

MINING PROPOSAL

February 2017

**Janet Ivy and Victory United
open pit project**

Version 1

M26/446, M26/629, L26/269, L26/247, L24/198, L24/196,
L24/125, L24/199, L24/34

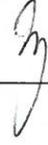


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Document Approval

Name	Position	Signature	Date
Wayne Astill	Environment, Community & Security Superintendent		16/2/17
Gary Goh	General Manager		17/2/17

No.	Mining Proposal Checklist	Y/N NA	Page No.	Comments
Public Availability				
1	Are you aware that this mining proposal is publicly available?	Y		
2	Is there any information in this mining proposal that should not be publicly available?	Y		Appendix 6 – Heritage survey
3	If 'No' to Q2, do you have any problems with the information contained within this mining proposal being publicly available?	N/A		
4	If 'Yes' to Q2, has confidential information been submitted in a separate document / section?	Y		Submitted separately
5	Has the mining proposal been endorsed?	Y	v	
Mining Proposal Details				
6	Have you included the tenement number(s), site name, proposal overview and date in the title page?	Y		
7	Who authored the mining proposal	Helen Chernoff, Senior Environmental Advisor		
8	State who to contact for enquiries about the mining proposal?	Wayne Astill, Environment, Community & Security Superintendent		
9	How many copies were submitted to DMP?	Electronic = 1		
10	Is this mining proposal to support lease application?	N		
11	Has a geological resource statement been included?	Y	14	Section 3.0
12	Will more than 10 million tonnes of ore and waste be extracted per year? State total tonnage:	N		
13	Will more than 2 million tonnes of ore be processed per year?	N		
14	Is the mining proposal on pre-1899 Crown Grants lands?	N		
15	Is the mining proposal located on reserve land?	N		
16	Will the mining occur within or affect a declared occupied townsite?	N		
17	Is the mining proposal within 2km of the coastline or a Private Conservation Reserve?	N		
18	Is the mining proposal wholly or partially within a World Heritage Property, Biosphere Reserve, Heritage Site or Soil Reference Site?	N		
19	Are all mining operations within granted or applied for tenement boundaries	Y		
20	Are you the holder of the all tenements	Y	3	Section 1.4
21	If 'No' at 20, do you have written authorisation from the tenement holder(s) to undertake the Mining proposal activities?	N/A		
22	If 'Yes' at 21, then is a copy of the authorisation contained within the mining proposal?	N/A		

No.	Mining Proposal Checklist	Y/N NA	Page No.	Comments
23	Have you checked for compliance against tenement conditions?	Y		Appendix 1
Location and Site Layout Plans				
24	Have you included location plans showing tenement boundaries and mining operations?	Y	2	Figure 1
25	Have you included site layout plans showing all mining operations and infrastructure in relation to tenement boundaries?	Y	17, 18	Figures 6 and 7
26	Have you included Area of Disturbance Tables for all tenements impacted by mining operations?	Y	23	Table 9
Environmental Protection Act				
27	Does the mining proposal require referral under part four of the MOU?	N		
28	Has the EPA set a level of assessment?	N		
29	Is a clearing permit required? If 'No' explain which in space below (exceed 10 hectares)	Y		
30	If 'Yes' at Q29 then has a permit been applied for?	Y	22	Section 5.3 Appendix 7
31	Is a Works Approval required by the DER?	Y	23	Section 5.4.1
32	Has a Works Approval been submitted to the DER?	Y		Application pending
Stakeholder Consultation				
33	Have the following stakeholders been consulted?			
33	Shire	Y		
33	Pastoralist	Y		
33	DER	Y		
33	Native Title Claimant Groups	Y		
Environmental Assessment and Management				
34	Is the mining proposal wholly or partially within a CALM managed area?	N		
35	If 'Yes' to Q34 has CALM been consulted?	N/A		
36	Is the mining proposal wholly or partially within a red book area or a bush forever site?	N		
37	Will the mining proposal impact upon a water resource area, water reserve, declared or proposed catchment, groundwater protection area, significant lake or wetland?	N		
38	Is a water or de-watering licence required?	Y		
39	If 'Yes' at Q38 then has the licence been applied for?	Y		Application pending
40	Does the mining proposal include new tailings storage or changes to existing tailings storage?	N		
41	Has Acid Mine Drainage assessment been undertaken?	Y		
42	Have flora and fauna checks been undertaken?	Y	7, 12	Section 2.4 Section 2.6

No.	Mining Proposal Checklist	Y/N NA	Page No.	Comments
43	Are any rare species present?	N		
44	Has a preliminary closure plan been included?	N		Reg ID 54448

I hereby certify that to the best of my knowledge the above checklist reflects the information contained within this mining proposal.

Name: Gary Goh
Position: General Manager

Signed: 

Date: 17/2/17

EXECUTIVE SUMMARY

Norton Gold Fields Limited (Norton) is proposing to develop the 'Janet Ivy' project, located approximately 8.5km west of the City of Kalgoorlie-Boulder, Western Australia, and approximately 33km south of the Paddington Mill. The Janet Ivy project area is located within the Black Flag Pastoral Lease.

The objective of the project is to mine the gold resources via northern and southern extensions of the existing Janet Ivy open pit; and a small pit that hosts the low grade Victory United deposit. Norton intends to commence mining during 2017. The project is expected to continue for approximately 12 months.

A total of 2,093,849 tonnes of ore will be mined from the Janet Ivy and Victory United open pits. Mined ore will be processed at the Paddington Mill. All tailings resulting from processing will be deposited in the tailings storage facility associated with the Paddington Mill.

A total of 6,395,206 tonnes of waste materials will be mined from the Janet Ivy and Victory United open pits. Waste materials will be deposited onto the Janet Ivy West and Janet Ivy East waste landforms as well as backfilling the Victory United pit void.

A total of 92.84ha of vegetation clearing is required for the project. Clearing will be managed in accordance with permit (CPS) 2986/2.

No Aboriginal heritage or sites or culturally significant European sites have been identified within the project area.

Water generated within Janet Ivy pit will be abstracted for dust suppression, dewatering activities will be conducted in accordance with Groundwater licence GWL167686(3). Norton has submitted a pending application to the DER to enable excess water to be discharged into the Fort William pit.

Throughout the life of the operation, ongoing sampling will be conducted to evaluate if problematic materials are located within the pit. Waste materials will be managed in accordance with Norton's Mined Waste Management Plan.

Norton has identified key stakeholders consultation process highlights Norton's commitment to ongoing and appropriate consultation in order to understand and meet the needs of interested parties. The stakeholder consultation will be ongoing throughout the life of the project.

Norton considers the adoption of good environmental practice and project management skills will minimise the effect of the Janet Ivy project on the environment.

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Appendix 5: Ethnographic survey (2005)
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Appendix 7: Clearing permit CPS 2986/2
Appendix 8: Multi-element sampling results

1.0 INTRODUCTION

1.1 Background

Paddington Gold Pty Ltd is a wholly owned subsidiary of Norton Gold Fields Limited. The Paddington Mill is located 33km north-west of Kalgoorlie-Boulder, has a planned annual capacity of 3.7 million tonnes (Mt) of ore and is a mid-tier gold mining and processing operation in Western Australia.

1.2 Objectives

The objective of the project is to mine the gold resources via northern and southern extensions of the existing Janet Ivy open pit; and a small pit that hosts the low grade Victory United deposit. Mined ore will be transported to the Paddington Mill via a network of existing haul roads.

It is proposed that the project is mined in four stages. Stage 1 will commence mining of the Janet Ivy northern extension. Stage 2 will develop the small Victory United pit. The third stage will complete the northern expansion of the Janet Ivy pit. The final stage will be to develop the southern expansion of Janet Ivy pit.

Waste materials will be deposited onto the Janet Ivy West and Janet Ivy East waste landforms as well as backfilling the Victory United pit void.

A total of 92.84ha of vegetation clearing is required for the project. Clearing will be managed in accordance with permit (CPS) 2986/2.

Water generated within the Janet Ivy pit will be abstracted for dust suppression, dewatering activities will be conducted in accordance with Groundwater licence GWL167686(3). Norton has submitted a pending application to the DER to enable excess water to be discharged into the Fort William pit.

Throughout the life of the operation, ongoing sampling will be conducted to evaluate if problematic materials are located within the pit. Waste materials will be managed in accordance with Norton's Mined Waste Management Plan.

1.3 Location

The Janet Ivy project is located approximately 8.5km west of the City of Kalgoorlie-Boulder Western Australia and approximately 33km south of the Paddington Mill. A regional location map of the project is included as Figure 1.

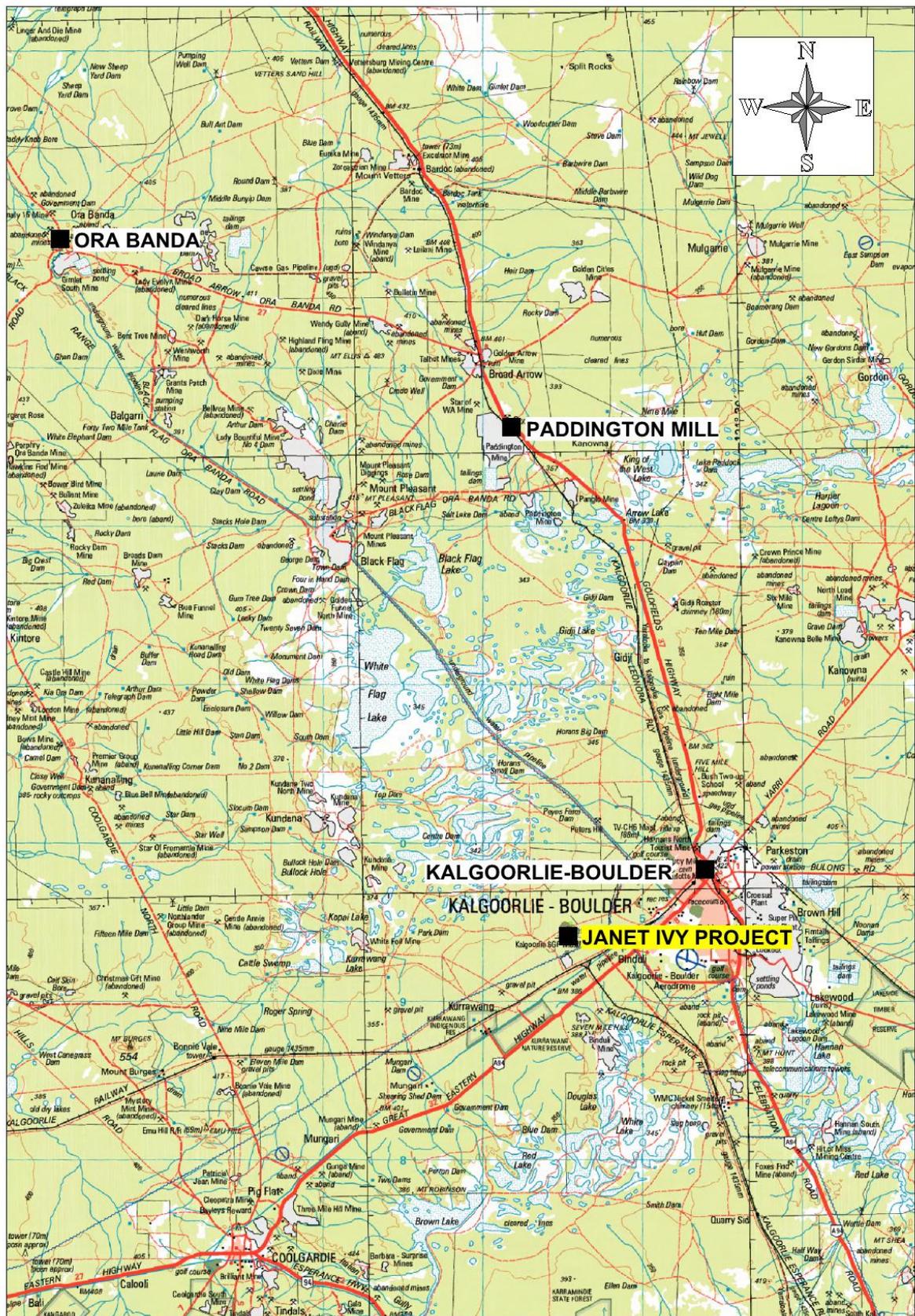


Figure 1: Regional location of the Janet Ivy project

1.4 Ownership and Tenure

The project is located on tenement M26/446, with haulage occurring on tenement M26/629 and a number of miscellaneous licences, Table 1. The tenements are owned by Paddington Gold Pty Ltd and Bellamel Mining Pty Ltd, which are wholly owned subsidiaries of Norton Gold Fields Limited. A full list of tenement conditions is attached as Appendix 1.

Table 1: Tenement ownership

Tenement	Owner	Area (ha)	Date Granted	Expiry Date
M26/446	Norton Gold Fields Limited	510.35	25/05/94	29/11/36
M26/629	Bellamel Mining Pty Ltd	295.25	20/11/00	19/11/21
L26/269	Norton Gold Fields Limited	42.00	05/12/2014	04/12/2035
L26/247	Paddington Gold Pty Ltd	8.28	04/05/09	03/05/30
L24/198	Paddington Gold Pty Ltd	44.16	11/01/11	10/01/32
L24/196	Paddington Gold Pty Ltd	2.42	04/05/09	03/05/30
L24/125	Paddington Gold Pty Ltd	5.50	14/06/89	13/06/19
L24/199	Paddington Gold Pty Ltd	2.69	17/08/12	16/08/33
L24/34	Paddington Gold Pty Ltd	14.00	04/06/85	19/10/25

All correspondence relating to this proposal should be sent to the registered owner as detailed below:

Registered Office: Norton Gold Fields Limited
Level 1, Viskovich House
377 Hannan Street, Kalgoorlie, WA 6430

Telephone: (08) 9080 6800

ABN: 23 112 287 797

Postal Address: Paddington Operations
PO Box 1653
KALGOORLIE WA 6430

1.5 Existing Infrastructure

The Janet Ivy project consists of an open pit and associated mine infrastructure primarily located on tenement M26/446. Existing mine infrastructure includes an open pit; waste landform, ROM, roads and tracks, office buildings and workshop areas. Nearby existing infrastructure includes the inactive Fort Scott and Fort William projects.

2.0 EXISTING ENVIRONMENT

2.1 Climate

The climate of the Eastern Goldfields subregion is characterised as an arid to semi-arid climate (Beard, 1990; Cowan, 2001). Norton monitors weather data from four Environ Data WeatherMation stations. The closest weather monitoring station is located approximately 6km from the Janet Ivy project. Climate data presented in Table 2 below is sourced from the Bureau of Meteorology (BOM), Kalgoorlie-Boulder Airport weather station (#12038).

Table 2: Climate data for the Janet Ivy project

	Average Temperature (°C)		9am Conditions			3pm Conditions		
	Min	Max	Temp	Humidity (%)	Wind Speed (km/hr)	Temp	Humidity (%)	Wind Speed (km/hr)
Jan	18	34	24	45	17	32	24	15
Feb	18	32	23	51	16	31	30	15
Mar	16	29	21	54	16	29	32	14
Apr	13	25	18	60	14	24	38	14
May	9	21	14	67	12	20	44	14
Jun	6	18	11	74	12	17	48	16
Jul	5	17	10	73	12	16	46	17
Aug	6	19	12	65	14	18	39	17
Sept	8	22	15	54	16	21	31	18
Oct	11	26	18	47	17	25	27	18
Nov	14	29	21	45	17	28	25	17
Dec	17	32	23	43	16	31	24	16
Annual	12	25	17	57	15	24	34	16

Sourced from BOM, 2016 weather station location #12038 Kalgoorlie-Boulder Airport

2.1.1 Temperature

The Kalgoorlie region has a semi-arid climate, with hot summers and cool to mild winters. Mean annual maximum temperature is 25°C and mean annual minimum is 12°C. Temperatures vary considerably throughout the year, January is traditionally the hottest month with a mean daily maximum of 34°C and minimum of 18°C. July is the coolest month with a mean daily maximum of 17°C and mean daily minimum temperature of 5°C (BOM, 2016a). Figure 2 shows the mean maximum temperature and the mean rainfall for the Kalgoorlie-Boulder Airport (#12038).

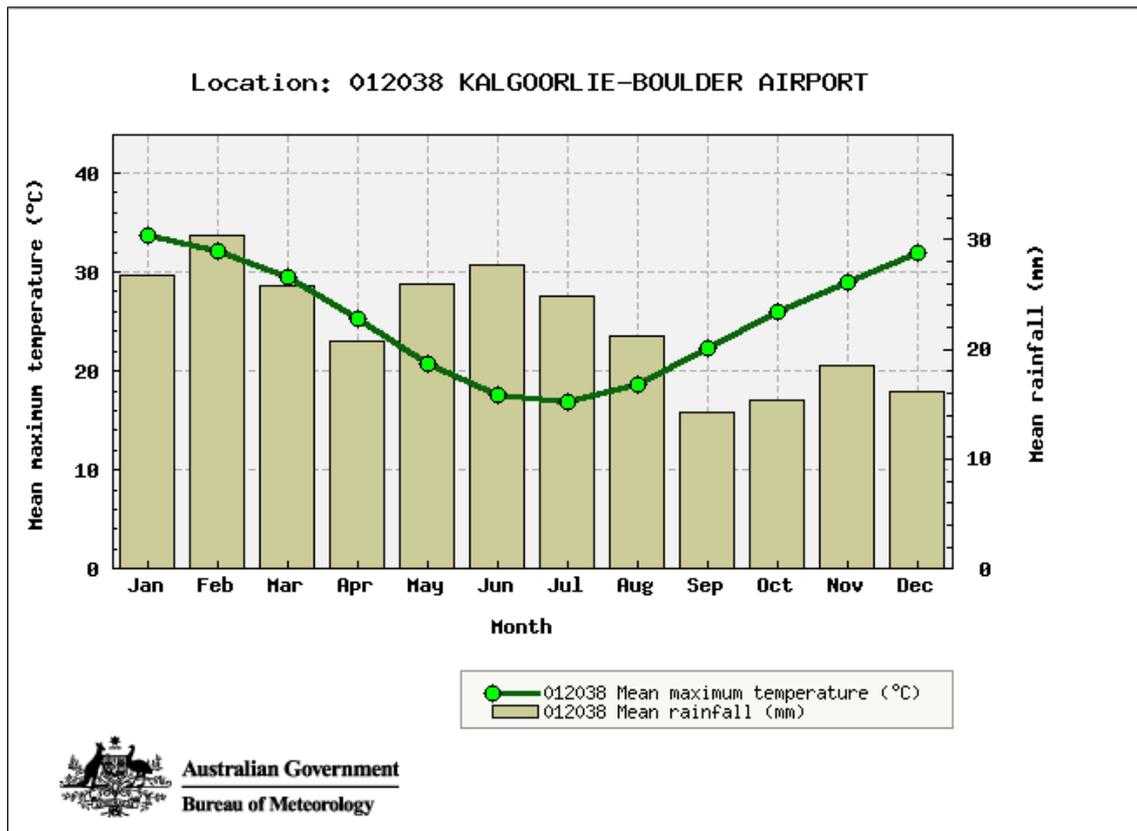


Figure 2: Mean monthly maximum temperature and rainfall at weather station #12038

Sourced from BOM, 2016

2.1.2 Rainfall

The Kalgoorlie Region is characterised with mainly winter rainfall. However, significant rainfall events can occur during the summer period mainly from January to March, associated with thunderstorms and the remnants of tropical cyclones (Beard, 1990; Cowan, 2001). The mean annual rainfall at Kalgoorlie is 266mm, Figure 2 (BOM, 2016a).

2.1.3 Winds

The average wind speeds at Kalgoorlie-Boulder vary throughout the year from 11.8 – 17.2 km/h in the morning to 13.7 – 17.8 km/h in the afternoon (BOM, 2016a).

2.1.4 Evaporation

Annual potential evaporation is approximately ten times higher than rainfall, and evaporation greatly exceeds average rainfall during each month of the year. The annual evaporation rate is approximately 2,628 mm (BOM, 2016a), compared to the annual rainfall of 266 mm. Figure 3 shows the average annual evaporation rate ranges throughout Australia.

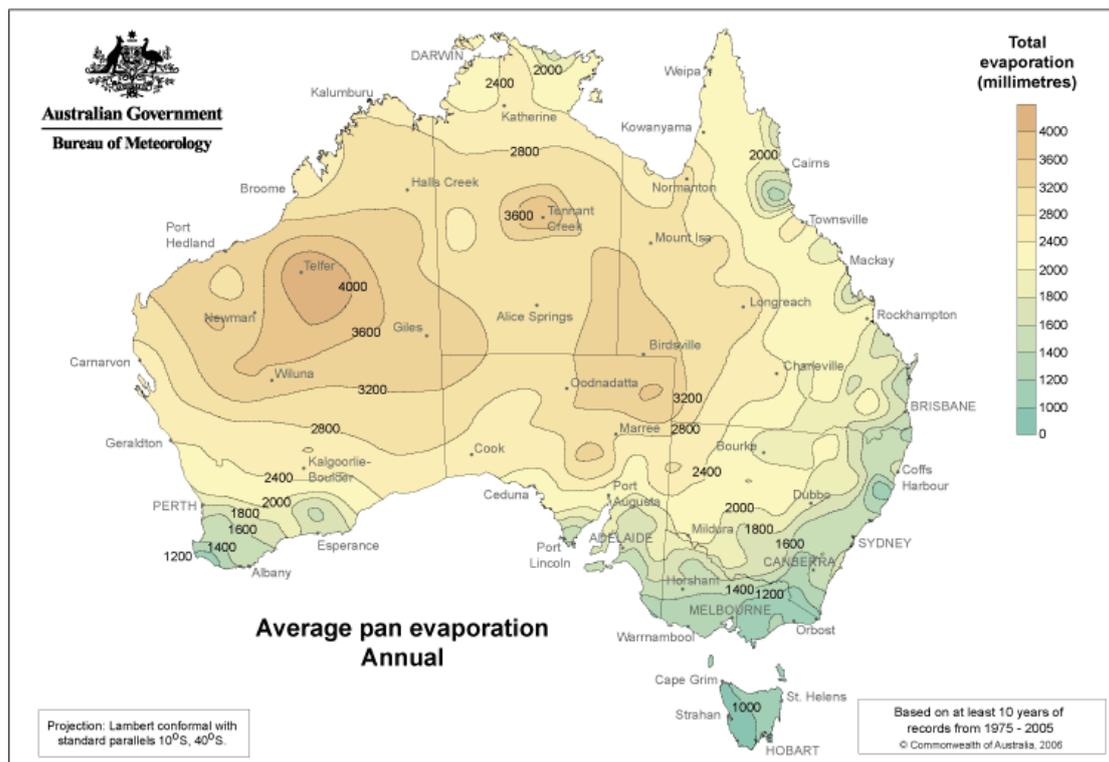


Figure 3: Annual average evaporation

Sourced from BOM, 2016

2.2 Surface Hydrology

The Janet Ivy project area is located on a sandplain with no significant surface water drainage systems. Sheet wash to the west may occur after periods of heavy rain. There is no requirement to divert surface water flows around the proposed project infrastructure. The nearest water bodies are seasonal salt lakes located 3km from the project site, these will not be impacted by mining activity.

The generally low relief of the topography within the tenement does not include any major drainage pathways. No water catchment areas are present within mining operations. During construction and operations, unconsolidated surfaces such as overburden storages, stockpiles, embankment faces and unsealed roads may contribute to sediment loads in the runoff water. Existing v-drains and spoon drains will be used to manage surface water runoff and limit the emissions of sediment into the natural environment.

2.3 Groundwater

Water resources are drawn from paleochannel and fractured rock within the Roe Groundwater Sub-area of the Goldfields Groundwater Area.

The results of groundwater monitoring at Janet Ivy and the nearby Fort William pit records a pH range of 7.30 – 8.47 pH units. Total dissolved solids ranges from 30,000 – 210,000 mg/L. 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 in low total concentrations by comparison.

Water quality in the project area is aligned with the natural groundwater drawn from the Roe Paleochannel System which is highly saline with major ions strongly dominated by sodium and chloride and to a lesser extent magnesium and sulphate. Due to the saline nature of the groundwater it is expected to have applications suitable only for use by the mining industry.

Exploration and hydrogeological drilling has not encountered significant water return from within the Janet Ivy Porphyry. Weak water return was noted along the southern most portion of the open pit within the sedimentary units and between the regolith-fresh rock horizons.

2.4 Vegetation and Flora

2.4.1 Regional Setting

The project area is located within the Coolgardie Botanical District of the South-western Interzone (Beard, 1990). This botanical district is predominantly Eucalypt woodland, becoming open towards the more calcareous soils, where a cover of saltbush-bluebush understorey is evident. Dominant plant families within the Coolgardie Botanical District include *Mimosaceae*, *Myrtaceae*, *Chenopodiaceae* and *Myoporaceae*. A gently undulating topography within this Botanical District is broken up with occasional ranges of low hills. Principally, the soils are brown calcareous earths (Beard, 1990).

2.4.2 Vegetation Surveys

A level 1 vegetation survey of the Binduli area, including the proposed Janet Ivy project area was conducted by Eco Logical Australia in 2016. A copy of the report is included as Appendix 2.

2.4.1 Vegetation condition

Vegetation with a condition scale of 2 (according to the "Technical Guide – Flora and Vegetation Surveys for Environmental Impact Assessment – EPA, DPaW, 2015), which equates to excellent condition, was the most extensive throughout the larger survey area. Vegetation with lower condition covered small areas associated with drilling or quarry activity or off road vehicle access. A map showing broad vegetation groups within the Janet Ivy area is included as Figure 4.



Figure 4: Vegetation units over the Janet Ivy project area tenements

2.4.2 Vegetation and Conservation Significance

No plant taxa located in the survey area are gazetted as Declared Rare Flora (pursuant to Subsection 2 of Section 23F of the *Wildlife Conservation Act 1950*). No plant taxa is listed as Threatened (pursuant to Schedule 1 of the *Environment Protection and Biodiversity Conservation Act 1999*). No Priority Flora were recorded within the Janet Ivy survey area.

Three conservation significant species were recorded approximately 10km southeast from the Janet Ivy project area; *Alyxia tetanifolia* (P3), *Goodenia salina* (P2) and *Isolepsis australiensis* (P3).

No Threatened Ecological Communities, Priority Ecological Communities or Environmentally Sensitive Areas were recorded in the survey area.

2.4.3 Weeds

The EPBC search results revealed possible suitable habitat for one weed species *Carrichtera annua* (Ward's Weed) was likely to occur within the survey area.

The Eco Logical Australia vegetation survey identified 12 introduced species occurring in the larger Binduli area, with two of those occurring in the vicinity of the Janet Ivy project area; *Salvia verbenaca* (wild sage) and *Sonchus oleraceus* (common sowthistle).

Weeds are managed in accordance with Norton's Weed Management Plan.

2.5 Topography and Soils

The relief is subdued and comprised of gently undulating plains interrupted in the west with low hills and ridges of Archaean greenstones and in the east by a horst of Proterozoic basic granulite. The general underlying geology of the Coolgardie Bioregion is of gneisses and granites eroded into a flat plane covered with tertiary soils and with scattered exposures of bedrock. Calcareous earths are the dominant soil group and cover much of the plains and greenstone areas. A series of large playa lakes in the western half are the remnants of an ancient major drainage line.

2.6 Fauna

A level 1 vertebrate fauna and short-range endemic invertebrate survey of the Janet Ivy project was conducted in April 2006 by ATA Environmental and is included as Appendix 3. The survey determined that proposed clearing of vegetation may result in a loss of the sedentary species and will force the more mobile ones to move to adjacent areas. Other than for malleefowl, based on the information reviewed in this desktop study and reconnaissance survey, and taking into account the quantity of similar habitat located in the vicinity of this site, this loss of individuals is not considered to be significant to the biodiversity of the region.

A subsequent level 1 fauna survey was conducted by Eco Logical Australia in May 2016, Appendix 4. Six broad fauna habitats were delineated across the larger study area;

- Mixed open shrublands on red sandy loam;
- Mixed open Eucalyptus woodlands on red clay loam and gravel or pebble rises;
- Sparse *Eucalyptus-Callitris* woodland on gypsum rises;
- Chenopod shrublands on clay pans and flats;

- Meleleuca open shrublands on seasonally wet claypans; and
- Acacia open shrubland on granitic sandy loam.

Of these, only the *Eucalyptus-Callitris* woodland was considered locally and regionally significant. This habitat type is located approximately 15km southeast of the Janet Ivy project area. The remaining fauna habitats were widespread and extended throughout the study area into the wider locality. The Janet Ivy project area is located in mixed open Eucalyptus woodlands on red clay loam and rocky rises, with a small area of Acacia open shrubland on the eastern side of the project boundary.

One SRE was identified nearby to the project area in the southwest boundary of the Fort William project; *Aganippe* 'MYG256' (spider).

One inactive malleefowl nest was identified in the Janet Ivy project area, inactive and an approximate age of >50 years since last activity. The surrounding habitat is identified as having low to moderate chance of supporting malleefowl. No other signs (scats, tracks or sightings) were identified during the survey.

The impact assessment found that:

- the remaining broad fauna habitats observed within the study area were not considered to be significant as they are widespread within the region and not restricted to the study area. Any impacts from the Project are therefore not expected to be significant.
- Overall impacts to native fauna were considered unlikely to be significant as the majority of fauna habitats extend throughout the study area and into regional areas and the majority of fauna occurring within the study area are highly mobile and can move away if disturbed.
- Impacts to conservation significant fauna were considered unlikely to be significant as all species are highly mobile and will move to other areas when disturbed.
- Impacts to Malleefowl were considered unlikely to be significant given the extent of available Malleefowl habitat in areas outside that to be disturbed and given Malleefowl are only considered to potentially occur in the area on a foraging or transitional basis only.
- Impacts to SRE invertebrates were considered unlikely to be significant given that none of the SREs were recorded from restricted habitat types, given the extent and availability of suitable habitat in regional areas outside the study area.

2.7 Aboriginal Heritage

An ethnographic survey conducted by Wayne Glendenning in May 2005 on behalf of the Widji, Maduwongga and Central West native title claimant groups and the Gubrun People did not identify any ethnographic sites in the Janet Ivy area. A copy of this report is included as Appendix 5.

A search of the Aboriginal Heritage Inquiry System maintained by the Department of Aboriginal Affairs did not record any Registered Sites, or an Other Heritage Places within the Janet Ivy project area. A copy of the Aboriginal Heritage Inquiry System reports for all tenements included in this project are available in Appendix 6.

A copy of this Mining Proposal will be provided to the relevant local Aboriginal groups.

2.8 European Heritage

A search of the Heritage Council of Western Australia database of culturally significant Sites in Western Australia was undertaken. There are no reported culturally significant heritage sites within the Janet Ivy project area. No World, Commonwealth or National Heritage places are listed as occurring on the site.

2.9 Pastoral Leases

The Janet Ivy project area is located within the Black Flag Pastoral Lease. The pastoral station managers have been provided with a copy of this Mining Proposal.

3.0 GEOLOGY

3.1 Regional Geology

The Janet Ivy project area is situated within the Ora Banda Domain of the Archaean Kalgoorlie Terrane and covers part of the Black Flag Beds towards the southern end of the Mt Pleasant Anticline.

The Black Flag Beds are a thick sequence of felsic to intermediate volcanics, volcanoclastics and sedimentary units intruded by felsic porphyry bodies. This sequence dips shallowly to steeply southwest in the project area, occupying part of the western limb of the anticline structure. It is bounded to the west by the overlying sediments of the Kurrawang Syncline and is separated from the mafic dominated Golden Mile/Kalgoorlie mine sequence by the Abattoir Shear.

3.2 Local Geology and Mineralisation

The geology of the M26/446 tenement consists of a Hematite-Quartz-Feldspar Porphyry (the Janet Ivy Porphyry) intrusion within the Black Flag sequence of variably altered volcanoclastic sediments and intermediate intrusions. The sequence is overlain by a soil and regolith profile ranging from 2-40 m in thickness (thicker profile to the south of the Janet Ivy open pit). The western portion of the Janet Ivy pit demonstrates the best exposure of weathered (saproilitic) volcanoclastic sediments. Muscovite, within the volcanoclastic sediments, defines a strong, pervasive foliation which is oriented north northwest and dips moderately to the east. This foliation is a local feature and is interpreted as a shear fabric related to ductile deformation on the western contact of the porphyry intrusion. The presence of muscovite is highlighted by a green sheen on foliation surfaces.

The Janet Ivy porphyry consists of anhedral quartz and sub-euhedral feldspar phenocrysts within a fine-grained to aphanitic ground mass (Figure 5). Two distinct alteration suites are present within the porphyry. The central potassic alteration suite consists of pervasive and halo bound biotite, magnetite and hematite. The sodic alteration suite is present within the alteration halos of quartz veins and within shear zones. This is characterised by a pale-pink (hematite still present) bleached appearance and consists of albite, calcite, ankerite, rutile, pyrite and galena. Gold mineralisation within the Janet Ivy porphyry is present as both discrete high grade and broad low grade zones. High grade mineralisation, which can include visible gold, is confined to narrow extensional and stringer quartz veins with sodic alteration halos. Broad, low grade, mineralisation is pervasive throughout the potassic alteration zones.

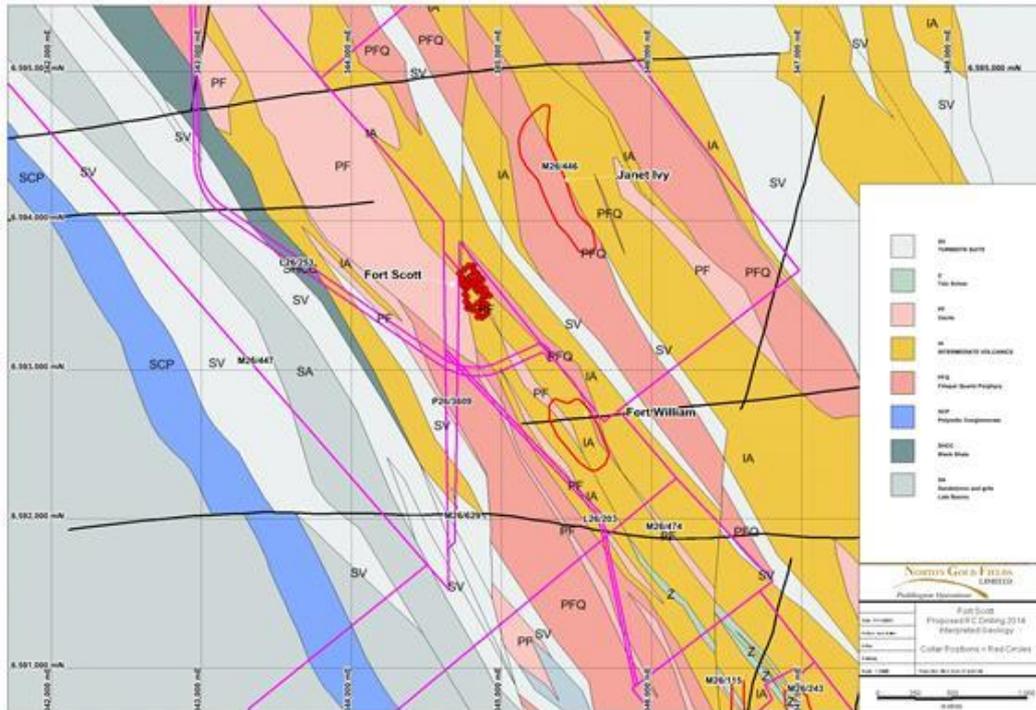


Figure 5: Local geology of Janet Ivy project area

3.3 Landforms

The survey area lies in the Coolgardie bioregion within the Eastern Goldfields subregion which lies on the Yilgarn Craton's 'Eastern Goldfields Terrains'. The relief is subdued and comprised of gently undulating plains interrupted in the west with low hills and ridges of Archaean greenstones and in the east by a horst of Proterozoic basic granulite.

The general underlying geology of the Coolgardie Bioregion is of gneisses and granites eroded into a flat plane covered with tertiary soils and with scattered exposures of bedrock. Calcareous earths are the dominant soil group and cover much of the plains and greenstone areas. A series of large playa lakes in the western half are the remnants of an ancient major drainage line.

4.0 PROJECT DESCRIPTION

The objectives of the project are to develop and mine the gold resource from the Janet Ivy deposit and a smaller oxide deposit known as Victory United. Development of the Victory United deposit is dependent on both the oxide ore requirements of the Paddington Mill and the economic viability at the time of mining.

It is proposed that the project is mined in four stages. Stage 1 will commence mining of the Janet Ivy northern extension. Waste materials will be deposited onto the existing Janet Ivy west waste landform. Stage 2 will develop the small Victory United pit. Waste materials will be deposited onto the Janet Ivy East waste landform. The third stage will complete the northern expansion of the Janet Ivy pit. Waste materials will be preferentially backfilled into the Victory United pit void and surplus waste deposited onto the Janet Ivy East waste landform. The final stage will be to develop the southern expansion of Janet Ivy pit. Waste materials will be

deposited onto the Janet Ivy East waste landform which will be extend south-east over the footprint of the Victory United backfilled pit and adjoin the mineralised waste stockpile.

If sterilisation drilling determines that the Victory United deposit is uneconomic, then waste materials from the Janet Ivy northern and southern extensions will be deposited within the footprint of the Janet Ivy East waste landform.

It is anticipated that the disturbance area of the Janet Ivy northern and southern extensions will be less than the proposed footprint. The proposed footprint includes a contingency to mine a larger pit design, dependent on the variability of the gold price as well as results from grade control drilling.

The project is located adjacent to the Fort Scott project and nearby to the Fort William project. Existing disturbances within the project area include the Janet Ivy open pit and waste landform; ROM; roads and tracks; exploration disturbance; office buildings; and workshop area. The project will utilise this infrastructure where appropriate.

Ore mined from the Janet Ivy project will be transported via an existing network of roads for processing at the Paddington Mill located approximately 33km north-east of the project.

Vegetation clearing for the Janet Ivy project will be managed by clearing permit CPS 2986/2. A copy of the permit is included as Appendix 7. Proposed disturbance for the project is outlined in Table 9 of this document.

Water required for the mining activities and dust suppression will be sourced from a standpipe located at the nearby Fort William open pit and transported to the Janet Ivy project area by water cart on an existing haul road.

A site layout depiction of stage 1 of the project is included as Figure 6. The final site layout is included as Figure 7 and shows total disturbance from the completion of stages 1-3.

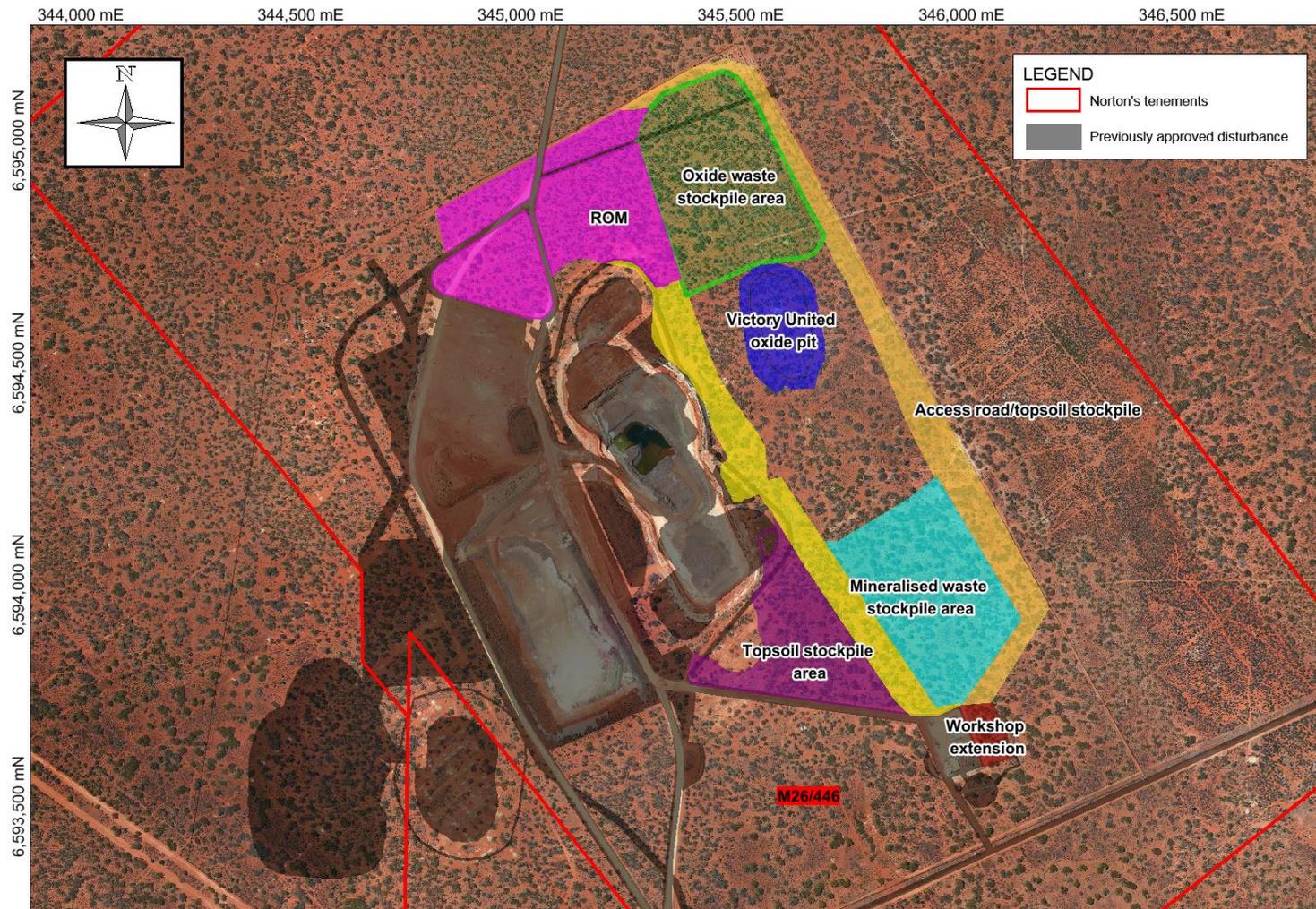


Figure 6: Stage 1 site layout plan

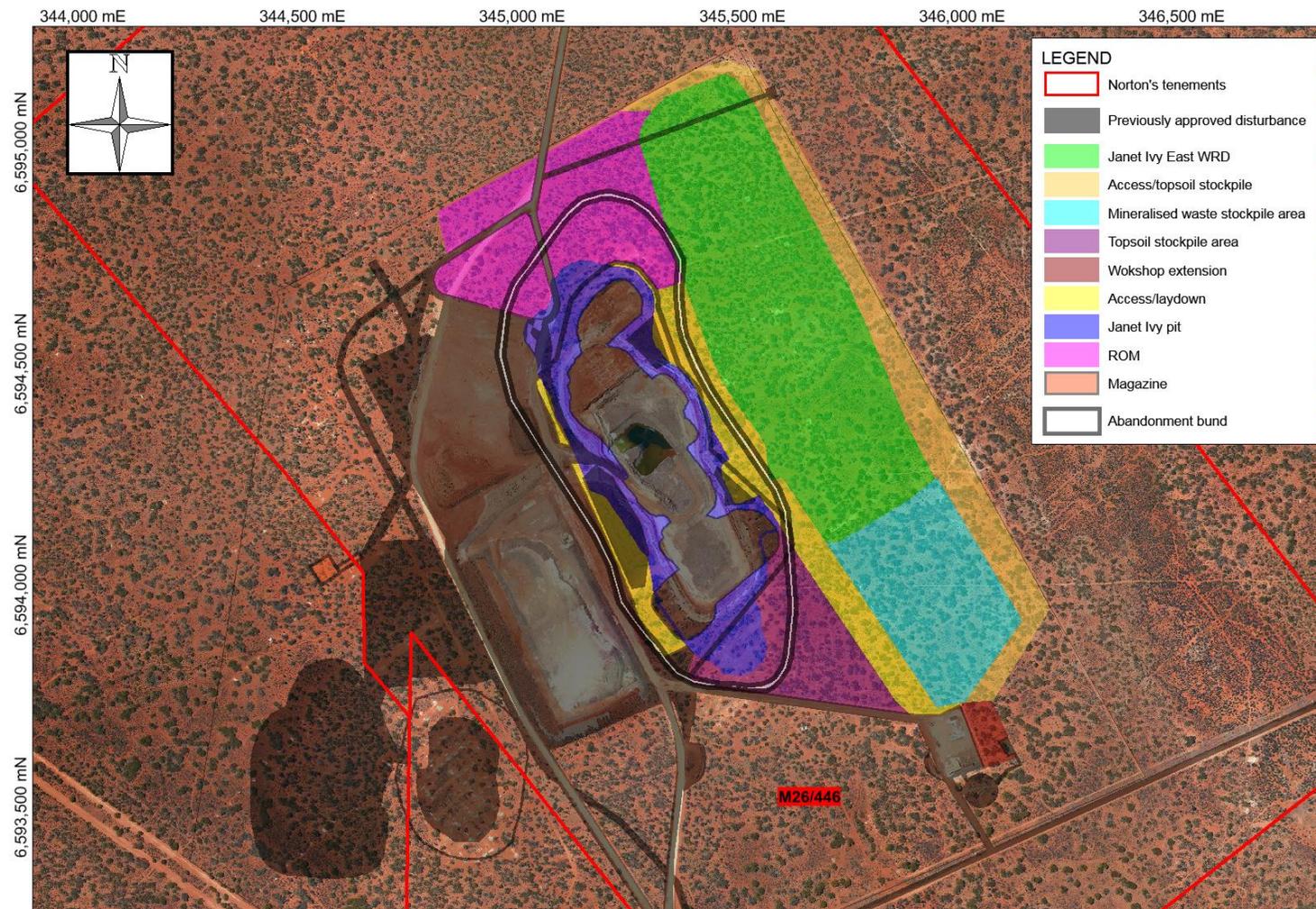


Figure 7. Final site layout plan

4.1 Mining

4.1.1 Ore production

It is proposed that the Victory United open pit will be developed and that the existing Janet Ivy open pit will be extended to the north and south. A total of 2,093,849 tonnes of ore will be mined from the open pits. Design parameters and materials movement is shown in Tables below.

Table 3: Design parameters for Janet Ivy northern and southern extensions

Design Parameters	
Length (max)	1,014m
Width (max)	320m
Surface	367rl
Mine bottom	290rl
Depth (max)	77m
Batter angle	70° Fresh, 60° Oxide and Transitional
Berm width	7m
Base	295rl

Table 4: Design parameters for Victory United pit

Design Parameters	
Length (max)	344m
Width (max)	202m
Surface	370rl
Mine bottom	320rl
Depth (max)	50m
Batter angle	320rl-350rl = 65 degrees, 360rl-surface = 55 degrees
Berm width	7m
Base	320rl

Table 5: Open pit materials movement Janet Ivy pit

Key Operating Parameters	
Ore Movement (t)	1,843,547
Waste Movement (t)	4,031,312
Ore Grade (g/t)	0.99
Strip Ratio (W:O, t:t)	3.51
Mined Gold (oz)	63,328

Table 6: Open pit materials movement Victory United pit

Key Operating Parameters	
Ore Movement (t)	250,302
Waste Movement (t)	2,363,894
Ore Grade (g/t)	1.5
Strip Ratio (W:O, t:t)	9.44
Mined Gold (oz)	12,071

4.1.2 Ore stockpiles

Ore will be classified into different types and grades and stockpiled on the existing ROM pad. As the project progresses, the ROM pad will be expanded as shown in Figure 6. It is expected that high grade ore will be immediately transported to Paddington Mill. Mineralised waste will be stockpiled and processed at a later date. In the event that mineralised waste is deemed uneconomic to process, it will be rehabilitated. A contingency for this is allowed in the waste landform construction and rehabilitation plan.

4.1.3 Ore processing

Ore will be transported for processing approximately 33km via an existing network of roads to the Paddington Mill.

4.1.4 Mining fleet

The mining fleet will likely consist of EX2500 and EX1200 excavators with CAT785, CAT777 and Komatsu 785 haul trucks.

Ancillary equipment will include CAT D10 dozers, CAT 773 water truck, CAT 16H grader, and blast hole drill rigs capable of 102/127/140/165mm diameter holes.

Grade control drilling will utilise a reverse circulation drill rig as required.

4.2 Abandonment Bund

An abandonment bund will be constructed in accordance with DMP guidelines and to prevent inadvertent access at the completion of mining.

4.3 Tailings

Tailings from the Paddington Mill will continue to be disposed of in the approved Paddington In-pit TSF.

4.4 Waste Materials

4.4.1 Waste Characterisation Program

In accordance with DMPs draft guideline "*Materials Characterisation Baseline Data Requirements for Mining Proposals, 2016*" Norton has completed:

- Phase 0 desktop study to understand regional geology, also used analogous sites;
- Phase 1 multi-element surveying and additional sampling from RC drilling; and
- Phase 2 specialist test-work to determine physical stability and potential growth medium attributes.

Norton considers that waste characterisation test-work is intended to be ongoing throughout the life of an operation. Samples are collected and analysed as additional information is available (such as bulk waste material samples); or where required by an amendment to the project. Therefore, Norton considers that there is sufficient waste characterisation information available to support the landform design and commits to consulting with the DMP regarding ongoing test-work results.

4.4.2 Waste Characterisation Test-work

Following the completion of Phase 0 desk top study, Phase 1 multi-element sampling has been conducted on 953 samples across the Janet Ivy project. A copy of the multi-element analysis is included as Appendix 8. Where there are increased sulphur values, additional test-work will be conducted to determine how this material can be effectively managed.

The existing Janet Ivy waste landform demonstrates that the material mined to date has effective stability properties and benign geochemical properties. In addition, rehabilitated areas of the landform show successful revegetation with no evidence of erosion.

The waste characterisation results indicate that the material is non-acid forming due to the low sulphur content. It is not expected that PAF material will be encountered during the mining of project. However, in the event that PAF material is identified, the waste landform designs will be amended in consultation with the DMP. Oxide and transitional waste materials are typical of the Goldfields region and may become dispersive over time with slow drainage that may be prone to hard setting and water logging. These characteristics have been mitigated in the landform design.

Throughout the life of the operation, ongoing sampling will be conducted to evaluate if PAF or dispersive materials are located within the pit. Waste materials will be managed in accordance with Norton's Mined Waste Management Plan. Laboratory analysis of waste material will be sampled as per the Department of Mines and Petroleum Guideline to evaluate if it is PAF. Where required, laboratory analyses will be undertaken to assess the characteristics that influence landform design requirements such as erodibility and ability to support plant growth. The methodologies adopted by Norton are detailed in Table 7.

Table 7 Methodologies of laboratory analyses

Physical parameters	<ul style="list-style-type: none"> • soil texture and particle size distribution; • soil structural stability assessed via Emerson Aggregate Test; • hardsetting / strength of disturbed material assessed via modulus of rupture (MOR test); • hydraulic conductivity testing of selected representative samples; and • water retention characteristics of representative samples.
Chemical characteristics	<ul style="list-style-type: none"> • pH and electrical conductivity; • plant-available macro-nutrients (N, P, K, S) and soil organic matter; • exchangeable cations (Ca²⁺, Mg²⁺, Na⁺, K) of selected samples, derivation of exchangeable sodium percentage (ESP); and • total and water soluble metal concentrations.
Geochemical characteristics	<ul style="list-style-type: none"> – total and sulfate sulfur; – Inorganic C and Acid Neutralisation Capacity (ANC); – Net Acid Generation (NAG); – Net Acid Production Potential (NAPP); and – total and water soluble metal concentrations.

A breakdown of waste type and expected volumes generated by each pit is included in Table 8.

Table 8: Waste type and volumes

	Waste Type	BCM
Janet Ivy	Oxide	150,000
	Transitional	520,000
	Fresh	2,009,977
Victory United	Oxide	949,355

4.4.1 Waste Landform Design

Waste materials mined from the Janet Ivy and Victory United pits will be managed by the four mining stages:

- Stage 1 waste from the Janet Ivy northern extension will be deposited onto the existing Janet Ivy West waste landform;
- Stage 2 waste from the Victory United pit will be deposited onto the Janet Ivy East waste landform;
- Stage 3 waste from the completion of the Janet Ivy northern extension will backfill the Victory United pit void, surplus waste will be deposited onto the Janet Ivy East waste landform; and
- Stage 4 waste from the Janet Ivy southern extension will be deposited onto the Janet Ivy East waste landform;

The existing Janet Ivy West waste landform will be constructed to a final height of 30m. This landform shows excellent vegetation growth with no indication of erosion and will continue to be progressively rehabilitated in accordance with objectives outlined in the Mine Closure Plan.

The Janet Ivy East waste landform will also be constructed to a height of 30m with a lower 20m lift and top 10m lift, separated by a 10m back sloping berm. The slopes will be battered to an angle of 15 degrees. The surface of the landform will be designed to be internally draining to mitigate surface erosion of the slopes. Oxide materials will be encapsulated within the waste landform. Fresh rock will be applied to the profiled walls and ripped through the topsoil to increase slope stability. The top will be cross-rippled with a perimeter crest bund constructed to promote internal drainage.

A cross section of the waste dump is shown in Figure 8, detailing the placement of waste material. In the event that any PAF material is mined, this will be encapsulated centrally within the waste landform and capped with benign fresh rock material.

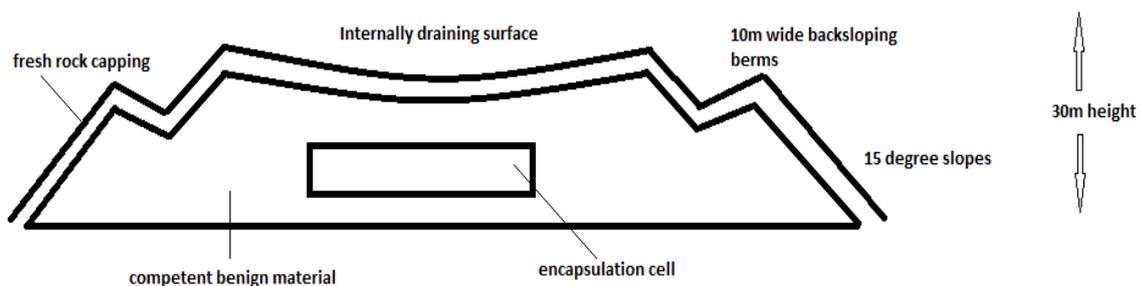


Figure 8: Schematic cross-section of final landform design

4.5 Infrastructure

4.5.1 Site Offices and Workshops

The existing site infrastructure will be utilised for the project. Existing office and workshop infrastructure includes: office buildings, first aid room, crib room, ablutions, water tanks, communications tower, workshop, fuel bay, go-line, wash down facility, parking and laydown areas.

All infrastructure associated with this mining proposal will be removed upon completion of the project.

4.5.2 Water Supply

Water required for the mining activities and dust suppression will be sourced from a standpipe located at the nearby Fort William open pit and transported to the Janet Ivy project area via watercart on an existing haul road.

Potable water will be transported to site from a local service provider.

4.5.3 Power Supply

The Janet Ivy project is not connected to the grid supply. Diesel generators will be used to provide power for the office buildings and workshop areas.

4.6 Workforce Requirements

Norton's existing workforce will be utilised to conduct mining of the Janet Ivy project. All employees will undertake site specific safety and environmental inductions.

The workforce will commute daily, from Kalgoorlie. No camp facilities will be established on-site.

4.7 Transport Corridors

The Janet Ivy project includes an existing network of private and public roads to provide access to the site. Ore will be transported to the Paddington Mill via the existing Janet Ivy haul road. A map showing the haulage route to Paddington Mill is included as Figure 9.

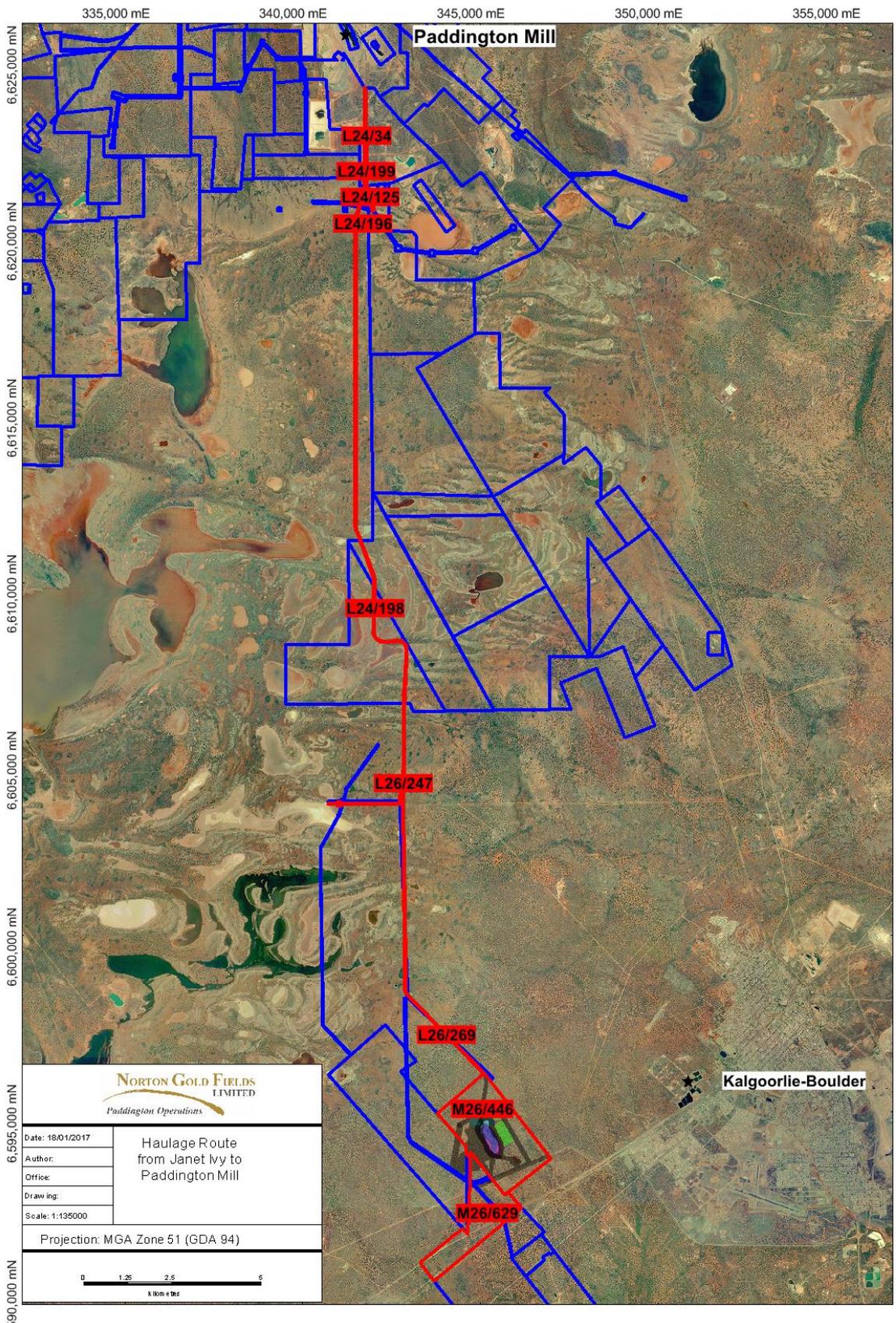


Figure 9: Haulage route from Janet Ivy to the Paddington Mill

5.0 ENVIRONMENTAL MANAGEMENT

5.1 Environmental Management Plan

Norton has developed an Environmental Management Plan (EMP) that establishes a framework under which the environmental, community and compliance risks are identified and managed. The key points included are:

- environmental risks applicable to exploration, mining and mineral processing activities;
- maintaining statutory compliance;
- facilitating statutory approvals; and
- provide a reference of environmental practices, policies and procedures.

This Environmental Management Plan (EMP) outlines how Norton manages impacts and risks to the surrounding environment. The EMP document is intended to be the overarching document that describes the purpose and application of the plans and procedures forming the Environmental Management System (EMS). The document outlines the management of environmental, community and compliance risks and applies to all existing and future activities. Specifically, the document applies to the following activities:

- Exploration, mining and mineral processing activities;
- Procurement, transport, warehousing, use and disposal of goods;
- Onsite commissioning and maintenance of equipment and services;
- Decommissioning, rehabilitation, remediation and closure of assets;
- Community liaison and stakeholder engagement; and
- Communication of environmental management requirements to employees, contractors, service providers, suppliers and key stakeholders.

Norton is committed to the ongoing improvement of environmental performance. The EMS aligns with the structure of ISO14001 and demonstrates Norton's determination to fulfil these requirements.

5.2 Land Tenure

The Janet Ivy project is situated on tenement M26/446, the project will not intersect any buffer zones of land as described in Section 20(5) of the Mining Act 1978. The project area is located within the Black Flag Pastoral Lease. A copy of this mining proposal has been provided to the pastoral manager.

5.3 Land Clearing

Clearing will be conducted in accordance with permit CPS 2986/2. The project includes a total disturbance of approximately 92.84 ha with all disturbance located on tenement M26/446. Details of proposed clearing is included in Table 9. It is anticipated that the actual disturbance for the project will be less than the areas shown in Figure 7.

Norton's management strategies for clearing includes:

- defined areas to be cleared to avoid over-clearing;
- induction discusses clearing objectives to avoid inadvertent clearing;
- operators are supervised during vegetation clearing;
- delineation is in place to protect areas outside of the clearing boundary;
- progressive rehabilitation is completed as soon as practicable;
- growth medium and topsoil resources are stockpiled for future use; and
- topsoil stockpiles will not exceed 2m in height.

Table 9: Disturbance table for Janet Ivy project

Domain	Area of Disturbance (Ha)		
	Proposed	Existing	Total
Abandonment Bund	4.15	0.12	4.27
Haul/Access Roads/Pipelines	7.88	19.04	26.92
Open Pit Annulus	10.16	15.74	25.9
Exploration Disturbance	0.00	4.24	4.24
Fenceline	0.00	1.44	1.44
Communications Tower	0.00	0.49	0.49
Go-Line	0.00	1.03	1.03
Run of Mine	13.29	11.00	24.29
Topsoil Stockpile	7.66	5.66	13.32
Waste Rock Dump	34.26	17.69	51.95
Workshop/Office Area	0.93	1.64	2.57
Mineralised Waste Stockpile	11.84	0.00	11.84
Laydown (General Disturbance)	2.34	0.00	2.34
Magazine	0.33	0.00	0.33
Total	92.84	78.09	170.93

5.3.1 Topsoil and Subsoil Characterisation

The available volume of topsoil reclaimed will be approximately 30,000m³ which is sufficient for the rehabilitation of the project. Topsoil will be removed to a depth of approximately 150mm from disturbed areas. Subsoil beyond this depth is mostly leached material, deficient of nutrients and not considered as valuable for rehabilitation purposes.

Topsoil will be stockpiled in mounds no greater than 2 m high. The topsoil stockpile area is positioned so that stockpiles retain nutrient content and do not to interfere with surface run-off or contribute to the sediment loading of the site drainage or the natural environment. In addition to the topsoil storage area, topsoil will also be stockpiled adjacent to the pit crest and at the perimeter of the final waste landform to minimise the handling of this material. Stockpiles will be located within the disturbance footprint as recorded in the disturbance table. The storage areas identified are adequate to accommodate the volume of topsoil and cleared vegetation stockpiles.

Topsoil retained and used in the previous Janet Ivy waste landform rehabilitation has low salinity and supports diverse and abundant regeneration, without the need for seeding. It is anticipated that by replicating this process, similar rehabilitation outcomes can be expected for the Janet Ivy East waste landform.

5.4 Water Management

5.4.1 Dewatering

It is anticipated that any water generated within Janet Ivy pit will be abstracted for dust suppression. Dewatering will be conducted in accordance with Groundwater licence GWL167686(3) which has an annual allocation of 1,050,000kL/pa. It is not expected that water will be intersected within the shallow Victory United pit.

In the event that the volume of water in the Janet Ivy pit exceeds dust suppression requirements, Norton has submitted an application to the DER to discharge excess water into the Fort William pit.

Some dewatering infrastructure is in place within the project area; including a standpipe at Fort William. Any additional pipelines will be placed within the v-drain of the existing haul road. The footprint of the pipeline is accounted for in Table 9, no additional disturbance will be required for pipelines.

Specifications of standard dewatering pipeline used previously includes:

- constructed of PE100 PN20 HDPE piping that meets;
- AS/NZS 2033:2008: Installation of polyethylene pipe systems;
- AS/NZS 4129:2008 Fittings for polyethylene pipes for pressure applications;
- AS/NZS 4130:2009 Polyethylene pipes for pressure applications; and
- AS/NZS 4131:2010 Polyethylene compounds for pressure pipes and fittings.

The following general principles will be followed to ensure compliance to license conditions and to ensure Norton maintains a high standard of environmental practices during dewatering activities:

- maintenance of pumps, breathers, isolation valves and flow meters;
- bund and sump maintenance and upgrades when required;
- 12 hourly pipeline inspection; and
- site training and induction of all personnel working in the area.

At closure, all dewatering infrastructure will be removed from site in accordance with the Mine Closure Plan completion criteria.

5.5 Waste Production

5.5.1 Wastewater Management

A septic tank system is installed at the ablution facilities in accordance with local government standards.

Oil contaminated runoff from wash-down areas is directed to sumps and passed through an oil separator to remove hydrocarbons from the water. Separated hydrocarbons are collected and pumped to a waste oil tank or appropriate containers for recycling.

In the unlikely event of a spill, the spilled material will be contained and all material removed and disposed of appropriately. The impacted sites will be remediated in accordance with Norton's Hydrocarbon Spill Procedure.

5.5.2 General Waste

Norton aims to reduce waste, re-use where possible and/or dispose of suitably with regard to industry best practice. The principal objective of waste management at the Janet Ivy project is to minimise the impacts on air, water, and land resources, as well as on the local environment, and to manage waste in a manner that avoids any impacts on the health of people working at the project.

All domestic and putrescible waste is managed in accordance with Norton's Waste Management Plan which discusses the disposal of: general waste; co-mingled recycling; paper and cardboard recycling; E-waste; green waste; batteries; fluorescent tubes; toxic substances; biohazardous waste; sewerage; tyres; scrap steel; polypipe; bulk containers; hydrocarbons; and printer cartridges.

5.6 Sediment and Erosion Control

Erosion control and sediment retention controls will include:

- Progressive rehabilitation and revegetation of disturbed areas; and
- V-drains will be installed along the length of roads, as required, to maintain the natural drainage.

Erosion control measures will be reviewed periodically. The aim of these reviews are to assess the effectiveness of erosion controls; identify any remedial measures; and establish any new controls that are required.

5.7 Dangerous Goods and Hazardous Substances

5.7.1 Storage and Transport

All chemicals and hydrocarbons are transported, stored and disposed of in accordance with Norton's Environmentally Hazardous Substances Management Plan. Chemicals and hydrocarbons are stored within bunds. Bunding is designed to minimise the risk of contamination to the surrounding environment by containing any spilled products. In addition to storage bunding, portable pallet bunds are also utilised. Norton engages suppliers certified to transport dangerous goods and undertakes periodical dangerous goods audits across site.

Diesel will be stored within double lined, self-bunded fuel tanks. Bulk explosives will be transported to site and stored in a licenced magazine.

5.7.2 Hydrocarbon Spill Response

Spill response equipment will be available on each maintenance/service vehicle throughout the project. In the event of a hydrocarbon spill, the product will be contained by earthen bunds. The product will then be collect and recycled if practicable or disposed of via waste hydrocarbon collection. Any contaminated soil will be removed, and taken to the bioremediation pad for treatment.

5.8 Atmospheric Pollution

5.8.1 Dust

Dust generated by mining activities will be controlled by the use of water carts. Water carts are utilised to spray saline water onto the surface of haulage roads to suppress dust as required.

During periods of high winds, clearing activities, topsoil handling will be restricted if dust cannot be adequately controlled.

5.8.2 Gaseous Atmospheric Emissions

Mining at the Janet Ivy project will result in the emission of greenhouse gases from a wide range of activities including:

- Clearing of vegetation;
- Use of diesel fuel for mining and transport operations; and
- Power generation.

The effect of the particulates released from the combustion of fuel is expected to be negligible given the location of the project area.

5.9 Noise Pollution

The Janet Ivy project will comply with the noise regulations under the *Mines Safety and Inspection Act 1994*, *Mines Safety and Inspection Regulations 1995* and the *Environmental Protection Act (Noise) Regulations 1997*.

The project operates in accordance with Norton's Noise Management Plan. Periodic noise and vibration monitoring is undertaken as well as hygiene monitoring of vehicles.

5.10 Decommissioning and Closure

5.10.1 Post Mining Land Use

The post mining land use for the Janet Ivy project area will be to return the area to pastoral land use.

5.10.2 Closure Plan

The updated Janet Ivy project will be included in the next Binduli Mine Closure Plan (MCP), approved by the Department of Mines and Petroleum in April 2015 (Reg ID 54448) and to be reviewed 2019. Norton is committed to the goals, objectives and criteria within the Mine Closure Plan.

Completion criteria have been developed to achieve closure objectives and are designed to achieve an end land use. Norton has developed preliminary completion criteria for the Janet Ivy project area and is committed to achieving the goals, objectives and criteria within the MCP.

Closure criteria for the project includes:

- Surface disturbances as a result of exploration activities, including costeans, drill pads, grid lines and access tracks will be rehabilitated;
- All waste material, rubbish, plastic sample bags and chemicals will be removed from the mining tenements at closure, rubbish and scrap progressively disposed of in a suitable manner and all chemicals removed from site by a licensed contractor;
- All infrastructure including pipelines, tanks, equipment, temporary buildings, and concrete pads will be removed from the mining tenements at closure;
- All hydrocarbon contaminated soil will be removed and remediated where practicable. Any contaminated soil that cannot be remediated will be disposed of offsite;
- Roads, tracks and other disturbed areas will be ripped to relieve compaction and scarified to prevent erosion and to enhance revegetation success;
- Erosion controls may be implemented to prevent downslope erosion. It is anticipated that narrow tracks with vegetation along their sides will not require seeding because of the seed source available from the surrounding vegetation. If necessary, seed will be spread to promote natural revegetation;
- Areas of heritage value will be conserved throughout life of the project; and
- Effective internal and external stakeholder consultation is included in the closure plan to ensure any concerns are considered.

The Janet Ivy East waste landform will be rehabilitated in accordance with the final design outlined in Section 4.4.1 of this report and relevant tenement conditions. The specific objectives for the closure and decommissioning of the Janet Ivy project are detailed in Table 10

Table 10 Closure Objectives by Domain

Domain/Feature	Closure Objective
Rehabilitation	Revegetation is developed based on achievable outcomes for growth medium types and review of relevant analogue sites for this land use.
Stability/Erosion	Rehabilitated areas are to be designed and left as a safe and stable feature and, where practicable, reflects and/or integrates with the surrounding topography.
Flora and Fauna -	Disturbed areas to be rehabilitated where practicable to reflect local flora, fauna habitats and support local fauna. Rehabilitation is undertaken progressively and during closure.
Contamination	Manage ongoing operations and apply risk assessments to minimize contamination.
Waste	Waste that cannot be reasonably recycled or re-used is disposed of appropriately and in accordance with controlled waste regulators and waste acceptance criteria.
Surface Water	Surface water management is in accordance with requirements outlined in the conditions and guidelines at the time of approval of operations. Hydrological patterns and quality are not adversely affected longterm.
Groundwater	Groundwater flows and quality are not adversely affected long-term.
Soils	Manage soil disturbance and contamination during operations and decommissioning. Manage topsoil stockpiling, re-use and supply during operations to improve rehabilitation outcomes.
Heritage	Manage the identified heritage sites according to agreed significance and final land use.
General Disturbed Areas and Infrastructure	Final management of retained infrastructure and access areas to be the responsibility of the future owner. Removed infrastructure is to be recycled or disposed of at a suitable landfill. Disturbed and compacted areas are rehabilitated to reflect the surrounding vegetation communities and/or support agreed future land use.
Open Pits	Pits are to be left in a safe state, suitable for the agreed post-mining land use. Any water remaining in pits should meet freeboard requirements and not overflow into the surrounding environment. Where pit water is potable to brackish, less than 14,000 mg/L TDS and where practical, safe access and egress is established to allow pastoral access to the water source.
Waste landforms	Waste landforms are to be designed and left as a safe feature and, where practicable, reflects and/or integrates with the surrounding topography. Potential contamination from waste landforms to surrounding environment is minimised as far as practicable. Where practicable, constructed waste landforms sustain local native vegetation communities consistent with the analogue vegetation communities and/or agreed future land use.
Mineralised waste stockpile	Potential contamination from mineralised waste stockpile to surrounding environment is minimised as far as practicable. Disturbed areas are rehabilitated to reflect the surrounding vegetation communities and support agreed future land use.
Haul Roads and tracks	Relevant parties will be consulted on the future of the haul road. Where, rehabilitated, roads/tracks will be ripped and erosion control banks may be installed to prevent inadvertent third party use.

5.11 Rehabilitation

The objective of the rehabilitation program at the Janet Ivy project area is to rehabilitate the disturbed areas to ensure that soil erosion and subsequent sedimentation is minimised and endemic and native plant species are re-established.

The Janet Ivy East waste landform has been designed to reflect the successful rehabilitation of the Janet Ivy West waste landform and will be constructed with the same material types.

5.11.1 Rehabilitation Principles

The rehabilitation of the project sites will be guided by the following principles:

- Ensure that vegetation clearing is kept to a minimum;
- Collect and correctly stockpile (no higher than 2m) vegetative material and available topsoil for later use at selected sites;
- Strip topsoil to 150mm for immediate re-use on prepared surfaces where possible;
- Progressively rehabilitate completed areas as soon as practicable;
- Only use local native plant species for seeding; and
- Undertake decommissioning and closure of the site to industry leading practice principles and to statutory requirements.

To assist with ongoing review of the rehabilitation and environmental management at the Janet Ivy project, Norton will submit an Annual Environmental Report (AER) to DMP in March each year.

5.12 Environmental Monitoring

5.12.1 Climate

Weather data is monitored from four Environ Data WeatherMation stations located across Norton's tenements. The closest weather station to the project area is located approximately 2km south of the Janet Ivy pit.

5.12.2 Emissions Reporting

As part of the National Pollution Inventory (NPI) and National Greenhouse and Energy Reports (NGER), quantities of air and other emissions will be estimated or measured and reported annually. This will include emissions from various activities on-site including blasting, vehicle movements and wind erosion.

5.12.3 Weed Management

Disturbed areas are periodically inspected to identify if weed species are present. Weeds are controlled in accordance with Norton's Weed Management Plan. The objectives of the weed management plan are to comply with the State and Commonwealth legislation, reduce the detrimental impact of weeds on existing and rehabilitated vegetation and improve closure outcomes.

5.12.4 Ecosystem Function Analysis

Ecosystem Function Analysis is conducted across rehabilitated landforms annually. Regularly scheduled monitoring of the sites provides data that determines the trends for ecosystem development with time. The monitoring is utilized to identify if a rehabilitated site is progressing to meet closure objectives.

5.12.5 Groundwater Monitoring

Groundwater production from the borefields and mine groundwater abstraction is monitored in accordance with the terms and conditions of Groundwater Well Licences issued by the Department of Water.

5.12.6 Mining Waste

Mined waste materials are sampled and analysed in accordance with Norton's Mined Waste Management Plan. The plan provides guidance on the management of mined waste materials generated through open pit and processing activities.

6.0 SOCIAL IMPACTS

6.1 Aboriginal Heritage

No sites of archaeological or ethnographic significance will be impacted by the proposed development of the Janet project. Should an Aboriginal heritage site be discovered during implementation of this proposal, the site will be left undisturbed and Norton will contact the Department of Aboriginal Affairs in accordance with the *Aboriginal Heritage Act 1972*.

6.2 European Heritage

No sites of European heritage significance will be impacted by the Janet Ivy project.

6.3 Workforce Induction and Training

All of the workforce, both Norton's Paddington Operations employees and contractors, will be given a comprehensive safety, occupational health and environmental management induction on arrival at the site.

Ongoing employee training will involve environmental presentations at "tool-box" meetings and specific environmental courses as required.

6.4 Stakeholder Engagement

The stakeholder engagement process has followed the five principles outlined in the Strategic Framework for Mine Closure (ANZMEC/MCA 2000):

- Stakeholders and interested parties have been identified;
- Consultation is carried out on a regular basis with all these parties;
- A targeted communication strategy should reflect the needs of the stakeholder groups and interested parties;
- Adequate resources have been allocated to ensure the effectiveness of the consultation process; and
- Wherever practical, the company will work with communities to manage the potential impacts of mine closure.
-

This consultation process highlights Norton's commitment to ongoing and appropriate consultation in order to understand and meet the needs of stakeholders. The stakeholder consultation will be ongoing throughout the life of the project in accordance with Norton's Stakeholder Engagement Procedure.

The Stakeholders and interested parties that have been identified are:

- City of Kalgoorlie-Boulder (CKB);
- Department of Environment Regulation (DER);
- Department of Mines and Petroleum (DMP);
- Department of Water (DOW);

- Black Flag pastoral managers; and
- Native Title Groups;

7.0 CONCLUSIONS

Norton considers the adoption of good environmental practice and project management skills will minimise the effect of the Janet Ivy project on the environment.

The objectives of this project and the environmental benefits to be gained from its implementation are consistent with the Norton's Environmental and Community Policy.

GLOSSARY OF TERMS

Term	Definition
AS/NZ S	Australian/New Zealand Standard
BOM	Bureau of Meteorology
CKB	City of Kalgoorlie-Boulder
Closure	A whole-of-mine-life process, which typically culminates in tenement relinquishment. It includes decommissioning and rehabilitation.
Completion	The goal of mine closure. A completed mine has reached a state where mining lease ownership can be relinquished and responsibility accepted by the next land user (DITR 2006a).
CPS	Clearing Permit System
DAFWA	Department of Food and Agriculture, Western Australia
DER	Department of Environment Regulation, Western Australia.
Decommissioning	A process that begins near, or at, the cessation of mineral production and ends with removal of all unwanted infrastructure and services.
DoW	Department of Water, Western Australia.
Disturbed	Area where vegetation has been cleared and/or topsoil (surface cover) removed.
Disturbance Type	A feature created during mining or exploration activity, e.g. WRDs, haul roads, access roads, ROM, plant site, TSF, borrow pits, drill pads, stockpiles, office blocks, accommodation village, etc.
DMP	Department of Mines and Petroleum, Western Australia.
DoE	Department of the Environment, Commonwealth
DPaW	Department of Parks and Wildlife, Western Australia
Environment	Living things, their physical, biological and social surroundings and interactions between all of these.
EMP	Environmental Management Plan
GWL	Groundwater Licence. Permission from the DoW to extract groundwater
Ha	Hectares
Legal Obligations	Legally binding conditions and commitments relevant to rehabilitation and closure at a given mine site.
NAF	Non-acid forming material
Norton	Norton Gold Fields Limited
MCP	Mine Closure Plan
Paddington	Paddington Gold Ltd Pty
PAF	Potentially-acid forming material
Post-mining land use	Term used to describe a land use that occurs after the cessation of mining operations.
The Project	The total integrated mining operations at PROJECT NAME in which a number of sites contribute to the overall operation to supply ore, processing facilities and disposal of waste products.
Rehabilitation	The return of disturbed land to a stable, productive and/or self-sustaining condition, consistent with the post-mining land use.
Revegetation	Establishment of self-sustaining vegetation cover after earthworks have been completed, consistent with the post-mining land use.
ROM	Run-of-mine pad, where mined ore is placed prior to being transported for processing.

Term	Definition
Safe	A condition where the risk of adverse effects to people, livestock, other fauna and the environment in general has been reduced to a level acceptable to all stakeholders.
Stable	A condition where the rates of change of specified parameters meet agreed criteria.
Stakeholder	A person, group or organisation who have an interest in a particular decision, either as individuals or representative of a group, with the potential to influence or be affected by the process of, or outcome of, mine closure.
TSF	Tailings Storage Facility. An area used to store and consolidate tailings, and may include one or more tailings storage features.
Tenement	Land tenure granted under the <i>Mining Act 1978</i> e.g. Mining Lease, Exploration Licence, Prospecting Licence, Miscellaneous Licence and General Purpose Lease.
WRD	Waste Rock Dump/Landform

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