RioTinto

Global Industry Standard on Tailings Management

GISTM tailings facility disclosure for Gove – Pond 5

5 August 2024

Guidance on interpretation of this GISTM tailings facility disclosure:

The following provides the information required under Requirement 15.1.B of the GISTM.

The information provided in this Global Industry Standard on Tailings Management (GISTM) tailings facility disclosure should be read in conjunction with the information relating to Rio Tinto's approach to tailings management that is available on the Rio Tinto website, and the Group-level tailings management information supporting the GISTM tailings facility disclosures that is included in the Appendix to this document.

Where Rio Tinto considers a Rio Tinto internal process, standard, procedure and/or plan gives rise to a materially similar outcome to a requirement of GISTM, Rio Tinto has adopted the relevant defined term from GISTM for the purpose of reporting under Requirement 15.1.B of GISTM, even though the relevant Rio Tinto process may have a different name or achieve a materially similar outcome by different methods.

The information provided in this disclosure contains forward-looking statements (within the meaning of the US Private Securities Litigation Reform Act of 1995) concerning the financial condition, operations and businesses of Rio Tinto. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements.

Readers should not place undue reliance on these forward-looking statements, including with regard to future investment decisions. This is because forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance of, or events affecting Rio Tinto, or the industry, to differ materially from those expressed or implied in these statements.

Refer to the end of this GISTM tailings facility disclosure for further information on the content of this document and on forward-looking statements.

GISTM conformance status

Tailings facility name: Gove – Pond 5

GISTM consequence classification: Extreme

GISTM conformance status: Meets

Facility status: Closed

The Gove – Pond 5 tailings facility is managed under the Rio Tinto *Group Safety Standard for the Management of Tailings and Water Storage Facilities*, which is focused on ensuring safe operation of all our tailings facilities.

The implementation of the GISTM for the Gove – Pond 5 tailings facility is complete, and the facility meets the requirements for GISTM conformance as validated by third-party assessment in accordance with the ICMM GISTM Conformance Protocols.

With safety and transparency being core principles for Rio Tinto and the GISTM, we have engaged with local representatives and emergency response groups for the community of Nhulunbuy and will continue to share relevant information and seek inputs as engagement continues. We have an Emergency Preparedness and Response Plan in place, developed with involvement from local responders and community stakeholders where relevant.

1. Description of the tailings facility

The Gove – Pond 5 tailings facility is part of the multi-cell Residue Disposal Area at Rio Tinto's bauxite mine at Gove on the Gove Peninsula, East Arnhem Land, Northern Territory, Australia. The tailings facility is located approximately 5 km to the west of the town of Nhulunbuy. Tailings from the Gove refinery were deposited into Gove – Pond 5 in the form of red mud slurry and supernatant liquor.

Gove – Pond 5 is a closed red mud tailings facility that is currently being rehabilitated. It has a total storage impoundment of 23 Mm^3. Pond 5 has external western and southern embankments and shares internal walls with the adjacent Pond 4 to the north, and Pond 6 and 6S to the east.

The Gove – Pond 5 tailings facility first received tailings in the late 1970s, as a high pH, low-density slurry deposited via a perimeter residue discharge system. In the early 1990s, the deposition method was modified to multipoint perimeter discharge to develop beaches against the embankment. The discharge system was changed to sand disposal in the south-east corner in the mid-1990s, and dry stacking complemented with mud farming was introduced in the late 1990s. In 2009 the discharge method was changed to a multi-spigot arrangement discharging high-density tailings. Deposition of red mud into Gove – Pond 5 ceased when the refinery operations were curtailed in 2014, after which the facility was used for managing rainfall runoff from Pond 4 and Pond 5, for evaporation of supernatant liquor and for disposal of materials from the Pond 4 rehabilitation works.

Gove – Pond 5 sits on the traditional lands of the Yolngu people, who are key stakeholders in closure planning. This tailings facility is located in close proximity to a site of cultural significance.

(Google Maps)

2. Consequence classification

Credible failure modes for Gove – Pond 5 have been identified and modelling has been undertaken of downstream flooding resulting from potential dam breaks. The dam failure consequence classification was assessed in accordance with the Consequence Classification Matrix, and incremental losses linked to potential population at risk and potential loss of life; environment; health, social and cultural; and infrastructure and economics were considered.

The overall GISTM consequence classification for Gove – Pond 5 is 'Extreme' due to the potential impacts to the environment, local cultural heritage and associated social impacts in the event of a tailings facility failure.

3. Risk assessment summary

Rio Tinto assesses risks in a manner consistent with the International Standards Organisation's *Risk Management – Guidelines* (ISO 31000) using the Rio Tinto *Risk Management Standard*. Assessments of risks relevant to Gove – Pond 5 are undertaken by a multi-disciplinary team. Risks are evaluated with regard to the potential consequences related to a range of aspects including, but not limited to, health and safety, social, environment, infrastructure and local economics. The material risks that have been identified for Gove – Pond 5 and their associated control measures are summarised in the table below.

Material risk	Control measure(s)	Status
Embankment failure.	Controls implemented to prevent or manage an embankment failure include: • Engaging qualified engineers for design, and involving them through all phases of construction, operation, and closure; • Utilising design criteria based on leading practice standards; • Preparing plans and procedures for the maintenance and closure of Gove – Pond 5; • Using a construction methodology and management that focusses on risk mitigation and appropriate supervision; • Monitoring tailings facility performance through instrumentation and visual inspections; • Independent reviews of design and operations by recognised experts; • Development of an Emergency Preparedness and Response Plan for the tailings facility informed by the dam break study, and having an emergency response team in place; and • Ensuring availability of standby pumps and earthmoving equipment, if required.	These controls are implemented and are monitored through Rio Tinto's internal assurance activities.
Impacts to culturally significant site as a result of closure works.	• Maintenance of an active buffer between the culturally significant site and closure activities associated with Gove – Pond 5, including the construction and maintenance of a new protective barrier and demarcation as a significant site; • Vegetation, dust and groundwater monitoring; and • Implementation of a cultural heritage management system including: – Annual inspection with Traditional Owners; and	These controls are implemented and are monitored through Rio Tinto's internal assurance activities.

Material risk	Control measure(s)	Status
	– Cultural heritage inductions for employees and contractors.	
Seepage impact to the environment.	Construction of a cover system as part of rehabilitation work is in progress to restrict water infiltration into the tailings and recharge of the tailings facility.	Rehabilitation works are scheduled to conclude in 2024.
	A collection system has been installed at the southern embankment to manage seepage and a solution to manage seepage on the western area is being installed.	Ongoing improvement: Seepage management system installation will be finalised by the end of 2024.
	Additional controls implemented to manage seepage related risks have included: • Preventing access to area by people; • Adopting design criteria based on leading practice standards; and • Monitoring and inspecting performance through instrumentation and observation, focussing on vegetation monitoring.	These additional controls are implemented and are monitored through Rio Tinto's internal assurance activities.

Material risks are reviewed on a quarterly basis and all other risks are reviewed annually by a multi-disciplinary team. The risk assessments are updated to reflect the current state of the risks and to ensure the control measures remain relevant and effective. The risk assessments are reviewed by the Independent Tailings Review Board.

A detailed study of tailings related risks for Gove – Pond 5 was completed in 2023. Risk reduction measures have been identified to ensure that the risks associated with the tailings facility are effectively managed to a level as low as reasonably practicable (ALARP), and to ensure that all reasonable steps have been taken to reduce both the likelihood and consequences of a tailings facility failure.

4. Impact assessment summary

An impact assessment has been undertaken for Gove – Pond 5 using credible flow failure scenarios. Human exposure and vulnerability have been assessed using the information from the dam break study to identify areas where people are likely to be exposed and vulnerable downstream during credible failure scenarios, and the impact this may have on the social, environmental, and local economic context.

In alignment with the United Nations *Guiding Principles on Business and Human Rights* and Rio Tinto's *Human Rights Policy*, a human rights risk self-assessment tool was used to identify and address potential impacts from a facility failure at Gove – Pond 5 to people's rights, particularly those linked to community health, safety and wellbeing, Indigenous Peoples' rights, and workplace health and safety, together with land access and use, labour rights, inclusion and diversity, and climate change. The assessment for the local community identified potential impacts to cultural heritage, the environment, livelihoods, land access and use, and infrastructure. The assessment, together with stakeholder mapping, has informed mitigation controls and engagement planning.

Potential environmental impacts were also assessed including water quality, sensitive terrestrial and aquatic ecosystems, threatened species, and designated areas of conservation significance. In addition, potential impacts on health, social, culturally sensitive sites, and the local economy, together with potential impacts on property, roads and infrastructure within the inundation zone were evaluated.

The size of areas that may be affected and the likely length of time required for remediation and recovery have been considered when determining the dam failure consequence classification for Gove – Pond 5.

This information has been shared and discussed with Northern Territory Government representatives and Traditional Owners. Northern Territory Police, Fire and Emergency Services and the nominated Nhulunbuy Local Emergency Committee have also been provided with this information and have had input into the development of the Emergency Preparedness and Response Plan for the tailings facility, which forms part of the overarching emergency preparedness and response for the site.

5. Description of the tailings facility design

The Gove – Pond 5 starter embankment was constructed between 1979 and 1981 as a clay fill embankment with a lateritic sandy downstream shell. Gove – Pond 5 received its first tailings deposits in 1981.

The facility has been raised in four stages with each raise following the downstream method over the crest and shoulder of the original embankment. In 1988-89, the clay fill embankment was raised and gravelly topsoil was placed as a shell for Stage 1. Stages 2 and 3 were completed in 1989 which saw multiple raises of the crest using a clay fill benched into the upper part of the topsoil shell, along with the establishment of a mid-berm road. A further clay fill raise was added in 1992 to complete Stage 4 and the gravel road was not removed. The current embankment has a maximum height of 24 m above natural ground level. The final height of the embankment following closure works is expected to be 18.6 m.

Deposition of red mud into Gove – Pond 5 ceased when the refinery operations were curtailed in 2014, after which the facility was used for managing rainfall runoff from both Pond 4 and Pond 5, for evaporation of supernatant liquor and for disposal of materials from the Pond 4 rehabilitation works.

Rehabilitation works commenced in 2021 and are scheduled to conclude mid-2025 with the aim of achieving the closure targets of being a safe, stable and non-polluting facility. The Gove – Pond 5 rehabilitation works targets the complete separation of clean water from potential contaminants through the construction of a lined and vegetated soil cover system. The cover system consists of a geomembrane liner overlaid by clay, loam and topsoil. All surface drainage system and three spillways were designed for Probable Maximum Flood and are being constructed to direct clean runoff to the discharge points. A seepage collection drain will collect contaminated seepage from the pond for treatment.

The closure design adopted conservative design criteria as recommended by ANCOLD and GISTM.

6. Review findings summary

The material findings from the most recent independent reviews and their associated mitigation measures are summarised in the table below.

Material review findings	Mitigation measure(s)	Status
A condition assessment of all mechanical elements and appropriate remedial action should be carried out and all steel structures, pipework and valves with corrosion should be appropriately treated and painted or replaced. Where not required, structures should be removed.	A new maintenance plan has been implemented to ensure that maintenance of mechanical equipment happens in a timely matter.	Completed.

Material review findings	Mitigation measure(s)	Status
Parameters for residual strength of red mud and loose foundation soils were not identified.	Further geotechnical investigation was undertaken to determine residual strength of red mud and loose foundation. Stability analysis has been updated adopting the residual strength data and the results showed the facility met minimum factor of safety requirements.	Completed.
Seepage management plan is not adequate.	A unified hydrogeological model has been developed for the site to improve the understanding of the seepage phenomena. A seepage collection system is currently being installed to collect seepage from Pond 5. Monitoring bores to monitor quality of ground water will be installed.	Ongoing improvement: Seepage collection system will be finalised by end of 2024. Monitoring bores will be finalised in 2025.

The Engineer of Record completes regular monthly inspections and assessment of monitoring instrumentation, monitoring data, and geotechnical and operational performance. The most recent annual performance review, completed for 2023, found:

- Erosion over the wet season due to significant rainfall events – remediation was undertaken;
- June InSAR data identified potential movement along the Pond 5/6 South Embankment – additional monitoring pins were installed and monitored weekly, reports are supplied as they are available with no significant movement noted;
- No signs of deformation, bulging, settlement or sinkholes along embankments;
- Construction works were in accordance with the specification and design intent;
- Safety, maintenance and management of the facility was acceptable; and
- Wet season plans were in place and sufficient infrastructure installed prior to the commencement of the wet season to manage surface water.

7. Environmental and social monitoring programmes

There are currently no material findings from the environmental and social monitoring programmes for Gove – Pond 5.

Monitoring programmes form part of Rio Tinto's Health, Safety, Environment and Communities (HSEC) management system, that acts as the environmental social management system under the GISTM.

To support environmental monitoring works, groundwater around the periphery of Gove – Pond 5 is monitored twice a year for water level, pH, alkalinity, turbidity, electrical conductivity, dissolved oxygen, oxidation-reduction potential, temperature, major ions and selected metals. The ongoing monitoring in this area supports the management and mitigation of seepage and progressive closure activities.

The surface water tidal drain to the mangrove area to the south of Gove – Pond 5 is monitored for pH, electrical conductivity, alkalinity, turbidity and selected metals and metalloids. The discharge is sampled during the first flow event of the month. These parameters are monitored to understand the characteristics of surface water leaving the site.

Seawater and sediment are monitored in the aquatic receiving environment to the southwest of Gove – Pond 5 for a range of physio-chemical parameters as part of a marine health monitoring programme. Seawater is monitored monthly, and sediment is sampled annually. Overall, there is no current evidence of deterioration of marine ecosystem health and there were no significant environmental impacts identified for the most recent monitoring period.

There are two air quality monitoring stations at the Residue Disposal Area to continually monitor dust generation from the tailings facilities. Gove – Pond 5 is also regularly monitored for weed species as part of weed control activities at the site.

Guided visits of site facilities are held for key stakeholders to increase awareness on how Rio Tinto manages tailings facilities, to build the integrated knowledge base, and to encourage meaningful engagement with community that is tailored to the social context and provides an opportunity for questions and clarification. This includes regular tours for the Traditional Owners of the land.

As monitoring programmes mature and engagement continues with local community, there will be more opportunity for stakeholders to be involved, request information, seek feedback, and raise any concerns they may have. A complaints and grievance mechanism is in place and no material complaints relating to this facility have been received in the previous 12 months.

8. Emergency preparedness and response

An Emergency Preparedness and Response Plan has been prepared for the Residue Disposal Area, including Gove – Pond 5, as part of the overarching emergency preparedness and response planning. The Emergency Preparedness and Response Plan is based on credible flow failure scenarios and the assessment of potential consequences to people and the environment, and identifies:

- Equipment and personnel resources required to respond to a tailings facility emergency;
- The chain of command in the event of an actual or potential Gove – Pond 5 failure;
- Roles and responsibilities of internal employees, responders and other relevant stakeholders;
- Personnel competencies and training needs for all responders;
- Training exercises that are required to be conducted;
- A graduated Trigger Action Response Plan, where actions are based on how imminent a failure may be, or where actions are based on a failure that has occurred;
- Proposed communications approach during an emergency;
- Evacuation decision making, co-ordination, and planning requirements; and
- Proposed recovery considerations following a Gove – Pond 5 failure.

The Emergency Preparedness and Response Plan articulates roles and responsibilities in the event of a tailings facility failure and procedures that need to be followed to minimise harm to people and the environment, has been developed in consultation with the Northern Territory Police, Fire and Emergency Services and the Nhulunbuy Local Emergency Committee. These groups respond to an emergency as per the Nhulunbuy District Local Emergency Plan, developed for the Nhulunbuy District.

In an emergency, the Gove operation has responsibility for evacuation orders within the site boundary. The Nhulunbuy Local Emergency Committee has responsibility for calling for a voluntary evacuation of persons from impacted areas in the community and to coordinate these evacuations. The Northern Territory Police can declare an emergency and order an evacuation.

In the event of a catastrophic failure, a long-term recovery plan will be developed in partnership with relevant stakeholders to ensure the considerations, response strategies and approach is appropriate for the local context.

9. Independent review timing

The Engineer of Record conducted an annual performance review in December 2023. The next annual performance review will be organised for the last quarter of 2024.

The most recent independent review of Gove – Pond 5 was conducted in May 2022. The next independent review is scheduled for April 2025.

The most recent Independent Tailings Review Board was conducted in February 2024, and will convene again in November 2024.

10. Financial capacity for closure

The operator of Gove – Pond 5, RTA Gove Pty Ltd, is ultimately 100% owned by Rio Tinto. Rio Tinto confirms it has adequate financial capacity to cover the estimated costs of planned closure, early closure, reclamation, and post-closure monitoring and maintenance of Gove – Pond 5.

IMPORTANT NOTICE

Content of document

This document includes figures, classifications, assessments and other information regarding tailings and Rio Tinto's systems. Some of the information provided relies upon judgment based on internal or external reviews of information. Unless otherwise stated the information in the document is based on data available as at 5 August 2024, and judgments or assessments in the document may be based on data which predates 5 August 2024. The information and views may change based on new or different information, circumstances or events and should not be relied upon as a forecast or recommendation.

Forward looking statements

The information presented contains forward-looking statements (within the meaning of the US Private Securities Litigation Reform Act of 1995) concerning the financial condition, operations and businesses of Rio Tinto. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements.

Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance of, or events affecting Rio Tinto, or the industry, to differ materially from those expressed or implied in these statements. Such forward-looking statements involve subjective judgements and determinations based on available geological, technical, contractual and economic information. These could change because of new information from production or mining activities, or changes in economic factors, including changes in market prices and operating costs, changes in the regulatory policies of host governments, or other events. The statements could also be altered by acquisitions and divestments, new discoveries, and extensions or closure of existing mines, as well as the application of improved recovery and tailings techniques. Published statements could also be subject to correction due to errors in the application of internal assurance or published rules or guidance, and changes in that assurance, rules or guidance. Please also refer to further factors and risks as identified in Rio Tinto's most recent Annual Report and Accounts in Australia and the United Kingdom and the most recent Annual Report on Form 2-0-F filed with the United States Securities and Exchange Commission ("SEC") or Forms 6-K furnished to, or filed with, the SEC.

As such, readers should not place undue reliance on these forward-looking statements, including with regard to future investment decisions.

Rio Tinto undertakes no obligation to publicly update, or revise, any information in the document, including forward-looking statements, as a result of new information, future events or other information.

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Global Industry Standard on Tailings Management

Appendix A:
Group-level tailings management information supporting the GISTM tailings facility disclosures

5 August 2024

Guidance on interpretation of this Appendix to the GISTM tailings facility disclosures:

The following provides Rio Tinto Group-level information relating to tailings management that supports the GISTM tailings facility disclosures. The processes implemented at individual sites may differ slightly from those described here.

The information provided in this Appendix to the Global Industry Standard on Tailings Management (GISTM) tailings facility disclosures should be read in conjunction with the information relating to Rio Tinto's approach to tailings management that is available on the Rio Tinto website.

Where Rio Tinto considers a Rio Tinto internal process, standard, procedure and/or plan gives rise to a materially similar outcome to a requirement of GISTM, Rio Tinto has adopted the relevant defined term from GISTM for the purpose of reporting under Requirement 15.1.B of GISTM, even though the relevant Rio Tinto process may have a different name or achieve a materially similar outcome by different methods.

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Refer to the end of this Appendix to the GISTM tailings facility disclosures for further information on the content of this document and on forward-looking statements.

Appendix A:
Group-level tailings management information supporting the GISTM tailings facility disclosures

A.1. Rio Tinto's tailings facilities

Key points:
- *Information for the tailings facilities that Rio Tinto operates are included in our interactive tailings disclosure map.*
- *New tailings facilities at our operations are in various stages of studies and construction; these will be added to the interactive tailings disclosure map over time.*
- *Rio Tinto also has an interest in tailings facilities at non-managed and non-operated sites.*

Rio Tinto operates a diverse portfolio of tailings facilities at various stages of the tailings facility lifecycle, including tailings contained within engineered earthen embankments and tailings deposited into previously mined open pits. Some tailings facilities consist of embankments constructed in a single phase; others have been raised several times over their active life to increase tailings storage capacity.

For each of our tailings facilities with 'Very High' and 'Extreme' GISTM consequence classifications, we have published a tailings facility disclosure statement under Principle 15 of the GISTM that provides information on implementation status. In addition, the tailings information published in response to the request for public disclosure on tailings by the Investor Mining and Tailings Safety Initiative (IMTSI) is available for these facilities. For the remaining tailings facilities with 'Low', 'Significant' and 'High' GISTM consequence classifications, we have published information in the IMTSI disclosure; disclosure statements under Principle 15 of GISTM will be available for all Rio Tinto operated tailings facilities by August 2025.

We periodically update the list of tailings facilities to reflect operational and ownership changes, including changes relating to closure or remediation obligations for legacy assets and reclassification of tailing facilities as these develop over the life of operations.

Rio Tinto also has an interest in other mining operations through joint ventures and other business entities, and through our connection to legacy assets. Sites with tailings facilities in which Rio Tinto has an interest include: Alumar, Blackbird, Escondida, Gladstone Power Station, Mineração Río do Norte, Olette, Ranger, and Saint Cyr. Refer to the operator or owner for further information on these tailings facilities.

A.2. Consequence classification

Key points:
- *Each tailings facility has been assessed against the five potential loss categories defined in the GISTM and assigned a dam failure consequence classification based on the highest consequence classification across the five categories.*
- *Consequence classifications for Rio Tinto's tailings facilities are a result of assessment by qualified and experienced multi-disciplinary teams following consideration of credible failure modes and impact assessments.*
- *Consequence classifications can change over time.*

Annex 2 of the GISTM includes the Consequence Classification Matrix, as shown below. Using this matrix, potential failures of a tailings facility are assessed against five potential loss categories and assigned a dam failure consequence classification. The overall GISTM consequence classification for a tailings facility is the highest classification across the five categories.

It is important to note that consequence classifications are not ratings of the safety condition of a tailings facility or the likelihood of failure; instead, they rate the potential consequence if the tailings facility were to fail.

Dam Failure Consequence Classification	Incremental Losses				
	Potential Population at Risk	Potential Loss of Life	Environment	Health, Social and Cultural	Infrastructure and Economics
Low	None	None expected	Minimal short-term loss or deterioration of habitat or rare and endangered species.	Minimal effects and disruption of business and livelihoods. No measurable effect on human health. No disruption of heritage, recreation, community or cultural assets.	Low economic losses: area contains limited infrastructure or services. <US$1M.
Significant	1–10	Unspecified	No significant loss or deterioration of habitat. Potential contamination of livestock/fauna water supply with no health effects. Process water low potential toxicity. Tailings not potentially acid generating and have low neutral leaching potential. Restoration possible within 1 to 5 years.	Significant disruption of business, service or social dislocation. Low likelihood of loss of regional heritage, recreation, community, or cultural assets. Low likelihood of health effects.	Losses to recreational facilities, seasonal workplaces, and infrequently used transportation routes. <US$10M.
High	10–100	Possible (1–10)	Significant loss or deterioration of critical habitat or rare and endangered species. Potential contamination of livestock/ fauna water supply with no health effects. Process water moderately toxic. Low potential for acid rock drainage or metal leaching effects of released tailings. Potential area of impact 10 km^2 – 20 km^2. Restoration possible but difficult and could take > 5 years.	500-1,000 people affected by disruption of business, services or social dislocation. Disruption of regional heritage, recreation, community or cultural assets. Potential for short term human health effects.	High economic losses affecting infrastructure, public transportation, and commercial facilities, or employment. Moderate relocation/compensation to communities. <US$100M.
Very High	100–1,000	Likely (10 – 100)	Major loss or deterioration of critical habitat or rare and endangered species. Process water highly toxic. High potential for acid rock drainage or metal leaching effects from released tailings. Potential area of impact > 20 km^2. Restoration or compensation possible but very difficult and requires a long time (5 years to 20 years).	1,000 people affected by disruption of business, services or social dislocation for more than one year. Significant loss of national heritage, community or cultural assets. Potential for significant long-term human health effects.	Very high economic losses affecting important infrastructure or services (e.g., highway, industrial facility, storage facilities, for dangerous substances), or employment. High relocation/ compensation to communities. < US$1B.
Extreme	> 1,000	Many (> 100)	Catastrophic loss of critical habitat or rare and endangered species. Process water highly toxic. Very high potential for acid rock drainage or metal leaching effects from released tailings. Potential area of impact > 20 km^2. Restoration or compensation in kind impossible or requires a very long time (> 20 years).	5,000 people affected by disruption of business, services or social dislocation for years. Significant National heritage or community facilities or cultural assets destroyed. Potential for severe and/or long - term human health effects.	Extreme economic losses affecting critical infrastructure or services, (e.g., hospital, major industrial complex, major storage facilities for dangerous substances) or employment. Very high relocation/compensation to communities and very high social readjustment costs. >US$1B.

Rio Tinto has assigned a GISTM consequence classification to each tailings facility that we operate following assessment of credible failure modes, impact assessments and consideration of downstream conditions. These assessments are conducted by multi-disciplinary teams and use in-house and external expertise. The current GISTM consequence classification for each tailings facility is shown in our interactive tailings disclosure map and in our IMTSI tailings disclosure.

There are other consequence classification schemes in use for tailings facilities, and Rio Tinto has previously published the consequence classifications for our tailings facilities based on the relevant local or international scheme. There may be differences in classification ratings between schemes, depending on the criteria used to assign the classifications.

The consequence classification of a tailings facility can change over time for various reasons, including changes to the operational status of the tailings facility, additional construction that changes the configuration of the tailings facility, the completion of engineering works or implementation of other controls that reduce the potential consequences, or when new information is obtained about the tailings facility, or about the social, environmental and local economic context where the tailings facility is situated.

Consequently, Rio Tinto may, from time to time, amend the consequence classification of a tailings facility. Given the nature of the work required to assess if an amendment to a consequence classification is required, there may be a delay between the change in circumstances that leads to the assessment and amending the consequence classification in our GISTM and IMTSI disclosures and in our interactive tailings disclosure map.

A.3. Risk assessments

Key points:

- *Rio Tinto's Risk Management Standard describes our approach to identifying, assessing, managing and mitigating risk.*
- *Tailings risk assessments consider risk scenarios based on credible failure modes.*
- *Risk assessments are conducted by qualified and experienced multi-disciplinary teams.*
- *Identified risks are managed using the 'three lines of defence' model.*

All of Rio Tinto's tailings facilities have undergone a detailed risk assessment in alignment with Rio Tinto's *Risk Management Standard* and, where relevant, following our internal guidance on risk analysis for dam safety. Using these processes, potential risk scenarios are listed, risk controls and their effectiveness are assessed, and additional controls are identified. The outcome of these risk assessments is a risk classification using Rio Tinto's internal risk classification scheme which determines the materiality of the risks and the approach to mitigating them.

For tailings facilities, the risk analysis is based on credible failure modes. While credible failure modes are possible ways that a tailings facility could fail, the GISTM notes that *"credible catastrophic failure modes do not exist for all tailings facilities"* and *"the term 'credible failure mode' is not associated with a probability of this event occurring and having credible failure modes is not a reflection of facility safety"*.

Credible failure modes can vary over the lifecycle of a tailings facility as the operating conditions change; the risk assessment process takes into account these changes, and risk assessments can be done at different stages in the life cycle (for example, a risk assessment will occur for the operating phase of the tailings facility and will subsequently be reviewed and updated when the tailings facility moves into the closure phase).

Tailings facility risk assessments are conducted by multi-disciplinary teams to consider the potential causes and impacts of a tailings facility failure including to communities and the environment. Rio Tinto has qualified and experienced personnel who participate in these risk assessments, and we also use the expertise and knowledge of external consultants at various times to contribute to and review the outcomes.

We have a structured approach to managing risks associated with tailings facilities, underpinned by our *Group Safety Standard for the Management of Tailings and Water Storage Facilities*. We apply the 'three lines of defence' model to assurance activities to ensure risks are appropriately managed, through:

- First line assurance, facilitated at the site level, with the purpose of assuring effective tailings facility design, comprehensive operational controls and regular independent reviews;
- Second line assurance through technical reviews and risk reviews; and
- Third line assurance that is independent and is commissioned by the Executive and Board to ensure that our systems for risk management, internal control and governance are adequate and effective.

A.4. Impact assessment, and human exposure and vulnerability

Key points:

- *Impact assessments have been used to inform and identify potential environmental impacts, and potential human exposure and vulnerability to a tailings facility failure.*
- *Human exposure and vulnerability assessments are used to inform the social impact assessments and other social studies that consider social, environmental and local economic contexts relevant to the tailings facility.*
- *A human rights risk self-assessment was used to identify, assess, manage and mitigate any potential impacts to project-affected people's salient human rights, in alignment with the United Nations Guiding Principles on Business and Human Rights and Rio Tinto's Human Rights Policy.*

Rio Tinto's environment Group Standards outline the minimum performance requirements for the management of water quality, air quality, mineral waste (including tailings), land disturbance and rehabilitation, hazardous materials and non-mineral waste as well as biodiversity and natural resource management. Our Health, Safety, Environment and Communities management system ensures that our environment standards are considered collectively with health, safety, and social performance standards as part of the hazard identification and risk management process to identify and control risks associated with business activities.

Regulations in the jurisdictions where we operate require Rio Tinto to conduct environmental impact assessments (EIAs) or social and environmental impact assessments (SEIAs) as part of any new mine development and, where required, expansions to existing operations. Additionally, risk assessments are required to be undertaken to consider climate change, water management and any hazards associated with physiochemical properties and biogeochemistry of tailings. To understand the potential risks associated with climate change affecting the stability of tailings facilities, assessments have been undertaken in line with Rio Tinto's approach to climate risk and resilience assessment for new, operating and closed tailings facilities.

Environmental baseline information and supporting monitoring information for each tailings facility has been incorporated into the integrated knowledge base. Additional environmental assessments have been undertaken as required to supplement the knowledge base to support tailings management risk mitigation approaches.

Rio Tinto's *Communities and Social Performance Standard* defines minimum, mandatory performance and management criteria to manage social and human rights risks and opportunities associated with our business activities that could materially impact host communities, other stakeholders with whom we interact, or the Rio Tinto Group.

To assess potential human exposure, and vulnerability, together with social risks and impacts from a tailings facility failure, assessments have been conducted in alignment with international standards, guidelines and best practice approaches, linked to:

- Social knowledge base, community baselines, socio-economic data and local context considerations;
- Social risks resulting from a potential tailings facility failure being considered through the formal, multidisciplinary risk assessment process using Rio Tinto's risk evaluation framework to quantify the potential consequences to people, health and safety, human rights, license to operate, the environment, business integrity, and legal and regulatory compliance;
- Human exposure and vulnerability assessments conducted for each tailings facility to identify inherent and induced vulnerabilities from a failure scenario identified in the dam break study;
- Social impact assessments being updated to reflect current social contexts, baselines, stakeholders, impacts, dependencies, mitigations and opportunities; and
- In alignment with the United Nations *Guiding Principles on Business and Human Rights* and Rio Tinto's *Human Rights Policy*, a targeted human rights risk self-assessment tool is used to consider and manage salient human rights risks resulting from tailings facility failure. The tool provides a framework for identifying, assessing, mitigating, managing and monitoring human rights risks in alignment with Rio Tinto's *Risk Management Standard* and *Communities and Social Performance Standard*.

A.5. Tailings facility design

Key points:

- *The design of each tailings facility is unique, based on the type of tailings and the location in which the tailings facility is situated.*
- *Our tailings facilities are designed and reviewed by qualified and experienced consultants.*
- *Designs are undertaken to industry standards and leading practice.*

Tailings storage is a substantial design decision when developing a mine, and there are many factors that need to be considered in selecting the site and construction method to safely contain the tailings. Site conditions such as topography, foundation conditions, rainfall, seismic activity, mineral characteristics and proximity to people and communities dictate appropriate siting of tailings facility locations, technology and storage solutions. As a result, each tailings facility is unique.

Depending on the environment and the chemical characteristics of the tailings, the tailings facility may be lined, using a variety of lining systems which are designed to prevent impacts to surface and groundwater systems. In other cases, lining may not be required and storage behind an engineered earthen embankment or within a mined-out open pit may be sufficient. Back-filling of mined-out pits may have advantages for overall risk reduction and will generally be considered as an option for tailings storage where practicable.

As the tailings slurry is collected in the tailings facility, the water separates from the heavier sand and silt particles and is collected at the surface. The water in the tailings facility may then be recycled back to the process plant for reuse to minimise the impacts to the environment.

In addition to the design requirements specified by the GISTM, our *Group Safety Standard for the Management of Tailings and Water Storage Facilities* has specific requirements relating to the design of tailings facilities. The design of our tailings facilities is carried out to industry accepted design standards and design criteria by qualified and experienced personnel employed by engineering consulting companies. The designs are also reviewed by independent tailings facility specialists. For our 'Very High' or 'Extreme' consequence classification tailings facilities, oversight and review of the technical aspects of the design is within the remit of the Independent Tailings Review Board.

A.6. Annual performance reviews and dam safety reviews

Key points:

- *Annual performance reviews are undertaken by the Engineer of Record, and findings are reported back to Rio Tinto.*
- *Dam Safety Reviews comprise independent reviews conducted in alignment with our Group Safety Standard for the Management of Tailings and Water Storage Facilities, together with reviews of our As Low As Reasonably Practicable (ALARP) risk assessments.*
- *ALARP demonstration is an ongoing process for the lifecycle of the tailings facility and is a driver for improvements to the management of our tailings facilities.*

Supporting the performance requirements specified by the GISTM, the Rio Tinto *Group Safety Standard for the Management of Tailings and Water Storage Facilities* has specific requirements relating to monitoring and design verification. The key requirements are:

- All personnel conducting monitoring, survey and other design verifications must be suitably trained and familiar with the tailings facility performance objectives;
- Reports must be prepared that outline tailings facility performance at specified intervals;
- The Engineer of Record must inspect the tailings facility at least annually and review the operational documentation to confirm that operation of the tailings facility conforms to the intent of the design; and
- Monitoring reports must be reviewed by the Engineer of Record and must confirm that the tailings facility is operating within the design constraints.

To meet these requirements, an annual performance review is undertaken by the Engineer of Record to assess performance of the operation to design, and a review report is then provided to Rio Tinto.

Rio Tinto addresses the GISTM requirements of a Dam Safety Review by undertaking independent reviews and risk analyses processes to demonstrate that risks have been reduced, including to an As Low As Reasonably Practicable (ALARP) level where required.

Design reviews are conducted at various stages of the design process. The independent design review includes detailed technical review of all aspects of the design with emphasis on the design basis analysis including site and material characterisations, water balance, and stability modelling.

The life-of-facility design is reviewed by an independent tailings facility specialist prior to the implementation of the design. Each detailed stage design, including final closure design, is also reviewed by an independent tailings facility specialist prior to start of construction. The independent specialist evaluates the technical aspects of the design including construction drawings and technical specifications and ensures that the stage designs align with the life-of-facility design.

Independent operational reviews are planned for and completed through the tailings facility lifecycle, including closure and post-closure phases, to identify physical hazards associated with geotechnical, hydrological, hydrogeological and performance aspects of the tailings facility. Reviews are conducted at a frequency of not less than once every two years. Following implementation of the GISTM for a tailings facility, the independent reviewer will make a statement on the safety of the tailings facility, in accordance with the requirements of the GISTM.

ALARP demonstration is undertaken predominantly through a formalised quantitative risk assessment process. ALARP demonstration activities are documented, including actions and timing for completion, and associated commentary is provided on the rationale behind the design decisions. We then subsequently confirm that all actions have been implemented to mitigate risks.

The Engineer of Record reviews the ALARP assessment results, followed by an additional review by the Independent Tailings Review Board or senior independent technical reviewer. The Accountable Executive may then take the decision to confirm that the tailings facility is at ALARP level, or direct further works to be undertaken to demonstrate ALARP.

ALARP demonstration is not a one-off event; it is an iterative process through the tailings facility lifecycle, including closure. The Rio Tinto processes listed above align with the GISTM ALARP requirements to:

- Conduct and update risk assessments with a qualified multi-disciplinary team using best practice methodologies at a minimum every three years and more frequently whenever there is a material change either to the tailings facility or to the social, environmental and local economic context; and
- Conduct a review of ALARP at the time of every Dam Safety Review or at least every five years for an existing tailings facility classified as 'High', 'Very High' or 'Extreme'.

A.7. Environmental and social monitoring

Key points:

- *Effective and integrated management of the tailings facility is governed through our Environmental and Social Management System (ESMS).*
- *The business monitors local communities, in terms of social contexts, impacts, dependencies, public perceptions, trust and acceptance, feedback, complaints and grievances through the collection and analysis of data to inform decision making.*
- *Social monitoring programs are maturing as local communities become more aware and engaged in the management of tailings facilities. Engagement plans are in place to support ongoing local engagement throughout the tailings facility lifecycle and to raise awareness and maintain a shared state of preparedness in the event of tailings facility failure.*
- *There are opportunities for local communities to become more involved in environmental monitoring activities linked to tailings management.*

Rio Tinto's Health, Safety, Environment and Communities (HSEC) management system is reflective of the 'plan, do, check, act' concept that integrates procedures and objectives to manage environmental and social risks and impacts in a structured and meaningful way. The HSEC system meets the requirements of the environmental social management system (ESMS) under GISTM, in that it promotes sustainable environmental and social performance, reflects clearly defined and repeatable processes, is dynamic, promotes continuous improvements and is integrated with other management systems, including the tailings management system.

Environmental and social monitoring activities are in place to support the management system. Environmental monitoring programs are established based on environmental impact assessments to determine actual and potential impacts from mining projects, which are compared against predicted or modelled impacts as part of the assessment process.

As part of the environmental impact assessment process, Rio Tinto is also required to undertake monitoring of impacts to the receiving environment to satisfy conditions and commitments outlined in statutory approvals and to conform to the requirements of our environment standards.

Monitoring can include, but is not limited to, assessment of impacts of the tailings facility to local and/or regional groundwater quality, surface water quality and local air quality. In most jurisdictions, reporting of environmental performance is through provision of monitoring results to the local regulators, as well as nominated affected stakeholders, and is required on at least an annual basis for the life of the tailings facility, including the closure and post-closure phases.

Our approach to social monitoring involves the collection and monitoring of data linked to socio-economic contexts of local communities, risk and impact assessments, stakeholder feedback, community perception surveys, complaints and grievances, and requests for information. The information gathered is used to manage social risks and impacts, measure performance against targets, and to inform decision making.

Engagement with local communities is used to increase awareness of each tailings facility and our approach to safe tailings management, to build an integrated knowledge base for each tailings facility and local surroundings, collectively develop plans to monitor performance, and to support a maintained shared state of preparedness in the event of a tailings facility failure. A variety of engagement tools and resources have been developed to support community forums, town drop-in centres, tailings facility site visits and round table discussions with stakeholders, including the use of interactive maps and explainer videos as needed.

With safety and transparency being core principles for Rio Tinto and the GISTM, we have engaged with local communities about the 'Very High' and 'Extreme' consequence tailings facilities located in the areas where

we operate and we will continue to share relevant information, seek input and ensure communities are prepared in the unlikely event of a failure.

Community grievances are managed through a mechanism that outlines processes for obtaining, handling, responding to, and remedying complaints and grievances. Our *Communities and Social Performance Standard* requires that each site has a mechanism that has been designed in consultation with communities and stakeholders, is publicly available, easily accessible, and allows for an appeal process for resolution of complex complaints or grievances.

To date, there have been a small number of reported complaints and requests for additional information in relation to tailings management from local communities across our global footprint. The complaints have been managed in accordance with our internal standards and procedures and responses provided to stakeholders as appropriate. As engagement continues, local communities will have more opportunity to raise questions, seek clarification, express concerns and request information.

A.8. Emergency preparedness and response

Key points:

- *Rio Tinto has a well-established Business Resilience and Recovery Programme, which applies to all emergency situations including tailings-related events.*
- *Immediate emergency response is provided by our emergency response teams, in collaboration with local emergency response groups as required.*
- *We engage with local communities and agencies on emergency response planning and considerations for longer-term recovery.*

Principles 13 and 14 of the GISTM include the requirement for a site-specific tailings facility Emergency Preparedness and Response Plan which includes specific actions to both prepare for and manage an escalating event, and deliver long-term business, social and environmental recovery following a catastrophic failure.

The Business Resilience and Recovery Programme (BRRP) is Rio Tinto's emergency and crisis management framework, ensuring enterprise-wide preparedness to respond to actual and potential incidents and/or events that may impact local communities, the environment, or our business objectives.

Our sites leverage the BRRP framework to address the GISTM requirements. Each site has an emergency response team that acts as first responders to any emergency on site. These teams are trained in rescue, medical aid and evacuations, and regularly practice emergency response scenarios. The role of the public sector or civil emergency response would be significant in the event of a catastrophic tailings facility failure, with their role likely to extend to the assumption of overall incident command in accordance with legislative requirements. In this situation, the site will comply with the directions of the lead response agency and cooperate with their response efforts.

In alignment with the BRRP and to meet the requirements of the GISTM for an Emergency Preparedness and Response Plan, a Tailings Response Plan has been prepared for each tailings facility as part of the overall emergency preparedness and response planning for local communities. The Tailings Response Plan is based on credible flow failure scenarios and the assessment of potential consequences. The plan includes details on roles and responsibilities, chain of command, training competencies, action responses, evacuation procedures and considerations for recovery.

To prepare for long term recovery in the event of a tailings facility failure, we will engage with public sector agencies and other organisations to consider social and environmental response strategies that may be relevant to reconstruction, restoration and recovery activities, tailored to the failure scenario and local context. In the event of a failure, a long-term recovery plan would then be developed and implemented in partnership with all relevant stakeholders supporting the recovery efforts.

A.9. Frequency of independent reviews

Key points:
- *Independent reviews of tailings facility designs are conducted at key stages of the design phase for each of our tailings facilities.*
- *Independent reviews of tailings facility operation are conducted at a frequency of not less than once every two years.*
- *Rio Tinto has a process for appointing Independent Tailings Review Boards for tailings facilities with 'Very High' and 'Extreme' consequence classifications.*

As detailed in Section A.6, the independent reviews undertaken by Rio Tinto include reviews of tailings facility designs, and reviews of tailings facility operation. Independent design reviews will be conducted as required at multiple stages of the design process as it progresses and typically occur at each project stage through pre-feasibility, feasibility, and other check points of the detailed design phase. Independent operational reviews, where an assessment on the performance of the tailings facility is conducted, are conducted at a frequency of not less than once every two years.

In addition to these independent reviews, Rio Tinto undertakes Independent Tailings Review Board reviews for tailings facilities with a GISTM consequence classification of 'Very High' and 'Extreme'. The Independent Tailings Review Board's role is to provide the Accountable Executive and senior management with independent, objective, expert advice in identifying, understanding, and managing the risks and opportunities associated with the relevant tailings facility. The Independent Tailings Review Board procedures require:
- A minimum of three members to constitute the board;
- Additional members to be appointed depending upon the risks associated with, and the complexity of, the tailings facility; and
- A minimum of two internationally recognised expert board members who are independent and external to the business.

A.10. Financial capacity for closure

Key points:
- *Rio Tinto has processes in place for estimating closure costs.*
- *Closure provisions for close-down, restoration and environmental obligations are included in the financial statements described in Rio Tinto's Annual Report.*
- *Rio Tinto's financial statements are audited by an independent auditor.*

The financial provisions and estimated closure costs for sites are included in Rio Tinto's consolidated financial statements in Rio Tinto's *Annual Report*. A copy of the latest *Annual Report* can be downloaded from Rio Tinto's website.

The financial provisions for close-down and restoration costs include the dismantling and demolition of infrastructure, the removal of residual materials, and the remediation of disturbed areas for mines and refineries and smelters. The provision excludes the impact of future disturbance which is planned to occur during the life of mine, so that it represents only incurred disturbance as at the balance sheet date.

Close-down and restoration costs are a normal consequence of mining or production, and the majority of close-down and restoration expenditure is incurred in the years following closure of the mine, refinery or smelter. Although the ultimate cost to be incurred is uncertain, the Group's businesses estimate their costs using current restoration standards, techniques and expected climate conditions. The costs are estimated on the basis of a closure plan and are reviewed at each reporting period during the life of the operation to reflect known developments. The estimates are also subject to formal review, with appropriate external support, at regular intervals.

We use our judgment and experience to determine the potential scope of closure rehabilitation work required to meet the Group's legal, statutory and constructive obligations, and any other commitments made to stakeholders, and the options and techniques available to meet those obligations and estimate the associated costs and the likely timing of those costs. Further details can be found under the heading 'Provision for closure costs' in the Financial Review section of the *Annual Report*.

The financial statements included in the Annual Report are audited by an independent auditor who provides an opinion that the financial statements give a true and fair view of the state of Rio Tinto's affairs, and that the statements have been properly prepared in accordance with international accounting standards. Evaluation of specific provisions for close-down, restoration and environmental obligations ('closure provisions') at certain sites is a recurring Key Audit Matter (KAM) noted in the independent auditors' report. For further information, refer to the Independent Auditor's Reports section of the *Annual Report*.

IMPORTANT NOTICE

Content of document

This document includes figures, classifications, assessments and other information regarding tailings and Rio Tinto's systems. Some of the information provided relies upon judgment based on internal or external reviews of information. Unless otherwise stated the information in the document is based on data available as at 5 August 2024, and judgments or assessments in the document may be based on data which predates 5 August 2024. The information and views may change based on new or different information, circumstances or events and should not be relied upon as a forecast or recommendation.

Forward looking statements

The information presented contains forward-looking statements (within the meaning of the US Private Securities Litigation Reform Act of 1995) concerning the financial condition, operations and businesses of Rio Tinto. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements.

Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance of, or events affecting Rio Tinto, or the industry, to differ materially from those expressed or implied in these statements. Such forward-looking statements involve subjective judgements and determinations based on available geological, technical, contractual and economic information. These could change because of new information from production or mining activities, or changes in economic factors, including changes in market prices and operating costs, changes in the regulatory policies of host governments, or other events. The statements could also be altered by acquisitions and divestments, new discoveries, and extensions or closure of existing mines, as well as the application of improved recovery and tailings techniques. Published statements could also be subject to correction due to errors in the application of internal assurance or published rules or guidance, and changes in that assurance, rules or guidance. Please also refer to further factors and risks as identified in Rio Tinto's most recent Annual Report and Accounts in Australia and the United Kingdom and the most recent Annual Report on Form 2-0-F filed with the United States Securities and Exchange Commission ("SEC") or Forms 6-K furnished to, or filed with, the SEC.

As such, readers should not place undue reliance on these forward-looking statements, including with regard to future investment decisions.

Rio Tinto undertakes no obligation to publicly update, or revise, any information in the document, including forward-looking statements, as a result of new information, future events or other information.