified the presence of malleefowl in the mining tenement containing the Enterprise Mine. The nesting mounds that have been located are all inactive/extinct indicating the area is not being currently used for breeding. One nest however appeared to have been active early 2018. Monitoring of the malleefowl continues as an annual programme.*

Groundwater: *The standing water levels are affected by the dewater pumping rate and are expected to recover background levels post mining but the water quality of the in pit water appears to be more influenced by major rainfall events*.

6. Consultation

The application was provided on the DWER website for public comment on 9 September 2019 and no submissions from the public were received. The Shire of Kalgoorlie-Boulder provided comment on 27 September 2019, they raised no concerns with the proposed works. A draft of the works approval and decision report were provided to the Applicant on 13 November 2019.

7. Location and siting

7.1 Residential and sensitive Premises

The nearest town, and sensitive receptor, to the Premises is Ora Banda which is within 600m of the closest Premises boundary as defined in the application. Ora Banda had a population of approximately 8 people at the time of the 2016 Census but this is variable depending on tourism. The area where the paste fill plant will be operating is approximately 1.6km from the town. The Enterprise mine is within 2km from the town and Gimlet South Pit is within 700m.

The distances to residential and sensitive receptors are detailed in Table 7.

Table 7: Receptors and distance from activity boundary

Sensitive Land Uses	Distance from Prescribed Activity
Ora Banda townsite (the Ora Banda Inn as the most regularly occupied residential property)	1.5km from the proposed location of the paste fill plant
Malleefowl nesting mounds. The nests located by the 2018 Annual Malleefowl Monitoring were not showing signs of recent use. (Enterprise underground MP, 2019)	100m – 2km from both the paste plant and the edge of the pit.

7.2 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 8. Table 8 also identifies the distances

to other relevant ecosystem values which do not fit the definition of a specified ecosystem.

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

Table 8: Environmental values

Specified ecosystems	**Distance from the Premises**
Geomorphic Wetlands Brown Lagoon (nearest of a series of lagoons and lakes including Clear and Muddy Lakes and Rowles Lagoon)	11km
Parks and Wildlife Managed Lands and Waters: Clear and Muddy Lakes Nature Reserve Rowles Lagoon Conservation Park Credo Station	21km from nearest border of reserve 21.5km from nearest border of park Approximately 9km from border of station, 26km from homestead
Biological component	**Distance from the Premises**
Threatened/Priority Flora *Notisia intonsa* Priority 3 (previously *Gnephosis intonsa:* Priority 1*)*	Located on the southern and eastern boundary of the Prescribed Premises
Threatened/Priority Fauna Malleefowl - vulnerable. Live sitings in the premise boundary known but nesting mounds are not active. 1 mound active early 2018.	100m – 200m.

7.3 Groundwater and water sources

The distance to groundwater and water sources are shown in Table 9.

Table 9: Groundwater and water sources

Groundwater and water sources	**Distance from Premises**	**Environmental value**
Groundwater **Area :** Goldfields **Subarea:** Rebecca **Aquifer:** Combined - Fractured Rock West - Palaeochannel	Depth to groundwater approximately 75m (Enterprise underground MP, 2019). The proposed underground mine intersects the groundwater.	Water is not suitable for potable use due to salinity (7,000 to 27,000mg/L). It is used for dust suppression in mining.

7.4 Meteorology

7.4.1 Regional climatic aspects

The climate in the Goldfields is semi-arid to arid but the Ora Banda area is on the northern edge of the Great Western Woodlands region which is described as a Mediterranean climate woodland, The climate is generally hot dry summers with frosty winters (DEC 2010).

The prevailing wind for the Kalgoorlie-Boulder area is Easterly with strong components of South Easterly and North Easterly winds.

7.4.2 Rainfall and temperature

The annual mean rainfall for the area is 270mm with a potential evapotranspiration rate of 2,200mm. The mean maximum temperature is 25^{o}C and mean minimum 11^{o}C.

8. Risk assessment

8.1 Determination of emission, pathway and receptor

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

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission. Where there is no actual or likely pathway and/or no receptor, the emission will be screened out and will not be considered as a Risk Event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission will not be risk assessed further and will be screened out through Table 10 and Table 11.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Table 10 and Table 11.

Table 10. 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		
Construction, mobilisation and positioning of infrastructure	Construction of dewatering pipelines, new paste fill plant and water pipelines from the turkeys nest.	Noise	The Ora Banda town, approximately 2km from the proposed paste fill plant to nearest dwelling. Malleefowl nesting mounds within 100m - 2km –.	Air / wind dispersion	None	No	Noise from construction of the underground dewatering infrastructure is unlikely to be noticeable as it is within the pit and the noise from the general mining operations are likely to be greater. Construction of the paste fill plant will be in accordance to the Noise Regulations. All malleefowl nests located within the area of Enterprise pit were recently inactive or extinct. The Delegated Officer has considered the separation distance to receptors, the position of the activities being in the pit, the limited activities required and the low possibility of malleefowl nesting during the construction activities and has determined that noise impacts are not likely to occur.
		Dust	The Ora Banda town, approximately 2km from the proposed paste fill plant to nearest dwelling. Malleefowl nesting mounds within 2km – 100m.				All malleefowl nests located within the area of Enterprise pit were recently inactive or extinct. Dust is managed on the site with a Dust Suppression Procedure detailing the use of saline water for control of dust during any operations (Appendix 9 of Enterprise paste plant works approval application, Norton Gold Fields, 2019) The Delegated Officer has considered the separation distance to receptors, the position of the activities being in the pit, and the limited activities required and has determined that dust impacts are not likely to occur.

Table 11: 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		
Category 6: Dewatering	Discharge to Enterprise pit	Overtopping of pit with highly saline mine dewater	Surrounding soils and native vegetation	Direct discharge Groundwater mounding	Decline/death of vegetation via inundation or salinity	No	Currently more water is required for dust suppression than is available from the Enterprise pit alone so that Gimlet South Pit is required as an extraction point rather than a discharge point. This is unlikely to change as the inflow rate of groundwater to the underground is expected to be 1L/s with a potential high flow of 10L/s. The portal for the underground will also be a limiting factor in the SWL in the pit during operations. If there is a need to discharge to Gimlet South Pit then the activity is already authorised and controlled by the conditions of the Current Licence.

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
Category 5: Paste Fill Plant	Dry tailings handling, and stockpiling at the paste plant.	Tailings dust with potential elevated metals and metalloids concentrations	1.5km from the proposed paste fill plant to nearest dwelling. Malleefowl nesting mounds within 2km – 100m of the paste fill plant. Native vegetation along the transport infrastructure and surrounding the paste fill plant.	Air / wind dispersion	Amenity and health impacts to general public. Health impacts on nesting malleefowl. Potential suppression of photosynthetic and respiratory functions of vegetation.	No	The moisture content in the tailings to be extracted, transported and stockpiled for use in paste fill have a moisture content of at least 14% in the tailings storage facility. The handling and transporting of the material will cause a degree of drying but it is expected that the moisture content will still be sufficient to minimise dust generation. Paddington Gold Pty Ltd has committed to the following in regards to the operation of the paste plant: •Dust suppression is to be available as water carts and water cannons on carts in the working areas. •The construction of a 2.5m three sided bund around the tailings stockpile at the paste plant expected to reduce the generation of windblown dust. • Sprays will be operational on the tailings hopper as needed. If the moisture content, water carts and bunding are insufficient to suppress dust generation then Paddington Gold Pty Ltd has also committed to: •Considering a sprinkler system for the tailings stockpile. The conditions 2.6.1 and 2.6.2 on the Existing Licence control for fugitive dust emissions from the activities on the Licensed Premises.

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
	Dry tailings handling and transport from Ora Banda TSF2	Tailings dust with potential elevated metals and metalloids concentrations	1.4km from the tailings dam to the nearest dwelling. <400m to Broad Arrow – Ora Banda public road,	Air / wind dispersion	Amenity and health impacts to general public.	Yes	The moisture content in the tailings to be extracted, transported and stockpiled for use in paste fill have a moisture content of at least 14% in the tailings storage facility. The handling and transporting of the material will cause a degree of drying but it is expected that the moisture content will still be sufficient to minimise dust generation. Dust is managed on the site with a Dust Suppression Procedure detailing the use of saline water for control of dust during any operations (Appendix 9 of Enterprise paste plant works approval application, Norton Gold Fields, 2019). The area around the TSF is not currently part of the Prescribed Premises of the licence so the conditions 2.6.1 and 2.6.2 on the Existing Licence do not apply to this activity.
	Paste production/ handling	Spillage of paste	Native vegetation	Direct discharge	Decline/death of vegetation from smothering of plants and salinity of paste material	No	The areas where reclaimed tailings, water and cement are combined into paste product will be bunded. This bunding will have the capacity to store 120% by volume of the mixture in the slurry/mixing tank.

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
	Paste deposition underground	Leaching of contaminants from paste	Groundwater	Direct discharge	Contamination of groundwater with heavy metal and metalloids	No	Leach testing of the tailings has shown that there is low acid forming potential of this material. The mixing of tailings with concrete reduces the pH of the mixture making metal/metalloid contaminants less available for leaching and the final mixture will render the material practically inert and non-acid forming. The inflow rate of groundwater to the underground is expected to be 1L/s with a potential high flow of 10L/s. This expected low rate of water conductivity in the surrounding rock reduces the potential for contact of the paste deposited underground with groundwater. The addition of the Enterprise pit as a discharge point to Condition 3.4.1 in Enterprise Pit in the Existing Licence conditions will mean the parameter of pH will be monitored. This will indicate whether there is potential for acid forming material to be leaching contaminants.

8.2 Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 14 below.

Table 12: Risk rating matrix

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

DWER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 15 below.

Table 13: Risk criteria table

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

^ Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting.*

* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines.*

"onsite" means within the Prescribed Premises boundary.

8.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment table 16 below:

Table 14: Risk treatment table

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

8.4 Risk Assessment – Dust from removing dry tailings from the Ora Banda TSF 2

8.4.1 Description of Dust from removing dry tailings from the Ora Banda TSF 2

The excavation of dry tailings from the Ora Banda TSF2, loading onto haul trucks and transporting to the paste fill plant across the Broad Arrow-Ora Banda Road may result in dust with potential elevated metals and metalloids concentrations impacting health and amenity of people in the Ora Banda townsite and impacting people using the Broad Arrow-Ora Banda Road.

8.4.2 Identification and general characterisation of emission

The emission is dust with potential elevated metals and metalloids concentrations that may spread beyond the premises boundary to areas of community residence and amenity.

The amount of tailings to be removed is up to 650,000 tonnes per annum.

The summary of leach testing results of the tailings provided by the Applicant show levels of arsenic and nickel to be within the limits required for inert landfill deposition.

The need for paste production is expected to continue for the life of the underground mine.

8.4.3 Description of potential adverse impact from the emission

The dust from the handling and transporting of the dry tailings from Ora Banda TSF2 could be inhaled by community members and tourists in Ora Banda. It may also be a nuisance to traffic through reduction in visibility on the main road into Ora Banda as it passes the TSF within 400m and is crossed by the trucks hauling dry tailings.

The community is a sensitive receptor but the risk of impact on the community there is reduced by the distance (1.4km). The distance reduces the levels and frequency at which the dust is present in the air at Ora Banda townsite.

The road is very close to the TSF where the tailings are being extracted and loaded onto haul trucks which then cross the road to transport the tailings to the paste fill plant. This can impact the amenity of the road to the public using it as visibility may be reduced. The road is a recognised significant local government road and in the Roads 2030 report it was stated in regards to the Broad Arrow – Ora Banda road that 'Conflict between heavy vehicles and tourist traffic is exacerbated by dust and becomes a safety concern'.

8.4.4 Applicant/Licence Holder controls

Paddington Gold has assessed the risk of tailings dust during the extraction and moving of the dry tailings and proposes to use appropriate dust suppression techniques on stockpiles and daily observations on dust within the work area with additional measures implemented if required. The Dust Suppression Procedure detailing the use of saline water for control of dust during any operations is applied across all Norton Gold Fields sites and will be applied to the Enterprise Mine activities (Appendix 9 of Enterprise paste plant works approval application, Norton Gold Fields, 2019).

This assessment has reviewed the controls set out in Table 17 below.

Table 15: Applicant's/Licence Holder's proposed controls for dust from removing dry tailings from the Ora Banda TSF2

Site infrastructure	Description	Operation details	Reference to issued licence plan (Attachment X)
Controls for dust			
Ora Banda TSF2	The TSF and access roads crossing the Broad Arrow – Ora Banda public road	The use of dust carts to provide dust suppression.	Site Plan Figure 6
Controls for fugitive dust			
Moisture content of material	The Dust Extinction Moisture (DEM) for the tailings has not been determined through testing, however, the dry tailings have a moisture content of 14%-22% which is relatively high moisture content for 'dry' material and is expected to be above the (DEM) level required for the material.		

8.4.5 Consequence

Ora Banda townsite

If dust from removing dry tailings from the Ora Banda TSF 2 occurs, then the Delegated Officer has determined that the impact of inhaled dust on public health for the people in the Ora Banda townsite will have low level on-site impacts, offsite impacts on the local scale will be minimal and offsite impacts on the wider scale will not be detectable. Therefore, the Delegated Officer considers the consequence of dust from removing dry tailings from the Ora Banda TSF 2 to be **Minor**.

Broad Arrow – Ora Banda Road

Tailings dust could cause a level of reduced visibility affecting the ability to drive safely on the Broad Arrow-Ora Banda Road. It is considered by the Applicant that the moisture in the tailings is sufficient to inhibit dust generation but this has not been specifically investigated. If

dust from removing dry tailings from the Ora Banda TSF 2 occurs, then the Delegated Officer has determined that the impact to health and loss of amenity due to reduced visibility on the Broad Arrow - Ora Banda road is potentially at a high level. Therefore, the Delegated Officer considers the consequence of dust from removing dry tailings from the Ora Banda TSF 2 to be **Major**.

8.4.6 Likelihood of Risk Event

The moisture content of the tailings reduces the potential for the tailings to produce dust but in the handling and transport process the moisture content can be expected to be reduced. The hauling of tailings in trucks will bring the potential dust to the Broad Arrow – Ora Banda Road increasing the potential for interaction with traffic on the road.

The Delegated Officer has determined that the likelihood of dust from removing dry tailings from the Ora Banda TSF 2 could occur at some time. Therefore, the Delegated Officer considers the likelihood of Risk Event 1 to be **Possible**.

8.4.7 Overall rating of dust from removing dry tailings from the Ora Banda TSF 2

The Delegated Officer has compared the consequence and likelihood ratings described above with the risk rating matrix (Table 10) and determined that the rating for the risk of dust from removing dry tailings on Ora Banda town from the Ora Banda TSF 2 is **Medium** and the risk to road users is **High**.

8.5 Summary of acceptability and treatment of Risk Events

A summary of the risk assessment and the acceptability or unacceptability of the risk events set out above, with the appropriate treatment and control, are set out in Table 18 below. Controls are described further in section 11.

Table 16: Risk assessment summary

Description of Risk Event			**Applicant controls**	**Risk rating**	**Acceptability with controls (conditions on instrument)**
Emission	**Source**	**Pathway/ Receptor (Impact)**			
Dust from removing dry tailings from the Ora Banda TSF 2	Dry tailings handling and transport from Ora Banda TSF2	Air/wind to receptor causing health impacts from inhalation of dust and amenity impacts due to reduced visibility on the public road.	Use of water carts and cannons to control dust. Moisture content of the tailings reducing potential for dust.	Minor consequence Possible likelihood **Medium risk**	Acceptable subject to regulatory controls: Condition 12: no visible dust generated by the activities on the Premises crosses the boundary of the Premises
Dust from removing dry tailings from the Ora Banda TSF 2	Dry tailings handling and transport from Ora Banda TSF2	Air/wind to receptor causing heath and amenity impacts due to reduced visibility on the public road	Use of water carts and cannons to control dust. Moisture content of the tailings reducing potential for dust.	Major consequence Possible likelihood **High risk**	Acceptable subject to multiple regulatory controls: Environmental Protection (Controlled Waste)

Description of Risk Event			Applicant controls	Risk rating	Acceptability with controls (conditions on instrument)
Emission	Source	Pathway/ Receptor (Impact)			
					Regulations 2004 – these regulations cover the transport of controlled waste over public roads. An exemption under R49 of these regulations would be required to cross the Broad Arrow – Ora Banda Road by trucks transporting tailings. Condition 12: no visible dust generated by the activities on the Premises crosses the boundary of the Premises and Condition 13: Trucks shall be covered to ensure dust is contained.

9. Regulatory controls

A summary of regulatory controls determined to be appropriate for the Risk Event is set out in the following section. The risks are set out in the assessment in section 7 and the controls are detailed in this section. DWER will determine controls having regard to the adequacy of controls proposed by the Applicant. The conditions of the Works Approval will be set to give effect to the determined regulatory controls.

9.1 Works Approval

9.1.1 Spill infrastructure and equipment

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

1. The Works Approval Holder shall maintain the bund capacity around the tailings hopper, mixer, tanks, sump and ramp such that sludge and runoff water is periodically removed to ensure a retention capacity equalling at least 120% by volume of the material in the slurry/mixing tank.

2. 12 hourly visual inspections are to be carried out of pipelines and scour pits for integrity.

9.1.2 Specified actions

3. The Applicant must submit an engineering compliance report/certification from an Engineering Project Manager or their delegate, confirming each item of infrastructure or component of infrastructure has been constructed in accord with the infrastructure requirements table specified.

9.1.3 Monitoring requirements

4. Monitoring of discharge water volume, water quality, Anions and Cations and Total Metals and Trace Elements.

9.1.4 Monitoring reports

5. The Applicant must ensure the report includes:

(a) A summary of monitoring results.

(b) current monitoring results shall be compared to previous monitoring and baseline data in tabular and graphical formats for each parameter.

10. 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*.

Table 20 provides a summary of the conditions to be applied to this works approval.

Table 17: Summary of conditions to be applied

Condition Ref	Grounds
Infrastructure and equipment 1, 2, 3 and 4	These conditions are valid, risk-based and contain appropriate controls.
Commissioning phase 5, 6, 7 and 8	These conditions are valid, risk-based and enable flexibility in operations.
Time limited operational phase 9	These conditions are valid, risk-based and enable flexibility in operations.
Emissions 10	This condition is valid, risk-based and consistent with the EP Act.
Operation 11, 12, 13 and 14	These conditions are valid, risk-based and enable flexibility in operations.
Monitoring 15 and 16	This condition is valid, risk-based and consistent with the EP Act.
Record-keeping 17 and 18	These conditions are valid and are necessary administration and reporting requirements to ensure compliance.

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

11. Determination of Licence conditions

The conditions of the Existing Licence will be appropriate to manage the emissions from the infrastructure approved under the issued Works Approval when amended to include the extended premises boundary, the Category 5 and the discharge point within the Enterprise pit.

12. Applicant's comments

The Applicant was provided with the draft Decision Report and draft issued Works Approval on 13 November 2019. The Applicant provided comments on 22 November 2019 clarifying the information regarding the application for an exemption under the Controlled Waste Regulations and the infrastructure of the Paste Fill Plant. These clarifications have been incorporated in this decision document and the issued Works Approval.

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 documents and policies specified in this Decision Report (summarised in Appendix 1).

The risks of dust and noise from construction of the infrastructure are capable of control under the Noise Regulations and the Paddington Gold Pty Ltd's Dust Suppression Procedure. Standard conditions on the works approval.

Risks from emissions during operation of the infrastructure should be manageable if construction of the infrastructure is to the specifications provided by Paddington Gold Pty Ltd and using the controls already present on the licence. The controls present on the licence have been added in part onto the works approval to cover the Ora Banda TSF2 areas of the Premises which are outside of the Existing Licensed Premises boundary.

Once construction has been completed an amendment to the prescribed premises boundary, the infrastructure present on the premises and the addition of the Enterprise Mine Pit as a discharge point for dewatering will be required.

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

Louise Lavery

Digitally signed by Louise Lavery
Date: 2019.11.25 14:20:34 +08'00'

Louise Lavery
A/Manager – Resource Industries
Delegated Officer
under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Enterprise paste plant works approval application, Paddington Gold Pty Ltd, May 2019	(Norton Gold Fields, 2019).	DWER records DWERDT160985
2.	Mining proposal: Enterprise open pit mine Stage 4, Version 3, Paddington Gold Pty Ltd, M24/29, M24/170 & M24/194, September 2017	(Enterprise open pit Stage 4 MP, 2017)	Accessed at: https://geodocs.dmirs.wa.gov.au/Web/documentlist/9/EARS_regi_id/68588
3.	Mining proposal: Enterprise underground, Version 2, Paddington Gold Pty Ltd, M24/29, M24/170 & M24/194, April 2019	(Enterprise Underground MP, 2019)	Accessed at: https://geodocs.dmirs.wa.gov.au/Web/documentlist/9/EARS_regi_id/78366
4.	Annual Environmental Report, January – December 2018, 31 March 2019	(2018 AER, 2019)	DWER records A1776837
5.	Water Topics page from DWER website, Understanding salinity	Understanding salinity	Accessed at: http://water.wa.gov.au/water-topics/water-quality/managing-water-quality/understanding-salinity
6.	Website page: Mining tenements explained. Accessed September 2019	(DMIRS Mining tenements explained)	Accessed at: http://www.dmp.wa.gov.au/Minerals/Mining-Tenements-explained-5145.aspx
7.	A biodiversity and cultural conservation strategy for the Great Western Woodlands, Department of Environment and Conservation, 2010.	(DEC, 2010)	Accessed at: https://www.dpaw.wa.gov.au/management/off-reserve-conservation/the-great-western-woodlands/76-strategy-implementation
8.	Main Roads and WALGA, Roads 2030 regional strategies for significant local roads: Goldfields Esperance region	Roads 2030	Accessed at: https://walga.asn.au/Policy-Advice-and-Advocacy/Infrastructure/Roads/Roads-2030-Regional-Road-Development-Strategies