NORTHERN TERRITORY GOVERNMENT

Environmental Approval

AMENDED PURSUANT TO SECTION 106 OF THE *ENVIRONMENT PROTECTION ACT 2019*

Approval number	EP2021/005 - 002
Approval holder	Primary Gold Pty Ltd
Australian Business Number (ABN)	42 122 726 283
Registered business address	Level 26, 140 St Georges Terrace, Perth WA, 6000 Australia

Action: Rustlers Roost and Quest 29 Open-Cut Mine Redevelopment

Recommence open-cut gold mining across two mine sites (Rustlers Roost and Quest 29) with expansion of all existing open-cut pits and development of two new pits. The key supporting infrastructure will include an 11 km upgraded access track/haul road connecting the two sites, a new purpose-built carbon-in-leach gold processing plant, and a tailings storage facility (TSF) at Rustlers Roost. The action includes clearing 369 ha for the construction of the tailings dam and waste rock dumps, and a 31 megawatt gas-fired power station located at Rustlers Roost.

Pit dewatering will occur prior to commencement of mining (by open-cut drill and blast) as well as during mining, and the wastewater will be discharged to a waterway under a waste discharge licence.

Constructed waste rock dumps will feature at both Rustlers Roost and Quest 29. The majority of the waste material generated by the action will be disposed of in surface waste rock dumps. A proportion of the waste material will be used to backfill a number of open-cut pits at both Rustlers Roost and Quest 29.

The approximate life of mine is 10 years and post-mining, with several residual pit voids left in place (i.e. not backfilled) to form pit lakes. Rehabilitation of the action will be completed in accordance with the conditions of this environmental approval.

Advisory notes:

i. This amended approval is granted under section 106 of the ***Environment Protection Act 2019 (EP Act)*** for the action to be undertaken in the manner described, including with implementation of the environmental management measures, commitments and safeguards documented in the Environmental Impact Statement (EIS) (comprising the Draft EIS, and the Supplement to the Draft EIS). If there is an inconsistency between the EIS and this environmental approval, the requirements of this environmental approval prevail.

ii. This approval does not authorise the approval holder to undertake an activity that would otherwise be an offence under the ***Water Act 1992***.

iii. All statutory authorisations as required by law must be obtained and maintained as required for the action. No condition of this environmental approval removes any obligation to obtain, renew or comply with such statutory authorisations.

iv. Management actions relating to threatened species must be developed in consultation with Flora and Fauna Division of the Department of Environment, Parks, and Water Security (DEPWS).

v. The approval holder has a duty to notify the Chief Executive Officer of DEPWS of incidents in accordance with Part 9 Division 8 of the EP Act.

vi. Submission of all notices, reports, documents or other correspondence required to be provided to the CEO and/or Minister as a condition of this approval must be provided in electronic form by emailing environmentalregulation@nt.gov.au

Table 1 Description and indicative metrics for action elements provided in the EIS

Action element	Description
Commodity	Gold
Rustlers Roost open-cut pits	1) Rustlers Roost Main Pit (existing) – mined to -125 m AHD 2) Annie Oakley Pit (planned for development) – mined to 5 m AHD 3) Annie's Dam Pit (planned for development) – mined to 35 m AHD
Quest 29 open-cut pits	1) BHS Pit (existing) – mined to 48 m AHD 2) North Koolpin Pit (existing) – mined to 22 m AHD 3) South Koolpin Pit (existing) – mined to -3.5 m AHD 4) Taipan Pit (existing) – mined to -11 m AHD 5) Zamu Pit (existing) – mined to -36 m AHD
Rustlers Roost WRD's	1) Northern WRD and 2) Southern WRD
Quest 29 WRD's	Quest 29 WRD
Waste rock – criteria for Non Acid Forming (**NAF**) material	Total sulfur content ≤0.2%
Waste rock – criteria for Potential Acid Forming (**PAF**) material	Total sulfur content >0.2%
Tailings storage facility (TSF) metrics	a) Maximum crest height 50 m b) Total capacity 48.0 Mt c) Tailings volume 28.9 Mm^3
Production	5 Mt of ore per annum on-site, or more than 50 Mt of ore over the life of mine.
Processing	Carbon-in Leach process with use of cyanide
Life of Mine	10 years
Rustlers Roost pits at end of mining (post-closure)	1) Rustlers Roost Main Pit – pit lake 2) Annie Oakley Pit - backfilled 3) Annie's Dam Pit – backfilled
Quest 29 pits at end of mining	Zamu Pit - backfilled with waste material from BHS Pit, North Koolpin Pit, South Koolpin Pit and Taipan Pit.

Note: this environmental approval applies to the action elements and extent shown in Figures 2 and 3.

Address of action	Rustlers Roost - NT Portion 4937 on Old Mount Bundy Station Perpetual Pastoral Lease 1163. Quest 29 - NT Portion 4938 on McKinlay River Station Perpetual Pastoral Lease 1184.
NT EPA Assessment Report number	99
Decision maker	Joanne Townsend CEO Department of Environment, Parks and Water Security
11 July 2024 **Date of approval**	

Environmental approval conditions

1 Limitations and extent of action

1-1 When implementing the action, the approval holder must ensure the action does not exceed the following limitations and extent:

Action element	Figure	Limitation or maximum extent
Total clearing	Figure 1, 2 and 3	No more than 370.0 ha to be cleared within the **approved extent**.
Rustlers Roost clearing	Figure 2	No more than 333.4 ha to be cleared within the **approved extent** on MLN 1083.
Quest 29 clearing	Figure 3	No more than 26.2 ha to be cleared within the **approved extent** on ML 29783.
Landfill	Figure 1	No more than 1.1 ha to be cleared within the **approved extent** on ML 29814.
Accommodation camp	Figure 1	No more than 7.3 ha to be cleared within the **approved extent** on ML 29814.
Haul road	Figure 1	No more than 2.0 ha to be cleared within the **approved extent**.
Groundwater drawdown and zone of influence – Marrakai Creek sub-catchment	Figure 4	<1 m drawdown is the **limit value** measured along the east bank of Marrakai Creek, as required by condition 12.
Groundwater drawdown and zone of influence - Upper Mount Bundey sub-catchment	Figure 4	<1 m drawdown is the **limit value** measured along the west bank of Upper Mount Bundey Creek, as required by condition 12.

2 Rehabilitation and closure

2-1 The action must be rehabilitated and closed in such a manner that the approval holder can demonstrate that it:

(1) is physically safe to humans and animals;

(2) is geo-technically stable;

(3) is non-polluting, non-contaminating;

(4) is progressively rehabilitated as disturbed land becomes available;

(5) supports productive, self-sustaining, resilient ecosystems;

(6) achieves improvement to the local biophysical environment; and

(7) does not cause **material environmental harm** or **significant environmental harm**.

3 Mine closure plan (MCP)

3-1 The approval holder must prepare a **MCP**, before **substantial disturbance**, that:

(1) achieves the outcomes in condition 2-1; and

(2) is consistent with contemporary best practice guidance on mine closure[1] (with particular regard to pit lakes), and transition to the agreed post-mining land use.

3-2 The approval holder must provide the **Minister** a copy of any **MCP** approved by the **responsible Minister** (that may supersede the version required by condition 3-1), within 10 business days after the date of the **MCP** being approved.

4 Terrestrial environmental quality

4-1 The approval holder must implement and close the action to meet the following environmental objective:

(1) protect the quality and integrity of land and soils so environmental values of the **Adelaide River Catchment** and **Mary River Catchment** are supported, maintained and improved where possible.

4-2 To support the achievement of condition 4-1(1):

(1) prior to **mining activity,** the approval holder must conduct a baseline contamination assessment of the **approved extent**, in accordance with the National Environment Protection (Assessment of Site Contamination) Measure.

(2) the approval holder must take all reasonable steps and measures to ensure that the baseline contamination levels determined under condition 4-2(1) are not exceeded during the **life of the action**.

(3) if the environment is contaminated above the baseline contamination levels determined under condition 4-2(1), the environment must be remediated in accordance with the CRC CARE National Remediation Framework prior to closure of the action.

(4) the remediation required in condition 4-2(3) must, to the greatest extent practicable, meet the objectives and outcomes of condition 3-1(1) and condition 3-1(2) to result in a measurable improvement to the post-closure biophysical environment that allows for the agreed post-mining land use.

(5) to achieve the required improvement to the post-closure biophysical environment required in condition 4-2(4), the approval holder must apply the **best practicable technology** (**BPT**) that produces the maximum environmental benefit that can be reasonably achieved.

5 Erosion and sediment control

5-1 The approval holder must implement an Erosion and Sediment Control Plan (**ESCP**) on commencement of **substantial disturbance** for the **life of the action** that is:

[1] Best practice guidance on mine closure includes: the International Council on Mining and Metals (ICMM) Integrated Mine Closure Good Practice Guide (2019), the Queensland Government Guideline for Progressive Rehabilitation and Closure Plans (2021), and the Statutory Guideline for Mine Closure Plans in Western Australia (2023).

(1) developed by a Certified Professional in Erosion and Sediment Control (**CPESC**), in accordance with International Erosion Control Association Australasia 2008, *Best Practice Erosion and Sediment Control*;

(2) monitored by the **CPESC** and by the approval holder; and

(3) reviewed and revised by the **CPESC** within 12 months of **substantial disturbance**, or at any time if:

(a) ongoing monitoring identifies a failure of the temporary and permanent erosion control systems described in the **ESCP**; or

(b) an accelerated or changed work program is required.

5-2 The approval holder must report on its compliance with the **ESCP** and condition 5-1. Each report must be:

(1) prepared by a **CPESC**; and

(2) submitted to the **Minister** by 30 May each year during the **life of the action** unless otherwise directed by the **Minister** in writing.

6 Terrestrial ecosystems

6-1 The approval holder must implement and complete the action to meet the following environmental objective:

(1) protect terrestrial habitats to maintain flora and fauna values including biodiversity, ecological integrity and ecological functioning.

6-2 To support the achievement of condition 6-1 the approval holder must:

(1) conduct pre-clearance surveys to identify presence of habitat and **threatened species**;

(2) implement a trapping program immediately prior to any clearing to capture and relocate affected fauna; and

(3) implement progressive rehabilitation that ensures habitat re-establishment and restoration in accordance with condition 2-1, and the MCP required by condition 3-1.

6-3 The surveys and programs required in conditions 6-2(1) and 6-2(2) must be prepared and implemented in consultation with the Flora and Fauna Division of the Department of Environment, Parks, and Water Security (DEPWS).

7 Inland water environmental quality and hydrological processes

7-1 The approval holder must implement the action to meet the following environmental objectives and outcomes:

(1) protect the quality of surface waters and groundwater so that the environmental values of the Adelaide River and tributaries (Marrakai Creek) including ecological health, land uses, and cultural values are maintained; and

(2) protect the quality of surface waters and groundwater so that the environmental values of the Mary River and tributaries (Charlies Creek and upper Mount Bundey Creek), and the McKinlay River and tributaries, including ecological health, land uses, and cultural values are maintained.

7-2 To support the achievement of condition 7-1(1), and condition 7-1(2), the relevant guideline values:

(1) for surface water quality, are the Australian and New Zealand guidelines for fresh and marine water quality (**ANZG**) freshwater default guideline values for slightly to moderately disturbed systems 95% species protection level;

(2) for groundwater quality, are the **ANZG** freshwater default guideline values 80% species protection level; or

(3) must be site specific and derived in accordance with **ANZG** where natural background levels exceed **ANZG** freshwater default guideline values, or default guideline values have not been set by **ANZG**.

7-3 The site-specific guideline values required by condition 7-2(3) must be:

(1) derived prior to any **substantial disturbance**, from the collected water quality dataset and baseline study as detailed in **ANZG**;

(2) derived for the physical and chemical indicators appropriate to the mineralogical properties of mined material and the range of declared **beneficial uses**, in accordance with **ANZG**;

(3) reviewed by an **independent qualified person** to ensure it is consistent with achievement of the environmental objectives and outcomes required by condition 7-1; and

(4) submitted with the review required in condition 7-3(3), and a statement addressing how the reviewer's findings have been addressed, to the **Minister** for approval at least three months before **substantial disturbance**.

8 General conditions for mine waste

8-1 To support the achievement of condition 7-1(1) and 7-1(2) the approval holder must:

(1) implement ongoing waste characterisation of **PAF**/**NAF** during the mining phase that includes a program of:

(a) in-pit testing;

(b) multi-phase column testing; and

(c) carbon and sulfur testing.

(2) implement ongoing geochemical testing and characterisation of materials segregated for the construction of mining infrastructure;

(3) implement testing and management for Naturally Occurring Radioactive Materials (NORM) according to the **national directory for radiation protection**. Testing must include any radionuclide in the Uranium (U) and Thorium (Th) decay chain; and

(4) implement continuous updates, ongoing development, and refinement of the waste/ore block model, and the sulfur model.

8-2 To support the achievement of condition 7-1(1), 7-1(2) and condition 8, the approval holder must appoint an **independent qualified person** to conduct an audit of quality assurance / quality control (**QA/QC**) procedures for waste rock identification and handling performance, the test work, and the model updates 12 months after **substantial disturbance**, and at 12 monthly intervals thereafter, for the **life of the action**.

(1) the findings of the initial audit required by condition 8-2, and any subsequent audits must be submitted to the **Minister** in a report within three months of conducting the audit together with remedial actions committed to by the proponent; and

(2) the reports required by condition 8-2(1) must be prepared by the **independent qualified person** referred to in condition 8-2.

8-3 Prior to commencing construction of the **mine waste storages**, the approval holder must:

(1) obtain certification from an **independent qualified person** with suitable qualifications and experience that the design plans for the mine waste storages meet an appropriate engineering standards and are consistent with internationally accepted contemporary best practice guidance; and

(2) obtain certification from the **independent qualified person** with suitable qualifications and experience that the construction of the mine waste storages is in accordance with the certified design plans.

8-4 The **independent qualified person** with suitable qualifications and experience required under condition 8-3 must be a professional engineer who is a member of Engineers Australia and has either a Chartered or National Engineering Register credential in civil, structural, and/or geotechnical engineering or holds equivalent professional qualifications with knowledge of principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of mine waste structures.

9 Waste Rock Dump (WRD) and acid and metalliferous drainage (AMD)

9-1 To support the achievement of condition 7-1(1) and condition 8-2, **WRD**s must be:

(1) designed to minimise water and oxygen ingress and control advection processes, limit seepage and generation of **AMD**; and

(2) constructed to include:

(a) a basal layer that achieves a saturated hydraulic conductivity of less than 1×10^{-9} m/s over a minimum thickness of one metre;

(b) a seepage management system that includes interception, collection, treatment and disposal;

(c) an outer annulus of **NAF** material encapsulating a core of **PAF** waste material;

(d) acid neutralising treatment and selective placement of the encapsulated **PAF** waste material;

(e) a capping layer and cover system; and

(f) a drainage system to prevent erosion.

(3) monitored to evaluate the performance of **AMD** management. The monitoring must include:

(a) settlement rates during the construction phase;

(b) the integrity of the engineered cover systems;

(c) oxygen concentration profiles;

(d) dump temperature profiles; and

(e) seepage rates and groundwater levels and quality.

(4) the approval holder must conduct auditing and reporting on **QA / QC** and the performance of **AMD** management required by condition 9-1(3) at 12 monthly intervals for the **life of the action**. The required audits and reporting must be undertaken by an **independent qualified person**.

(5) the reports required by condition 9-1(4) must be submitted to the **Minister** within two months of conducting the audit.

(6) any recommended actions to address findings in the reports required by condition 9-1(4) must be implemented.

10 Tailings Storage Facility (TSF)

10-1 To support the achievement of condition 7-1(1) and condition 7-1(2), the approval holder must ensure the TSF is designed, constructed, operated, monitored, decommissioned, and closed in accordance with:

(1) the Australian National Committee on Large Dams' (**ANCOLD**) Guidelines on Tailings Dams – Planning, Design, Construction, Operation and Closure (ANCOLD 2012a);

(2) other **ANCOLD** guidelines that consider flood capacity, dam break and consequence, safety, seismic hazard and earthquakes, and impact on public safety, public infrastructure, and the environment; and

(3) consideration of the required management of cyanide under condition 11.

10-2 The **TSF** must be designed and constructed to:

(1) limit seepage with the use of liner materials to achieve a saturated hydraulic conductivity of less than 1×10^{-9} m/s;

(2) include a compacted basal clay liner with a minimum thickness of one metre, and overlain with a synthetic **geomembrane** to further reduce seepage;

(3) include embankments that are constructed utilising the downstream raise method; and

(4) installation of an underdrainage system with embankment toe drains and cut-off trenches, and an integrated system for leachate collection and recovery.

10-3 To support the achievement of condition 7-1(1), the TSF must be operated in accordance with an approved **Operating Manual for Tailings Storage**.

(1) the operating manual required by condition 10-3 must:

(a) be prepared by an **independent qualified person** with suitable qualifications and experience in the design, construction, operation, monitoring, management, and rehabilitation of a high risk TSF.

(b) include provisions for tailings and water management, surveillance, inspections, monitoring, reporting and independent audits.

(c) include provisions for the decommissioning, rehabilitation, closure and post-closure monitoring and management requirements of the TSF.

10-4 Prior to **mining activity**, the approval holder must ensure that:

(1) a geotechnical investigation, mapping program and reporting is completed on the **TSF** footprint to confirm the characteristics of the near surface ground conditions;

(2) specific testing and **QA/QC** on material intended for construction of the **TSF** is completed; and

(3) sufficient suitable construction materials are available for the constructed TSF to be safe, stable and protects the environment during its operation, and to meet the requirements of conditions 2-1 and 10-2.

10-5 The materials testing, **QA/QC**, geotechnical investigation and reporting required by condition 10-4 must be undertaken by an **independent qualified person** and submitted to the **Minister** within two months of completing the investigation.

10-6 To support the achievement of condition 7-1(1) and condition 2-1, the **MCP** required in condition 3-1 must include:

(1) an evaluation of in-pit disposal of tailings as part of decommissioning and mine closure;

(2) a program of tailings testing and characterisation to ensure the closure design of the TSF includes:

(a) a low permeability layer capping to reduce long term infiltration and oxidation;

(b) water shedding capacity;

(c) resistance to erosion; and

(d) a growth medium to promote vegetation establishment.

11 Cyanide management

11-1 To support the achievement of condition 7-1, the approval holder must prepare and implement a **Cyanide Management Plan** that:

(1) complies with the International **Cyanide Management Code** and management framework (ICMI); and

(2) ensures cyanide levels of the aqueous component of the tailings slurry stream do not exceed: 20 mg CNWAD/L (90 percentile over six months), and 30 mg CNWAD/L (maximum permissible limit at any time), at the **process plant**.

11-2 The plan required by condition 11-1 must be prepared by an **independent qualified person** and include monitoring and reporting on cyanide use on the site. The plan must make provision for, but is not limited to:

(1) containing cyanide contaminated waters entirely within the mine site;

(2) maintaining weak acid dissociable (WAD) cyanide levels at the **process plant** to the levels stated in condition 11-1(2);

(3) contingency measures for cyanide reduction; and

(4) reporting of wildlife deaths occurring due to cyanide.

11-3 The plan must include, but not be limited to, provision for:

(1) monitoring of CNWAD levels of the aqueous component of the tailings slurry stream at the process plant;

(2) monitoring CNWAD levels in the decant water of the tailings dam;

(3) An on-site laboratory for quickly establishing CNWAD levels in the liquid at the process plant and in the decant ponds for monitoring purposes;

(4) establishing a monitoring regime for detection of cyanide movement beneath and adjacent to the TSF; and

(5) monitoring of CN(FREE) at locations where employees are operating.

12 Aquatic and groundwater dependent ecosystems

12-1 The approval holder must implement, remediate and complete the action to meet the following environmental objectives:

(1) protection of the Adelaide River and tributaries (Marrakai Creek).

(2) protection of the Mary River and tributaries (Charlies Creek and upper Mount Bundey Creek).

(3) protection of the McKinlay River and tributaries.

(4) protect terrestrial and aquatic **groundwater dependent ecosystems** to maintain environmental values including biodiversity, ecological integrity and ecological functioning.

12-2 To support the achievement of condition 12-1 the approval holder must:

(1) develop and implement an environmental monitoring program that includes measures for monitoring of the potential impacts of the action on **groundwater dependent ecosystems (GDE)** that are within the zone of influence of groundwater drawdown and recovery; and

(2) conduct dewatering of the pits according to a **Trigger Action Response Plan (TARP)**.

12-3 The **TARP** required in condition 12-2(2) must be reviewed by an **independent qualified person** to ensure it is consistent with achievement of the environmental objectives and outcomes required by condition 12-1. The **TARP** must:

(1) be submitted, with the review and a statement addressing how the reviewer's findings have been addressed, to the **Minister** at least three months before substantial disturbance;

(2) be implemented for the **life of the action**;

(3) specify quantitative **limit values** to demonstrate compliance with condition 12-1;

(4) include quantitative **trigger values** to initiate contingency and/or management actions to ensure achievement of the environmental objective in condition 12-1;

(5) include contingency and/or management actions for exceedances of **trigger values** and **limit values**; and

(6) identifies requirements for notifying the **Minister** on any exceedance of **trigger values** or **limit values**, including:

(a) date, time and cause of any exceedance;

(b) any contingency and/or management actions implemented;

(c) the outcomes of investigative, contingency and/or management actions, stop work or recommencement actions; and

(d) a timeframe within which the **Minister** would be notified.

12-4 The **TARP** required in condition 12-2(2) must be:

(1) updated annually by an **independent qualified person** to ensure it is consistent with achievement of the environmental objectives and outcomes required by condition 12-1; and

(2) for the life of the action, submitted each year by 30 October to the **Minister** for approval.

12-5 To support the achievement of condition 12-2(1), the approval holder must:

(1) prior to commencement of dewatering of the pits, expand the groundwater monitoring network with **key bores** to monitor seepage, water level and quality of groundwater.

(2) prior to **mining activity**, prepare a baseline **groundwater dependent ecosystem** characterisation report that includes at a minimum:

(a) seasonal **baseline data** for surface water flows and quality in waterways and/or waterbodies that could be affected by the action;

(b) seasonal **baseline data** for groundwater levels and quality in aquifers that could be affected by the action;

(c) vegetation assessment for the terrestrial **groundwater dependent ecosystems**; and

(d) aquatic value characterisation for the aquatic **groundwater dependent ecosystems**.

(3) implement monitoring of pit **lake water quality** and surrounding groundwater using **key bores** for the **life of the action**.

13 The report required by condition 12-5(2) must be:

(1) reviewed by an **independent qualified person** to ensure it is consistent with achievement of the environmental objectives and outcomes required by condition 12-2(1); and

(2) submitted, with the review and a statement addressing how the reviewer's findings have been addressed to the **Minister** for approval 3 months prior to **substantial disturbance**.

14 Post-closure pit Lake Water Quality

14-1 To support the achievement of condition 12-1 and the objectives of condition 2-1, the approval holder must;

(1) ensure pit **lake water quality** does not exceed the **ANZG** livestock drinking water quality guideline values at any time during post closure;

(2) monitor pit **lake water quality** post-closure for a minimum of 20 years to demonstrate achievement of 14-1(1);

(3) update, calibrate and validate the models used to predict the post-closure pit **lake water quality** and groundwater quality, and

(4) remediate the **lake water quality** if **ANZG** livestock water quality guideline values are exceeded in accordance with the MCP required by condition 3-1, and the requirements of condition 4-2.

15 Air Quality

15-1 The approval holder must implement, remediate and complete the action to protect quality of air, and minimise emissions and their impact on the environment.

15-2 To support the achievement of condition 15-1, for the **life of the action** the approval holder must:

(1) monitor the ambient concentrations of all air pollutants emitted from the proposal at the boundary and at relevant sensitive receptors and indigenous sites of importance;

(2) ensure that ground level concentrations of pollutants of concern:

(a) achieves the ambient air quality *National Environment Protection (Ambient Air Quality) Measure* goal;

(b) meets the objectives and achieves compliance against the impact assessment criteria provided in the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (2022); and

(3) report the results of monitoring against the National Environment Protection (Ambient Air Quality) Measure to the **CEO**.

15-3 Prior to **substantial disturbance**, the approval holder must prepare an **Air Quality Management Plan** (**AQMP**).

15-4 The **AQMP** required by condition 15-3 must be prepared by an **independent qualified person** and include, but is not limited to:

(1) details of all emission sources including odour and particulates;

(2) the type and locations of air quality monitoring stations and equipment;

(3) control measures that will be implemented for each emission source to minimise the potential risks to adverse air quality; and

(4) contingency measures to be implemented to respond to complaints or if dust impacts are identified.

16 Commencement of action

16-1 This approval expires five (5) years after the date on which it is granted, unless **substantial disturbance** has commenced on or before that date.

16-2 Within 10 business days of **substantial disturbance** the approval holder must provide notification in writing to the **Minister**.

17 Change of contact details

17-1 The approval holder must provide notification in writing to the **Minister** of any change of its name, physical address or postal address for the serving of notices or other correspondence within 10 business days of such change.

18 Compliance reporting

18-1 The approval holder must:

(1) advise the **Minister** of any potential non-compliance within seven (7) days of that non-compliance being known, and describe the corrective and preventative actions taken;

(2) within six months of **substantial disturbance**, obtain from an **independent qualified person**, a report on compliance with the conditions of this environmental approval;

(3) obtain further such reports at regular intervals not exceeding 12 months from the report referred to in condition 18-1(1); and

(4) submit each report to the CEO within 90 days of its completion.

18-2 The reports required by condition 18-1(1) and condition 18-1(3) must:

(1) be endorsed by the approval holder's Chief Executive Officer or a person delegated to sign on the approval holder's Chief Executive Officer's behalf;

(2) include a statement as to whether the approval holder has complied with the conditions of this approval; and

(3) identify all non-compliances and describe corrective and preventative actions taken.

19 Environmental Performance Report

19-1 The approval holder must submit an Environmental Performance Report to the **Minister** on completion of the **mine life**.

19-2 The report required by condition 19-1 must be prepared by an **independent qualified person**.

19-3 The Environmental Performance Report must verify and report on impacts of the action on the state of the following environmental values:

(1) terrestrial environmental quality;

(2) terrestrial ecosystems;

(3) hydrological processes and quality;

(4) inland water environmental quality;

(5) air quality;

(6) community and economy, culture and heritage; and

(7) the whole of environment within the area of influence of the action.

19-4 The Environmental Performance Report must include:

(1) a comparison of the predicted impacts of the action on environmental values (identified in condition 19-3), and the actual impacts of the action as verified by environmental monitoring data; and

(2) an assessment of the cumulative impacts of the action and other actions for which the approval holder is responsible on the environmental values of the **Adelaide River Catchment** and the **Mary River Catchment**.

20 Provision of environmental data

20-1 All environmental monitoring data required to be collected or obtained under this environmental approval must be retained by the approval holder for a period of not less than 10 years commencing from the date that the data is collected or obtained.

20-2 The approval holder must, as and when directed by the **Minister**, provide any validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products (such as maps)) relevant to the assessment of the action and implementation of this environmental approval, to the **Minister** in the form and manner, and at the intervals specified, in the direction. Culturally sensitive data held by the approval holder may be subject to access terms and conditions imposed by traditional owners which the approval holder is required to maintain.

Definitions

The terms used in this approval have the same meaning as the terms defined in the *Environment Protection Act 2019* and Environment Protection Regulations 2020.

Adelaide River Catchment	The catchment area of the Adelaide River and tributaries as depicted in Figure 1.
AMD	Acid and metalliferous drainage, including neutral and saline drainage
ANCOLD	The Australian National Committee on Large Dams (**ANCOLD**) Guidelines on Tailings Dams – Planning, Design, Construction, Operation and Closure (ANCOLD 2012a)
ANZG	ANZG 2018. Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia. Available at http://www.waterquality.gov.au/anz-guidelines. Note: The ANZG (2018) Water Quality Guidelines replaces the previous ANZECC/ ARMCANZ (2000) guidelines. Without updates to the trigger values for irrigation and general water use and as the revised livestock drinking water guidelines are yet to be published, the default guidelines values from ANZECC/ ARMCANZ (2000) will apply.
approved extent	The extent identified in Figure 2 and Figure 3 of this approval that is the Project area identified in the EIS and includes equipment, plant and

	structures, whether stationary or portable, and the land and water on which the action is situated.
AQMP	Air Quality Management Plan
beneficial uses	uses of water specified in subsection (3) of the *Water Act 1992*
BPT	Best practicable technology that produces the maximum environmental benefit that can be reasonably achieved.
CEO	The Chief Executive Officer of the Department of Environment, Parks and Water Security (or another name for that department, which may vary from time to time), or their delegate.
Clean Energy Regulator	The independent statutory authority established by the *Clean Energy Regulator Act 2011* for the administration of schemes legislated by the Australian Government to measure, manage, reduce or offset Australia's carbon emissions (https://www.cleanenergyregulator.gov.au/).
CPESC	Certified Professional in Erosion and Sediment Control
Cyanide Management Code	The International Cyanide Management Code For the Manufacture, Transport, and Use of Cyanide in the Production of Gold that is administered by the International Cyanide Management Institute (CMI).
EP Act	*Environment Protection Act 2019*.
ESCP	Erosion and Sediment Control Plan.
geomembrane	A manufactured low-permeability sheet or liner, such as high-density polyethylene (HDPE) that meets the specifications of Geosynthetic Research Institute (https://geosynthetic-institute.org/specifications.htm).
groundwater dependent ecosystems (GDEs)	Refers to ecosystems that are dependent on the surface expression (aquatic GDEs) or subsurface expression (terrestrial GDEs) of groundwater for all or part of their water requirements. The terrestrial GDEs are typically riparian vegetation dominated by the presence of *Eucalyptus bigalerita*, and *Lophostemon grandifloras* that rely on access to groundwater for its water requirements.
independent qualified person	A qualified person as defined under section 4 of the **EP Act**; and who also meets the following requirements: a) was not involved in the preparation of the approval holder's **Referral** or **EIS**; and b) is independent of the personnel involved in the design, construction and operation of the action; and c) has obtained written approval from the **CEO** to be the qualified person to satisfy the **independent qualified person** reporting requirements under this approval.
key bores	The groundwater monitoring bores for the purpose of updating the hydrogeochemical and groundwater models, and for informing management responses and corrective actions to drawdown triggers and limits.
lake water quality	The water quality of pit lakes that is the volume weighted averaged concentration determined by profiling the pit with surface, mid-depth and bottom samples, and with profiling to be undertaken at three locations.
life of the action	The period of time from **substantial disturbance** until the issue of a closure certificate under section 213 of the **EP Act**, or revocation of the

	environmental approval by the Minister at the request of the approval holder under section 114 of the **EP Act**.
Mary River Catchment	The catchment area of the Mary River and tributaries as depicted in Figure 1
material environmental harm	Environmental harm that as defined in section 8 of the EP Act.
MCP	Mine Closure Plan
mine waste storages	Any structure, landform or residual void under this approval that is designed, constructed or used to store mine waste that includes, but is not limited to, waste rock, PAF material, tailings, radioactive material, asbestos containing material, and residues from water treatment.
Mining activity	Mining activity has the same meaning as in the *Mining Management Act 2001*.
national directory for radiation protection	The National Directory for Radiation Protection – 2nd Edition (2021) by the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).
PAF	Potentially acid forming.
process plant	The mineral processing facility for the recovery of gold from ore in a series of steps to produce gold dore.
QA/QC	Quality Assurance/Quality Control
responsible Minister	The responsible Minister (or delegate) under the *Mining Management Act 2001*.
significant environmental harm	Environmental harm that as defined in section 9 of the EP Act.
Species Protection Level	The degree of protection afforded to a water body based on its ecosystem condition (current or desired health status of an ecosystem relative to the degree of human disturbance).
substantial disturbance	Means substantial disturbance of a mining site as defined under section 35(3) of the *Mining Management Act 2001*.
threatened species	Threatened fauna and flora species listed under the *Territory Parks and Wildlife Conservation Act 1976* (TPWC Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) that are known or have potential to occur within the proposal area including but not limited to: Fauna (Northern Quoll, Pale field-rat, Black-footed tree-rat, Yellow-snouted gecko, Northern brushtail possum, Yellow-spotted monitor, Merten's water monitor, Mitchell's water monitor, Red goshawk, Partridge pigeon Gouldian finch) and Flora (*Schoutenia ovata*, *Helicteres macrothrix*, and *Stylidium ensatum*).
TSF	Tailings Storage Facility
WRD	Waste rock dump

Location and extent of the action

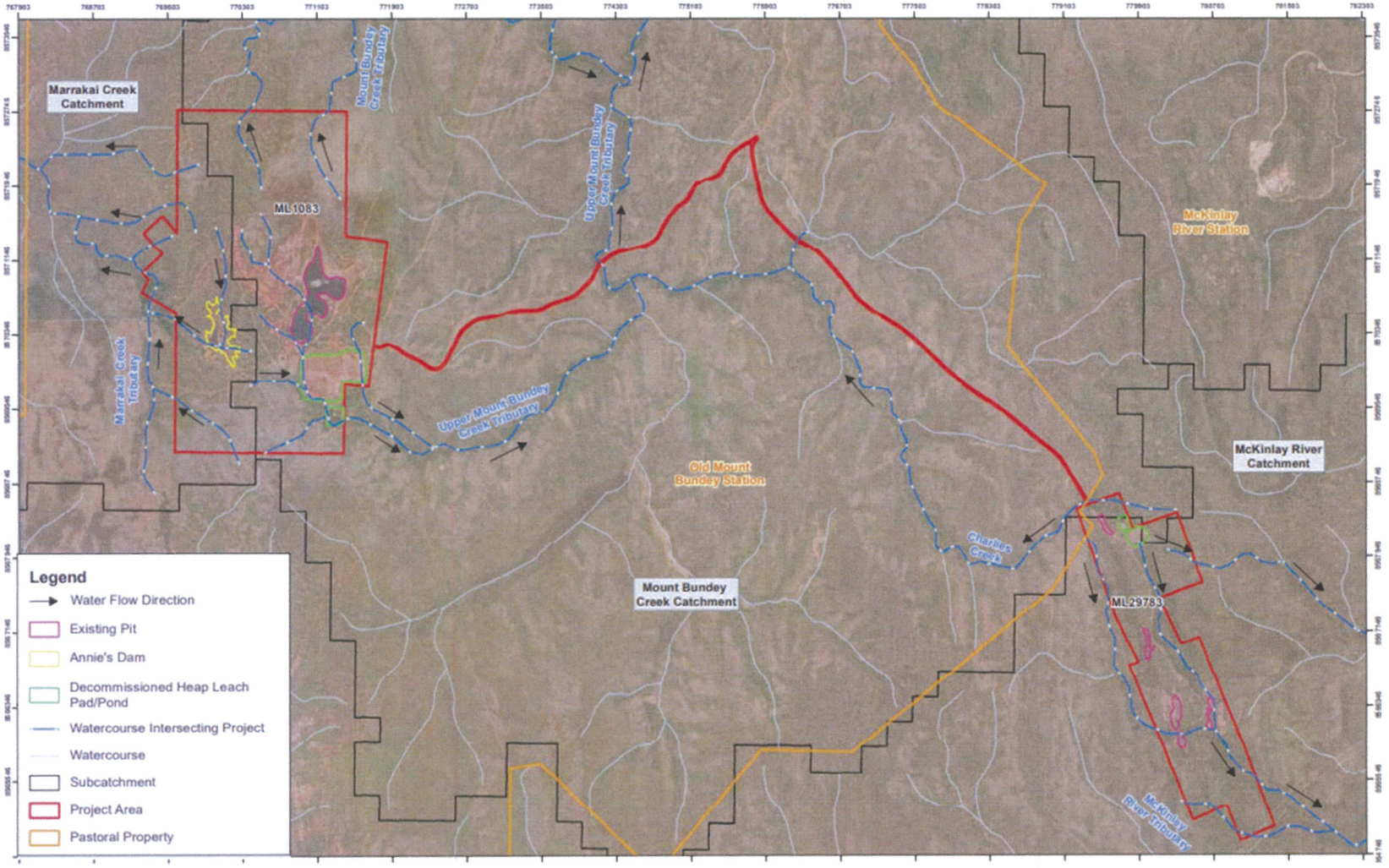

Figure 1 Layout of the Rustlers Roost and Quest 29 Open-Cut Mine Redevelopment showing Marrakai Creek in the Adelaide River catchment, and Mount Bundey Creek and McKinlay River in the Mary River catchment

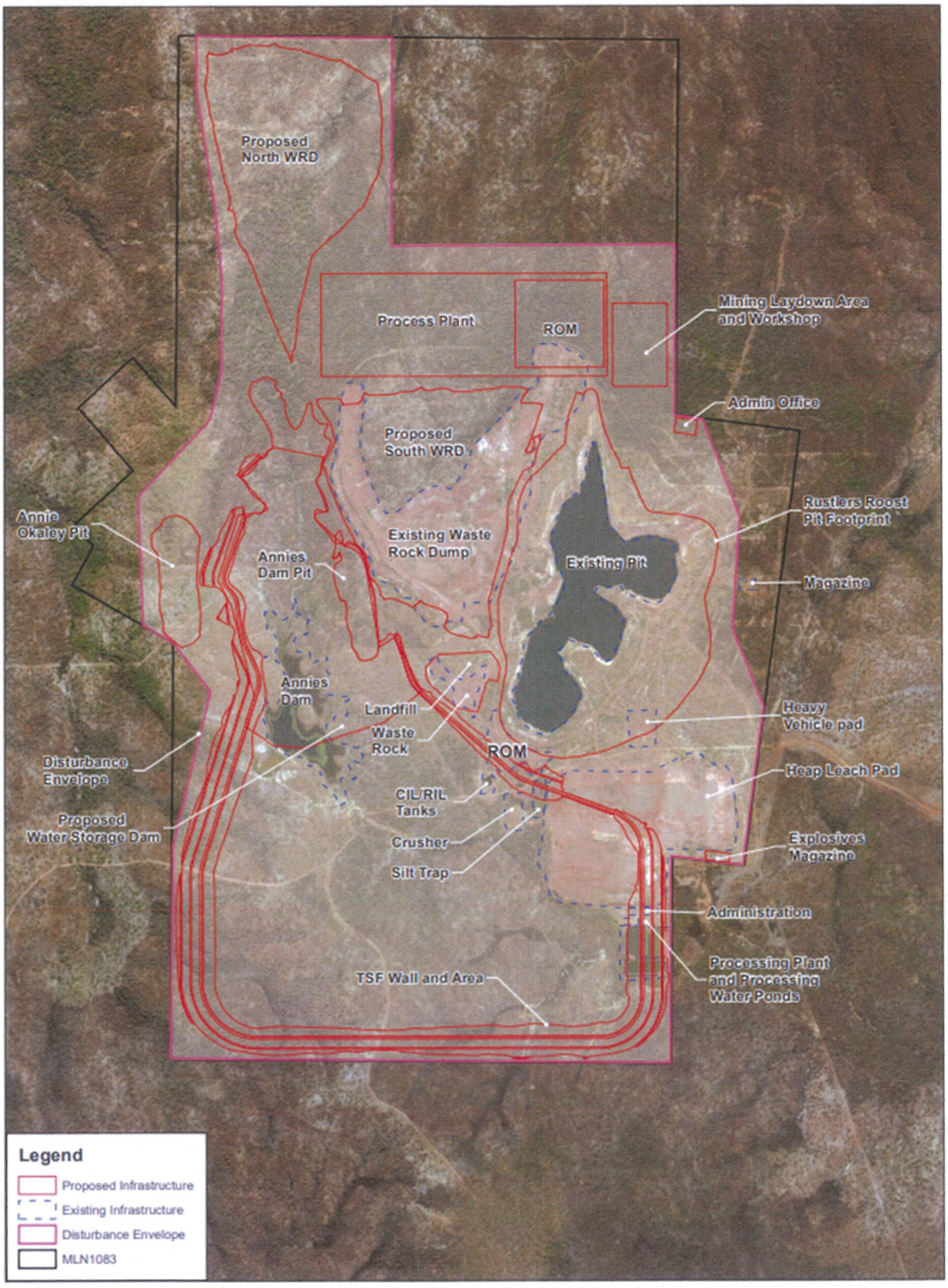

Figure 2 Rustlers Roost action elements and extent – mineral lease, existing infrastructure, and proposed disturbance envelope

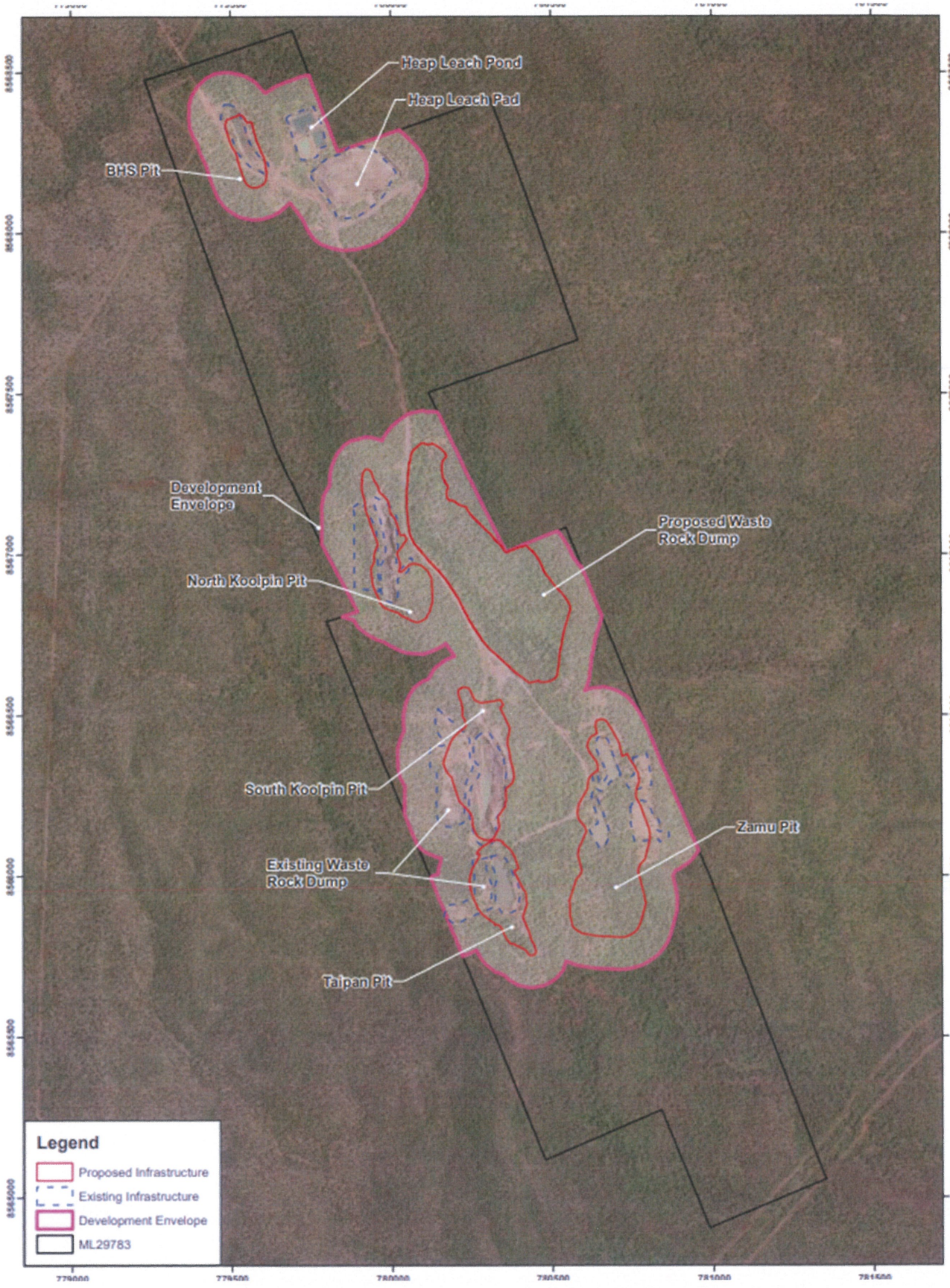

Figure 3 Quest 29 action elements and extent – mineral lease, existing infrastructure, and proposed disturbance envelope

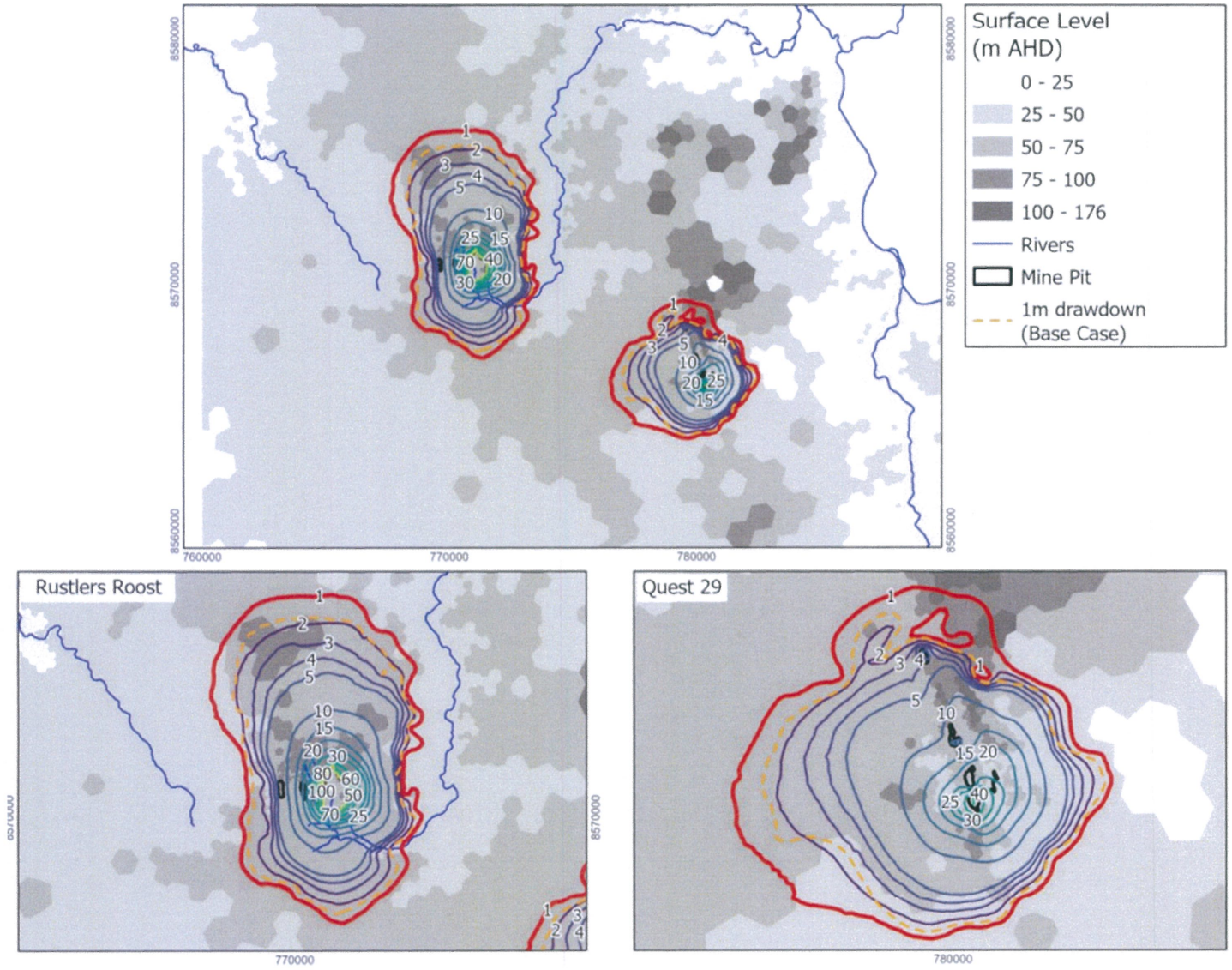

Figure 4 Map of the modelled 95th percentile maximum groundwater drawdowns (m), and the 1 m drawdown limit at Rustlers Roost and Quest 29