

# NORTON GOLD FIELDS

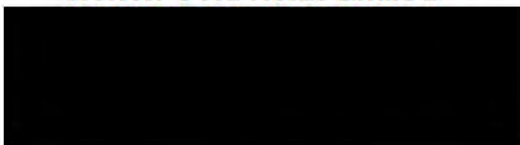
## BINDULI OPERATIONS

### Works Approval Application



October 2024

Prepared by  
**Norton Gold Fields Limited**



Prepared for  
**Department of Water and**



Version No.	Date Prepared	Description
1	10/2024	Works Approval Application Supporting Information

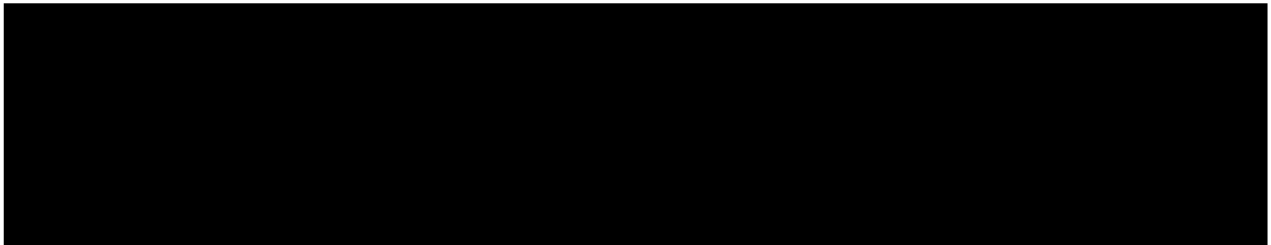


## Introduction

Norton Gold Fields Pty Ltd (Norton) proposes to add screening infrastructure to the Binduli North crushing, screening and agglomeration circuit. Ore processing and beneficiation at Binduli North is Licenced under L9362/2022/1. Norton will amend the Licence to include the screening infrastructure within Category 5 prescribed activities.

Binduli North's Licence production capacity of processing of ore (Category 5) is 5MTPA. This project is designed to separate fine (<3mm) material to increase the permeability of the Heap Leach and increase the plant utilization rate, therefore the production limit will not require any amendments.

Should further information be required please contact:

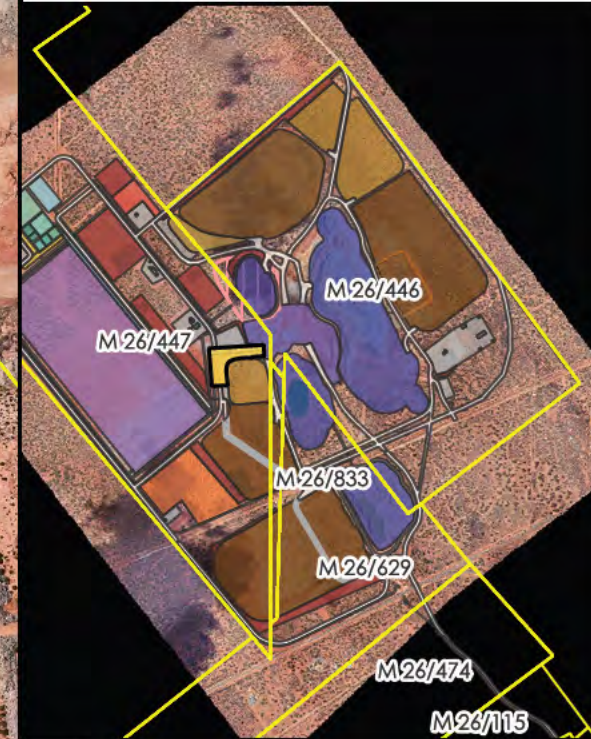


## Attachment 2 – Premises Map(s)

## Premises Map

### Legend

- Premise Boundary
  - Dry Plant
  - Screening Infrastructure
- Google Satellite

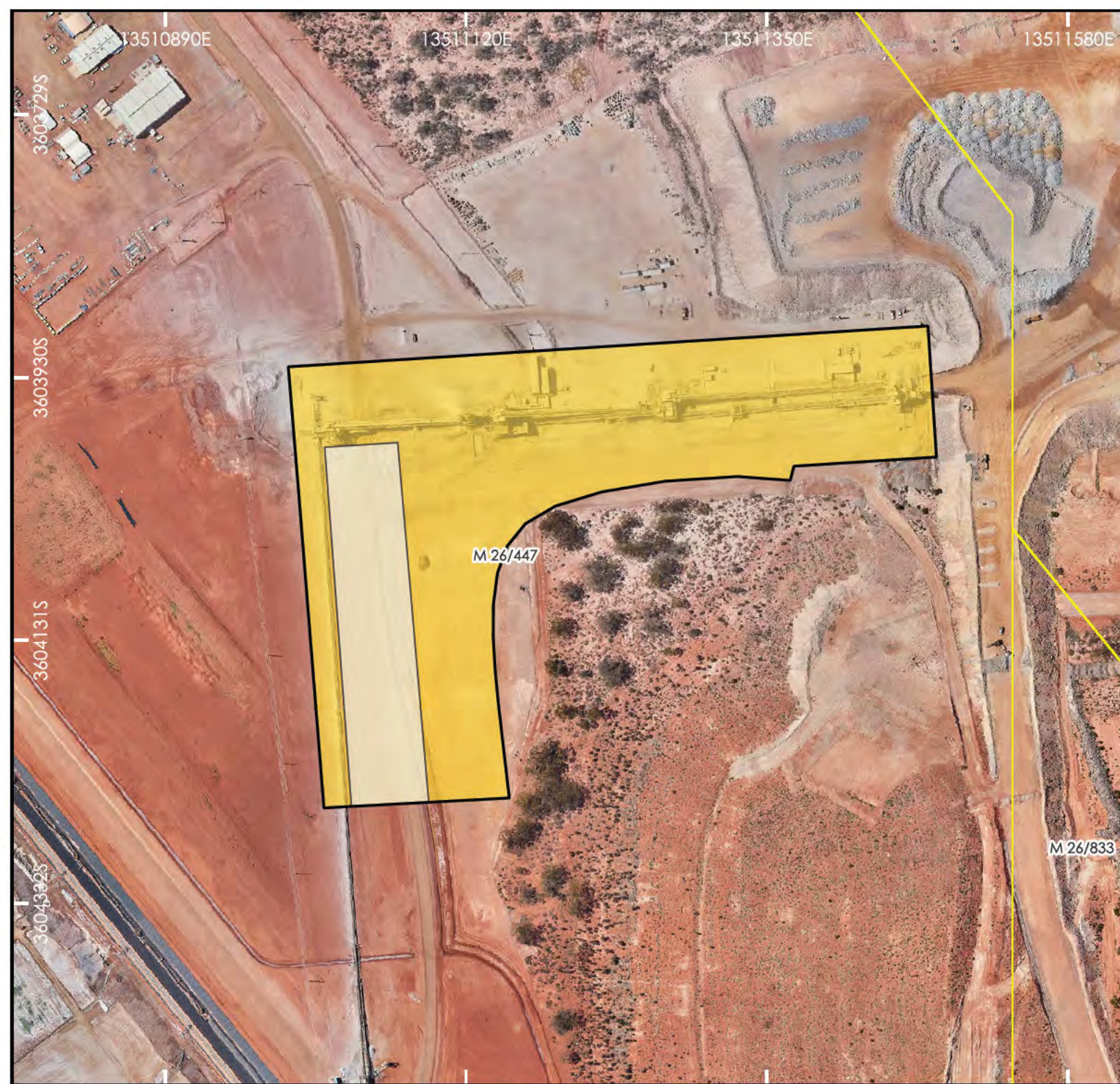


0 0.1 0.2 km



1:4,000

GDA95 / MGA Zone 51



## Attachment 3B – Proposed Activities

This application covers the modification of existing crushing, screening and agglomeration plant. The proposed additional screening infrastructure will occupy the proposed Prescribed Premises boundary, to the south of the existing Dry Plant. The proposed Prescribed Premises boundary for this Works Approval application is located within the approved Binduli North Minesite Licence 9362/2022/1 Prescribed Premise boundary.

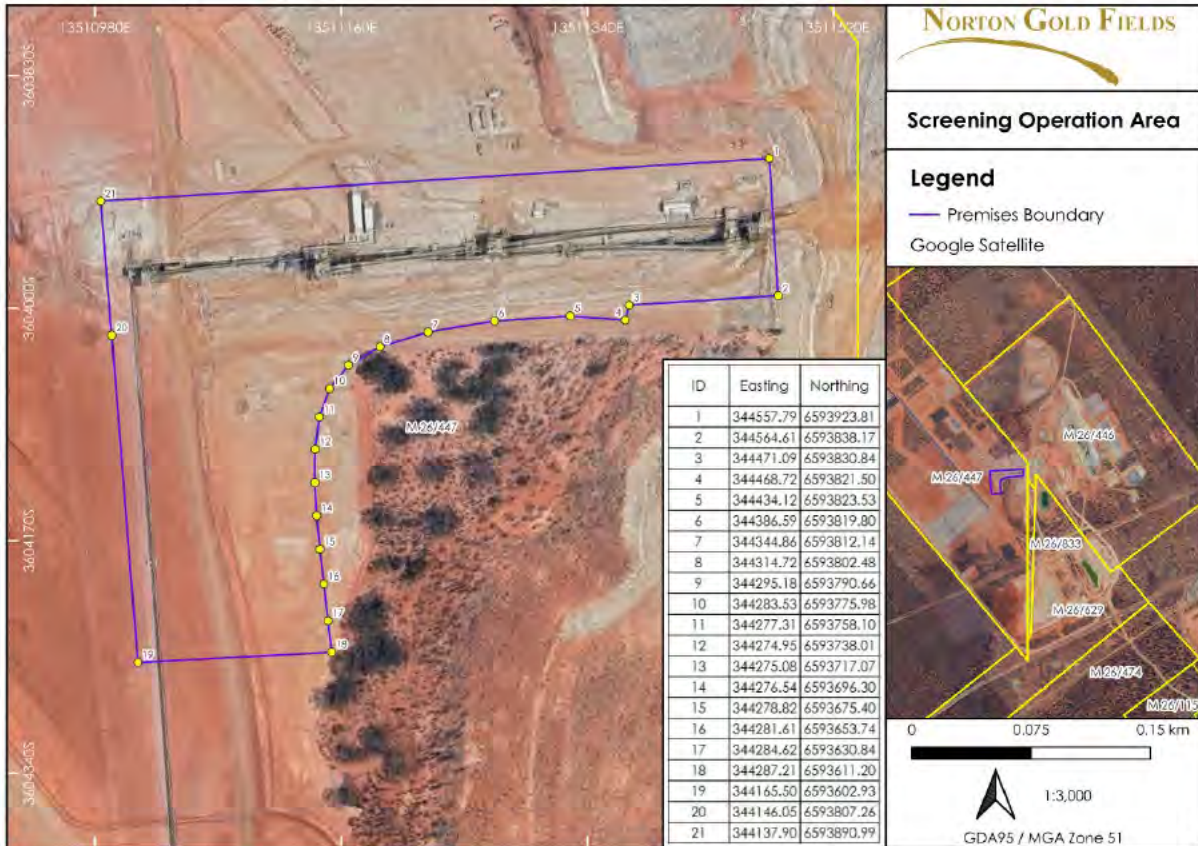


Figure 1. Screening Operation Area

Infrastructure will consist of a Landsky Flip-flow Screen, model 2LKFS3085. The infrastructure will be located in the south pocket of the Premises boundary. Auxillary plant will also be utilised for the operation including conveyors, water carts, excavators and loaders. All screening activities will occur within the Premise boundary.

Final crushed ore from the existing high-pressure grinding rollers (HPGR) will be transported by a fixed conveyor and fed to an agglomerator feed head chute. 50% of ore will be fed to the agglomerator bin and 50% will be diverted to the agglomerator bypass conveyor, then directed to the proposed screening circuit line.

Screened, undersize (<3mm) ore material will be diverted to a 20,000-tonne stockpile for processing purposes at the Paddington Mill. Road trains

transporting undersize ore material will be covered to ensure dust is contained.

Oversize (>3mm) ore material will be deposited on the Binduli North Heap Leach via an overland conveyor to improve the permeability of the landform and the mineral production output.

During the maintenance of the agglomerator, 100% of ore will be diverted from the agglomerator feed head chute to a 60,000-tonne emergency bypass stockpile via a grasshopper and radial stacker. Ore from this stockpile will be rehandled and transported to the heap leach pad via a transfer conveyor feeding directly onto the overland conveyor.

The processing flow chart is shown in Figure 2 and outlines the proposed screening infrastructure within the existing processing circuit.

Norton will amend Licence 9362/2022/1 to include the screening activities within the processing and beneficiation of metallic or non-metallic ore category (5). No additional material processing is proposed with this project. The Category 5 production limit of 5MTPA approved on Licence 9362/2022/1 is sufficient for Binduli North's mineral processing requirements.

The purpose of adding a screen is to separate oversize material to increase the permeability of the heap leach and to increase the plant utilization rate during maintenance of the Agglomerator.

Additional clearing for the screening activities is not required, as the plant will utilise existing laydown.

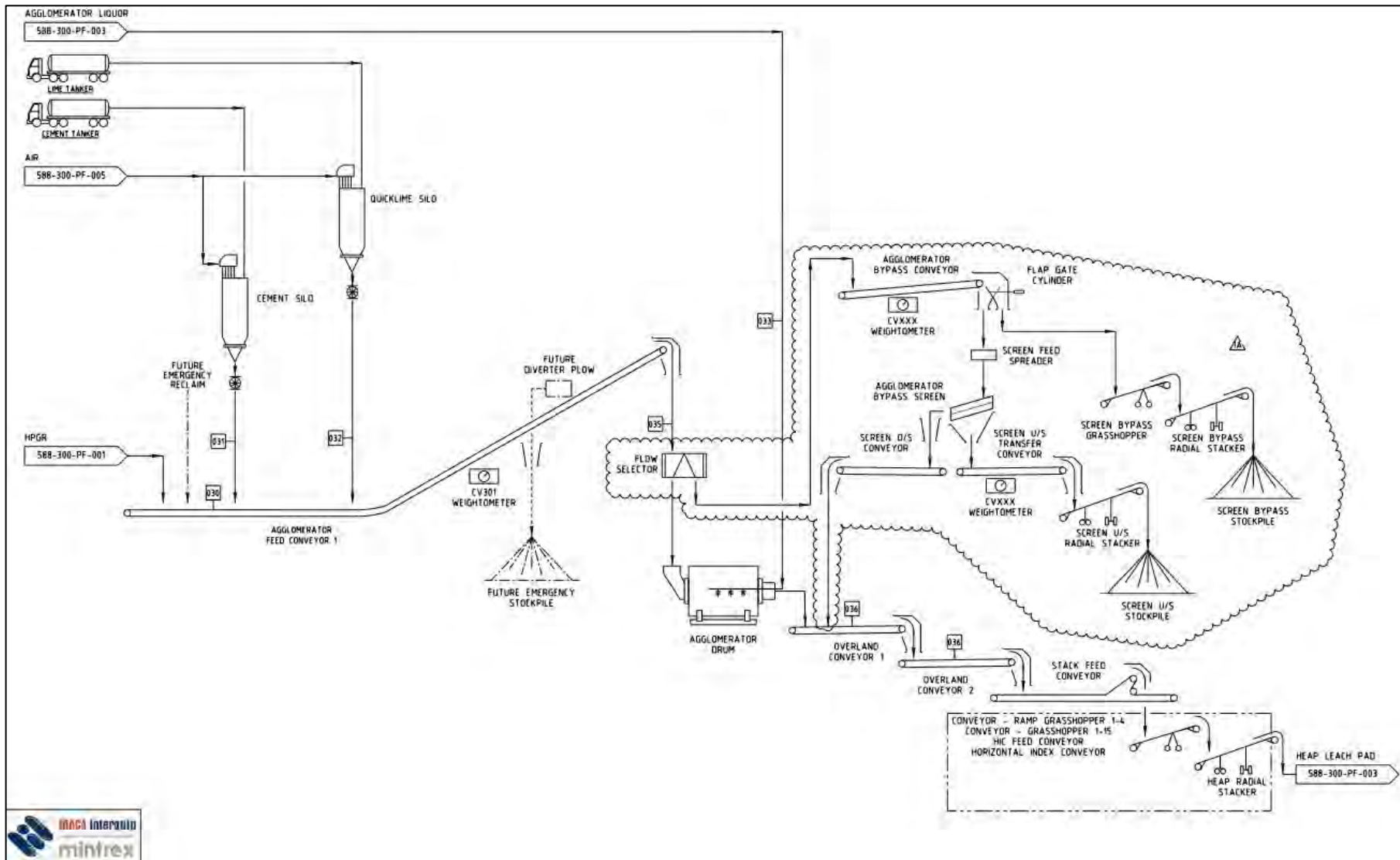


Figure 2. Agglomerator and Screening Processing Flow Chart

## Attachment 6A – Emissions and Discharges

The only emissions expected from the screening operations are dust and noise. The volume of dust has not been quantified, but visual inspections will be conducted daily as per Licence 9362 condition 3, Table 2. Other controls will include:

- Stockpile dust suppression measures such as fog cannons
- Dust suppression measures, such as water spray bars on screening infrastructure and carts, are implemented as necessary, in the event that high levels of dust are observed;
- Dust will be visually monitored daily during operations and construction to ensure control measures are effective;
- Any complaints will be investigated immediately;
- Water carts are used onsite to ensure dust around stockpiles and road areas are adequately controlled as per Norton's Dust Management Plan; and
- The Site is managed according to *A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities*, published by the Department of Environment and Conservation (now the Department of Water and Environmental Regulation, DWER) Perth, Western Australia, January 2011.


Noise emissions are not expected to differ from current crushing and screening operations. Norton engaged Talis Noise Consultants to undertake noise monitoring as required by W6504/2021/1 in 2022 (Figure 3). Noise modelling found receivers R3 and R4 (~2km from screening infrastructure) to be non-compliant, however Norton have purchased these properties. All remaining receivers will not be affected due to existing landforms and features shielding noise.

Additional noise controls include regular plant maintenance and the planning of routes and travel paths to utilise existing features to shield noise. Norton also keeps a complaints register with all complaints to be recorded and investigated as soon as practicable.





Figure 3. Worst Case Noise Model Results (LA10) - 2022 Assessment

 - Binduli North Dry Plant (and proposed Screening plant)

**ZERO HARM** - TEAMWORK - INNOVATION - PERFORMANCE DRIVEN - EFFICIENCY

# Attachment 7 – Siting and Location

## Local Context

The Project is located approximately 10km west of the City of Kalgoorlie-Boulder city centre and to the north of Great Eastern Highway and the Trans-Australia rail line (Figure 4). The Project area has previously been mined for gold by Norton and others between 2002 and 2019.

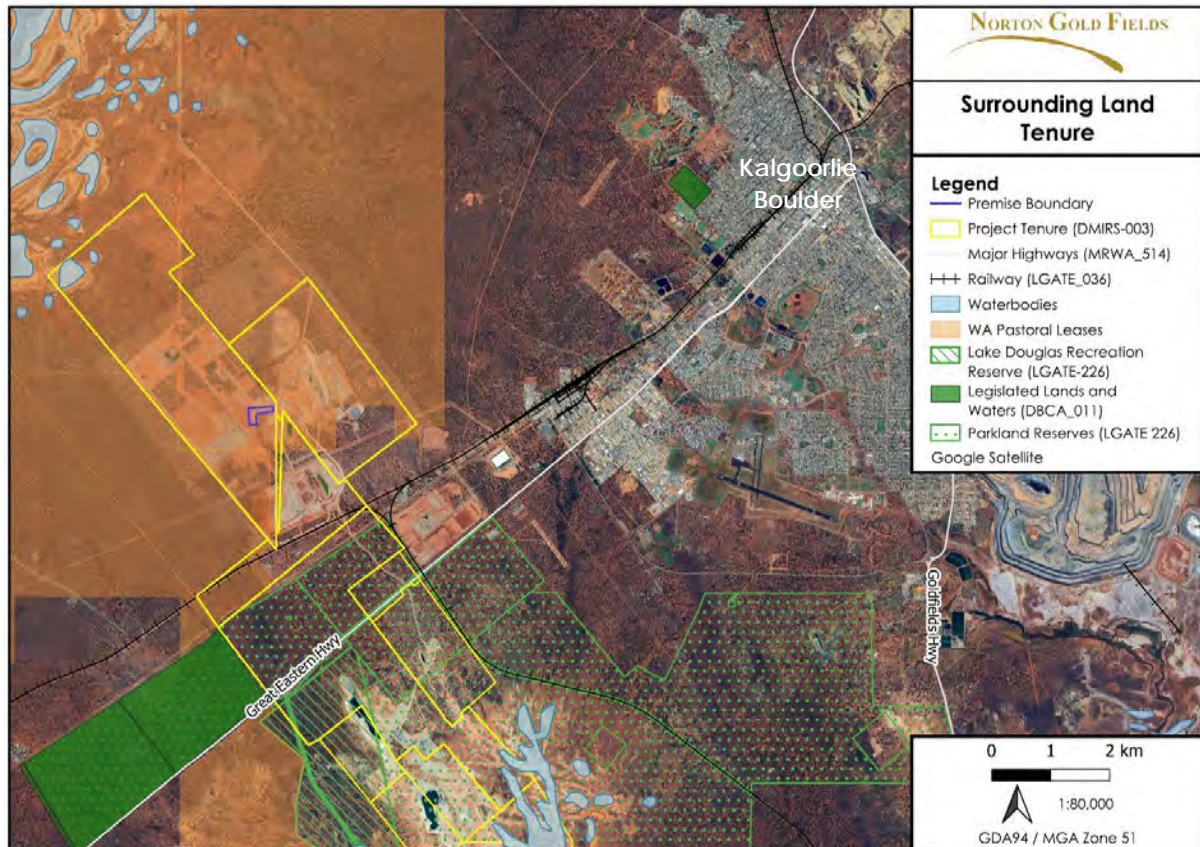


Figure 4. Project Surrounding Land Tenure

Mining has been undertaken at the Binduli North site between 2002 and 2024 which resulted in the excavation of three open pits (Fort William, Fort Scott and Janet Ivy) and associated waste rock dumps and auxiliary areas. Construction of the heap leach and processing facilities commenced in June 2021, with mining recommencing in July 2022 and processing commencing in September 2022.

## Local Geology and Geochemical Characterisation

Janet Ivy East WRD consists of waste rock derived from the Janet Ivy open pit. The Janet Ivy deposit is located on the western margin of a north-northwest striking feldspar porphyry intrusion, where it contacts with metasedimentary rocks via a steep, contact-parallel fault (the Western Fault). The sedimentary rocks consist of siltstone and fine sandstone and display a strong shear fabric defined by pervasive muscovite. The porphyry intrusive is of feldspar-quartz composition, displaying feldspar

phenocrysts within a hematite-bearing, fine-grained groundmass. Potassic and carbonaceous alteration styles are observed across the porphyry.

The key waste rock lithology types identified at Janet Ivy included regolith, porphyry, sediments, and veining. The geochemical test work historically undertaken showed that all regolith and fresh rock samples displayed low-moderate salinity, limited elemental enrichment and solubility, and were classified as non-acid-forming (NAF) due to negligible sulphides.

Felsic porphyries form the dominant proportion of Janet Ivy waste rock. The predominance of moderate to high durability minerals and moderate grain size indicates that fresh porphyry waste rock should display high erosion stability. Porphyry rock that has been subjected to moderate weathering or greater will display moderate erosion stability at best.

### **Hydrological Context**

The Binduli Operations is located within the DWER regional 'Salt Lake' Basin whose streams and drainage drain to inland lakes. There are no permanent or dominant streams of drainage channels within the project area with any rainfall dispersing as sheet flow. Bunds both from historical mining activity and construction prevent rainfall from escaping the proposed premise area, decreasing the likelihood of sedimentation from impacting neighbouring areas.

### **Biological Surrounding**

#### *Vegetation and Flora*

The Binduli North project area can be separated into three different vegetation community types (not including previously disturbed land). The proposed premise area occupies previously disturbed land; however, it is to be noted Janet Ivy East WRD has been partially rehabilitated (Figure 12). Surrounding the proposed premise area is Mixed Eucalyptus woodlands (*Eucalyptus horistes*, *Eucalyptus gracilis*, *Eucalyptus griffithsii*, *Eucalyptus salubris*, *Eucalyptus gracilis*, *Eucalyptus salmonophloia*) over *Eremophila scoparia*, *Exocarpos aphyllus*, *Scaevola spinescens*, *Eremophila ionantha* open mid to low shrubland, and *Triodia scariosa* sparse hummock grassland<sup>1</sup>. Additional clearing for the purpose of mobile crushing and screening is not required.

The vegetation types present within the Project Area do not represent Threatened Ecological Communities (TECs), Priority Ecological Communities (PECs), or Environmentally Sensitive Areas (ESAs) recognised by the Department of Biodiversity, Conservation and Attractions. The closest listed community to the Project Area is the Priority 3 Emu Land System, located 40km to the north-east.

No threatened flora species listed under the *WA Biodiversity Conservation Act 2016* or the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999* have been recorded within the Binduli North project area<sup>1</sup>.

#### *Fauna*

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<sup>1</sup> Spectrum Ecology. 2020. *Binduli North Expansion Project Desktop Report Review*

None of the broad fauna habitats observed within the Binduli North project area are considered significant as they are widespread within the region and not restricted. No conservation significant fauna species have been observed within the project area; however two (Carnaby's Cockatoo - *Calyptorhynchus latirostris* and Malleefowl - *Leipoa ocellata*) are considered to have a medium likelihood of occurrence. Neither species is considered to be impacted by the continued mobile crushing and screening operations.

### **Sensitive Receptors**


#### *Aboriginal Heritage*

One Aboriginal Heritage site has been identified approximately 1km south of the proposed premise area and is referred to as OHP 21047 "Binduli Rock Holes". This site is classified as 'lodged' meaning that the Aboriginal Cultural Materials Committee had yet to assess the site to determine its status. There will be no impact to this site.

#### *Residential Properties*

Refer to Attachment 6A.

# Attachment 10B – Details for Cost of Works

Approval for Expenditure Binduli Operations		 NORTON GOLD FIELDS LIMITED <i>Paddington Operations</i>
<b>General Information</b>		
Department:	Site:	AFE Number:
Projects	Binduli North (BN)	20240718-XL-003
Title:		
CV301 Diverter		
<b>Project in Current Year Budget/Forecast?</b>		
No		Current Year Budget Amount: 7,440,331
<b>Explanation:</b> The main objective of this project is to screen out a portion of fine ore from crushed ore, improving the permeability of the Binduli heap leach and increasing the leaching gold recovery, while also supplying fine ore to Paddington to fill the gap of missing oxide ore. The construction scope includes a distributor, conveyor belts, vibrating screens, and steel structures. This AFE approval primarily covers the detailed design and the procurement budget for major equipment. Based on the preliminary design, the estimated budget for detailed design and equipment procurement totals AUD 6,764k, including AUD 1,380k for design and AUD 5,383k for equipment and major materials.		<b>Substitutions (if applicable):</b> Enter site (if different) and budgeted project title Enter site (if different) and budgeted project title Enter site (if different) and budgeted project title Total substitutions
		-
<b>Project Description</b>		
NGFBO-2409 CV301 Screen Project Detail Design and Procurement		