NORTHERN TERRITORY GOVERNMENT

Environmental Approval

PURSUANT TO SECTION 69 OF THE *ENVIRONMENT PROTECTION ACT 2019*

Approval number	**EP2023/022-001**
Approval holder	Chief Executive Officer of the Northern Territory Department of Industry, Tourism and Trade
Australian Business Number (ABN)	84 085 734 992
Registered business address	Manunda Place Level 3, 38 Cavenagh St Darwin NT 0800
Approval holder reference number	DITT-0001

Action: Rehabilitation of the former Rum Jungle mine site

Rehabilitate the former Rum Jungle mine site and associated satellite sites (Mt Fitch and Mt Burton) located 6 km north of Batchelor in the Northern Territory (NT) to address legacy site contamination issues:

- a construction phase followed by a monitoring and stabilisation phase
- clearing of up to 490.9 hectares (ha) of native vegetation including 4.5 ha sensitive or significant vegetation (4 ha riparian and 0.5 ha vine forest)
- excavation and relocation of ~6.1 million cubic metres (Mm^3) mine waste material from existing sulfidic waste rock dumps and contaminated soil areas
- extraction and treatment of contaminated groundwater and pit lake water
- point source discharge of water to the East Branch of the Finniss River (EBFR)
- construction of two new waste storage facilities (WSF) to contain mine waste material that is potentially acid forming (PAF) and/or radioactive and/or contains asbestos
- backfilling and capping of Main Pit to contain ~ 1.5 Mm^3 mine waste
- containment and disposal of waste generated by the water treatment plant
- potential realignment of the EBFR through Main Pit and Intermediate Pit
- rehabilitation and revegetation of disturbed land.

Advisory notes

i. Approval is granted under section 69 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**, Supplement to the Draft **EIS**, and Additional Information submissions dated August 2019 and July 2022). 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. Submission of all notices, reports, documents or other correspondence required by a condition of this approval must be provided in electronic form by emailing environmentalregulation@nt.gov.au

v. The approval holder has a duty to notify the **CEO** of incidents in accordance with Part 9 Division 8 of the EP Act.

Address of action	Rum Jungle - Section 2968 Hundred of Goyder Mount Burton - Section 998 Hundred of Goyder Mount Fitch - NT Portion 3283 Borrow Area A - Section 2940 Hundred of Goyder Borrow Area B - Section 2830 Hundred of Goyder
NT EPA Assessment Report number	98
Decision maker	Hon Lauren Jane Moss MLA, Minister for Environment, Climate Change and Water Security
Date of approval	29th March 2023

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 extents shown in Table 1.

Table 1 Limitations and extent

Action element	Context	Limitation or maximum extent
Rum Jungle	Figure 2	No more than 276.5 ha in total to be cleared within the **approved extent**
Mt Burton	Figure 3	No more than 1.2 ha in total to be cleared within the **approved extent**
Mt Fitch	Figure 4	No more than 1.3 ha in total to be cleared within the **approved extent**
Borrow Area A	Figure 5	No more than 66.6 ha in total to be cleared within the **approved extent**
Borrow Area B	Figure 6	No more than 145.3 ha in total to be cleared within the **approved extent**
Total clearing	**Figure 1**	**No more than 490.9 ha within the approved extent**

2. Overarching objectives

2-1 The approval holder must implement the action to meet the following environmental objectives:

(1) Improve environmental conditions onsite to support long-term improvement in the downstream aquatic ecosystem condition; and

(2) Improve environmental conditions onsite to support future use of the land for traditional ceremony, culture and subsistence use of natural resources.

Culture and heritage

3. Cultural heritage outcomes

3-1 The approval holder shall implement the action to meet the following environmental outcomes:

(1) avoid where possible, and otherwise mitigate, further impacts on Aboriginal sacred sites within the **approved extent**;

(2) avoid, where possible, and otherwise mitigate, further impacts to Aboriginal archaeological places and objects within the **approved extent**;

(3) remediate **contamination** to aid in achieving improvements to cultural values associated with the **approved extent**.

4. Consultation with traditional owners

4-1 The approval holder must consult with, and have regard to the views of, traditional owners and the **NLC**:

(1) prior to the finalisation and implementation of the **RAP** required by condition 9-1;

(2) prior to the finalisation of the **site audit report** required by condition 13-1; and

(3) throughout implementation of the action.

4-2 If the **RAP** is prepared in stages, the consultation required by condition 4-1 must be undertaken for each stage.

5. Cultural Heritage Management Plan (CHMP)

5-1 The **RAP** that the approval holder is required to prepare under condition 9-1, must include a **CHMP** that has been prepared by a **suitably qualified and experienced person**, in consultation with traditional owners and the **NLC**, and must be endorsed by the **site auditor**.

5-2 If the **RAP** is prepared in stages, the consultation on the **CHMP** required by condition 5-1 must be undertaken for each stage.

5-3 The **CHMP** must include measures to provide for:

(1) protection of sacred sites within the **approved extent** and compliance with Authority Certificates issued to the approval holder under the *Northern Territory Aboriginal Sacred Sites Act 1989*;

(2) protection of known heritage places and objects within the **approved extent** and compliance with any statutory authorisations issued to the approval holder under the *Heritage Act 2011*;

(3) cultural heritage induction procedures for site personnel;

(4) an internal approval process prior to ground disturbing activities and use of visual barriers and signs where appropriate;

(5) further archaeological survey and assessment where required;

(6) procedures to mitigate risks to unidentified heritage places and objects;

(7) stop work procedures to follow in the event suspected or actual unidentified human remains, or Aboriginal archaeological places or objects are encountered;

(8) measures for effective consultation and engagement with stakeholders, including traditional owners and the **NLC**; and

(9) detail of how compliance would be monitored and reported and how the outcomes of investigative and/or **adaptive management** actions would be notified to the relevant government authorities.

5-4 The approval holder must implement the **CHMP** for the **life of the action** with the objective of ensuring that the outcomes under condition 2-1 are achieved.

5-5 The approval holder may review and revise the **CHMP** in consultation with stakeholders, including traditional owners. If the CHMP is revised, the revised version must be provided to the **site auditor** for their written endorsement. Within 10 business days after obtaining written endorsement from the **site auditor** the endorsed version of the **CHMP** must be submitted to the **Minister**.

5-6 The approval holder shall implement, review and revise the **CHMP** as and when directed by the **site auditor** or the **Minister** by notice in writing, and in consultation with stakeholders.

6. Post-remediation land use

6-1 The approval holder must verify through the **site audit report** required by condition 13-1, whether any post-remediation land use restrictions would be required, including on traditional Aboriginal practices and land use such as hunting and gathering activities for native fauna and flora as bush foods within the proposal area and Zones 3, 4, 6 and 7 of the downstream aquatic ecosystem (Figure 7).

6-2 The **site audit report** must address potential impacts to human health with consideration of exposure to radiation and toxicants, informed by the advice of a **suitably qualified and experienced person** with demonstrated expertise in radiation protection.

Terrestrial environmental quality

7. Remediation works

7-1 To support achieving the outcomes under condition 2-1, **remediation works** must be carried out:

(1) in accordance with:

(a) the design specifications, criteria, requirements and quality assurance/quality control procedures detailed in the endorsed **remediation action plan (RAP)** required by condition 9-1;

(b) the National Environment Protection (Assessment of Site Contamination) Measure 1999 (**ASC NEPM**); and

(c) the relevant guidelines produced under the National Remediation Framework (**NRF**);

(2) to the satisfaction of the **site auditor** required by condition 8-1.

8. Site auditor

8-1 Prior to the commencement of **remediation works**, the approval holder must:

(1) appoint a **site auditor** to independently review and endorse:

(a) the **remediation action plan** required by condition 9-1; and

(b) the implementation and validation of the **remediation works** carried out under the **RAP**.

(2) The appointment of the **site auditor** required by condition 8-1 must be agreed to by the **Minister** in writing.

9. Remediation action plan

9-1 Prior to the commencement of **remediation works**, the approval holder must engage a **suitably qualified and experienced person** to prepare a **RAP** detailing the remediation objectives, work required to meet the remediation objectives, performance criteria for the remediation works, and corresponding contingency actions.

9-2 The **RAP** required by condition 9-1 must:

(1) be informed by a health risk assessment and environmental risk assessment;

(2) be prepared in accordance with the relevant guidelines produced or approved under the **ASC NEPM** and **NRF**; and

(3) be reviewed and endorsed in writing by the **site auditor** appointed under condition 8-1

(4) be revised to address any comments of the independent peer review required by condition 10-1, and approved by the site auditor.

9-3 The approval holder must implement the **RAP** that has been approved by the site auditor under condition 9-2(4).

9-4 As part of the **RAP** required by condition 9-1 the approval holder must include the following:

(1) Cultural heritage management plan (see condition 5);

(2) Long-term environmental management plan (see condition 15);

(3) Erosion and sediment control plan (see condition 16);

(4) Revegetation management plan (see condition 17);

(5) Receiving environment monitoring program (see condition 20); and

(6) Water management plan (see condition 21).

10. Independent peer review of endorsed RAP

10-1 Prior to the commencement of **remediation works** the approval holder must appoint a **peer reviewer** to undertake an independent peer review of the site auditor endorsed **RAP.**

10-2 The appointment of the **peer reviewer** required by condition 10-1 must be agreed to by the **Minister** in writing.

10-3 The **peer reviewer** must provide written advice to the **approval holder** on whether the **site auditor** endorsed **RAP**:

(1) is suitable for the scope of remediation for the proposed action;

(2) is technically sound, based on appropriate data, and supported by the; conclusions of investigations and studies presented in the **EIS**; and

(3) is consistent with best practice standards in line with the **NRF**.

10-4 The written advice of the **peer reviewer** must be submitted to the **Minister** together with the approved **RAP** and details of how the **approval holder** has addressed any inadequacies or recommendations raised in the peer review.

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11. Validation of remediation works

11-1 Prior to the commencement of **remediation works**, the approval holder must appoint a **suitably qualified and experienced person** to:

(1) document and validate the **remediation works** to demonstrate compliance with the **RAP**; and

(2) prepare the validation report required by condition 12-1

11-2 The **suitably qualified and experienced person** required by condition 11-1 must be certified under the **CEnvP(SC)** or **CPSS/CSAM** scheme, or be accredited under section 68 of the *Waste Management and Pollution Control Act 1998*.

12. Validation report

12-1 Following completion of **remediation works** the approval holder must submit a validation report to the **Minister.**

12-2 The validation report must:

(1) be prepared by the **suitably qualified and experienced person** required by condition 11-2 and endorsed by the **site auditor**;

(2) be prepared in accordance with the relevant guidelines produced or approved under the **ASC NEPM** and **NRF**;

(3) describe the **remediation works**, the validation carried out and the final condition of the site as informed by at least 12 months of post-construction monitoring data, collected in accordance with the **REMP** required by condition 20-2, and **LTEMP** required by condition 15-1;

(4) validate the **remediation works** against the remediation criteria set out in the **RAP**.

13. Site audit report

13-1 Within six months of submission of the validation report required by condition 12-1, or within a timeframe as otherwise agreed by the **Minister**, the approval holder must submit a **site audit report** to the **Minister**.

13-2 The **site audit report** must be prepared by the **site auditor** in accordance with the relevant guidelines produced or approved under the **NRF** and must:

(1) summarise the information reviewed by the **site auditor** during the audit;

(2) include the **site auditor**'s written findings, evaluations and conclusions, including but not limited to:

(a) whether **remediation works** have been completed in accordance with the **RAP** and the risks to human health and the environment have been addressed in accordance with the objectives in the **RAP**;

(b) an evaluation of the suitability of the site for the intended future land uses, with or without recommended conditions on the use of the site; and

(c) an evaluation of the suitability of the **LTEMP** required by condition 15-1 to manage the **mine waste storages**.

13-3 The approval holder may progressively submit the **site audit report** required by condition 13-1 as series of reports for stages of the action, if the **remediation works** have been completed in accordance with the **RAP** for those stages of the action.

13-4 If the **site audit report** is submitted progressively as the **remediation works** for stages of the action are completed, the final **site audit report** is not required to cover those stages of the action for which site audit reports have already been submitted. However, the final **site audit report** must otherwise comply with the requirements under condition 13-2.

14. Certifying design and construction plans for mine waste storages

14-1 Prior to construction of the **mine waste storages**, the approval holder must:

(1) engage a **suitably qualified and experienced person** with demonstrated expertise in mine waste engineering, to prepare the design plans for the **mine waste storages** in accordance with an appropriate engineering standard and consistent with internationally accepted contemporary best practice guidance;

(2) obtain certification of the design plans for the **mine waste storages** from the **site auditor**; and

(3) submit the certified design plans for the **mine waste storages** to the **Minister**.

14-2 When the construction of the **mine waste storages** is complete, the environmental approval holder must:

(1) obtain written verification from the **suitably qualified and experienced person** required by condition 14-1, that the construction of the **mine waste storages** is in accordance with the certified design plans, and submit the written verification to the **site auditor**;

(2) obtain certification from the **site auditor** that the construction of the mine waste storages is in accordance with the certified design plans; and

(3) submit the construction certification to the **Minister.**

14-3 The **suitably qualified and experienced person** required by conditions 14-1 and 14-2, 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 and has the following:

(1) knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of mine waste landforms; and

(2) at least a total of ten years of suitable experience and demonstrated expertise in the design, construction, operation and maintenance of mine waste landforms; geomechanics with particular emphasis on stability, geology and geochemistry; hydrology, sediment transport and deposition; erosion control; and hydrogeology with particular reference to seepage, groundwater, and solute transport processes and monitoring.

15. Long-term environmental management plan (LTEMP)

15-1 The **RAP** required by condition 9-1, must include an **LTEMP** for the **mine waste storages** detailing the long-term management objectives, work required to achieve the long-term objectives, monitoring and performance criteria, and corresponding contingency actions.

15-2 The **LTEMP** required by condition 15-1 must:

(a) be prepared by a **suitably qualified and experienced person** to the satisfaction of the **site auditor** required by condition 8-1;

(b) be prepared in accordance with the relevant guidelines produced or approved under the **ASC NEPM** and **NRF**

(c) include but not be limited to:

(i) identification of all relevant statutory and other obligations, including all approvals, licences, agreements and financial arrangements;

(ii) details of ongoing management roles and responsibilities;

(iii) details of all monitoring, inspections, environmental controls, requirements and measures to manage the ongoing integrity and performance of the **mine waste storages**;

(iv) details of the contingency measures and responses to be implemented for any identified issues with the **mine waste storages**;

(v) mechanisms for performance reporting and auditing in line with the relevant legislation and guidelines; and

(vi) a program for ongoing review of the **LTEMP** to ensure it remains contemporary with relevant environmental standards.

15-3 Upon completion of the construction of the **mine waste storages**, the approval holder must:

(a) implement the approved **LTEMP**; and

(b) manage the **mine waste storages** in accordance with the approved **LTEMP.**

16. Erosion and sediment control

16-1 The **RAP** required by condition 9-1, must include an **ESCP** prepared by a suitably qualified and experienced **CPESC**, to the satisfaction of the **site auditor;**

16-2 The **ESCP** required by condition 16-1 must include measures to minimise erosion and the release of sediment to receiving waters and contamination of stormwater, and be implemented for all stages of the action;

16-3 The erosion and sediment control measures detailed in the **ESCP** required by condition 16-1 must be installed and maintained in accordance with the International Erosion Control Association Australasia (IECA) Best Practice Erosion and Sediment Control (BPESC) document;

16-4 The **ESCP** required by condition 16-1 must be revised annually by a suitably qualified and experienced **CPESC** prior to commencement of the **wet season** or at more frequent intervals if site conditions significantly change.

17. Revegetation

17-1 The **RAP** required by condition 9-1 must include a revegetation management plan that requires that the approval holder:

(1) revegetate land disturbed by the action where **exposed soil areas** would remain following completion of **remediation works**;

(2) revegetate land disturbed by the action to achieve a species composition, structure and diversity that is consistent with surrounding undisturbed vegetation;

(3) use suitable local native plant species in the revegetation, taking into account as practicable:

(a) predicted changes in climate;

(b) cultural significance;

(c) the potential effects of revegetation on the long-term stability of **mine waste storages**; and

(4) implement **adaptive management** measures to ensure revegetation supports long-term landform stability and integrity.

17-2 Within 12 months after the completion of revegetation works, and within every 12 months thereafter for the **life of the action**, the approval holder must engage a **suitably qualified and experienced person** to:

(1) undertake an assessment of the performance of the revegetated areas against the revegetation performance criteria in the revegetation management plan;

(2) identify any measures that should be implemented to improve the performance of revegetation within **rehabilitation** areas; and

(3) if the revegetation completion criteria have not been met, or are not adequately trending towards being met, recommend additional measures to ensure that revegetation is sufficient to meet design criteria.

17-3 If the assessment by the **suitably qualified and experienced person** required by condition 17-2 recommends implementation of additional measures for revegetation, the approval holder must, within 6 months of completion of the assessment, implement the recommended measures, to the satisfaction of the **site auditor** required by condition 17-2.

17-4 The **suitably qualified and experienced person** required by condition 17-2 must have suitable regional experience and demonstrated expertise in mine site **revegetation** and **rehabilitation**.

Inland water environmental quality, Hydrological processes and Aquatic ecosystems

18. Environmental outcome

18-1 The approval holder must implement the action to meet the following environmental outcome:

(1) Over the long-term, improve the quality and hydrological regimes of groundwater and surface water to the maximum extent practicable to support

the restoration of environmental values including ecological health, land uses and the welfare and amenity of people.

19. Discharge water quality

19-1 The approval holder must ensure that **point source discharge** from the action causes no decline in downstream **water quality** in the Finniss River during implementation of the action consistent with condition 18-1.

19-2 In meeting the requirements under condition 19-1, the approval holder must ensure that:

(1) **point source discharge** from the action to the **EBFR** does not exceed the **water quality** discharge requirements stated in **Table 2** at **end-of-pipe**;

(2) site-specific trigger values for discharge water quality are developed for pH, dissolved oxygen, turbidity and total dissolved solids (as required in **Table 3**), to the satisfaction of the **Minister**, and implemented prior to any discharge of water from the action to the **EBFR**;

(3) **point source discharge** from the action to the **EBFR** does not exceed the site-specific guideline values stated in **Table 3** at **end-of-pipe**;

(4) stream flow gauging stations are installed, operated and maintained to determine and record stream flows in each of the Zones 2, 3, 4, 6 and 7 (as shown in Figure 7) of the **EBFR** and Finniss River continuously (minimum daily recording frequency);

(5) the rate of **point source discharge** to the EBFR is limited and controlled such that there is no decline in downstream **water quality** in Zones 6 and 7 (Figure 7) of the Finniss River;

(6) the daily quantity of water discharged from each discharge point is measured and recorded; and

(7) discharges to receiving waters are undertaken so as not to cause erosion of the bed and banks of the receiving waters, or cause a material build-up of sediment in such waters, in line with condition 16-4.

Table 2 Point source discharge water quality requirements at end-of-pipe

Activity	Species protection level (SPL)	Comment on SPL	Monitoring frequency	Monitoring Point	Receiving waters
Discharge of water during Main Pit backfill	**≥70%** (≥99% of the time)	Based on 99th percentile of the rolling annual discharge **water quality** dataset	Commencement of discharge and thereafter weekly during discharge	End-of-pipe	EBFR
Discharge of water following completion of Main Pit backfill	**≥80%** (≥90% of the time)	Based on 90th percentile of the rolling annual discharge **water quality** dataset			

Table 3 Discharge water quality characteristic guideline values

SPL	EC	SO_4	pH	DO	Turbidity	TSS	Al	As	Se	Cd
%	µs/cm	mg /L	pH	% sat.	NTU	mg/L	µg/L	µg/L	µg/L	µg/L
70	2985	1192	TBC	TBC	TBC	TBC	236	140	2	4.3
80	2985	997	TBC	TBC	TBC	TBC	150	140	2	2.16
SPL	**Cd**	**Cu**	**Co**	**Fe**	**Mg**	**Mn**	**Ni**	**Pb**	**Zn**	**U**
%	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L
70	4.3	60.2	89	300	86.6	759	130.4	12.9	210.5	31
80	2.16	27.5	25.9	300	86.6	443	43.1	9.4	180	22.5

NOTE:
1 - All metals and metalloids in this Table must be measured as total (unfiltered) and dissolved (filtered). Guideline values for metal/metalloids apply if dissolved results exceed value.
2 – Guideline values in this Table are adapted from the Compliance LDWQOs listed in Table 4-1 of Appendix 6 of the Main document - Second Request for Information Report (Compliance LDWQOs Hydrobiology Pty Ltd 2022), unless otherwise specified.
3 – SSTVs for dissolved oxygen (DO), turbidity and total suspended solids (TSS) must be provided by the approval holder prior to any discharge of water from the action to the EBFR as required by condition 15-2(2)

20. Receiving environment monitoring program (REMP)

20-1 The approval holder must monitor downstream **water quality** for the **life of the action** to identify changes in water quality and flow compared to the pre-construction aquatic ecosystem condition.

20-2 The **RAP** required by condition 9-1 must include a **REMP** which has been prepared by a **suitably qualified and experienced person.** The **REMP** must be implemented by the approval holder for the **life of the action** to monitor and record the effects of the discharge and seepage of contaminants from the action on the receiving environment, with the aims of identifying and describing the extent of any adverse impacts to local environmental values, and monitoring any changes in the downstream waters of the **EBFR** and the Finniss River.

20-3 A report outlining the findings of the **REMP**, including all monitoring results and interpretations for the period from 1 April to 31 March the following year (the reporting period), must be prepared by a **suitably qualified and experienced person** and submitted to the **site auditor** by 30 June each year;

20-4 The report required by condition 20-3 must include:

(1) an assessment of background **water quality**;

(2) any detected impact associated with contaminant **point source discharge**; and seepage from the action;

(3) an assessment of the suitability of contaminant **point source discharge** limits required by condition 19-2 to maintain or improve environmental values.

20-5 For the purpose of conditions 20 and 20-1, an improvement or decline in downstream **water quality** may be measured as a statistically significant change from pre-construction **water quality** and the level of species protection in each of the downstream zones (3,4,6 and 7) described in the Main Document of the Draft **EIS** (section 5.5.6)

20-6 The monitoring report required by condition 20-3 must include time series trend analysis of **water quality** data collected using appropriate monitoring techniques in the receiving environment, to determine the extent and duration of any improvement or decline in the ecosystem condition and whether the change is attributable to the action.

21. Water management plan

21-1 The **RAP** required by condition 9-1 must include a revised and updated version of the water management plan (Appendix 3 of the Draft **EIS** – Water Management Plan Stage 3 Rum Jungle Rehabilitation Project version 4 dated 27 November 2019);

21-2 The approval holder must ensure that the water management plan required by condition 21-1 is revised and updated by a **suitably qualified and experienced person**, to the satisfaction of the **site auditor;**

21-3 The water management plan must provide for effective water management of actual and potential environmental impacts resulting from water management associated with the activities carried out under this environmental approval and must include at least the following components:

(1) study of the source on contaminants

(2) a water balance model for the site

(3) a water management system for the site

(4) measures to manage and prevent acid, metalliferous and/or saline drainage

(5) contingency procedures for incidents and emergencies

(6) a program for monitoring and review of the effectiveness of the water management plan.

21-4 The approved water management plan required by condition 21-1 must be revised, to the satisfaction of the **site auditor**, within every 12 months after the date of approval by the **site auditor** and implemented for the **life of the action**, or as otherwise agreed by the **site auditor**; and

21-5 The approval holder must continue to implement the last approved version of the water management plan required by condition 21-1 until the **site auditor** provides confirmation in writing that a revised version is approved.

22. Modelling impact on water resources

22-1 Unless otherwise specified in a water licence or permit issued under the Water Act 1992, the approval holder must undertake the following:

No later than 2 years after the commencement of **remediation works**, the proponent must review the adequacy of the groundwater and surface water modelling and update the groundwater and surface water models (Supplement to the draft EIS, Appendix 28 parts A and B; and Draft EIS Appendix Robertson GeoConsultants 2019 Groundwater

and Surface Water Modelling Report, Rum Jungle Stage 2A Report 183008/1, November 2019) predicting changes in groundwater levels and surface water flow rates as a result of the action.

(1) The updated model required by condition 22-1 must incorporate the results of the monitoring program required by condition 20.

(2) The updated model required by condition 22-1 must be reviewed by a **suitably qualified and experienced person** to the satisfaction of the **site auditor**, to evaluate the appropriateness of the model used, evaluate the accuracy of the predicted changes in groundwater levels and surface water flow rates and recommend actions to ensure the accuracy of the model predictions.

(3) No later than 2 years after the commencement of **remediation works**, a report on the model amendments and accuracy (including any recommendations) of the updated model must be submitted to the **site auditor**.

(4) The groundwater and surface water models referred to in condition 22-1 must be updated at the following times:

(a) every five years from the commencement of **remediation works**; or

(b) at appropriate intervals specified by the **site auditor** in writing, when the observed water levels and surface water flow rates measured in accordance with condition 20 are not consistent with the groundwater levels and surface water flow rates predicted in the groundwater and surface water model.

(5) Within three months of completion, a model update (required by condition and a report interpreting the results from the updated model must be submitted to the **site auditor**.

23. EBFR realignment

23-1 The realignment of any portion of **EBFR** flow through the backfilled Main Pit by the approval holder must not cause a decline in the downstream **water quality** in **Zone 6** and **Zone 7** of the Finniss River (Figure 7) at any time during the **life of the action**;

23-2 The approval holder must verify through the **site audit report** required by condition 13-1, that:

(1) the construction of the permanent **EBFR** diversion is consistent with the functional design/s that formed a part of the **EIS** for the action.

(1) the permanent **EBFR** diversion has been constructed to prevent the release of contaminants from backfilled mine waste to the receiving environment.

Community and economy

24. Community and economy outcomes

24-1 The approval holder shall implement the action to meet the following environmental outcomes:

(1) minimise negative impacts to potentially affected communities from the action; and

(2) maximise benefits for traditional owners, and local and regional communities and businesses.

25. Public reporting to the community

25-1 The approval holder must develop and maintain a website to communicate regularly with the community. On the website the approval holder must publicly report on the:

(1) actions to enhance local employment, training and development opportunities;

(2) actions to avoid, manage or mitigate action-related social impacts on local community services, infrastructure and community safety and wellbeing;

(3) actions and **adaptive management** strategies to avoid, mitigate or manage action-related impacts on local and regional housing and accommodation markets;

(4) actions to inform the community and stakeholders, including traditional owners, about action-related impacts and show that community and stakeholder advice and concerns about action-related impacts have been taken into account when reaching decisions;

(5) actions to record, respond to, and manage community complaints; and

(6) results and outcomes of the monitoring and annual reporting required by the **REMP** under condition 20, including time series trend analysis of downstream water quality over time.

GENERAL CONDITIONS

26. Commencement of action

26-1 This approval expires five (5) years after the date on which it is granted, unless **substantial implementation** has commenced on or before that date.

26-2 Within 10 business days of **substantial implementation** of the action the approval holder must provide notification in writing to the **Minister**.

27. Completion of the action

27-1 The approval holder must provide notification in writing to the **Minister** within 10 business days of **completion of the action**.

28. Change of contact details

28-1 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.

29. Plans, modelling and monitoring programs

29-1 All plans, modelling and monitoring programs required by the conditions of this approval must be certified by a **suitably qualified and experienced person**.

29-2 All plans and monitoring programs required under these conditions must be implemented.

29-3 All plans, modelling and monitoring programs required by the conditions of this approval must be provided to the **Minister** on request.

29-4 All plans, modelling and monitoring programs required by the conditions of this approval must be updated as and when requested by the **Minister**.

30. Staging, combining and updating plans or programs

30-1 With the approval of the **site auditor**, the approval holder may:

(1) prepare and submit any plan or program required by this approval on a staged basis (if a clear description is provided as to the specific stage and scope of the action to which the plan or program applies, the relationship of the stage to any future stages and the trigger for updating the plan or program);

(2) combine any plan or program required by this approval (if a clear relationship is demonstrated between the plans or programs that are proposed to be combined) and;

(3) update any plan or program required by this approval (to ensure the plans and programs required under this approval are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the action)

30-2 If approved by the **site auditor**, updated plans or programs supersede the previous versions of them and must be implemented in accordance with the conditions of this approval that require the plan or program.

31. Compliance reporting

31-1 The approval holder must:

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

(2) obtain further such reports at regular intervals not exceeding 12 months from the report referred to in condition 31-1(1), for the **life of the action**; and

(3) submit each report required under condition 31-1(1) to the **Minister** within 90 days of its completion.

31-2 The reports required by conditions 31-1(1) and 31-1(2) 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.

32. Provision of environmental data

32-1 All environmental monitoring data, surveys, maps and other spatial and metadata (including sensitive 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 50 years commencing from the date that the data is collected or obtained.

32-2 The approval holder must, as and when directed by the **Minister**, provide any validated environmental monitoring data (including sampling design, sampling methodologies, empirical data and derived information products), surveys, maps and other spatial and metadata (including sensitive data) 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.

Term/acronym	Definition/full form
adaptive management	A systematic approach to improving environmental results and management practices during action implementation through the application of learning from monitoring of outcomes and management actions.
AMD	Acid and metalliferous drainage, including neutral and saline drainage
approved extent	The extent identified in Figures 1 to 5 and Table 1 of this approval which includes equipment, plant and structures, whether stationary or portable, and the land on which the action is situated.
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure 1999.
CEnvP(SC)	A person who is certified under the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) (**CEnvP(SC)**) scheme.
CHMP	Cultural heritage management plan
completion of the action	Completion of the **stabilisation phase** of the action.
construction phase	The first phase of the action, which is scheduled to be completed within a five-year period and includes earthworks, **remediation works** and water treatment.
contamination	A condition of land or water where any chemical substance or waste has been added as a direct or indirect result of human activity at above background level and represents, or potentially represents, an adverse health or environmental impact (**ASC NEPM** 1999).
CPESC	A person who is certified by EnviroCert International, Inc. as a Certified Professional in Erosion and Sediment Control (**CPESC**).
CPSS/CSAM	A person who is certified under the Soil Science Australia Certified Professional Soil Scientist / Contaminated Site Assessment and Management (**CPSS/CSAM**) scheme.
EBFR	East Branch of the Finniss River
EIS	Environmental Impact Statement (includes the Draft **EIS**, Supplement to the Draft **EIS**, and two additional information submissions).
end-of-pipe	The location at which water is discharged to waters or land in the receiving environment.

Term/acronym	Definition/full form
EP Act	*Environment Protection Act 2019* (NT)
ESCP	Erosion and sediment control plan
exposed soil areas	All areas of the site where the vegetation (trees, shrubs, brush, grasses, etc.) or impervious surface has been removed, thus rendering the soil more prone to erosion.
independent qualified person(s)	A qualified person (s) under the **EP Act** who is independent from the approval holder i.e.: o was not involved in the preparation of the **EIS**; o is independent of the personnel involved in the design, construction and operation of the action; and o has obtained written approval from the **CEO** to be the a qualified person to satisfy the relevant requirements under this approval.
life of the action	The period of time from **substantial implementation** 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**.
LTEMP	Long-Term Environmental Management Plan
mine waste	Waste that includes, but is not limited to, waste rock, PAF material, tailings, radioactive material, asbestos-containing material, water treatment plant residues and filter cake associated with historical mining and proposed remediation and **rehabilitation** activities at Rum Jungle, Mt Burton and Mt Fitch.
mine waste storages	Any structure, landform or residual void under this approval (including the east and west waste storage facilities and the backfilled Main Pit) that is designed and constructed to store **mine waste** as part of the **remediation works**.
Minister	The Northern Territory Minister for Environment, Climate Change and Water Security.
NLC	Northern Land Council.
NRF	The National Remediation Framework (NRF) developed by Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE 2019) to enable a nationally consistent approach to the remediation and management of contaminated sites. In November 2019, it was endorsed as best practice by all jurisdictions through the Heads of EPA (HEPA) forum.
PAF	Potentially acid forming

Term/acronym	Definition/full form
peer reviewer	A person(s) who is engaged by the proponent to provide an independent peer review of the site auditor endorsed RAP. The **peer reviewer** must: • be a qualified person(s) under the EP Act; • be accredited under section 68 of the *Waste Management and Pollution Control Act 1998*; • be suitably qualified and experienced in mine site remediation and rehabilitation; • be able to nominate an expert support team of specialised professionals on whom they would rely for site issues beyond their areas of expertise; • demonstrate a sound ability and experience in forming and managing a multidisciplinary team for complex site assessment which contains the appropriate balance of expertise; and • be independent from the approval holder i.e.: o was not involved in the preparation of the **EIS**; o is independent of the personnel involved in the design, construction and operation of the action; and o has obtained written approval from the CEO to be the **peer reviewer** to satisfy the relevant requirements under this approval.
point source discharge(s)	A discharge or outflow of water from the action to a waterway, that comes from an identifiable location, such as a pipe, drain or spillway (does not include diffuse discharge which cannot be seen and is not easily attributed to a single source, or uncontrolled discharge)
RAP	Remediation Action Plan.
rehabilitation	The design and construction of landforms as well as the establishment of sustainable ecosystems or alternative vegetation, depending upon desired post-operational land use (Australian Government 2016).
remediation	Remediation is taking steps towards remedying something, in particular of reversing or stopping environmental damage. It may be action designed to deliberately break the source-pathway-receptor linkage in order to reduce the risk to human health and/or the environment to an acceptable level (CRC CARE 2019)
remediation works	Any works carried out under the approved **RAP**.
sensitive or significant vegetation	As defined in the NT Planning Scheme and the NT Land Clearing guidelines

Term/acronym	Definition/full form
site auditor(s)	A person(s) who is engaged by the proponent to: • review and endorse all plans and reports required under the environmental approval • review the investigation, remediation and validation undertaken during **remediation works** • provide independent expert opinion regarding any potential impacts to human health and/or the environment relating to site **contamination**, and the suitability of land for its intended use (**ASC NEPM** sch. 9). The **site auditor(s)** must: • be a qualified person(s) under the **EP Act**; • be accredited under section 68 of the *Waste Management and Pollution Control Act 1998*; • be suitably qualified and experienced in mine site **remediation** and **rehabilitation**; • be able to nominate an expert support team of specialised professionals on whom they would rely for site issues beyond their areas of expertise; • demonstrate a sound ability and experience in forming and managing a multidisciplinary team for complex site assessment which contains the appropriate balance of expertise; and • be independent from the approval holder i.e.: o was not involved in the preparation of the **EIS**; o is independent of the personnel involved in the design, construction and operation of the action; and o has obtained written approval from the **CEO** to be the **site auditor(s)** to satisfy the relevant requirements under this approval.
stabilisation phase	The second phase of stage 3 of the Rum Jungle **rehabilitation** framework. It follows the **construction phase**, is anticipated to take five years to complete and includes intensive monitoring and maintenance.
substantial implementation	The commencement of any ground disturbing activity undertaken to carry out the action.

Term/acronym	Definition/full form
suitably qualified and experienced person(s)	A person(s) who: • has professional qualifications, training, skills and experience related to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, and methods. • is engaged by the approval holder to prepare and implement plans, programs and/or reports required under this environmental approval • is able to nominate an expert support team of specialised professionals on whom they would rely for site issues beyond their areas of expertise; and • demonstrates a sound ability and experience in forming and managing a multidisciplinary team for complex site assessment which contains the appropriate balance of expertise.
water quality	The physical, chemical and biological characteristics of water and the measure of its condition relative to the requirements for one or more biotic species and/or to any human need or purpose.
wet season	The period from 1 October to 30 April in any calendar year.
WSF	Waste storage facilities
Zone 6	Zone 6 of the Finniss River as shown in Figure 7 and described in Appendix 5 to the Rehabilitation of the former Rum Jungle Mine - Supplement to the Draft **EIS** (Aquatic Ecosystem Survey, Early and Late Dry Season 2015. Prepared for the Department of Mines and Energy, Northern Territory Government) (Hydrobiology 2016b).
Zone 7	Zone 7 of the Finniss River as shown in Figure 7 and described in Appendix 5 to the Rehabilitation of the former Rum Jungle Mine - Supplement to the Draft **EIS** (Aquatic Ecosystem Survey, Early and Late Dry Season 2015. Prepared for the Department of Mines and Energy, Northern Territory Government) (Hydrobiology 2016b).

LOCATION AND APPROVED EXTENT OF ACTION

Spatial data depicting information provided in Table 1 and Figures 1 to 6 are held by the Department of Environment, Parks and Water Security within file NTEPA2016/0097-110: Spatial files (final) – Rum Jungle rehabilitation - DITT.

All coordinates are provided in the Universal Transverse Mercator map projection, Map Grid of Australia Zone 52 (MGA Zone 52) and datum Geocentric Datum of Australia 1994 (GDA94).

Approved extents are shown in Figures 2 to 6.

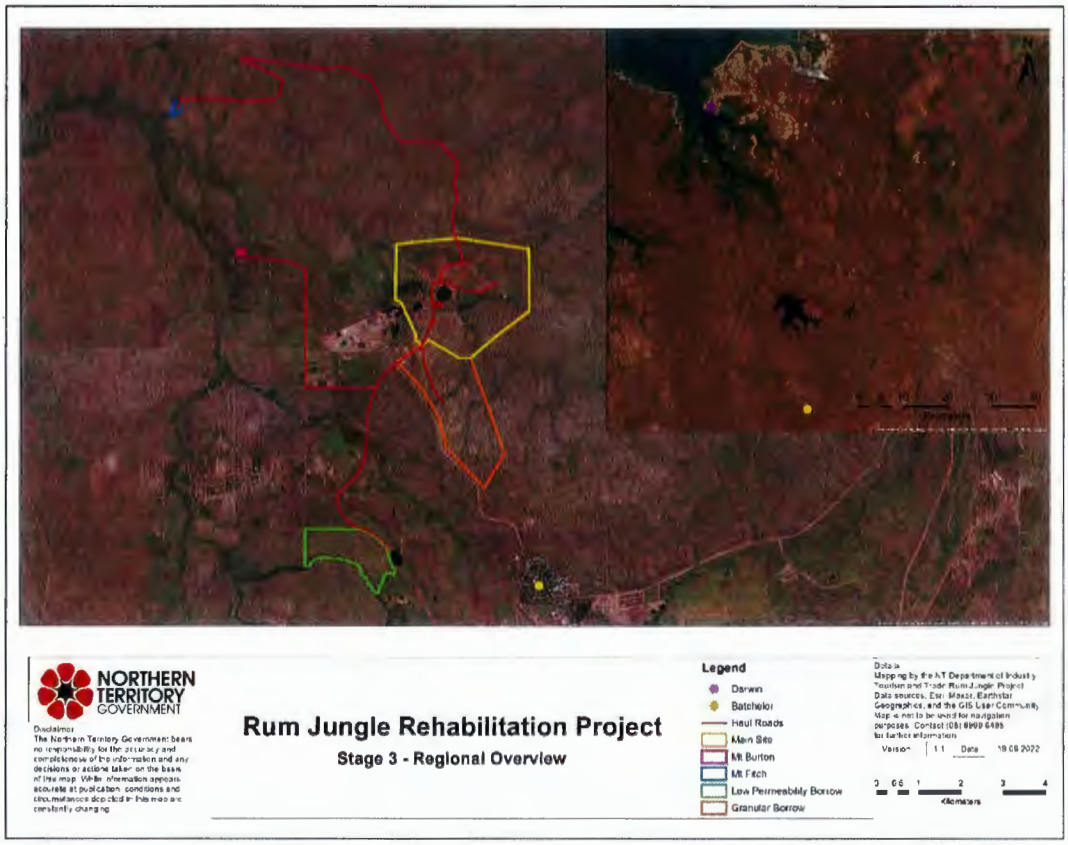

Figure 1 Regional context - Location of rehabilitation activities and haul roads.

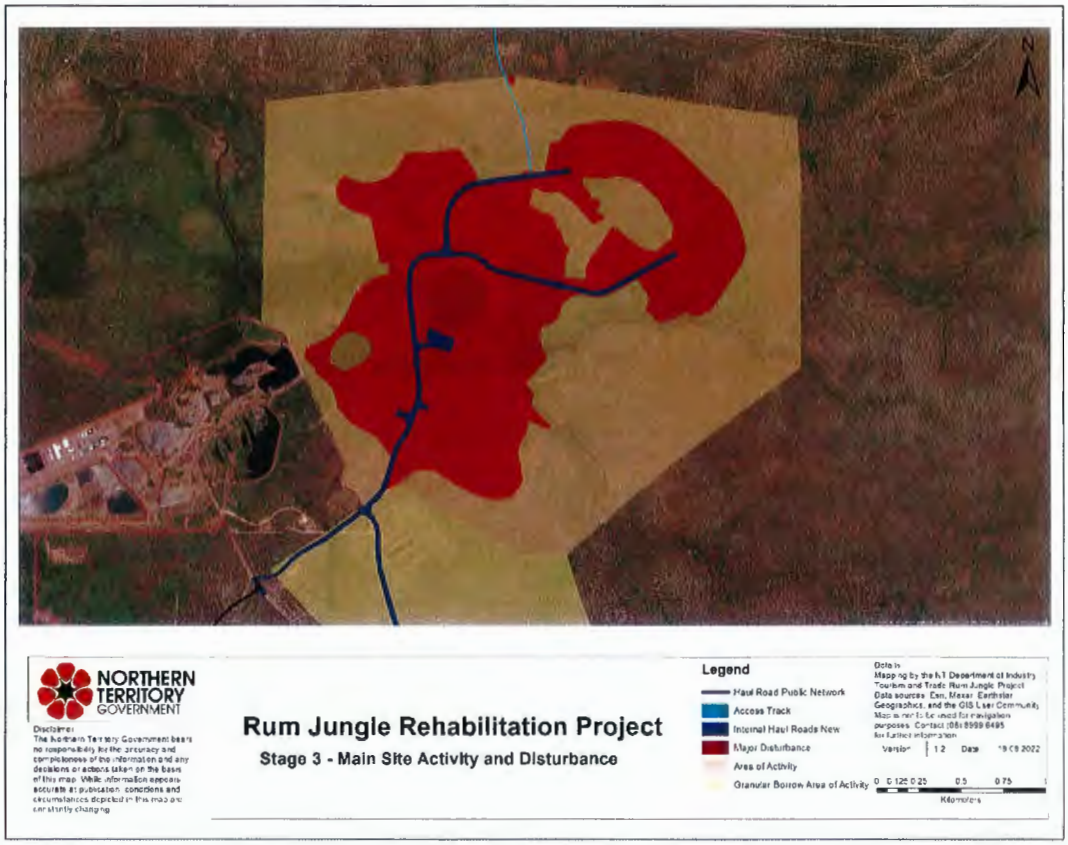

Figure 2 Approved extent Rum Jungle – major disturbance (red) and haul roads (blue).

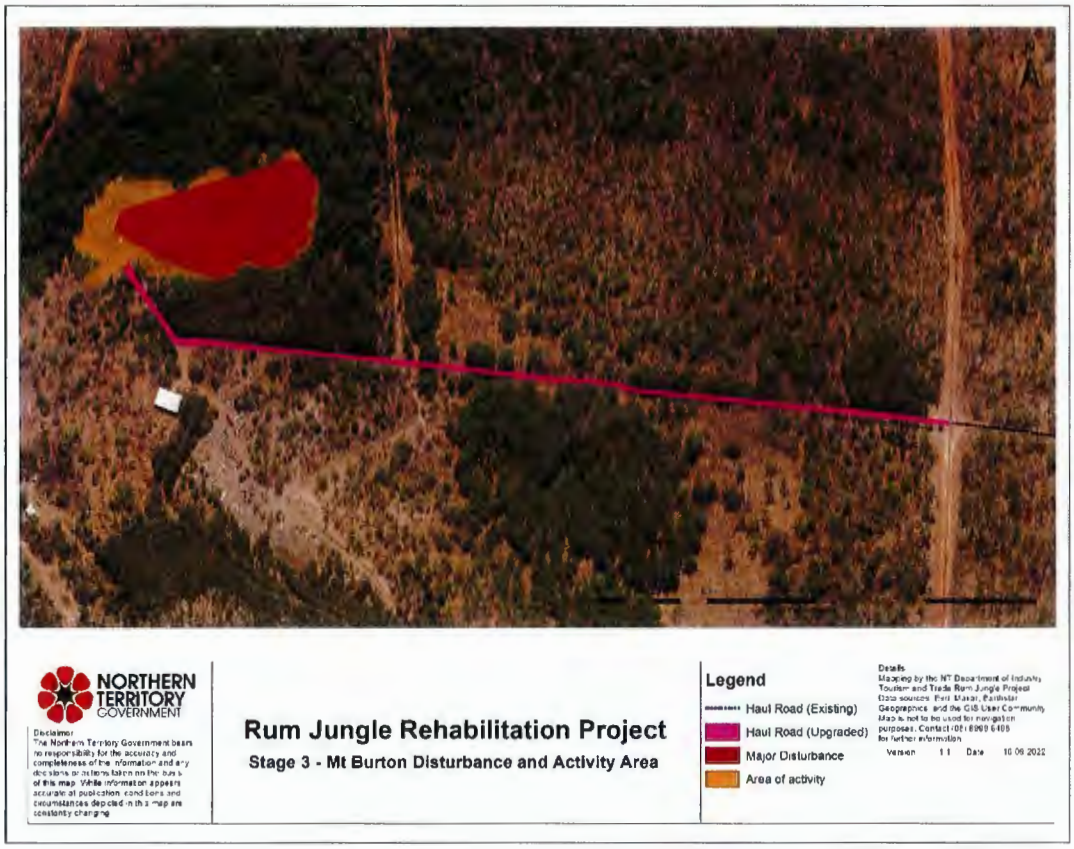

Figure 3 Approved extent Mt Burton - major disturbance (red).

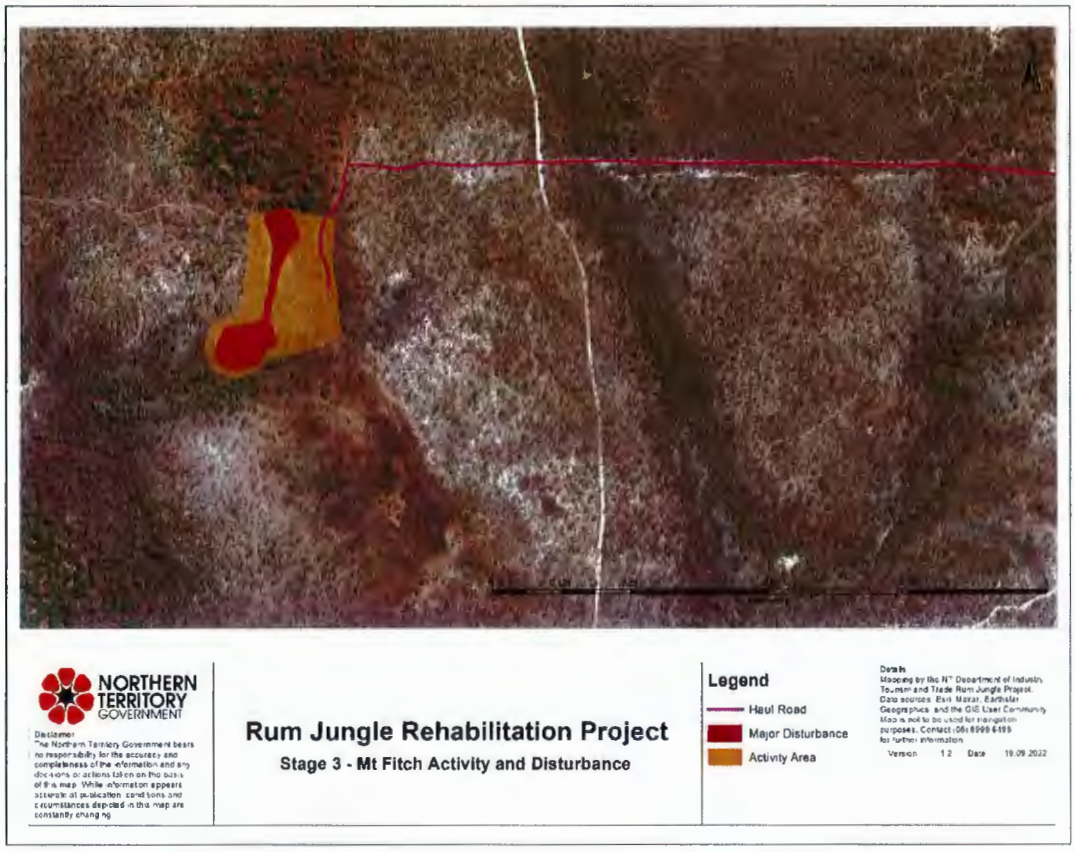

Figure 4 Approved extent Mt Fitch - major disturbance (red) and haul road

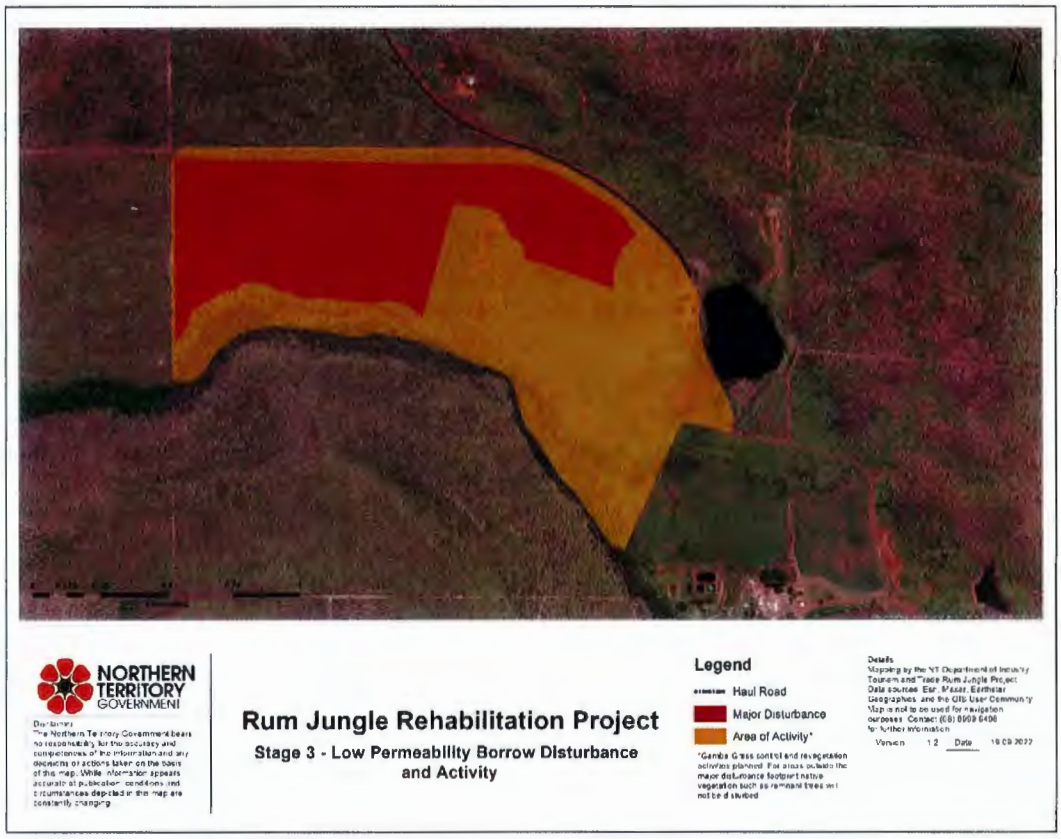

Figure 5 Approved extent Borrow Area A - major disturbance (red).

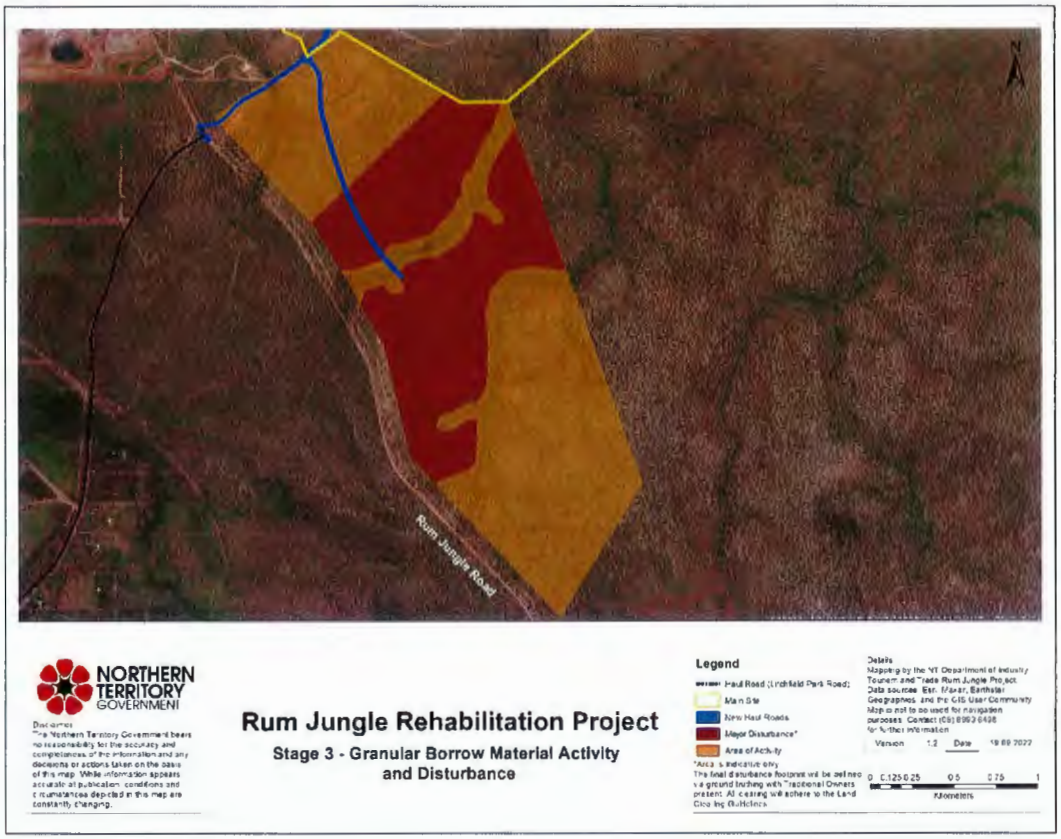

Figure 6 Approved extent Borrow Area B - major disturbance (red) and haul road (blue).

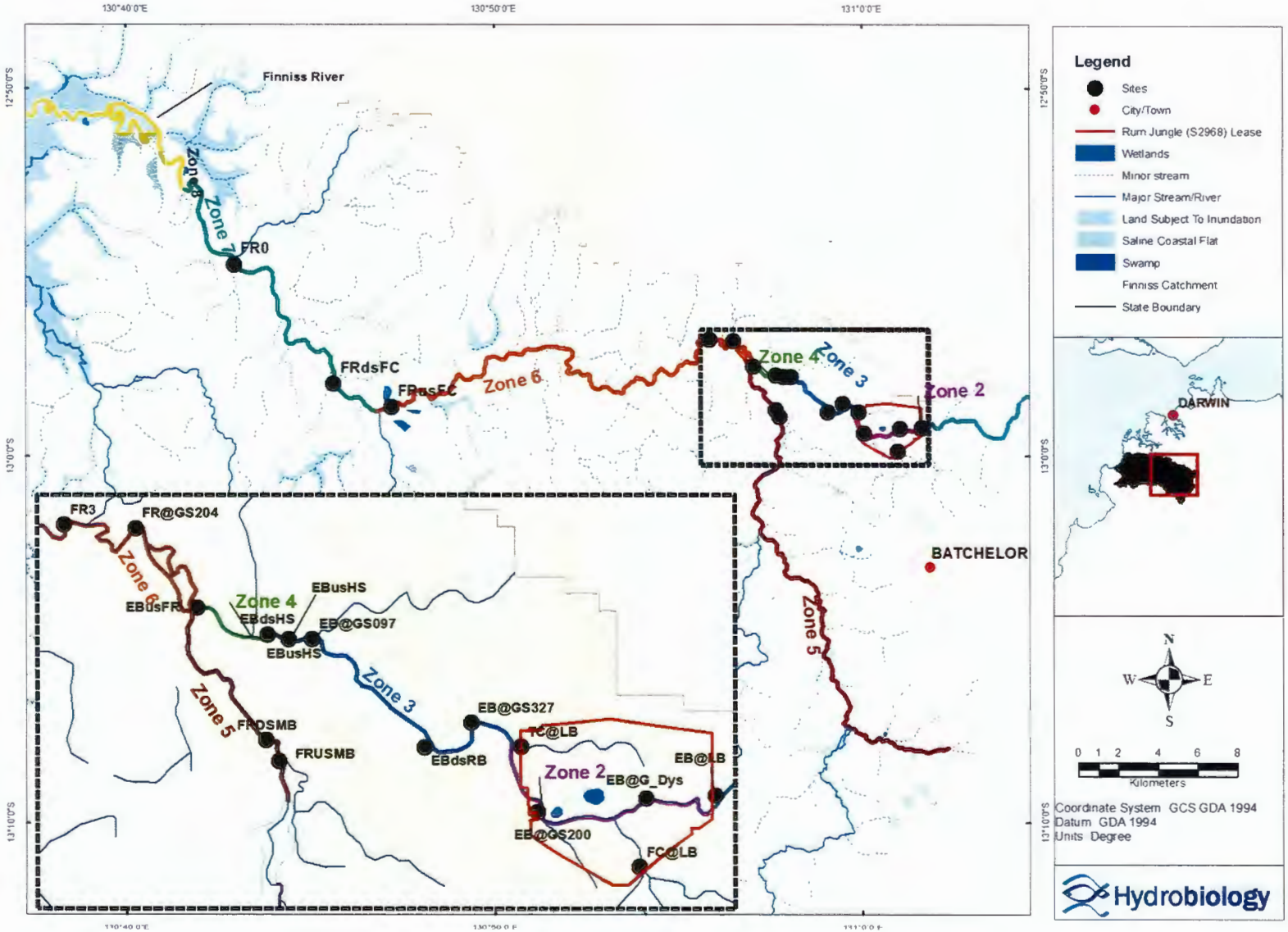

Figure 7 Finniss River zones and monitoring sites