GARDEN GULLY PROJECT
WORKS APPROVAL APPLICATION

ATTACHMENT 3B
PROJECT ACTIVITIES

PREPARED FOR:

NEW MURCHISON GOLD LIMITED

NMG
New Murchison
Gold Limited

DECEMBER 2024

[redacted]

MBS
ENVIRONMENTAL

MARTINICK BOSCH SELL PTY LTD
ABN 60 102 614 479

MBS ENVIRONMENTAL

environmental and geoscience consultants

GARDEN GULLY PROJECT
ATTACHMENT 3B - WORKS APPROVAL

Distribution List:

[redacted]

Disclaimer, Confidentiality and Copyright Statement

This report has been prepared for **New Murchison Gold Limited** on the basis of instructions and information provided by **New Murchison Gold Limited** and therefore may be subject to qualifications which are not expressed.

No person other than those authorised in the distribution list may use or rely on this report without confirmation in writing from MBS Environmental and **New Murchison Gold Limited**. MBS Environmental has no liability to any other person who acts or relies upon any information contained in this report without confirmation.

This report has been checked and released for transmittal to **New Murchison Gold Limited**.

These Technical Reports:

TABLE OF CONTENTS

TABLES

1. INTRODUCTION

1.1 BACKGROUND

New Murchison Gold Limited (NMG), previously (Ora Gold Ltd) are proposing to develop the Crown Prince deposit (Crown Prince), a new gold zone at the Garden Gully Project (the Project) wholly owned by NMG. The Project is located 650 km northeast of Perth and 20 km north of Meekatharra in the Murchison region of Western Australia (Figure 1, Attachment 2).

The Project is accessed by Meekatharra-Mount Clere Road (unsealed), approximately 13 km from the Great Northern Highway. Transport of ore products from the Project will be via the mine site access roads and the Great Northern Highway to Bluebird Gold Mine (Bluebird), located approximately 15 km south southwest of Meekatharra.

1.2 APPROVAL HISTORY

No referrals under Part IV of the *Environmental Protection Act 1986* (EP Act) or the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) have been made for the Project. No approvals under Part V of the *Environmental Protection Act 1986* (EP Act) or *Mining Act 1978* have been granted for the Project at this stage. This Works Approval Application will be submitted in conjunction with a Native Vegetation Clearing Permit, Mining Proposal and Mine Closure Plan.

The prescribed premises comprises much of mining tenement M 51/886, a portion of M 51/889 granted under the *Mining Act 1978,* as well as miscellaneous tenement applications L 51/138 and L 51/139 (Attachment 1A and figures 3 and 4 of Attachment 2).

1.3 PURPOSE

This Works Approval application is submitted to the Department of Water and Environment Regulation (DWER) for approval of specific infrastructure and activities proposed for the Project as classified as Prescribed Premises Categories under Schedule 1 of the EP Act Regulations.

This application specifically seeks approval for the construction and commissioning of the following scheduled activities at the Crown Prince Project:

- Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore up to 50,000 tonnes or more per year (Category 6).
- 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 up to 50,000 tonnes or more per year (Category 12).
- Proposed tenure overlaps existing tenure held by Big Bell Gold Mines Pty Ltd including the prescribed premises boundary of licence L4496/1988/11. Therefore this application also seeks authorisation for discharge of water to pits (Sabbath and Five Mile pits) which are within the prescribed premises boundary of L4496/1988/11.

Information presented in this document aims to assist DWER in assessing the adequacy of proposed pollution prevention and control measures to ensure adverse environmental impacts are prevented or minimised to levels where appropriate environmental standards can be complied with.

1.4 PROJECT SUMMARY

The Garden Gully Project is a greenfield site and NMG is proposing to develop the Project as an open pit mining, crushing, and trucking operation, with stockpiled ore transported off site for processing. It is proposed the Project will include:

- Development of two open pit mines, extending below the water table.
- Run-of-mine (ROM) pad and ore storage area.
- A permanent waste rock landform (WRL).
- Low grade ore (LGO) stockpile.
- Above-ground water storage (Turkeys nest).
- Mobile crushing, screening and sampling plant.
- Other associated mining infrastructure:
  - Topsoil stockpiles.
  - Mine haul roads, access roads and tracks.
  - Fuel storage and dispending facilities.
  - Dewatering infrastructure (including pipelines to Sabbath and Five Mile Well Pit).
  - Surface water management infrastructure.
  - Laydown areas.
  - Exploration core storage yard.
  - Hardstand areas.
  - Mine equipment maintenance workshop.
  - Temporary administration / office / gatehouse buildings.
  - Explosive storage (Magazine).
  - Diesel generators.
  - Communication (satellite or microwave tower).
  - Fencing to control livestock.

1.5 TENURE

The Project is situated within Mining Leases M 51/886 and M 51/889 and two pending Miscellaneous Lease applications as listed in Table 1. Mining operations and the majority of infrastructure are located on M 51/886 with some supporting infrastructure located on M 51/889. Both M 51/886 and M 51/889 are held by Zeus Mining Pty Ltd, a wholly owned subsidiary of Red Dragon Mines Pty Ltd. Red Dragon Mines Pty Ltd is a wholly owned subsidiary of NMG.

The first Miscellaneous Lease application (L 51/138) which is proposed for dewatering infrastructure to Sabbath Pit, overlays L 51/98, and portions of E 51/1791 and M 51/322 as well as the road easement of a portion of Meekatharra Mount Clere Road. The second Miscellaneous Lease application (L 51/139), which is proposed for dewatering infrastructure to Five Mile Well Pit, overlays land covering road easement of the southern portion of Meekatharra Mount Clere Road as well as portions of E 51/1791, M 51/199, M 51/670, M 51/671, E 51/2263 and Crown Land. Tenements L 51/98, M 51/322, M 51/199, M 51/670 and M 51/671 are held by Big Bell Gold Mines Pty Ltd, a wholly owned subsidiary of Westgold Resources Ltd (Westgold). Pending lease E 51/2263 was submitted by Redstone Metals Pty Ltd. E 51/1791 is held by Zeus Mining Pty Ltd.

NMG has an operational and access agreement with Westgold over L 51/98, M 51/322, M 51/199, M 51/670 and M 51/671 for dewatering infrastructure as well as haulage of ore offsite for processing. The agreement with Westgold also includes ore purchase and processing arrangements at Westgold's Bluebird Mill at Meekatharra. As described, proposed tenure overlaps some existing tenure held by Big Bell Gold Mines Pty Ltd including the prescribed premises boundary of licence L4496/1988/11. Therefore this application also seeks authorisation for discharge of water to pits (Sabbath and Five Mile Well pits) which are within the prescribed premises boundary of L4496/1988/11.

The proposed prescribed premises boundary for the Project comprises much of mining tenement M 51/886, a portion of M 51/889 granted under the *Mining Act 1978,* as well as miscellaneous tenement applications L 51/138 and L 51/139 (Figure 3 and Figure 4 of Attachment 2).

Table 1: Crown Prince Project

Tenement	Area (ha)	Tenement Holder	Grant Date	Expiry Date
M 51/886	204.29	Zeus Mining Pty Ltd	21/02/2022	20/02/2043
M 51/889	189.43		21/02/2022	20/02/2043
L 51/138*	69.00		TBD	TBD
L 51/139*	114.00		TBD	TBD

**NMG submitted Miscellaneous Licence applications for pipeline infrastructure to Sabbath and Five Mile Well pits and these applications are pending.*

1.6 LICENSEE AND OCCUPIER OF PREMISES

The Project is wholly owned by NMG. All tenements associated with the Project are held or proposed by Zues Mining Pty Ltd. The proponent and key contact details are provided in Table 2.

[redacted]

1.7 PRESCRIBED PREMISE CATEGORIES

This Works Approval Application (WAA) is submitted to the DWER for approval of specific infrastructure and activities proposed for the Project as classified as Prescribed Premises Categories under Schedule 1 of the EP Act Regulations.

The Prescribed Premise Categories applicable to the Project are identified in Table 3.

Table 3: Relevant Prescribed Premise Categories

Category No.	Category Description	Prescribed Premise Threshold	Infrastructure
6	Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore.	50 000 tonnes or more per year	Pumps and pipeline
12	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.	50 000 tonnes or more per year	Mobile crushing and sampling plant (mobile crusher)

2. EXISTING ENVIRONMENT

A description of the existing environment at the Project is provided in Attachment 7 (Siting and Location) of the WAA and is not repeated here. Attachment 7 details the siting and location of the Project, the environmentally sensitive receptors, and the environmental siting context at a regional level.

3. KEY CHARACTERISTICS OF THE PROJECT

Infrastructure subject to the Prescribed Premise Categories of this Works Approval application is discussed in the following sections.

3.1 MINE DEWATERING INFRASTRUCTURE (CATEGORY 6)

3.1.1 Overview

NMG is proposing to dewater two open pits (West Pit and East Pit) to enable for safe mining below the current water table. Water from pit dewatering will be used for dust suppression in the mining area and on the haul road. The mine dewatering system will consist of submersible pumps and diesel generators that will pump water from in-pit sumps in West and East Pit. Groundwater will be pumped out of boreholes using submersible bore pumps powered by diesel generators, then via a pipeline to a Turkeys Nest located to the south. Water in the Turkeys Nest will be pumped, for storage in two historic pits (Five Mile Well and Sabbath pits) via two overland pipelines. The proposed design capacity is 3,700 m^3 per day up to a maximum of 1,400,000 kL per annum

Mine dewatering is proposed to be undertaken under a Groundwater Licence application which has been submitted with DWER.

3.1.2 Pumping

Electro-submersible pumps (one per pit) will be installed in East and West Pits with power supply to the pumps via portable diesel fuel generators with auto-start capability. It is anticipated the pumps will have similar specifications to Grundfos SP95-9.

In-pit pumping in West Pit will be via excavated sumps located at the bottom of the pit. A flow meter will be installed at the in-pit sumps to enable water volumes to be recorded.

3.1.3 Pipeline

The dewatering pipeline will extend approximately 12.5 km and 7.4 km from the Turkeys Nest to the discharge location at Five Mile Well Pit and Sabbath Pit respectively. The pipelines will have standpipe access to enable re-use of dewater for dust suppression and road watering activities. The proposed pipeline will be two multiple polyethylene 160 mm pipes (PN10). Water flow meters will be placed on the pipelines to enable water usage to be determined. The pipelines will be laid loose on the ground and bunded to prevent damage and movement.

The proposed pipeline network is shown in Figure 11 of Attachment 2. The pipeline fabrication, installation and testing will comply with Australian standards as shown below:

- Installation: AS2033;
- Dimensional specification (fitting): AS4129 SDR 26 or AS4130; and
- Material specification: AS4131.

3.1.4 Discharge Point

Water is to be used principally in the form of dust suppression and for operational activities. Surplus water is to be discharged onto hard rock walls of both historic pits. Five Mile Well pit has a capacity of 1.2 x 10^6 m^3, and Sabbath pit 510,000 m^3. The pits are projected to have the capacity to store water for approximately the first 700 days of mining at the predicted dewatering rates of around 3,700 m^3 per day, and likely longer with seepage losses from the pits. The final mine voids are anticipated be permanent groundwater sinks, although in the case of East Pit it is possible the lake could be a flow-through feature, with flow towards West Pit. Water in the pit lakes will gradually

increase in salinity, but there should be no seepage from the pit lakes back into the surrounding groundwater (Rockwater 2024).

3.2 CRUSHING AND SAMPLING PLANT (CATEGORY 12)

The key characteristics of the Category 12 prescribed premises are presented in Table 4.

Table 4: Key Characteristics of the Mobile Crushing and Sampling Plant

Operating hours	Continuous (12 hours per day, 7 days a week, 365 days a year).
Flow sheet	Primary and secondary crushing and sampling.
Type of mobile crusher	Two stage (jaw, cone) diesel hydraulic unit with automatic sampler.
Ore processing rate	Maximum throughput 300 t/hr*
Ore production rate	1.5 Mt over a 3 year mine life.
Supporting equipment	Front end loader.

**Alternative options (including intermittent operation) for the operating hours will be proposed as part of the contractor selection process. All emissions presented in this application are conservatively based on continuous operation and at the higher processing rate.*

Ore from the pits will be loaded into haul trucks via excavators and delivered to stockpiles at the ROM pad. Ore will be reclaimed from these stockpiles using a front-end loader and fed to the adjacent crushing circuit, comprised of a jaw crusher (primary), cone crusher (secondary crusher) and sampling set up, before being delivered to the product stockpile.

A process flow diagram outlining the mobile crushing and sampling operation is presented in Figure 12 of Attachment 2. The location of the proposed mobile crushing and sampling plant is shown in Figure 13 of Attachment 2 and a general arrangement photo is presented in Figure 14 of Attachment 2.

3.2.1 ROM Pad and Stockpile

The ROM pad and stockpile will cover an area of approximately 2.11 ha and have a capacity to store up to 50 Kt of ore. The ROM pad will be constructed using waste of the pit, covered with sheet of low grade ore material with similar chemical characteristics to ore sourced from the mine pits which is non-fibrous, non-radioactive and non-acid forming (NAF). The ROM will be sized and built to simplify the loading requirements and the ultimate height will be approximately 5 m to 7 m dependent on ground level.

The ROM Pad will support storage of up to four weeks of crusher feed to allow for operational disruptions between mining and processing. Ore will be added to the ROM stockpile on day shift only by a mining contractor. Ore will be fed to the crusher during 12 hours shifts (though the operating hours will be the subject of discussion during the tender process).

3.2.2 Crushing and Sampling

ROM ore will be rehandled from the ROM stockpile by the front-end loader into the dump hopper of the jaw crusher (primary). The front-end loader will access the front of the ROM stockpile, whilst the haul trucks arriving from the pit will dump on to stockpiles from a raised tiphead at the back of the ROM pad.

The indicative specifications for the crushing and sampling station are outlined in Table 5. As these are indicative only, they are subject to change, although the anticipated throughput, emissions and discharges described in this WAA remain the same, or will be lessened.

The level of crushed ore in the primary crusher chamber would be controlled by an apron feeder which would discharge onto the primary crusher discharge conveyor. The primary crusher discharge conveyor transfers ore to the secondary crusher. The secondary crusher discharge conveyor stacks ore onto the product stockpiles. The discharge conveyor ore stream travels over a weightometer and is sampled using an automatic cutter sampler, operating at predetermined intervals, to produce a representative sample for a defined period of time. Weights and samples are using to determine ore properties for payment.

This operation is not planned to produce any waste material.

A flow chart of the crushing and sampling process as well as the general arrangement of the unit are shown in Figure 12 and Figure 14 of Attachment 2, respectively.

Dust generated from this activity would be minimised through the application of dust suppression practices as detailed in Table 5. Raw water sprays would be used at the head of the conveyor for dust suppression prior to discharging onto the ore stockpiles. The mobile crusher is piped for dust suppression and equipped with spray bars.

Table 5: Mobile Crushing and Sampling Plant and Indicative Specifications

Options and Supplier	TEREX[1]
Primary Crusher	**J1480 Jaw Crusher**
Feed opening (mm)	1,415 x 820
Feeder Capacity	10 m^3
Capacity (up to)	400 t/hr
Engine power (kW)	328
Transport length (m)	18.00
Transport width (m)	3.38
Transport Height (m)	3.80
Dust Management Option	Fitted with hose and spray bars as standard, diesel water pump.
Secondary Crusher	**C-1550 Cone Crusher**
Feed opening (mm)	1,300
Feeder Capacity	8 m^3
Performance Capacity (up to)	400 t/hr
Engine power (kW)	390
Transport length (m)	16.80
Transport width (m)	3.00
Transport height (m)	3.80
Dust Management Options	Fitted with hose and spray bars as standard, diesel water pump.

Options and Supplier	TEREX[1]
Screen	**893+ Screen**
Total Screening Area	21.2 m^3
Feeder Capacity	10 m^3
Performance Capacity (up to)	400 t/hr
Transport length (m)	17.90
Transport width (m)	3.00
Transport height (m)	3.60
Dust Management Options	Fitted with hose and spray bars as standard, diesel water pump.
Sampling Plant	**Process 26 P300**
Cut interval	TBA
Cut size	TBA
Dust Management Options	Hydraulically driven water pump for dust suppression.

1. *Supplier and specifications are indicative only, and are subject to change, as required.*

The plant would be located on a high point within the mining lease. No specific surface water management infrastructure is deemed necessary. Drains may be established to encourage rainfall run-off from the ROM, crusher area and product stockpiles to run into a constructed diversion channel running north-south across the project tenement to a settling pond, depending on site conditions and weather events. This would limit the potential for sediment run-off outside of the land disturbance footprint, with non-contact water diverted through minor surface drainages to preserve natural overland flow paths.

3.2.3 Product Stockpiles

Ore will be collected from the product stockpiles and transported to third party owned processing plant for treatment. The initial destination will be the Bluebird plant south of Meekatharra.

4. TIME LIMITED OPERATIONS

4.1 CONTEXT

Environmental commissioning is the process of commencing operation of particular plant and/or equipment and ensuring that the outputs of the activity (i.e. discharges or emissions) meet the environmental criteria or specifications nominated in the WAA, and follows the submission of an Environmental Compliance Report to confirm that the works have been constructed in accordance with the conditions of the Works Approval. The mobile crushing and sampling plant is an existing and operational unit that does not require commissioning for the purpose of the Project, therefore a commissioning plan has not been submitted with this WAA. The construction of the dewatering infrastructure is proposed to commence in Q2 2025 and is expected to be completed in Q2 2025, with dewatering at the discharge point beginning immediately upon the completion of construction, and receipt of approvals. It is requested that time limited operations be undertaken under the Works Approval, to allow for the assessment and determination of a Licence.

The mobile crushing and sampling plant is a track mounted, two stage mobile unit (jaw, cone) with an automatic sampler. The product specifications are ~40 mm material (P80 of -28.5 mm). All machine components of the processing plant will be diesel hydraulic operated. The components of the system will be delivered by on-road highway going flatbed truck trailers and tracked into required operating positions on delivery to site. Commissioning of the circuit is relatively simple and consists of testing interlocks between each unit and is expected to take less than one shift.

Following the completion of construction, and upon submission of the relevant documentation to DWER (as required), the prescribed premises would enter a phase called Time Limited Operations (TLO), which allows operations, post-environmental commissioning, to continue under the Works Approval prior to the grant of a Licence for the prescribed premises.

Conditions would be included in the Works Approval to regulate emissions and discharges that arise during the TLO phase. These conditions are based on the design performance of the operations at the premises as assessed and conditioned in the Works Approval, and as provided in the WAA (see Section 3 of this Attachment and Attachment 6A)

4.2 TIME LIMITED OPERATIONS

Due to the nature of the operations of the Project (being that the activities require only simple commissioning), NMG proposes a Time Limited Operation period of 180 days be granted for the prescribed premises category nominated in Section 1.3, as summarised in Table 6.

Operations under Licence conditions would begin when the Licence is granted.

Table 6: Proposed Time Limited Operations for Prescribed Premises

Infrastructure	Time Limited Operations Period (days)
Dewatering	180
Mobile crushing and sampling plant	180

4.3 NON-COMPLIANCE

Where the operation of the premises does not meet the design specifications as proposed in this attachment and Attachment 6A, it is likely the premises will be unable to comply with TLO phase conditions. Under these circumstances, NMG would apply for an amendment to the Works Approval to allow for reassessment of emissions and discharges. Operations will need to cease in this period, but if the amendment is granted, TLO phase will recommence.

5. PROPOSED CLEARING ACTIVITIES

Clearing of native vegetation is required for project development. NMG proposes to clear 131.45 ha of native vegetation within a Development Envelope of 373 ha which allows adequate space within the Development Envelope for proposed and future mining, siting of infrastructure, and associated activities. The project development will utilise existing disturbed areas where possible to minimise clearing.

A Native Vegetation Clearing Permit (NVCP) application will be submitted concurrently to the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) for the Project. All clearing activities will be undertaken in accordance with the granted NVCP. The area proposed to be cleared within the Prescribed Premises is shown in Attachment 3C.

6. REFERENCES

Australian Standard AS/NZS 2033/2024: Design and installation of polyolefin pipe systems.

Australian Standard AS/NZS 4129/2020: Fittings for polyethylene (PE) pipes for pressure applications.

Australian Standard AS/NZS 4130/2018: Polyethylene (PE) pipes for pressure applications.

Australian Standard AS/NZS 4131/2010: Polyethylene (PE) compounds for pressure pipes and fittings.

Rockwater. 2024. *Garden Gully Project - Hydrological and Hydrogeological Assessment*. Report for Ora Gold Pty Ltd. March 2024.