BHP

Global Industry Standard on Tailings Management

Public Disclosure

2025

Disclaimer

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In this document, the terms ‘BHP’, ‘Group’, ‘BHP Group’, ‘we’, ‘us’, ‘our’ or similar are used to refer to BHP Group Limited and, except where the context otherwise requires, their respective subsidiaries. Refer to note 30 ‘Subsidiaries’ of the Financial Statements in the BHP Annual Report 2025 and Form 20-F for a list of our significant subsidiaries. Those terms do not include non-operated assets. This document refers only to assets (including those under exploration, projects in development or execution phases, sites and closed operations) that are wholly owned and/or operated by BHP or that are owned as a joint venture operated by BHP (referred to in this document as ‘operated assets’, ‘operations’ or ‘BHP-operated’). BHP also holds interests in assets that are owned as a joint venture but not operated by BHP (referred to in this document as ‘non-operated joint ventures’ or ‘non-operated assets’), which are not included in the BHP Group and, as a result, statements in this document

regarding our operations, assets and values apply only to our operated assets. Non-operated joint ventures have their own management and operating standards. Joint venture partners of other companies managing those non-operated joint ventures may take action contrary to our standards or fail to adopt standards equivalent to BHP's standards, and commercial counterparties may not comply with our standards. References in this document to a 'joint venture' are used for convenience to collectively describe assets that are not wholly owned by BHP. Such references are not intended to characterise the legal relationship between the owners of the asset.

In this disclosure

Statement of conformance

The Global Industry Standard on Tailings Management (GISTM) sets a global benchmark for achieving social, environmental and technical outcomes for tailings management. Underpinned by an integrated approach, the GISTM aims to enhance the safety of tailings storage facilities (TSFs) and prevent catastrophic failure of TSFs.

The following principles form the basis upon which BHP has assessed conformance:

- The following requirements may be assessed as not applicable in specific situations. Individual TSFs may still assess these requirements depending on the circumstances of the TSF, and in those instances will demonstrate their level of conformance for these requirements.

Requirement	Rationale
1.2	These requirements only apply to new TSFs.
3.3	
5.8	This requirement only applies where involuntary resettlement has occurred.
13.4	These requirements only apply where catastrophic failure has occurred. Preparatory work that underpins these requirements is to be demonstrated in Requirements 13.1 to 13.3.
14.2	
14.3	
14.4	
14.5	This requirement only applies when managing a post-failure recovery.
15.1A	This requirement only applies to new TSFs.

- In accordance with guidance from the ICMM, only requirements 4.7 and 5.7 are permitted to be met with a plan based on time-bound outputs, with a suitably detailed and prioritised work plan approved by the Accountable Executive Operations. Meeting these requirements with an approved plan will be taken as conformance.
- For requirements where systems and processes are in place and are substantially progressed, but require further or ongoing activity to achieve conformance (requirements 1.2, 1.3, 3.1, 5.8, 6.1, 6.2, 9.3, 13.4, 15.2 and 15.3), 'meets with a plan' will be taken as conformance.
- Where processes are in a cycle of review and update in accordance with BHP's regular business practices, evidence that reflects current practices and demonstrates systems, processes and practices are in place that meet the intent of the requirement, will be taken as conformance.
- Non-operated joint ventures (NOJVs) have their own operating and management standards and do not apply BHP tailings management standards. NOJV TSFs are expected to be included in the report of the respective operating company in accordance with each NOJV's operating and management standards.
- The ICMM GISTM Conformance Protocols require third-party validation of conformance against the GISTM requirements as soon as is reasonably practicable, and thereafter every three years for very high and extreme facilities, and every five years for the remainder. BHP has staggered the validation of GISTM conformance to balance resources internally and externally.
- External validation results are included in the conformance status table below. All but two of the TSFs with a Very High or Extreme consequence classification have been validated by a third party. These TSFs changed their consequence classification over the reporting period – the Pampa Norte Spence TSF will be validated prior to the next disclosure, and Copper South Australia Prominent Hill TSF will be validated once the conformance plan has been completed.
- The third-party validators have assessed BHP's evidence against GISTM based on BHP's interpretation and the ICMM GISTM Conformance Protocols. The validation process involved an initial review and feedback session before a gap closing period to address any gaps identified. Future validation providers may follow a different process and will be chosen based on consultant and resource availability.

New TSFs

New TSFs are defined under GISTM as facilities approved for construction or that have commenced the regulatory approval process. Full conformance with GISTM is not required, and the following disclosure elements are mandated under GISTM requirement 15.1A:

- Key outcomes from the multi-criteria assessment and a summary of the rationale for the adopted design basis.
- Physical details of the proposed TSF.
- The consequence classification and its basis.
- Anticipated impacts over the TSF lifecycle and corresponding controls.

Full conformance with the GISTM and public disclosure under requirement 15.1B applies once a TSF transitions from being a new TSF to an existing TSF. Existing TSFs are those receiving tailings as part of a commissioning process, or that have transitioned directly into operation, and will be considered as an existing TSF until they are in a state of safe closure.

Safe Closure

TSFs assessed to be in a state of safe closure as defined in the GISTM will not be included in BHP's public disclosures or be subject to assessment of conformance with the GISTM, in line with the ICMM GISTM Conformance Protocols. BHP's assessment process for safe closure reviews the risks to people and the environment to check alignment with the GISTM definition, determines any ongoing governance requirements, is reviewed by an independent third party as required by GISTM, and signed off by the relevant Accountable Executive.

The results of BHP's self-assessment and third-party validation provided in the table below reflects the status of the TSFs at BHP-operated sites as at 31 July 2025. For those that have not yet been validated, they have been self-assessed based on the performance of their current infrastructure, systems, processes, and practices. In line with ICMM commitments, we will undertake third-party validation of our self-assessments as soon as reasonably practicable.

Australian Asset	Tailings Storage Facility	Classification	Conformance	Basis
BHP Mitsubishi Alliance	Goonyella Riverside, Dragline 5 Void TSF	Low	Meets	Self-assessment
BHP Mitsubishi Alliance	Goonyella Riverside, GS1 TSF	Very High	Meets	Validated [1]
BHP Mitsubishi Alliance	Goonyella Riverside, Ramp 32 TSF	Low	Meets	Self-assessment
BHP Mitsubishi Alliance	Goonyella Riverside, RS1 TSF	Very High	Meets	Validated [1]
BHP Mitsubishi Alliance	Peak Downs, Airfield Tailings Dam	High	Meets	Self-assessment
BHP Mitsubishi Alliance	Peak Downs, Old Tailings Dam	Very High	Meets	Validated [2]
BHP Mitsubishi Alliance	Peak Downs, 2N TSF	Low	Meets	Self-assessment
BHP Mitsubishi Alliance	Peak Downs, Ramp 6S/7S TSF	Significant	Meets	Self-assessment
BHP Mitsubishi Alliance	Saraji, Ramp 2/3 TSF	High	Meets	Self-assessment
BHP Mitsubishi Alliance	Saraji, Ramp 6 TSF	Low	Meets	Self-assessment
BHP Mitsubishi Alliance	Saraji, Tailings Storage Facility No. 2	Significant	Meets	Self-assessment
BHP Mitsubishi Alliance	Saraji, Tailings Storage Facility No. 3	Very High	Meets	Validated [2]
BHP Mitsubishi Alliance	Saraji, Tailings Storage Facility No. 4	Significant	Meets	Self-assessment
BHP Mitsubishi Alliance	Saraji South, Old Tailings Dam	Significant	Meets	Self-assessment
BHP Mitsubishi Alliance	Saraji South, Ramp 67 TSF	Significant	Meets	Self-assessment
Copper South Australia	Carrapateena TSF	High	Meets	Self-assessment
Copper South Australia	Olympic Dam, TSF1-3	Very High	Meets	Validated [1]
Copper South Australia	Olympic Dam, TSF4	Very High	Meets	Validated [1]
Copper South Australia	Olympic Dam, TSF5	Very High	Meets	Validated [1]
Copper South Australia	Olympic Dam, TSF6	Low	Meets	Self-assessment
Copper South Australia	Prominent Hill TSF	Extreme	Partially meets	Self-assessment
NSW Energy Coal	Mt Arthur Coal, North Cut TSF	Low	Meets	Self-assessment
NSW Energy Coal	Mt Arthur Coal, SP1/2 TSF	Low	Meets	Self-assessment
NSW Energy Coal	Mt Arthur Coal, SP3 TSF	Low	Meets	Self-assessment
NSW Energy Coal	Mt Arthur Coal TSF	Very High	Meets	Validated [2]
Western Australia Iron Ore	Newman Operations West, Mt Whaleback TSF	High	Meets	Self-assessment
Western Australia Iron Ore	Port Hedland, Finucane Island TSF	High	Meets	Self-assessment
Western Australia Nickel	Kambalda TSF	High	Partially meets	Self-assessment
Western Australia Nickel	Kwinana, Baldivis TSF	Low	Partially meets	Self-assessment
Western Australia Nickel	Leinster TSF 1	Low	Meets	Self-assessment
Western Australia Nickel	Leinster TSF 2/3	High	Meets	Self-assessment
Western Australia Nickel	Mt. Keith TSF	High	Meets	Self-assessment

Australian Asset	Tailings Storage Facility	Classification	Conformance	Basis
Titanium Minerals	Beenup, Former Dredge Pond	Low	Partially meets	Self-assessment
Titanium Minerals	Beenup, MDSA TSF	Low	Partially meets	Self-assessment

Brazilian Asset	Tailings Storage Facility	Classification	Conformance	Basis
OZ Minerals	Carajás, Antas Dam	High	Partially meets	Self-assessment
OZ Minerals	Carajás, Antas Pit	Low	Partially meets	Self-assessment

Canadian Asset	Tailings Storage Facility	Classification	Conformance	Basis
Legacy Assets	East Kemptville TMA	High	Meets	Self-assessment
Legacy Assets	Elliot Lake, Lacnor TMA	Low	Meets	Self-assessment
Legacy Assets	Elliot Lake, Milliken TMA	High	Meets	Self-assessment
Legacy Assets	Elliot Lake, Nordic TMA	Significant	Meets	Self-assessment
Legacy Assets	Elliot Lake, Panel TMA	High	Meets	Self-assessment
Legacy Assets	Elliot Lake, Pronto TMA	Very High	Meets	Validated [2]
Legacy Assets	Elliot Lake, Quirke TMA	Very High	Meets	Validated [2]
Legacy Assets	Elliot Lake, Spanish American TMA	Low	Meets	Self-assessment
Legacy Assets	Elliot Lake, Stanleigh TMA	Very High	Meets	Validated [2]
Legacy Assets	Poirier Tailings Disposal Area	Low	Meets	Self-assessment
Legacy Assets	Selbaie Tailings Facility	High	Meets	Self-assessment
Potash	Jansen Coarse TSF	High	Not assessed	New TSF [4]
Potash	Jansen Fine TSF	High	Not assessed	New TSF [4]

Chilean Asset	Tailings Storage Facility	Classification	Conformance	Basis
Minera Escondida	Escondida, Hamburgo TSF	Under assessment	Partially meets	Self-assessment
Minera Escondida	Escondida, Laguna Seca TSF	Extreme	Meets	Validated [3]
Pampa Norte	Spence TSF	Very High	Meets	Self-assessment

USA Asset	Tailings Storage Facility	Classification	Conformance	Basis
Legacy Assets	Ambrosia Lake, Cells 1 and 2	High	Meets	Self-assessment
Legacy Assets	Copper Cities, No. 2 Tailings	Very High	Meets	Validated [2]
Legacy Assets	Copper Cities, No. 8 Tailings	Very High	Meets	Validated [2]
Legacy Assets	Copper Cities, No. 9 Tailings	Significant	Meets	Self-assessment
Legacy Assets	Copper Cities, No. 10 Tailings	Significant	Meets	Self-assessment
Legacy Assets	Lisbon, Lower Tailings Impoundment	High	Meets	Self-assessment
Legacy Assets	Lisbon, Upper Tailings Impoundment	High	Meets	Self-assessment
Legacy Assets	Miami Unit, Canyon TSF	Very High	Meets	Validated [2]
Legacy Assets	Miami Unit, No. 2 TSF	High	Partially meets	Self-assessment
Legacy Assets	Old Dominion, Tailings No. 1	Very High	Meets	Validated [2]
Legacy Assets	Old Dominion, Tailings No. 2	High	Meets	Self-assessment

USA Asset	Tailings Storage Facility	Classification	Conformance	Basis
Legacy Assets	Old Dominion, Tailings No. 3	High	Meets	Self-assessment
Legacy Assets	San Manuel, No. 1/2 TSF	Very High	Meets	Validated [1]
Legacy Assets	San Manuel, No. 3/4 TSF	Very High	Meets	Validated [1]
Legacy Assets	San Manuel, No. 5 TSF	Very High	Meets	Validated [1]
Legacy Assets	San Manuel, No. 6 TSF	Very High	Meets	Validated [1]
Legacy Assets	San Manuel, No. 10 TSF	Very High	Meets	Validated [1]
Legacy Assets	Solitude TSF	Extreme	Meets	Validated [2]

[1] Third-party validation completed 26 July 2024.

[2] Third-party validation completed 2 May 2025.

[3] Third-party validation completed 21 July 2025.

[4] Construction of this TSF is nearing completion but is not yet commissioned, and is being disclosed as a new TSF under GISTM requirement 15.1A.

Preface

Overview

The safety and integrity of TSFs across our operated and closed assets is a primary focus, in order to protect people, the environment and communities where we operate.

Our commitment to the safe management of TSFs, governance and risk management, transparency, emergency preparedness, response and recovery in the unlikely event of a failure is outlined in the BHP Tailings Storage Facility Policy Statement.

Global Industry Standard on Tailings Management

We are committed to achieving alignment with the GISTM for all operated TSFs. The GISTM embodies a step-change in transparency, accountability and safeguarding the rights of project affected people. This disclosure document demonstrates our approach to effective TSF management, provides an overview of how we implement our tailings governance framework, and summarises information on our organisation-wide policies, standards and approaches to all stages of our TSF life cycle.

Further information on our approach to risk management is available on our website.

Our approach

Governance

Our approach to TSF management is supported by strong governance and effective risk management. Part of the Board's role is to oversee the Company's material risks, and to review and monitor the effectiveness of the Group's system of risk management and internal control, which includes TSF failure risks. The Risk and Audit Committee oversees and assists the Board in reviewing the principal and emerging risks facing the Group and monitors effectiveness of the Group's system of risk management and internal control. The Board's Sustainability Committee reviews and assesses the framework for the identification, management and reporting of health, safety, environment, climate and community risks and assists the Board with overseeing health, safety, environment, climate, community issues, and emerging areas of risk related to the Group's operations and engagement with customers, suppliers and communities.

We employ a multi-dimensional approach to managing controls and governance which is embodied in the 'three lines model' of risk management. Further detail is available on our website.

Effective TSF governance includes clearly defined accountabilities and appropriately qualified personnel appointed to key governance roles. Three key roles are mandated across all operated assets: Dam Owner, Responsible Tailings Facility Engineer and Engineer of Record. These roles manage the day-to-day operations and safety at site and communicate regularly to the relevant Accountable Executive (AE). BHP has adopted a multiple AE model, where all AEs are direct reports of the Chief Executive Officer and are held accountable through scheduled reporting to and standing meetings with the Sustainability Committee. AEs have operational accountability for BHP's TSFs or are accountable for oversight of BHP's TSF governance framework. AEs are accountable for the safety, environmental and social impacts of TSFs.

BHP's TSF governance includes external dam safety and technical reviews. External third parties complete dam safety reviews at a minimum frequency informed by TSF consequence classification, per requirement 10.5 of the GISTM. TSFs with extreme or very high GISTM consequence classifications have Independent Tailings Review Boards to review aspects such as the status of the TSF, proposed design changes and outcomes of dam safety reviews. For lower consequence classification TSFs, a single external Senior Independent Technical Reviewer may perform this role. Our approach to TSF governance is outlined in more detail on our website.

Risk

We operate a single Risk Framework for all risks, including TSF failure risks at our assets. Risks are assessed to determine potential impacts and likelihood, enable prioritisation and determine risk treatment options. Controls designed to prevent, minimise or mitigate threats, and enable or enhance opportunities are then implemented.

Our Risk Framework is an integral part of our governance model and supports the effective management of the unique risks posed by TSFs. The framework recognises that TSF failure risk is characterised by extremely low frequency events yet potentially large consequences for the surrounding people, environment, and communities where we operate.

During the risk assessment process, risks are identified and analysed to define mandatory minimum performance requirements. This is achieved by undertaking assessments that define tailings facility failure risks:

- Failure Mode Analysis (FMA): determines the scenarios and mechanism(s) that could trigger failure given known and unknown parameters and conditions.
- Failure Impact Assessment: models a worst-case breach scenario(s) so impact to human life and zone of inundation can be defined and considered in risk management and emergency response plans.
- Consequence Classification Assessment: assesses social, environmental and economic impact due to a worst-case breach scenario and assigns pre-determined design criteria based on consequence.

Note: A potential failure mechanism is independent of both the probability of failure and the failure impact.

Our Risk Framework requires critical controls for each risk that could have a material impact to BHP. For TSFs the critical controls may cover design, operating, monitoring, review and emergency response activities, and are developed at a site level to address the specific risks and context for each TSF.

BHP asset specific details

In line with ICMM commitments, this disclosure includes summary information regarding 70 TSFs at our assets and operated joint ventures. These TSFs are located at the following assets:

BHP Mitsubishi Alliance – Australia

BHP Mitsubishi Alliance (BMA) is operated by BM Alliance Coal Operations Pty Ltd. BMA is a producer and supplier of seaborne metallurgical coal and is owned 50:50 by subsidiaries of BHP and Mitsubishi Development.

BMA operates five mines in Queensland, Australia's Bowen Basin: Goonyella Riverside, Broadmeadow, Peak Downs, Saraji and Caval Ridge. Goonyella Riverside, Peak Downs, and Saraji each have one or more TSFs associated with them. BMA also owns and operates the Hay Point Coal Terminal near Mackay, Queensland.

In Queensland, resource activities operate under an Environmental Authority (EA), and the regulatory obligations of each operation are described in the relevant EAs.

New South Wales Energy Coal – Australia

New South Wales Energy Coal (NSWEC) operates the Mt Arthur Coal mine in Australia, an open-cut energy coal mine producing coal for international customers in the energy sector. The mine is 100 per cent owned by BHP and has one active TSF and several inactive TSFs. It is the only mine operated by NSWEC.

The Environmental Authority governing the Mt Arthur Coal mine is Project Approval 09_0062 issued by the NSW Government. In April 2025, BHP received approval from the NSW Department of Planning, Housing and Infrastructure to continue mining at Mt Arthur Coal for an additional four years, as part of the planned closure of the site in 2030. The Approval provides more certainty for our people, the community, suppliers and local businesses and enables time to continue working collaboratively on plans to cease mining and, subject to future approvals, transition the site to its next productive use in 2030.

Copper South Australia – Australia

The Copper South Australia asset comprises three operating sites in the State of South Australia: Carrapateena, Olympic Dam, and Prominent Hill. All three operations are 100 percent owned by BHP.

Carrapateena is an underground copper and gold mine located 472 kilometres north-west of Adelaide. Ore from the mine is processed through conventional crushing, grinding and flotation methods. Tailings from processing operations are disposed in a single TSF. The operation was approved under the Mining Act 1971 (SA), and an associated Program for Environment Protection and Rehabilitation.

Olympic Dam is a significant deposit of copper, gold and uranium. Tailings from processing operations is hydraulically deposited in a series of TSFs and associated evaporation ponds. Olympic Dam is covered by a state indenture under the Roxby Downs (Indenture and Ratification) Act 1982. An Annual Environmental Protection and Management Program report is prepared as one of the requirements of the indenture.

Prominent Hill is an underground open stope copper and gold mine located 650 kilometres north-west of Adelaide, producing high-grade copper concentrate. Ore from the mine is processed through conventional crushing, grinding and flotation methods. Tailings from processing operations are disposed in a single TSF. The operation was approved under the Mining Act 1971 (SA), and an associated Program for Environment Protection and Rehabilitation.

Escondida – Chile

Escondida is a producer of copper concentrate and cathodes. BHP operates and owns 57.5 per cent of the Escondida mine, which is a joint venture with Rio Tinto (30 per cent) and Japan-based JECO Corp (12.5 per cent).

Escondida's two pits feed three concentrator plants, as well as two leaching operations (oxide and sulphide). There is one active TSF. Escondida operates under Resolution 2886/5 dated July 2000 from the Antofagasta Service of Health that authorises the TSF construction and operation.

Legacy Assets – Canada and the USA

BHP's Legacy Assets refer to BHP-operated assets transitioning to closure and located in North America.

The Elliot Lake area in Algoma District, Ontario, Canada, encompasses inactive TSFs from historical uranium mining in the area. The TSFs were acquired by BHP through the merger with Billiton in 2001. The monitoring and management strategy of the Elliot Lake area is through three integrated programs: the Tailings Management Area Operational Monitoring Program, the Source Area Monitoring Program, and the Serpent River Watershed Monitoring Program.

The former Poirier Mine was an underground copper and zinc mine is located approximately 100 kilometres north of Amos, and 6 kilometres west of Joutel, in north-western Québec, Canada. The mine operated from 1965 - 1994, followed by reclamation works. Ongoing environmental monitoring continues.

Selbaie is located approximately 94 kilometres north of the town of Villebois, in north-western Québec, Canada. Mining operations were active from 1981 to 2004, with reclamation commencing prior to the end of operations, with decommissioning largely complete by 2006. The site is now in care and maintenance.

The East Kemptville Site is located approximately 54 kilometres north-east of the town of Yarmouth and approximately 60 kilometres north-west of the town of Shelburne, in south-western Nova Scotia, Canada. Mine operations at East Kemptville commenced in 1985 and ceased in 1991, with milling operations stopping in January 1992. The Tailings Management Area is under care and maintenance.

The Ambrosia Lake West former uranium mill site is located approximately 40 kilometres north of Grants, New Mexico. The facility is regulated under U.S. Nuclear Regulatory Commission Source Materials License SUA-1473 Amendment No. 65. It was operated between 1958 and 2003, and the site is now inactive, in care and maintenance.

The Lisbon site is located in San Juan County, approximately 6 kilometres south-west of La Sal, Utah. The Site is regulated under the Utah Department of Environmental Quality (UDEQ), Division of Waste Management and Radiation Control (DWMRC) Radioactive Material License UT 1900481, Amendment 7. The mine and mill operated between 1972 and 1988, and the site is now inactive, in care and maintenance.

The Miami, Copper Cities, Old Dominion, and Solitude TSFs included in this disclosure are part of a complex of sites located in Gila County within the Globe-Miami district in east-central Arizona, United States. All are inactive TSFs associated with historical copper mining and were acquired by BHP in 1996 through the purchase of the Magma Copper Company.

The TSFs within the Globe-Miami Arizona area are under the regulation of Arizona Department of Environmental Quality. Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund and surface water is managed through the Arizona Pollutant Discharge Elimination System Multi-Sector General Permit.

San Manuel is located in Pinal County, approximately 45 kilometres north-east of Tucson, Arizona, United States of America. San Manuel was also acquired by BHP in 1996 through the purchase of Magma Copper Company. All TSFs are inactive. The TSFs located in the San Manuel region are under the regulation of Arizona Department of Environmental Quality. Groundwater is managed through Arizona's Aquifer Protection Permit and surface water is managed through the Arizona Pollutant Discharge Elimination System Multi-Sector General Permit.

OZ Minerals – Brazil

The OZ Minerals Brazil operations are located in the state of Pará, in the north of Brazil, and include the Antas Norte Processing facility, producing copper concentrate, and an underground copper-gold mine Pedra Branca. The copper concentrate is sent via rail from the town of Parauapebas to a port at São Luis Harbour and then shipped to customers.

Pampa Norte – Chile

Pampa Norte's Spence open-pit copper mine is located in the Sierra Gorda district 162 kilometres north-east of Antofogasta, Chile, and produces copper concentrate and cathodes. Spence operates a single open pit feeding a concentrator, and the product is shipped through the ports in Mejillones Bay, where a desalination plant is located to provide water for operations at Spence.

Potash – Canada

BHP's Jansen potash project is located 140 kilometres east of Saskatoon, Saskatchewan in Western Canada, and in Treaty 4 Territory lands of the Cree, Salteaux, Dakota, Nakota, and Lakota peoples and on the homeland of the

Métis Nation. Expected to commence operation in late 2026, Jansen will become one of the world's largest potash producers.

Titanium Minerals – Australia

The Beenup Titanium Mine is located 50 kilometres south-east of the town of Margaret River, in Western Australia. Dredging operated from 1997 – 1999, before processing stopped due to operational difficulties. Following an extensive community consultation process, rehabilitation was largely completed in FY2018, although monitoring and inspection of spillways and other engineered structures continues. The resulting wetlands established in collaboration with the Western Australian Botanic Gardens and Parks Authority now support declared rare flora.

Western Australia Iron Ore – Australia

BHP's Western Australia Iron Ore (WAIO) asset is located in the Pilbara region of Western Australia and includes four main joint ventures, with BHP having an 85 percent interest in each. WAIO comprises an integrated system of four processing hubs and five mining hubs, connected by over 1,000 kilometres of rail, and includes port facilities in Port Hedland. Where beneficiation is necessary, this is done at the beneficiation plant located in Newman West, which is currently the only location of active tailings disposal. The Newman West site is located six kilometres south-west of Newman Township.

An inactive TSF located at the port on Finucane Island received tailings from a beneficiation plant that has since been dismantled.

Western Australia Nickel – Australia

Western Australia Nickel is 100 percent owned by BHP and comprises the Nickel West operations and the West Musgrave project, all located in the State of Western Australia. BHP announced temporary suspension of Western Australia Nickel from October 2024, to be reviewed by February 2027.

Nickel West is an integrated nickel business with three streams of concentrate comprising open cut and underground mines, concentrators, a smelter and a refinery. The three streams of concentrate include outputs from the Mt Keith, Leinster, and Kambalda operations located in the Goldfields-Esperance region of Western Australia. The Kalgoorlie Nickel Smelter located near the town of Kalgoorlie uses a flash furnace to process the three streams of concentrate to produce nickel matte. The majority of the nickel matte from Kalgoorlie is then processed into nickel powder, briquettes and nickel sulphate at the Kwinana Nickel Refinery, located 40 kilometres south of the city of Perth. Tailings disposal at the Kwinana refinery took place from 1972 – 1995 at the nearby Baldivis TSF, with cessation of tailings production due to changes in operation of the refinery.

The Mt Keith open pit mining operation is located 720 kilometres north-east of the city of Perth, in the north-eastern Goldfields Region of Western Australia. At Mt Keith, disseminated sulphide ore from the Mt Keith open pit mine and satellite Yakabindie operation is crushed and processed on site to produce nickel concentrate. Tailings from the concentrator is hydraulically deposited in the single active TSF.

The Leinster underground mining operation is near the Mt Keith operation, located 880 kilometres north-east of the city of Perth. At Leinster, nickel sulphide ore from the Leinster and Cliffs underground mines is processed through a concentrator and dryer. Tailings from the concentrator is hydraulically deposited in the single active TSF.

The Kambalda concentrator is located in Kambalda, 615 kilometres east of Perth, and about 60 kilometres south of Kalgoorlie. The concentrator at Kambalda processes ore and concentrate purchased from third parties, as feed for the Kalgoorlie Nickel Smelter. Tailings from the concentrator is hydraulically deposited in the single active TSF.

General information

TSF status

Active TSFs are receiving tailings, have received tailings in the 12 months prior to the end of June 2025, or have the capacity and infrastructure to receive tailings or processing liquors. Inactive TSFs are all other facilities not considered to be in a state of safe closure as defined by the GISTM. Inactive TSFs include facilities with the capacity to receive tailings but have not done so over the past 12 months, facilities with the tailings deposition infrastructure removed, and facilities in various states of closure works.

Failure impact assessment

Failure impact assessments are undertaken to estimate the physical area that could be impacted in the event of a TSF breach. The potential failure impact is independent of the probability of failure and represents only the consequences of a failure.

The physical area that could be impacted by a potential failure, flood arrival times, flow depth, flow velocities and depth of material deposition are estimated in a failure impact assessment. Modelling outputs, such as identifying safe areas above the inundation zone, are used to develop and update documents and plans, including the consequence classification assessment and the Emergency Preparedness and Response Plan.

Two failure scenarios are typically assessed at each potential failure location:

- Sunny day: Under a sunny day failure scenario, the failure occurs during typical operations (normal loading or seismic loading conditions) and represents a sudden/instantaneous failure.
- Flood failure: Under a flood failure scenario, the failure occurs following or during a large rain event, such as the design storm event, a natural flood of a magnitude that is greater than the dam can safely pass, or a series of weather events (several cyclones/hurricanes in succession).

The extent of tailings flow is described as the area covered by released tailings, volume of tailings released, or the distance travelled by the released tailings and is based on a consideration of the facts and circumstances of each asset, operation and TSF.

Consequence classification

The failure impact assessment informs the TSF's consequence classification. All consequence classifications in this document are based on the GISTM Assessment for Incremental Loss and can be extreme, very high, high, significant or low.

Consequence classification assessment determines the maximum potential risk exposure that the worst-case credible failure scenario may have to:

- human life, assessed as potential population at risk (PAR) or potential loss of life (PLL)
- environment
- health, social and cultural
- infrastructure and economics

The two human life consequence criteria consider different aspects and cannot be considered analogous: population at risk is the number of people exposed to the hazard; potential loss of life is the expected loss of life in the event of a catastrophic failure.

We adopt a conservative approach when assessing the total number of people who are potentially at risk. This can result in a variation in the number of people at risk due to construction works at the TSF, even if these works are for a limited duration.

Consequence classification is typically used in the industry to assess the potential impacts downstream if a hypothetical failure scenario were to occur. Failure consequence should not be confused with failure risk, which is determined by considering both the consequence and the probability of a credible failure scenario.

Summary of risk assessment

Understanding failure modes is critical to developing safe tailings management practices. A Failure Modes Analysis (FMA) is undertaken to identify physical (structural integrity), environmental and functional failure modes (where applicable), and preventative and mitigative controls that when implemented, reduce the likelihood and/or consequence of the failure mode. Following a qualitative assessment methodology, the analysis includes a review of the possible mechanisms that could trigger a failure for each element that retains tailings, considering both known and unknown contributing factors. Guidance for assessing risks has been developed based on current industry practice.

This disclosure reports credible failure modes. Failure scenarios are deemed non-credible if an FMA panel collectively agrees it is not credible based on data and engineering analysis. Non-credible failure modes are still identified and regularly reviewed as part of the FMA process.

This disclosure also reports the preventive and mitigative controls implemented by BHP that are deemed 'critical controls' under the BHP Risk Framework. Critical controls are designed to significantly reduce the likelihood or impact of a material risk. Not all controls are critical controls under the BHP Risk Framework. The determination of controls deemed critical is made with consideration of the facts and circumstances of each asset, operation and TSF.

A TSF where the impact does not meet BHP's threshold for material risk does not come under the BHP Risk Framework and does not have critical controls designated. Such TSFs need to comply to BHP's Global Standard on Tailings Storage Facilities that details the residual levels of operational and governance controls required.

Performance reviews

TSF performance is periodically verified by annual inspections/performance reviews and dam safety reviews. Responding to the findings identified in these inspections and reviews can be critical to the long-term safety and governance of the TSF. Systems and procedures have been implemented so that:

- findings are escalated to the appropriate level of management based on risk and urgency
- an appropriate level of technical oversight is maintained to effectively manage the risk posed by each finding
- remediation plans are developed in conjunction with the reviewer
- accountability for the remediation plan is clearly defined
- remediation plans and outcomes are documented to ensure continuity of knowledge
- a formal management of change process is in place where the remediation plan involves a material change to the TSF or management system
- findings have set time frames, agreed with the reviewer, to be actioned
- findings are managed through systems such as Asset Integrity Management System (AIMS) or Governance Risk and Compliance (GRC) that track progress and provide visibility to defined dam safety roles such as the Responsible Tailings Facility Engineer (RTFE), Dam Owner, and Accountable Executive (AE)

Annual inspections are completed by the Engineer of Record (EOR) supported by the RTFE, and in accordance with the applicable guidance for that area, such as Australian National Committee on Large Dams (ANCOLD) Guidelines, Canadian Dam Association (CDA) Guidelines, or local regulatory requirements. Dam safety reviews are performed by external reviewers meeting the requirements set out in the GISTM, and using the framework described in CDA Guidelines.

This disclosure reports material findings from performance reviews. Materiality was determined by the asset teams responsible for TSF operation and in consideration of the GISTM definition of materiality and the facts and circumstances of each asset, operation and TSF. The date of the reviews reflects the date of the site inspection. Based on the review cycle for each asset relative to the disclosure date, the Annual Performance Reviews may be from different years, as some analysis is required following the site inspection and only finalised reports are included.

Environmental and social monitoring

We are committed to tailings management practices that aim to reduce the impacts caused by the TSFs and undertake comprehensive social and environmental monitoring programs to identify potential impacts to people, communities and the environment.

As each TSF is located in a unique environment, environmental and social monitoring can differ across TSFs. The monitoring of a TSF considers local factors, such as climate, geology, topography, the resource being mined, local land use, proximity and makeup of nearby communities, and the proximity and characteristics of environmental receptors. This diversity of circumstance is considered and reflected in the differing environmental and social programs in place at each TSF.

The BHP Environmental Management System uses a Plan-Do-Check-Act framework designed to consistently review, evaluate and improve environmental performance. These processes and procedures help to address our regulatory obligations in a systematic manner. They also help identify opportunities to improve environmental performance, which in turn can reduce the risk of non-compliance and assist in controlling potential impacts to the environment.

Our minimum mandatory requirements for managing environmental impacts and climate-related considerations and delivering on environmental strategies and plans are detailed in BHP's *Environment Global Standard* and *Climate Change Global Standard*, which are available on our website.

Each financial year, BHP conducts global human rights due diligence that:

- Assesses the human rights linkages across the Asset and Global Community and Indigenous People Impact and Opportunity Assessments.
- Assesses the human rights linkages within all material Health & Safety and Community & Indigenous Peoples risks within the group risk profile.
- Utilises this analysis to develop a global, regional, and asset view of where our current and emerging salient human rights risks are and uses this to inform further second line assurance actions such as commissioning of asset or issue-specific human rights impact assessments as needed.
- Engages with relevant functions including Ethics & Compliance, Sustainability & ESG Legal, Human Resources, Sustainability & Social Value, and Security on the assessment for feedback and additional risk insights.
- Communicates the results of the assessment to the GCAC leadership team and to the External Affairs leadership team through the Group Risk Reporting process annually.
- Coordinates a third-party independent human rights expert review of the assessment for feedback on process and outcomes annually.
- Engages national and regional human rights stakeholders, such as human rights commissioners and human rights defender groups, for feedback on process and outcomes every 2 years at a minimum, or earlier as necessary where there are new or emerging salient human rights risks.

The *Community and Indigenous Peoples Global Standard* sets out our requirements for understanding and engaging with our host communities and the process for undertaking community development. This standard is available on our website.

Stakeholders can raise a concern through our local Community Complaints and Grievance Mechanisms, which are available at all assets and developed in alignment with the United Nations Guiding Principles on Business and Human Rights criteria for effective and legitimate grievance mechanisms. They may also raise concerns online or over the telephone at any time via our globally accessible, multilingual tools, Integrity@BHP and the BHP Protected Disclosure Reporting Channel. For these resources, all information is dealt with promptly, confidentially and respectfully, and with steps taken to protect identity if the reporting person wishes to remain anonymous.

This disclosure summarises key aspects of the environmental and social monitoring programs at each TSF. Key program aspects were determined by the asset teams responsible for TSF operation and in consideration of the facts and circumstances of each asset, operation and TSF.

Emergency preparedness and response plan

The EPRP provides external and internal agencies with the necessary information to mobilise and coordinate resources and equipment in a timely manner, in the event of an emergency impacting, or with the potential to impact, the site and surrounding area.

Our approach to emergency response planning for our TSFs is designed to be commensurate with the level of risk and may include:

- defined roles and responsibilities of response teams
- identifying and monitoring for conditions and thresholds that prompt preventive or remedial action
- assessing and mapping the potential impacts from a hypothetical, significant failure including impacts to people, infrastructure, communities and environment, both within and outside the mine site, regardless of probability
- establishing procedures to assist operations personnel responding to emergency conditions at the TSF
- testing and training in emergency preparedness ranging from desktop exercises to full-scale simulations (desktop and field drills scheduled at a frequency commensurate with the level of risk of the TSF)
- engaging, testing and integrating emergency response plans with external authorities as appropriate, including conducting coordinated drills to ensure readiness and transparency
- engaging with community stakeholders to maintain a shared state of readiness

External reviews

The performance of each TSF is monitored and evaluated through third-party, external reviews in accordance with GISTM and local regulatory requirements. These include:

- Dam safety reviews: a detailed process led by an external qualified professional engineer to review dam integrity and governance.
- Independent Tailings Review Board and Senior Independent Technical reviews: undertaken by third party engineers focusing on design, construction, operation, closure and management of the facility on a strategic level.

Key changes from the August 2024 disclosure

This will be the first public disclosure of all TSFs on BHP-operated sites. The key changes from the previous August 2024 disclosure are as follows:

- Addition of low, significant and high consequence TSFs at BHP-operated sites.
- Third-party validation of the GISTM conformance status of an additional 12 TSFs has been completed, with the outcome included in this disclosure in the conformance table.
- Material findings from performance reviews have been updated based on the most current activity and schedule for each facility.

Acronyms used in this document

Defined by GISTM

DSR	Dam Safety Review
EOR	Engineer of record
EPRP	Emergency Preparedness and Response Plan
ITRB	Independent Tailings Review Board
OMS	Operations, Maintenance and Surveillance
RTFE	Responsible tailings facility engineer
SITR	Senior Independent Technical Reviewer
TSF	Tailings storage facility

Other

AIMS	Asset Integrity Management System
ALARP	As low as is reasonably practicable
ANCOLD	Australian National Committee on Large Dams
CDA	Canadian Dam Association
FY	Financial Year (Australian)
FMA	Failure Modes Analysis (also used to refer to Failure Modes Effect Analysis)
GRC	Governance Risk and Compliance
ICMM	International Council on Mining & Metals
PAR	Population at risk
PLL	Potential loss of life
TARP	Trigger action response plan

BMA – Dragline 5 Void Tailings Storage Facility

Facility location	Goonyella Riverside Mine, Queensland, Australia
Classification	Low

Facility description

The Dragline 5 Void (DRE05) TSF is an active in-pit TSF situated on the Goonyella Riverside Mine, an open-cut metallurgical coal mine located 30 kilometres north of Moranbah in Queensland, Australia and on the traditional lands of the Barada Barna people. Deposition of tailings began in 2021 and remains active for intermittent deposition. There are no engineered embankments at the facility; however, it has an engineered operational spillway.

Summary information	
BHP site	Goonyella Riverside Mine
TSF name	Dragline 5 Void TSF
Coordinates	-21.774, 147.962
Current maximum height	N/A (In-pit facility)
Area	10 hectares
Stored tailings volume	1 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Dragline 5 Void facility is Low across all assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for the DRE05 facility was in 2024. The assessment identified no credible failure modes that would result in the catastrophic loss of tailings containment.

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the DRE05 TSF were assessed in 2021. No potential failure modes that would lead to a catastrophic tailings release were identified.

The estimated PAR at the DRE05 TSF is in the low range with none identified.

Design description

The DRE05 Void was excavated between late 2012 and early 2013. It is nearly 1200 metres long and 50 metres wide at the bottom and at the crest, the width ranges between 150 metres and 200 metres. Before the DRE05 Void became a TSF, process tailings were stored in the GS1 and RS1 above-ground TSFs. Tailings deposition in the DRE05 TSF commenced in March 2021. The facility is used for back-up storage for when maintenance is required for the tailings delivery system for the active Ramp 32 TSF. Tailings are delivered via a single point discharge spigot in the north-west corner. The maximum allowable tailings level is 256 mRL at the north wall and a decant pond level of 251 mRL at the south wall. Tailings are contained below natural ground level by an excavated benched low wall on the eastern side of the pit and a spoil low wall on the western side. There are no engineered

embankments at the facility; however, it has an engineered operational spillway, which reports to a mine void on site used for water storage.

The critical operating levels for the DRE05 TSF are as follows:

- Maximum tailings level at the north wall – 256 mRL,
- Maximum tailings level at the south wall – 251 mRL,
- Overflow point for the pit occurring on the south wall – 252 mRL,
- Maximum Allowable Operating Level – 251 mRL.

Dragline 5 Void TSF, 2025

The requirements for the closure of the DRE05 TSF align to local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. This period allows time for long-term settling, consolidation and drying, to minimise a detrimental impact on closure cover. The TSF will be rehabilitated in line with the Progressive Rehabilitation and Closure Plan to achieve a landform in accordance with applicable conditions laid out by the regulatory authorities. Monitoring will be conducted to ensure that the landform can achieve its nominated post-mining land use.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent reviews in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The first and most recent dam safety review was in 2025. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. No material findings.	Not applicable.
Dam Safety Review 2025	No regulatory non-compliances Unauthorised rock bund present in the spillway channel and may damage spillway lining.	Remove the unauthorised rock bund from the spillway channel and assess any damage to the spillway lining. *This action is in progress*

Environmental and social monitoring

The Environmental Authority (EA) governing the Goonyella Riverside Broadmeadow Mine, EPML00853413, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and are published on the DETSI website. No enforcement notices representing an environmental material finding for DRE05 were issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage with stakeholders on the appropriateness of mitigation strategies
- continue to build the foundation of engagement and consultation with stakeholders for the ongoing operations of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics including a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

There are no credible failure modes for the release of tailings for DRE05 TSF, as such no formal Emergency Action Plan is required. However, there is an Operations Plan and Emergency Action document for DRE05 TSF that outlines the process for safe operations that may affect the operation of the DRE05 TSF. The TSF is included in the Site Dam Safety Management plan and the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- details on internal stakeholders, and where to find contact information, and
- applicable TARPS for operational business continuity.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2025	2035
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation is available in our Annual Report.

BMA – GS1 Tailings Storage Facility

Facility location	Goonyella Riverside Mine, Queensland, Australia
Classification	Very High

Facility description

The GS1 TSF is situated on the Goonyella Riverside Mine, an open-cut metallurgical coal mine located 30 kilometres north of Moranbah in Queensland's Bowen Basin on the traditional lands of the Barada Barna people. The TSF starter embankment was built in 1975 and is now an inactive facility, as tailings deposition at the mine has changed to in-pit disposal. The GS1 TSF is an above-ground facility. The embankments use either the upstream, centreline or downstream raise methods, and the facility has undergone multiple raises throughout its history.

Summary information	
BHP site	Goonyella Riverside Mine
TSF name	GS1
Coordinates	-21.804, 147.949
Current maximum height	23 metres
Area	212 hectares
Stored tailings volume	36 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the GS1 TSF is Very High based on the Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for the GS1 facility was in 2023. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Embankment instability	Internal erosion through embankment
	Static liquefaction
	Erosion of embankment, crest or slopes
	Embankment instability (seismic or static)
	High rates of seepage/failure to contain seepage
	Pipe burst erosion – pipe bursts on embankment
Spillway	Erosion of spillways in flood event
Tailings impoundment	Tailings beach – loss of containment due to wind erosion
	Tailings overtop via spillway in flood event
	Pipe collapse in embankment causing settlement
Foundation failure	Foundation instability (seismic or static)
	Internal erosion
	Static liquefaction

Failure mode	Initiating event
	High rates of seepage/failure to contain seepage

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the GS1 TSF were assessed in 2022 and show there is potential human exposure should any of the embankments fail. The greatest potential human exposure relates to a failure of the north embankment, while the greatest potential economic impact, driving the consequence classification is a sunny day failure of the eastern embankment that interrupts the adjacent railway line used to transport coal.

The estimated population at risk of the GS1 TSF is in the high classification range of 10-100 people, comprising workers within the boundaries of the mine site.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than five square kilometres covered by tailings.
- Environmental impact: May impact areas of state environmental significance.
- Infrastructure impacted: Very high economic losses affecting public infrastructure, shared commercial rail line may be impacted for up to two weeks.

Design description

The TSF is an above-ground facility with constructed embankments to contain the tailings. It was built using the upstream, centreline and downstream raise methods.

The starter embankments were constructed in 1975, with the external embankments formed from locally sourced sandy-clay material. Following initial construction, the facility underwent a period of continuous lifts (from the early 1980s to 1992) in which the embankments were progressively raised with waste materials using the downstream method, as part of day-to-day operational mining activities.

The original configuration was three cells, increasing to seven cells in 1994 for tailings, and an eighth cell for water storage. The water storage cell, designated as GS1A and located in the north-east quadrant, was decommissioned in 2013 as part of the Stage 3 raise and repurposed for tailings storage. Only the north-west, north-east and southern cells remain visually distinct, following efforts to simplify the facility's operation in the 2014 Stage 4 raise. The cells helped direct and manage the deposition of tailings and recovery of water. The TSF has two operational decants and two emergency spillways.

As part of BHP's commitment to GISTM, historical engineering work has been reviewed and opportunities to increase TSF resilience identified. A construction history summary is in the table below.

Stage	Year completed	Design description
Initial construction	1975	Construction of a 10-metre starter embankment to 264 mRL using locally sourced sandy-clay engineered fill.
Continuous lifts	1980-1992	Embankment progressively raised using the downstream method with waste materials as part of day-to-day operational mining activities.
Pre-Stage 1	1994	Incremental downstream and centreline raises of embankments to varying heights between 269 mRL to 275 mRL using non-engineered fill.
Pre-Stage 1	2005	Upstream embankment raise of southern sections of the eastern and western embankments and downstream raise of the southern embankment to 272 mRL. Construction of southern, northern and internal spillways.

Stage	Year completed	Design description
Stage 1	2009	Upstream embankment raise of northern sections of the western and north-western embankments and the internal embankments on the north-western cell to 277.7 mRL. Raise and construction of additional internal spillways and drainage structures.
Stage 2	2011	Upstream embankment raise of southern embankment and southern sections of the eastern and western embankments to 274-275 mRL. Southern emergency spillway raised, and new northern emergency spillway constructed.
Stage 3	2013	GS1A water storage dam (north-east cell) repurposed and incorporated into the TSF.
Stage 4	2014	Downstream raise of northern embankment and downstream/upstream raise of eastern embankments to 277.7 mRL to amalgamate north-eastern cells into a single cell.
Stage 5	2016	Upstream and centreline raise of southern cell embankments to 276.6 mRL. Raise of southern spillway.
Stage 6	2020	Upstream raise of northern cell embankments to 280.3 mRL.
Improvement projects	Ongoing	Various improvement projects, including updates to the knowledge base.

GS1 TSF, 2025

The requirements for the closure of the GS1 TSF align with local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. A period of inactivity allows time for long-term settling, consolidation and drying to minimise a detrimental impact on closure cover. Once most of the expected settlement has occurred, the TSF will be modified to manage rainfall, and include features as identified in the closure design such as placement of erosion protection on the external embankments, shaping the TSF so that rainfall safely flows to the surrounding environment and capping of the tailings surface. The cover will be selected and finalised during the closure design phase, creating a landform in accordance with applicable conditions set out by regulatory authorities.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent reviews in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2022. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. Three recommendations to address preventative and operational maintenance improvements related to erosion and vegetation.	Complete remedial works on erosion protection on spillway and embankments. Clear overgrowth in spillway to restore capacity. *This action is in progress*
Dam Safety Review 2022	No regulatory non-compliances. Four findings to complete erosion remedial work and complete assessments to determine root cause of erosion on sections of embankment. Sections of the embankment, particularly the East Embankment do not meet BHP's target requirements. Risk associated with material properties of tailings and embankment need to be addressed.	Complete earthworks and reprofiling at localised areas of identified embankments to address erosion. Complete investigations and risk assessments to determine risk implication of areas identified as prone to erosion. Complete deformation analysis informed by updated geotechnical site investigation to determine whether the TSF' embankments would remain serviceable and safe (stable) after incurring deformations when subjected to the safety evaluation earthquake characteristic of this site. Undertake risk assessment of material properties to determine under what scenarios embankment strength could be impacted. *These actions are in progress*

Environmental and social monitoring

The Environmental Authority (EA) governing the Goonyella Riverside Broadmeadow Mine, EPML00853413, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and published on the DETSI website. No enforcement notices representing an environmental material finding for GS1 were issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs

- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics including a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

Significant events concerning the safety of the GS1 TSF are managed by the Emergency Action Plan. The plan outlines the facility-specific TARPs and procedures to be followed in the event of an emergency or an incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for the GS1 TSF provides operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework in unlikely the event of a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2022	2027
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

BMA – Ramp 32 Tailings Storage Facility

Facility location	Goonyella Riverside Mine, Queensland, Australia
Classification	Low

Facility description

The Ramp 32 TSF is an active in-pit TSF situated on the Goonyella Riverside Mine, an open-cut metallurgical coal mine located 30 kilometres north of Moranbah in Queensland, Australia and on the traditional lands of the Barada Barna people. After mining ceased in Airstrip Pit, the pit was repurposed as the Ramp 32 TSF with tailings deposition beginning in late 2019. Both of the coal preparation plants currently deposit tailings from the northern end of the Ramp 32 TSF, with the decant system operating in the southern end of the TSF.

Summary information	
BHP site	Goonyella Riverside Mine
TSF name	Ramp 32 TSF
Coordinates	-21.824, 147.968
Current maximum height	N/A (In-pit facility)
Area	51 hectares
Stored tailings volume	6 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Ramp 32 facility is Low based on the Environmental assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for the Ramp 32 facility was in 2024. The assessment identified no credible failure modes that would result in the catastrophic loss of tailings containment.

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Ramp 32 TSF were assessed in 2021. No potential failure modes that would lead to a catastrophic tailings release were identified.

The estimated PAR at the Ramp 32 TSF is in the low range with none identified.

Design description

Tailings deposition into Ramp 32 TSF began in late 2019. Currently, both of the mine's coal preparation plants deposit tailings from the northern end of the TSF. The decant system operates in the Southern end of the TSF. The maximum storage level is limited by the Goonyella Middle Seam, which is exposed in the high wall at 218 mRL. Deposition into Ramp 32 is limited to 217 mRL which provides 1 metre of freeboard capacity to store the extreme storm event below the Goonyella Middle Seam elevation. Studies are in progress to consider raising the final deposition elevation.

Ramp 32 TSF, 2025

The requirements for the closure of the Ramp 32 TSF align to local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. This period allows time for long-term settling, consolidation and drying, to minimise a detrimental impact on closure cover. The TSF will be rehabilitated in line with the PRCP to achieve a landform in accordance with applicable conditions laid out by the regulatory authorities. Monitoring will be conducted to ensure that the landform can achieve its nominated post-mining land use.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent reviews in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The first and most recent dam safety review was in 2025. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. No material findings or recommendations.	No material findings or recommendations.
Dam Safety Review 2025	No regulatory non-compliances. Two material findings: One relating to geotechnical stability and one relating to water balance reporting.	Complete slope stability analysis of the east wall at the location of the pump stations (South Pit). Review and update water balance report based on current reporting catchment areas. *These actions are in progress*

Environmental and social monitoring

The Environmental Authority (EA) governing the Goonyella Riverside Broadmeadow Mine, EPML00853413, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to

prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and are published on the DETSI website. No enforcement notices representing an environmental material finding for Ramp 32 were issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage with stakeholders on the appropriateness of mitigation strategies
- continue to build the foundation of engagement and consultation with stakeholders for the ongoing operations of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics including a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

There are no credible failure modes for the catastrophic release of tailings for the Ramp 32 TSF; as such, no formal Emergency Action Plan is required. However, there is an Operations, Maintenance and Surveillance Manual and Emergency Action document for Ramp 32 that outlines the process for safe operations that may affect the operation of the Ramp 32 TSF. The TSF is included in the Site Dam Safety Management Plan and the Site Emergency Response Plan, ensuring consistency with the broader Safety Management Plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- details on internal stakeholders, and where to find contact information, and
- applicable TARPs for operational business continuity.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2025	2035
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation is available in our Annual Report.

BMA – RS1 Tailings Storage Facility

Facility location	Goonyella Riverside Mine, Queensland, Australia
Classification	Very High

Facility description

The RS1 TSF is situated on the Goonyella Riverside Mine, an open-cut metallurgical coal mine located 30 kilometres north of Moranbah in Queensland, Australia and on the traditional lands of the Barada Barna people. The TSF starter embankment was built in 1983 and the TSF is now an inactive facility. The RS1 TSF is an above-ground facility. Embankments were built using the upstream and downstream raise methods and have undergone multiple raises to expand storage capacity.

The TSF was originally designed and constructed to deposit tailings from the centre of the TSF, with starter embankments to the south and east. It changed to a two-cell facility (north and south) in 2006 as part of the Stage 3 raise, with tailings deposition switched to the perimeter at the same time.

Summary information	
BHP site	Goonyella Riverside Mine
TSF name	RS1
Coordinates	-21.743, 147.946
Current maximum height	21 metres
Area	230 hectares
Stored tailings volume	23 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the RS1 facility is Very High based on Population at Risk assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for the RS1 facility was in 2023. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Embankment instability	Internal erosion through embankment
	Static liquefaction
	Erosion of embankment, crest or slopes
	Embankment instability (seismic or static)
	High rates of seepage/failure to contain seepage
	Pipe burst erosion – pipe bursts on embankment
Spillways	Erosion of spillways in flood event
Tailings impoundment	Tailings beach – loss of containment due to wind erosion
	Tailings overtop via spillway in flood event
	Stability of adjacent mine dump causing collapse onto TSF
Foundation failure	Foundation instability (seismic or static)

Failure mode	Initiating event
	Internal erosion
	Static liquefaction
	High rates of seepage/failure to contain seepage

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the RS1 TSF were assessed in 2022 and indicate potential human exposure should any of the embankments fail. The greatest potential exposure relates to a failure of the southern embankment. The failure scenario represents the worst-case scenario and is due to the southern sloping nature of the local topography towards an infrastructure area with mine workers.

The estimated PAR at the RS1 TSF is in the very high classification range of 100-1,000 people comprising workers on the mine site.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than five square kilometres covered by tailings.
- Environmental impact: May impact areas of state environmental significance.
- Infrastructure impacted: No public infrastructure impacted, shared commercial rail line may be impacted for up to two weeks.

Design description

The TSF is an above-ground facility relying on constructed embankments, natural topography and a waste dump to contain the tailings. It was raised using the upstream and downstream raise methods.

First constructed in 1983 from engineered fill sources from the mining operation, the TSF underwent a series of continuous lifts from 1983 to 1986, to progressively raise the embankment using the downstream method with waste materials as part of day-to-day operational mining activities. Material placed in the continuous lift period was characterised and reworked (as required) as part of Stage 1 works in 1986. Excluding this period, the facility has been raised in seven stages, most recently in 2020.

The south-western side of the facility features an active waste dump functioning as a downstream embankment. The use of the waste dump for this purpose offers greater factors of safety than traditional embankments. The interaction of the dump with the TSF is regularly monitored by the onsite operational team.

A summary of the construction history is provided in the table below.

Stage	Year completed	Description of design
Initial construction	1983	Construction of starter embankment at the southern and eastern extent to 280 mRL. Construction of emergency spillway.
Continuous raises	1983-1986	Embankment progressively raised using the downstream method with waste materials as part of day-to-day operational mining activities.
1	1987	Downstream raise of southern and eastern embankments to 283 mRL. Raise of emergency spillway.
2	1993	Downstream raise of the southern and eastern embankments to 285.5 mRL. Raise of emergency spillway.

Stage	Year completed	Description of design
2 (North Dam)	1996	An external embankment constructed to prevent catchment run-off entering the facility from the north.
3	2006	Downstream raise of south-eastern embankment to between 288 – 291 mRL. Upstream raise of eastern embankment to 288 mRL and construction of new western embankment to 286.6 mRL and internal embankment to 288 mRL. Previous spillway decommissioned and new emergency spillway constructed in the north-east corner.
4	2008	Upstream and downstream raise of eastern and western embankments to 289.5 mRL and centreline raises of internal embankments.
5	2012	Upstream raise of southern, eastern and northern embankments to 291.3 mRL.
6	2015	Upstream and centreline raise of northern, eastern and internal embankments to between 291.3 mRL and 291.5 mRL
7	2020	Upstream raise of western embankments to 291.3 mRL.

RS1 TSF, 2025

The requirements for the closure of the RS1 TSF align with local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. A period of inactivity allows time for long-term settling, consolidation and drying, to minimise a detrimental impact on closure cover. Once most of the expected settlement has occurred, the TSF will be modified to manage rainfall, and include features as identified in the closure design such as: placement of erosion protection on the external embankments; shaping the TSF so that rainfall safely flows to the surrounding environment; and capping of the tailings surface. The cover will be selected and finalised during the closure design phase, creating a landform in accordance with applicable conditions set out by regulatory authorities.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent reviews occurring in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2022. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. Three material findings identified related to instrumentation, operational maintenance improvements related to erosion and operational maintenance of stormwater infrastructure.	Re-establish freeboard and drainage pathways to decant pond. Restore and connect identified instrumentation. Complete earthworks along diversion drain and culverts at embankment toe. *These actions are in progress*
Dam Safety Review 2022	No regulatory non-compliances. Two material operational maintenance recommendations were identified related to erosion and reprofiling coarse rejects dump the knowledge base. Risk associated with material properties of tailings and embankment stability need to be addressed.	Complete investigations and risk assessments to determine risk implication of areas coarse rejects dump that may impact the TSF. Complete reprofiling if determined necessary. Undertake risk assessment of material properties to determine whether the TSF embankments would remain serviceable and safe (stable) after incurring deformations when subjected to the safety evaluation earthquake characteristic of this site. *These actions are in progress*

Environmental and social monitoring

The Environmental Authority (EA) governing the Goonyella Riverside Broadmeadow Mine, EPML00853413, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and published on the DETSI website. No enforcement notices representing an environmental material finding for RS1 were issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage with stakeholders on the appropriateness of mitigation strategies
- continue to build the foundation of engagement and consultation with stakeholders for the ongoing operations of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics including a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

Significant events that may concern the safety of the RS1 TSF are managed by the Emergency Action Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose and is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for the RS1 TSF provides operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework in the unlikely event of a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2022	2027
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation is available in our Annual Report.

BMA – Airfield Tailings Dam Tailings Storage Facility

Facility location	Peak Downs Mine, Queensland, Australia
Classification	High

Facility description

The Airfield Tailings Dam (ATD) is an inactive TSF situated on the Peak Downs Mine, an open-cut metallurgical coal mine located approximately 31 kilometres south-east of Moranbah in Queensland, Australia. The mine is located on the traditional lands of the Barada Barna people. The ATD TSF is located on the northern side of the Old Tailings Dam (OTD) and approximately 500 metres west of the coal handling preparation plant. Tailings in the ATD are contained by the OTD along part of the southern boundary, by three embankments (northern, eastern and south-western) and the natural topography to the west. Deposition began in late 1999 and ceased in 2003.

Summary information	
BHP site	Peak Downs Mine
TSF name	Airfield Tailings Dam
Coordinates	-22.255, 148.169
Current maximum height	14 metres
Area	54 hectares
Stored tailings volume	5 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the ATD facility is High based on Potential Loss of Life, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for the ATD TSF was in 2021. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Overtopping breach
Spillway	Erosion of spillways in flood event
Blockage of filter wall	Seepage causing damage to filter wall
Embankment instability	Earthquake induced liquefaction
	Embankment instability (seismic or static)
	Internal erosion
	Flood water erosion – Flow events in perimeter drains
	Internal erosion
	Surface runoff – Erosion
Foundation failure	Foundation instability (Seismic)
	Foundation strength failure
	Liquefaction – Earthquake or vibration

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the ATD TSF were assessed in 2022.

The estimated PAR at the ATD TSF is in the significant classification range of 1-10 people.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: 10-20 square kilometres covered by tailings.
- Environmental impact: May impact areas of state environmental significance.
- Infrastructure impacted: Minor flooding and disruptions to mine site infrastructure may occur.

Design description

The ATD was once the primary tailings storage for Peak Downs Mine. The storage is formed by three embankments (constructed on the northern, eastern and south-western boundaries), with the Old Tailings Dam to the south and natural topography to the west. The TSF has a roughly rectangular layout with the long axis oriented approximately east to west. Tailings deposition was originally from a single point on the eastern embankment but was subsequently amended to a perimeter discharge from the southern, eastern and northern embankments after the final raise (Stage 3 Raise) was constructed. As a result of the deposition practices and design basis, the decant pond has developed in the south-west area of the TSF. The ATD construction history is detailed in the table below. Water from the decant pond flows from the TSF to the Pond Return Dam to the south, via a filter wall constructed as part of the south-western embankment (known as middle embankment). Pond Return Dam acts as an 'off storage' decant pond, significantly reducing water stored on the ATD. An external spillway is located to the western end of the south-western embankment.

Stage	Year completed	Description of design
1	1999	Three starter embankments (north, south and middle) and decant pond Embankments (bunds) were constructed.
1 (Modifications)	2000	Due to the tailings beach forming a flatter slope than anticipated, modifications to the dam were required. Works included raising the Western portion of the Northern embankment to 262 mRL and raising the decant pond embankments.
2	2001	The northern and eastern embankments were raised to 265 mRL. The middle embankment was raised to 264 mRL and a filter wall included in its' design. The by-wash spillway was relocated from the northern embankment to the middle embankment. Other works which were undertaken but not considered part of the ATD included adjustments to Windsor Dam and Pond Return Dam embankments to provide a uniform crest level of 262.5 mRL. A low permeability zone was added to the upstream face of the Pond Return Dam embankment and erosion protection was placed on the slope of Winsor Dam embankment.
3	2002	Stage 3 comprised a 2.5m raise to the northern, eastern and middle embankments. The stage included the relocation of the by-wash spillway and raising of the filter wall.

Airfield Tailings Dam, 2025

The requirements for the closure of the ATD align to local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. A period of inactivity allows time for long-term settling, consolidation and drying to minimise a detrimental impact on closure cover. Once most of the expected settlement has occurred, the TSF will be modified to manage rainfall, and include features as identified in the closure design such as; placement of erosion protection on the external embankments, shaping the TSF so that rainfall safely flows to the surrounding environment and capping of the tailings surface. The cover will be selected and finalised during the closure design phase, creating a safe and stable landform in accordance with applicable conditions laid out by regulatory authorities.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent review occurring in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. One material finding identified for the integrity of the filter wall.	Review long term operational management of the filter wall and undertake design and construction to suit. Install pump to minimise the storage of surface water on the TSF. *These actions are in progress.*
Dam Safety Review 2023	No regulatory non-compliances. No material findings.	Not applicable.

Environmental and social monitoring

The Environmental Authority (EA) governing the Peak Downs Mine, EPML00318213, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and the notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and are published on the DETSI website. No enforcement notices which would represent an environmental material finding for ATD have been issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics and include a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Significant events that may concern the safety of the ATD are managed by the Emergency Action Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for the ATD TSF provides operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework that will be implemented after a TSF failure. The RRR framework addresses each phase of

TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2023	2033
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

BMA – Old Tailings Dam Tailings Storage Facility

Facility location	Peak Downs Mine, Queensland, Australia
Classification	Very High

Facility description

The Old Tailings Dam (OTD) is an inactive TSF situated on the Peak Downs Mine, an open-cut metallurgical coal mine located approximately 31 kilometres south-east of Moranbah in Queensland, Australia. The mine is located on the traditional lands of the Barada Barna people. The TSF was active between 1974 and 1999. Although currently inactive, a monitoring surveillance program is maintained on the TSF in accordance with local guidelines and legislative requirements. OTD is an above-ground TSF that relies on constructed embankments to contain the tailings. Embankments were built using a combination of upstream and downstream raise methods, and the TSF has undergone several raises throughout its history.

Summary information	
BHP site	Peak Downs Mine
TSF name	Old Tailings Dam
Coordinates	-22.264, 148.172
Current maximum height	18 metres
Area	162 hectares
Stored tailings volume	34 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the OTD facility is Very High based on the Infrastructure and Economic assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for the OTD TSF was in 2021. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Overtopping breach
Embankment instability	Earthquake induced liquefaction
	Embankment instability (seismic or static)
	Internal erosion
	Flood water erosion – Flow events in perimeter drains
	Pipe erosion – Pipe bursts on embankment
	Surface runoff – Erosion
Foundation failure	Foundation instability (Seismic)
	Foundation strength failure
	Liquefaction – Earthquake or vibration

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigating)

Impact assessment

The impacts of an embankment failure at the OTD TSF were assessed in 2022 and show there is potential human exposure should any of the embankments fail. Significant exposure was identified for failures along the north-eastern, eastern and southern embankments, with the greatest exposure in the event of a north-eastern failure scenario, due to the proximity of an infrastructure area with workers.

The assessment was undertaken with special consideration to the newly constructed Vitrinite Mine, located downstream of the southern embankment. This resulted in an increase to population at risk, specifically related to the southern embankment, however this did not result in a change in the classification as a north-eastern failure continues to represent the worst-case scenario.

The estimated PAR at the OTD TSF is in the high classification range of 10-100 people, comprising workers on the mine site or adjacent Vitrinite Mine.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than one square kilometre covered by tailings.
- Environmental impact: May impact areas of state environmental significance.
- Infrastructure impacted: Adjacent railway and public road may be inundated.

Design description

The facility was commissioned in 1974 and has undergone six subsequent design changes (see table below). The original TSF consisted of two cells, the northern cell (TD1) and southern cell (TD2) which merged into one cell in 1993.

Stage	Year completed	Description of design
1	1974	Construction of two starter embankment cells, TD1 (North) and TD2 (South) to 253.0 mRL. TD1 for tailings storage and TD2 for water storage.
2	1981	Embankments raised downstream to varying heights (256.0 mRL – 260.0 mRL)
3	1991	Embankments raised upstream to varying heights (262.0 mRL – 266.0 mRL)
TD1 Capping	1993	Capping of tailings surface in the northern cell extents.
4A	1993-1994	Embankments raised upstream to varying heights (260.0 mRL – 267.5 mRL). Facility merged into a single cell.
4B	1996	Embankments raised upstream and downstream to varying heights (266.5 mRL – 269.5 mRL).
4B Adjustment	1998	Embankments raised upstream and downstream to varying heights (266.5 mRL – 272.0 mRL).
5	2024	Upgrade of emergency spillway capacity and buttressing of North-western and eastern embankments.

Old Tailings Dam, 2025

The requirements for the closure of the OTD align with local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. A period of inactivity allows time for long-term settling, consolidation and drying, to minimise a detrimental impact on closure cover. Once most of the expected settlement has occurred, the TSF will be modified to manage rainfall, and include features as identified in the closure design such as: placement of erosion protection on the external embankments; shaping the TSF so that rainfall safely flows to the surrounding environment; and capping of the tailings surface. The cover will be selected and finalised during the closure design phase, creating a landform in accordance with applicable conditions laid out by regulatory authorities.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent reviews occurring in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. Three material findings were identified relating to design and construction, maintenance, and monitoring of the buttresses.	Complete design of buttressing remedial works to achieve compliance with the design criteria and implement construction. Reconnect disconnected Vibrating Wire Piezometers (VWP's). Collect data manually until reconnected. *These actions are in progress*
Dam Safety Review 2023	No regulatory non-compliances. Six material findings related to: Design and remedial works to achieve compliance with design criteria. VWP readings.	Complete earthworks and reprofiling at identified embankments at localised areas. Complete design of remedial works to achieve compliance with design criteria and implement construction.

Review	Material findings	Recommendations
	Flood mapping around OTD is limited to 1:30 and 1:100 AEP events. Recent study was completed for a 1:1000 AEP event but mapping around OTD was not reported. Upon completion of flood studies, determine whether surface water and erosion protection upgrades are required around OTD. Windsor's Dam variable condition, erosion basis of design. Windsor's Dam bypass levee observed to be in variable structural condition with potential seepage issues.	Reconnect VWPs back to the automatic data logger. Collect VWP data manually once a day until connected back to the automatic data logger. Additional investigation and reporting are being conducted to assess the need for addition buttressing or external flood protection, review the stability and adequacy of erosion protection, and confirm integrity and surrounding tailings strength. *These actions are in progress*

Environmental and social monitoring

The Environmental Authority (EA) governing the Peak Downs Mine, EPML00318213, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and the notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and are published on the DETSI website. No enforcement notices which would represent an environmental material finding for OTD were issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event.
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts.
- provide an opportunity for stakeholders to provide feedback.
- listen to stakeholder concerns, ideas and questions.
- consider community feedback in the planning for ongoing management of TSFs.
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders.
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs.

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics and include a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Significant events that may concern the safety of the OTD are managed by the Emergency Action Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that

credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for the OTD TSF provides operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework in the unlikely event of a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

BMA – Ramp 2N Tailings Storage Facility

Facility location	Peak Downs Mine, Queensland, Australia
Classification	Low

Facility description

The Ramp 2 North (Ramp 2N) TSF is an inactive TSF situated on the Peak Downs Mine, an open-cut metallurgical coal mine, which is located approximately 31 kilometres south-east of Moranbah, Queensland. The mine is located on the traditional lands of the Barada Barna people. The TSF is located north of the coal handling and processing plant on the eastern side of the northern haul road. The facility is bounded by the northern haul road and 1N Recycling Dam to the west, spoil stockpiles to the east, and stockpile benching and access ramps to the south. The overflow spillway is located on the southern embankment. Spillway discharge from the Ramp 2N TSF is designed to be contained by Ripstone Dam located on the mine lease downstream of the Ramp 2N TSF. The Ramp 2N TSF was active between 2003 and 2007.

Summary information	
BHP site	Peak Downs Mine
TSF name	Ramp 2 North TSF
Coordinates	-22.245, 148.181
Current maximum height	4 metres
Area	15 hectares
Stored tailings volume	2 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Ramp 2N TSF is Low across all assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for the Ramp 2N TSF was in 2021. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Storm event exceeding design
	Spillway blockage
	Slope failure of adjacent dump
Foundation failure	Internal erosion at southern embankment
Spillway failure	Erosion

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Ramp 2N TSF were assessed in 2022. The consequence classification assessment and failure mode analysis shows based on the geometry of the TSF tailings are unlikely to be mobilised in the event of a dam break with only ponded water potentially being released from the southern embankment. The overflow coming from a potential dam break would be contained within the adjacent haul road and potentially impact the adjacent railway balloon loop.

The estimated PAR at the Ramp 2N TSF is in the low range with none identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than one square kilometre covered by tailings.
- Environmental impact: The deterioration of habitat or rare and endangered species is not expected.
- Infrastructure impacted: Adjacent railway and public road may be inundated.

Design description

The 2N TSF design and construction stages are summarised in the table below.

Stage	Year completed	Description of design
1	1995	Dam 2N was constructed as an engineered zoned earth fill water dam by enclosing a depression with two embankments to 249.7 mRL. The spillway was constructed to an invert level of 248.7 mRL. The design storage was for 670 ML of mine pit water and natural runoff.
2	2003	Dam 2N was converted to a TSF. The conversion included excavation of the floor to 234 mRL in the north and 231 mRL in the south. Construction of an internal embankment to 249.7 mRL. Construction of internal embankment occurred across the southern portion of the TSF to act as a filter and create a decant pond.
3	2007	Tailings deposition ceased and capping commenced at the facility with placement of coarse rejects over the tailings surface.

Ramp 2 North TSF, 2025

The requirements for the closure of the Ramp 2N TSF align to local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. This period allows time for long-term settling, consolidation and drying to minimise a detrimental impact on closure cover. The TSF will be rehabilitated in line with the PRCP to achieve a final stable landform in accordance with applicable conditions laid out by the regulatory authorities. Monitoring will be conducted to ensure that the landform can achieve its nominated post-mining land use.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent review occurring in 2022 and 2023. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. One material finding identified for monitoring instrumentation.	Review and assess need for additional monitoring instrumentation. *This action is in progress.*
Dam Safety Review 2024	No regulatory non-compliances. Six material findings relating to updating inspection and monitoring requirements, slope stability analysis and surface water management.	Update inspection and monitoring program to align with identified failure modes, including specific monitoring requirements. Update the slope stability assessment using the latest National Seismic Hazard Assessment. Conduct new stability analyses following the completion of the decant infill project using as-built geometry, confirmed material properties, and the most adverse phreatic levels. Develop and document surface water management plans for both pre- and post-decant infill conditions, including drainage paths, erosion controls, and monitoring requirements. Repair identified deficiencies in the western drain and spillway, including debris removal and erosion protection. *These actions are in progress.*

Environmental and social monitoring

The Environmental Authority (EA) governing the Peak Downs Mine, EPML00318213, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and the notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and are published on the DETSI website. No enforcement notices which would represent an environmental material finding for Ramp 2N TSF have been issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback.
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics and include a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Significant events that may concern the safety of the Ramp 2N TSF are managed by the Emergency Action Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for dam failure at Peak Downs Mine provides operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework that will be implemented after a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2024	2034
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

BMA – Ramp 6S/7S Tailings Storage Facility

Facility location	Peak Downs Mine, Queensland, Australia
Classification	Significant

Facility description

The Ramp 6S/7S TSF is an active TSF situated within the southern section of Peak Downs Mine, an open-cut metallurgical coal mine, which is located approximately 31 kilometres south-east of Moranbah, Queensland. The mine is located on the traditional lands of the Barada Barna people. The TSF is located approximately 7 kilometres south-east of the Mine Industrial Area and the coal handling and preparation plant. The TSF is bordered by a spoil stockpile to the north, the PDM southern haul road to the west and the Yura South Pit to the east. The Boomerang Creek Diversion is located to the south of the TSF. The Ramp 6S/7S TSF was initially two separate in-pit facilities which have now combined into a single facility consisting of five above-ground saddle embankments and a spillway on the southern embankment.

Summary information	
BHP site	Peak Downs Mine
TSF name	Ramp 6 South / 7 South Tailings Storage Facility (Ramp 6S/7S)
Coordinates	-22.303, 148.219
Current maximum height	12 metres
Area	223 hectares
Stored tailings volume	18 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Ramp 6S/7S facility is Significant based on the Population at Risk, Potential Loss of Life, Environment, and Health, Social and Cultural assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for the Ramp 6S/7S TSF was in 2023. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Embankment instability	Design error / Unidentified low strength materials
	Settlement of upstream toe
	Elevated water pressure
	Future modifications
	Internal erosion
	Surface water erosion
Seismic instability	Design error / Unidentified low strength materials
	Seismic event outside design criteria
	Liquefaction
	Excessive blast vibrations
Overtopping	Embankment settlement

Failure mode	Initiating event
	Consolidation of tailings
	Spillway blockage
	Flood event outside design criteria
	Loss of freeboard resulting from crest erosion
Internal erosion	High permeability / erodible foundation material
	Deviations from deposition plan
	Ponding water against embankments
	Flood event outside design criteria
	Inflow of surface water from transverse cracking
Erosion of embankment	Failure of erosion protection measures
	Flood event outside design criteria
Spillway	Erosion of spillway
	Exceedance of capacity
Displacement of tailings and water	Failure of spoil containment embankments

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Ramp 6S/7S TSF were assessed in 2022 and show there is human exposure should any of the embankments fail. Significant exposure was identified for failures along the western and southern embankments, with the greatest exposure in the event of a southern failure scenario.

The estimated PAR at the Ramp 6S/7S TSF is in the significant classification range of 1-10 people comprising of mine personnel, with no population at risk outside of the mining lease identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than five square kilometres covered by tailings.
- Environmental impact: No significant loss or deterioration of habitat.
- Infrastructure impacted: No residential, commercial or community infrastructure affected.

Design description

Ramp 6S/7S is now operated as an above-ground TSF that relies on constructed embankments and spoil stockpiles to contain the tailings. The TSF has undergone several raises throughout its history with embankments being raised using the downstream method. In 2021, the Stage 5 Phase 2 raise resulted in the combination of the Ramp 6S TSF and Ramp 7S TSF, forming a single facility named the Ramp 6S/7S TSF.

Stage	Year completed	Description of design
Ramp 6S TSF		
N/A	2007	Southern Embankment: 6.3 metre high embankment in the spoil piles separating the Ramp 6S TSF from Ramp 7S.

Stage	Year completed	Description of design
		Eastern Embankment: 3 metre high spillway embankment between spoil piles at the eastern end of the ramp. Spillway: 10 metres wide, HDPE lined spillway constructed on the spillway embankment, with the return channel discharging into Ramp 7S. Western Embankment: 2.3 metre high earth bund across the entrance to Ramp 6S to prevent rainfall runoff entering the void from the main southern haul road.
Ramp 7S TSF		
Stage 1	2008	Filter Wall 1: 9 metre high filter wall and associated sump.
Stage 2	2009	Filter Wall 2: 11 metre high filter wall and associated sump Wall was constructed 150 metres upstream of the design alignment.
Stage 3	2014	Filter Wall 3: 6 metre high filter wall and decant pond. Tailings decant system installed and spigot bench constructed.
Stage 4	2016 / 2017	Spillway Embankment: 5 metre high embankment with emergency spillway. Eastern Bund: 10 metre high embankment constructed. Western Bund: 2.5 metre high embankment constructed.
Stage 5, Phase 1	2018 / 2019	6S Western Embankment: 2.6 metre raise. Backfilling of the ramp embankment void.
6S/7S TSF		
Stage 5, Phase 2	2021	Spillway Embankment: 2.6 metre raise, with new spillway East Embankment: 2.6 metre raise. West Embankment: 2.6 metre raise. Ramp Embankment: 0.9 metre raise.
Stage 6	Completion expected 2026	Western embankment: up to 3 metre raise. Southern (spillway) embankment: up to 3 metre raise. Eastern embankment: up to 6 metre raise.

Ramp 6 South / 7 South Tailings Storage Facility, 2025

The requirements for the closure of the Ramp 6S/7S TSF align to local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. A period of inactivity allows time for long-term settling, consolidation and drying to minimise a detrimental impact on closure cover. Once most of the expected settlement has occurred, the TSF will be modified to manage rainfall, and include features as identified in the closure design such as; placement of erosion protection on the external embankments, shaping the TSF so that rainfall safely flows to the surrounding environment and capping of the tailings surface. The cover will be selected and finalised during the closure design phase, creating a safe and stable landform in accordance with applicable conditions laid out by regulatory authorities.

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent review occurring in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. Three material findings related to monitoring instrumentation.	Complete installation of automatic data logging system. Review and assess requirement for monitoring instrumentation. Reassess MRL in accordance with DES guidelines, relocate MRL marker accordingly. *These actions are in progress.*
Dam Safety Review 2023	No regulatory non-compliances. One material finding relating to monitoring instrumentation.	Update markers at TSF to reflect the currently applicable MRL and DSA levels (RL's). Install gauge or water level marker boards at regular intervals to facilitate monitoring of decant pond level during routine inspections. Alternatively, consideration could be given to using a data logger. *These actions are in progress.*

Environmental and social monitoring

The Environmental Authority (EA) governing the Peak Downs Mine, EPML00318213, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and the notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and are published on the DETSI website. No enforcement notices which would represent an environmental material finding for Ramp 6S/7S have been issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback

- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics and include a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Significant events that may concern the safety of the Ramp 6S/7S TSF are managed by the Emergency Action Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for dam failure at Peak Downs Mine provides operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework that will be implemented after a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2024	2033
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

BMA – Ramp 2/3 Tailings Storage Facility

Facility location	Saraji Mine, Queensland, Australia
Classification	High

Facility description

The Ramp 2/3 TSF is an active TSF situated on the Saraji Mine, an open-cut metallurgical coal mine located 52 kilometres south-east of Moranbah in Queensland, Australia. The mine is located on the traditional lands of the Barada Barna people. The facility initially comprised in-pit deposition, with additional above-ground capacity now provided by engineered embankments and low wall spoil piles. The decant pond and an engineered spillway are located in the south-east corner of the TSF.

Summary information	
BHP site	Saraji Mine
TSF name	Ramp 2/3 Tailings Storage Facility
Coordinates	-22.376, 148.276
Current maximum height	12 metres
Area	176 hectares
Stored tailings volume	22 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Ramp 2/3 TSF is High based on the Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for Ramp 2/3 TSF was in 2020. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Embankment instability	Internal erosion through embankment
	Static liquefaction
	Erosion of embankment crest or slope
	Embankment instability (seismic or static)
	High rates of seepage/failure to contain seepage
	Pipe burst erosion – pipe bursts on embankment
Spillways	Erosion of spillway in flood event
Tailings impoundment	Tailings overtop via spillway in flood event
	Stability of adjacent mine dump causing collapse onto TSF
Foundation failure	Foundation instability (seismic or static)
	Internal erosion
	Static liquefaction
	High rates of seepage/failure to contain seepage

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The most recent failure impact assessment for the Ramp 2/3 TSF was completed in 2024.

The estimated PAR at the Ramp 2/3 TSF is in the significant classification range of 1-10 people, comprising of workers using adjacent roads and the railway.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than five square kilometres covered by tailings.
- Environmental impact: No significant loss or deterioration of habitat.
- Infrastructure impacted: High economic losses affecting infrastructure (<US$100M).

Design description

The facility started as two separate in-ramp facilities, and as the tailings level increased they combined into a single above-ground facility in Stage 4. Storage is now provided by engineered embankments and low wall spoil piles. The embankments were raised using the downstream, upstream and centreline methods over five stages.

Stage	Year completed	Description of design
Stage 0	2003	Infilling with tailings below ground in Ramp 3 Pit Void.
Stage 1 **Ramp 3 TSF**	2006	Western and southern starter embankment constructed to 205 mRL with crest width of 10m.
Stage 2A **Ramp 3 TSF**	2008	Western and southern embankment downstream raise constructed from 205 mRL to 207 mRL.
Stage 2B **Ramp 2 TSF**	2009	Western starter embankment constructed to 206.5 mRL.
Stage 3	2012	Ramp 2 TSF Western embankment downstream raise constructed from 206 mRL to 209 mRL. Spillway constructed at eastern end of Ramp 2 TSF to discharge to the northern void of Ramp 3 TSF
		Ramp 3TSF Western embankment upstream raise from 207 to 209 mRL. Southern embankment downstream raise constructed from 207 to 208.5 mRL. Construction of spillway at the eastern end of Ramp 3 TSF to discharge into Bauhinia Pit.
		Ramp 2 TSF and Ramp 3 TSF Armouring of all embankments. Raised 2 South Haul Road to a minimum level of 208.5 mRL. Excavated existing road along the northern rim of Ramp 3 TSF to discharge into the northern void of Ramp 3 TSF.
Construction of Stage 4 Raise	2013	Ramp 2 and Ramp 3 combined into a single above-ground storage. Raised west embankments of Ramp 2/3 TSF from 209 mRL to 212 mRL. Western starter embankment constructed to 212 mRL and combined Ramp 2 and Ramp 3 TSF western embankments into a single embankment. Southern embankment centreline raise from RL208.5 to 211.5 mRL. Construction of by-wash spillway and return channel at the eastern end of the southern embankment, discharging into Bauhinia Pit. Raised the filter wall surrounding the decant pond by 4 metres.

Stage	Year completed	Description of design
		Construction of a new unsealed light vehicle access road to northern end of the West embankment.
Construction of Stage 5 Raise	2019	Western embankment raise: Upstream raise from 212 mRL to 215.8 mRL. A Fill platform was constructed along the western embankment and along the southern embankment.
		Southern embankment raise: Downstream raise from 211.5 mRL to 215.8 mRL. The final embankment construction comprised an 8 metre embankment crest. New toe drain constructed along the southern embankment to monitor and capture potential embankment seepage.
		Starter embankments: Several discrete starter embankments were constructed over a deep profile of low wall spoil along the northern and north-eastern parts of the Ramp 2/3 TSF. Starter embankments were constructed from low wall spoil won from borrow pit located at the north-east of the TSF. Construction of northern saddle starter embankment to 215.8 mRL and north-eastern starter embankment to 215.8 mRL.
		Spillway: Spillway raised to 214.3 mRL (previous spillway removed and tied in with the existing drainage channel).

Ramp 2/3 Tailings Storage Facility, 2025

The requirements for the closure of the Ramp 2/3 TSF align to local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. A period of inactivity allows time for long-term settling, consolidation and drying to minimise a detrimental impact on closure cover. Once most of the expected settlement has occurred, the TSF will be modified to manage rainfall, and include features as identified in the closure design such as; placement of erosion protection on the external embankments, shaping the TSF so that rainfall safely flows to the surrounding environment and capping of the tailings surface. The cover will be selected and finalised during the closure design phase, creating a safe and stable landform in accordance with applicable conditions laid out by regulatory authorities.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent reviews occurring in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2017. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. Four material findings: Current mandatory reporting levels do not comply with the requirements of the DES. Updated consequence classification available for review and actioning. Erosion on the northern edge of the upstream slope interface with the gabions on the spillway.	Adjust the mandatory reporting levels marker. Review updated consequence classification and impacts on TSF and take action accordingly. Repair with rockfill to arrest development of preferential erosion pathway at this location. Repair should be carried out prior to next wet season. Consider surfacing on embankment crest to reduce surface cracking and erosion. *These actions are in progress.*
Dam Safety Review 2017	No regulatory non-compliances. Twelve material findings relating to erosion protection, blasting impacts, bore monitoring, drainage, deposition planning, crack remediation and monitoring, mandatory reporting levels, access road accessibility during flood events, toe drainage.	Reshape the spoil above the spillway to continuous or equivalent benched slope. Complete a desktop level assessment of the likely flood depths and velocities and determine if additional flood ingress / erosion protection modelling is required. Seek expert advice on blasting and refer to geotechnical engineer for impacts on TSF Consider installing additional bores to level below the invert of Hughes Creek in the area. Remove the buried spigots on the southern embankment and reinstate on the crest road with a suitable cover to allow traffic to pass. Review stability of pipes on the Ramp 2 access embankment and update the deposition planning if necessary. Review cracking on Western embankment with reference to the Stage 5 raise works and incorporate actions into the Stage 5 construction. Set up a system for monitoring the cracking identified on the decant embankment and develop a maintenance schedule to manage the cracking. Reset mandatory reporting levels and review design storage allowance with respect to the spillway elevation.

Review	Material findings	Recommendations
		Review the spillway channel access point road and potential for flooding to prevent access to the TSF. Review the toe drainage in the southern and western embankments. Review the staff training and auditing procedure with respect to the Operations Plan requirements. *These actions have been completed.*

Environmental and social monitoring

The Environmental Authority (EA) governing the Saraji Mine, EPML00862313, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and published on the DETSI website. No enforcement notices representing an environmental material finding for Ramp 2/3 TSF were issued in the last calendar year.
To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics including a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Significant events that may concern the safety of Ramp 2/3 TSF are managed by the Operations Plan and Emergency Action Plan. They outline the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios

- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for the Ramp 2/3 TSF provides operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework that will be implemented after a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2017	2027
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in the Annual Report.

BMA – Ramp 6 Tailings Storage Facility

Facility location	Saraji Mine, Queensland, Australia
Classification	Low

Facility description

The Ramp 6 TSF is an inactive TSF situated on the Saraji Mine, an open-cut metallurgical coal mine located 52 kilometres south-east of Moranbah in Queensland, Australia. The mine is located on the traditional lands of the Barada Barna people. The TSF was active between 1998 and 2014. The TSF comprises a former pit access ramp and is constrained by existing low wall spoil piles to the south and north and by a low wall spoil embankment to the east.

Summary information	
BHP site	Saraji Mine
TSF name	Ramp 6 Tailings Storage Facility
Coordinates	-22.402, 148.292
Current maximum height	53 metres
Area	40 hectares
Stored tailings volume	2 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Ramp 6 TSF is Low across all assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for Ramp 6 TSF was in 2024. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Embankment instability	Internal erosion
	Erosion of embankment, crest or slopes
	Embankment instability (seismic or static)
	Overtopping (global instability)
Overtopping	Overtopping breach

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Ramp 6 TSF were assessed in 2021.

The estimated PAR at the Ramp 6 TSF is in the low classification range with none identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than five square kilometres covered by tailings (limited to extent of pit).
- Environmental impact: Minimal short-term loss or deterioration of habitat or rare endangered species.
- Infrastructure impacted: Low economic losses, area contains limited infrastructure or services (<US$1M).

Design description

Construction and tailings deposition commenced in 1998, with intermittent subsequent deposition as summarised in the table below.

Stage	Year completed	Description of design
Construction	1998	Constructed in 1998 with deposition occurring from the western side and flowing to the east.
Deposition	2003 – 2004	End of operations as primary site
	2006 – 2011	3 metres of tailings was deposited
	2013 – 2014	1 metre of tailings was deposited

Ramp 6 Tailings Storage Facility, 2025

The requirements for the closure of the Ramp 6 TSF align to local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. This period allows time for long-term settling/ consolidation and drying to minimise a detrimental impact on closure cover. The TSF will be rehabilitated in line with the PRCP to achieve a final stable landform in accordance with applicable conditions laid out by the regulatory authorities. Monitoring will be conducted to ensure that the landform can achieve its nominated post-mining land use.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent reviews occurring in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. Four material findings: Two related to upstream piped culverts that appear to be blocked at the outfall. Ramp 6 comprises a flow through facility whereby surface water passively drains via a spillway to Dogwood North Pit, leading to erosion of the downstream embankment. Ramp 6 TSF is harvesting unnecessary mine affected water.	Inspect culverts used to channel surface water flows from western catchment to Ramp 6 TSF and remediate blockages of these culverts. Undertake studies to quantify potential impacts from blockage of these culverts. Setup formal spillway to manage flow. Improvement to surface water management is required. *These actions are in progress.*
Dam Safety Review 2024	No regulatory non-compliances. Six material findings relating to severe erosion on external slopes. seismic hazard assessment, slope stability, failure impact assessment and consequence classification.	Areas affected by severe erosion on external slopes will need to be treated before these embankments are damaged further. Update the current seismic hazard assessment to incorporate the National Seismic Hazard Assessment changes. Conduct site-specific multichannel analysis of surface waves surveys at SRM to confirm the assumptions made in the 2021 hazard assessment. Revisit the 2024 slope stability assessments when details of the upcoming mining works in the downstream pit become available to ensure that the stability of the embankments is not adversely impacted. Conduct a more comprehensive failure impact assessment for Ramp 6 TSF, especially in light of the planned resumption of mining activities in the downstream Pit. Reassess the consequence classification of Ramp 6 TSF following the completion of the failure impact assessment and consider temporarily increasing in population at risk due to mining activities in the downstream Pit. *These actions are in progress.*

Environmental and social monitoring

The Environmental Authority (EA) governing the Saraji Mine, EPML00862313, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and published on the DETSI website. No enforcement notices representing an environmental material finding for the Ramp 6 TSF were issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics including a complaints and grievance mechanism for community issues.
BHP undertook further perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Significant events that may concern the safety of the Ramp 6 TSF are managed by the Emergency Action Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for the Ramp 6 TSF provides operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework that will be implemented after a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2024	2034
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in the Annual Report.

BMA – Tailings Storage Facility No.2

Facility location	Saraji Mine, Queensland, Australia
Classification	Significant

Facility description

TSF No.2 is an inactive TSF situated on the Saraji Mine, an open-cut metallurgical coal mine located 52 kilometres south-east of Moranbah in Queensland, Australia. The mine is located on the traditional lands of the Barada Barna people. The TSF was initially constructed between 1973 and 1977 with deposition occurring between 1986 and 1996. TSF No.2 has been partially capped since 1996, with an ongoing monitoring and surveillance program in place. The TSF comprises embankments to the north and west, with containment to the south and east provided by the current mining topography.

Summary information	
BHP site	Saraji Mine
TSF name	Tailings Storage Facility No. 2 (TSF No.2)
Coordinates	-22.406, 148.284
Current maximum height	16 metres
Area	18 hectares
Stored tailings volume	1 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for TSF No.2 is Significant based on Population at Risk assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for TSF No.2 was in 2021. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Improper routing of surface water potentially increasing erosion
	Design capacity exceeded due to large/extreme flood
Embankment instability	Embankment instability due to internal and external erosion
	Static and seismic deformation
Reservoir slope instability	Displacement of decant pond water leading to overtopping event

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at TSF No. 2 were assessed in 2023 and show there is the potential for human exposure should any of the embankments fail. Whilst there is no permanent population at risk recorded

within the potential inundation zone of a hypothetical breach, sporadically used access roads within the Mine Lease would be impacted.

The estimated PAR at TSF No.2 is in the significant classification range of 1-10 people, comprising of workers using adjacent roads.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than one square kilometre covered by tailings.
- Environmental impact: Minimal short-term loss or deterioration of habitat, or rare and endangered species.
- Infrastructure impacted: Low economic losses, area contains limited infrastructure or services (<US$1M).

Design description

TSF No.2 comprises downstream raised embankments to the north and west, with no embankments needed for containment to the south and east due to higher ground levels. The embankment crest has an elevation of approximately 220 mRL and minimum toe elevation of 204 mRL. The highest embankments are located at the north-west of the TSF. TSF No.2 is an inactive facility that has been partially capped since 1996.

The table below outlines a summary of construction for three major events of TSF No.2.

Stage	Year completed	Description of design
Construction of TSF No.2 embankment	1973 – 1977	TSF No.2 was constructed between 1973 and 1977 (Crest RL approximately 220 mRL).
Construction of Capping	1996 – 1998	Crest RL 220 to 222 mRL.
Dam modification	2002 – 2003	Realignment of main haul road partially over downstream toe.

Tailings Storage Facility No. 2, 2025

The requirements for the closure of TSF No.2 align to local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. This period allows time for long-term settling, consolidation and drying release to minimise a detrimental impact on closure cover. The TSF will be rehabilitated in line with the PRCP to achieve a final stable landform in accordance with applicable conditions laid out by the regulatory authorities. Monitoring will be conducted to ensure that the landform can achieve its nominated post-mining land use.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent reviews occurring in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. Six material findings: Failure Impact Assessment does not include a scenario for the population at risk for the downstream pit restart works. No formal spillway. A non-engineered spill point is present at the north-eastern extent. Potential for uncontrolled pond release. Amber trigger levels detected at sections of the TSF No.2 embankment. Instrumentation installed are not connected to any automated logging / monitoring system. Drainage pipes discharge onto downstream slope from height without erosion protection at the discharge end, which can increase scouring potential.	Review failure impact assessment with respect to increase in population at risk associated with the pit restart. Complete a surface water assessment and implement recommendations for upgrade works to meet BMA requirements. Undertake an assessment of the outcomes from an uncontrolled release of the informal pond pending upgrade works. More frequent monitoring of section of embankment that triggered the amber TARP and adhere to prescribed TARP actions. Install telemetry in accordance with current instrumentation design requirements and establish an integrated monitoring program. Extend pipes to discharge beyond the downstream toe. *These actions are in progress*.
Dam Safety Review 2024	Nine material findings relating to slope stability analysis, internal erosion failure assessment, seismic hazard assessment, erosion protection, surface water management, hydrotechnical assessment, and a qualitative risk assessment.	Conduct an independent review of slope stability analyses using updated geotechnical parameters and guidelines. Perform a detailed internal erosion failure assessment, considering the presence of potentially dispersive materials and observed erosion features. Update the seismic hazard assessment using the latest National Seismic Hazard Assessment and recalculate liquefaction potential. Develop and implement a comprehensive plan to address erosion issues on embankment slopes and the capped surface.

Review	Material findings	Recommendations
		The spill point condition shall be monitored regularly to identify any potential changes that may result in changes in the water balance model findings. Design and construct a formal closure spillway that meets BHP requirements for closure conditions. Conduct a hydrotechnical assessment to evaluate water storage capacity and spillway requirements. Develop and implement a surface water management plan to address erosion issues. Review and update the qualitative risk assessment regularly, focusing on failure modes with high residual risk ratings and developing specific mitigation strategies for each. *These actions are in progress.*

Environmental and social monitoring

The Environmental Authority (EA) governing the Saraji Mine, EPML00862313, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and are published on the DETSI website. No enforcement notices representing an environmental material finding for TSF No.2 were issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics including a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Significant events that may concern the safety of TSF No. 2 are managed by the Operations, Maintenance and Surveillance Manual and Emergency Action Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for TSF No. 2 provides operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework that will be implemented after a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2024	2034
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

BMA – Tailings Storage Facility No.3

Facility location	Saraji Mine, Queensland, Australia
Classification	Very High

Facility description

TSF No.3 is an inactive TSF situated on the Saraji Mine, an open-cut metallurgical coal mine located 52 kilometres south-east of Moranbah in Queensland, Australia. The mine is located on the traditional lands of the Barada Barna people. The TSF was active between 1977 and 1985 and is now capped, with an ongoing monitoring and surveillance program in place. TSF No.3 is an above-ground TSF that relies on constructed embankments to contain the tailings. The embankments were constructed in a single stage with no subsequent raises.

Summary information	
BHP site	Saraji Mine
TSF name	Tailings Storage Facility No. 3 (TSF No.3)
Coordinates	-22.400, 148.275
Current maximum height	13 metres
Area	27 hectares
Stored tailings volume	4 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for TSF No.3 is Very High based on Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for TSF No.3 was completed in 2021. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Design capacity exceeded due to large/extreme flood
	Blocked spillway
Spillway	Erosion of spillway in flood event
Embankment instability	Embankment instability due to erosion/excavation at the toe
	Static and seismic deformation
	Surface runoff – Erosion

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at TSF No. 3 were assessed in 2024 and show there is the potential for human exposure should any of the embankments fail. Whilst there is no permanent population at risk recorded within the potential inundation zone of a hypothetical breach, sporadically used access roads within the Mine Lease would be impacted.

The estimated PAR at TSF No.3 is in the significant classification range of 1-10 people, comprising users of adjacent roads and the railway.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than one square kilometre covered by tailings.
- Environmental impact: No significant loss or deterioration of habitat.
- Infrastructure impacted: Adjacent railway and public road may be inundated, very high economic loss (US$100M-US$1B).

Design description

Construction of the facility commenced in 1966 and tailings deposition started by 1977. TSF No.3 is an above-ground facility that relies on constructed embankments to contain the tailings. Capping and rehabilitation works were undertaken between 2009 and 2014.

Stage	Year completed	Description of design
Initial construction	1966 – 1977	Downstream construction of single stage embankments to 217 and 218 mRL for tailings storage.
Deposition commenced	1977 – 1983	Deposition commenced around 1977.
Deposition ceased	1983 – 1985	Deposition ended in late 1980s.
No activity	1998 – 2009	No active deposition of tailings recorded. Surveyed embankment heights 12m above natural ground level.
Initial capping	2009 – 2010	Capping 2/3 of tailings surface, raised embankment crest elevations between 218 mRL and 220 mRL.
	2010 – 2011	Construction of the closure spillway.
Final capping	2012 – 2013	Completion of capping layer over existing decant pond and embankment. Rock mulching of the spillway.
Rehabilitation	2013 – 2014	Placement of topsoil as part of final stage of rehabilitation plan.

Tailings Storage Facility No. 3, 2025

The requirements for the closure of TSF No.3 align to local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. A period of inactivity allows time for long-term settling, consolidation and drying to minimise a detrimental impact on closure cover. The TSF has been capped and rehabilitation is ongoing to achieve a final stable landform in accordance with applicable conditions laid out by the regulatory authorities. Monitoring will be conducted to ensure that the landform has achieved its nominated post mining land use.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent reviews occurring in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. Ten recommendations to address performance and operational maintenance improvements related to instrumentation, drainage, erosion and vegetation. Sections of the Northwestern embankment do not meet BHP's target requirements for stability.	Review ownership and functionality of drainage culvert on the western embankment and determine if remedial actions are required. Develop methodology for backfilling and repair of swallow hole. Regrade the crest surface to reinstate free drainage to the TSF spillway. Reinstate bunding. Complete earthworks and backfilling at identified localised areas to address erosion. Complete remedial works on erosion protection of embankments. Complete surface water assessment to inform spillway arrangement and backfill low point. Connect instrumentation to automated monitoring system.

Review	Material findings	Recommendations
		These actions are in progress
Dam Safety Review 2024	No regulatory non-compliances. Five material findings related to slope stability, strength parameters, seismic liquefaction assessment, failure mode remedial measures.	Conduct an independent review of the slope stability calculations to resolve discrepancies between the previous assessments and verify the stability of the TSF3 embankments. Review and update the strength parameters used in the stability analyses, particularly for the compacted embankment fill and tailings materials, to ensure they represent the expected behaviour under various loading conditions. Update the seismic liquefaction assessments using the most recent ground motion parameters and consider the potential impact of updated National Seismic Hazard Assessment data for Australia. Investigate and implement remedial measures for the failure modes with high residual risk ratings, particularly those related to embankment stability, to reduce the risks to tolerable levels. Conduct detailed assessments for the failure modes close to the tolerable risk limits, to better understand the risks and develop appropriate mitigation strategies. *These actions are in progress*

Environmental and social monitoring

The Environmental Authority (EA) governing the Saraji Mine, EPML00862313, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and are published on the DETSI website. No enforcement notices representing an environmental material finding for TSF No.3 were issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics including a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.
We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Significant events that may concern the safety of TSF No. 3 are managed by the Operations, Maintenance and Surveillance Manual and Emergency Action Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for TSF No. 3 provides operational level detail for the first responders to an incident, Field Response Team, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework in the unlikely event of a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2024	2029
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in the Annual Report.

BMA – Tailings Storage Facility No. 4

Facility location	Saraji Mine, Queensland, Australia
Classification	Significant

Facility description

TSF No.4 is an inactive TSF located on the Saraji Mine, on open-cut metallurgical coal mine located 52 kilometres south-east of Moranbah in Queensland, Australia. The mine is located on the traditional lands of the Barada Barna people. The facility has been capped and has an active monitoring and surveillance program in place. TSF No.4 is an above-ground TSF that relies on constructed embankments to the north, west and south to contain the tailings. Embankments were built using the downstream method, with the TSF constructed in a single stage with subsequent modifications.

Summary information	
BHP site	Saraji Mine
TSF name	Tailings Storage Facility No. 4 (TSF No.4)
Coordinates	-22.399, 148.282
Current maximum height	22 metres
Area	36 hectares
Stored tailings volume	6 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for TSF No.4 is Significant based on the Population at Risk assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for TSF No.4 was in 2021. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Design capacity exceeded due to large/extreme storm event
Foundation instability	Weak areas where uncontrolled fill was encountered
Embankment deformation	Embankment instability due to erosion/excavation at the toe
	Static and seismic deformation

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at TSF No. 4 were assessed in 2023 and show there is the potential for human exposure should any of the embankments fail. Whilst there is no permanent population at risk recorded within the potential inundation zone of a hypothetical breach, sporadically used access roads within the Mine Lease would be impacted.

The estimated PAR at TSF No.4 is in the significant classification range of 1-10 people, comprising of workers using adjacent roads.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than one square kilometre covered by tailings.
- Environmental impact: No significant loss or deterioration of habitat.
- Infrastructure impacted: Low economic losses, area contains limited infrastructure or services (<US$1M).

Design description

The facility's initial construction commenced in 1984, and tailings deposition started after construction of the first stage. Capping of the facility was undertaken between 2006 and 2009.

Stage	Year completed	Description of design
Initial construction	1984 – 1991	Downstream construction of embankments with the crest height close to 217 mRL. Embankment construction advanced progressively ahead of tailings placement until 1991.
Modification	1992 – 1996	Minor modifications to raise the crest from 218 mRL to 221 mRL.
Modification	1996 – 1998	Western embankment was lowered to a maximum height 220 mRL.
		Construction of a weighting berm (toe berm) 8 metre wide to 208 mRL to the western embankment
		Embankment raises at the eastern and western ends of the northern embankment to 218.8 mRL and 218.4 mRL respectively.
Capping	2006 – 2009	Capping layer of minimum thickness of 2 metres constructed over the tailings.

Tailings Storage Facility No. 4, 2025

The requirements for the closure of TSF No.4 align to local regulatory requirements as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. A period of inactivity allows time for long-term settling, consolidation and drying to minimise a detrimental impact on closure cover. The TSF has been capped and rehabilitation is ongoing to achieve a final stable landform in accordance with applicable conditions laid out by the

regulatory authorities. Monitoring will be conducted to ensure that the landform can achieve its nominated post mining land use.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent reviews occurring in 2023 and 2024. As the annual performance review inspection period is aligned with preparation for the Central Queensland wet season, the finalised 2024 dam performance report findings will not be available until the next public disclosure.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No regulatory non-compliances. One borehole with instrumentation installed appears to be reading faulty readings. Continue works to close out potential stability issues at location of unidentified fill at south-west corner. The spillway (spill point) is not an engineered structure and constructed to withstand flood events, and a compliance review is not possible. Known alluvial channel intersects the south-west corner of TSF No. 4. Reporting currently does not show alluvial beneath the coarse rejects fill material.	Reinstall instrumentation in borehole and monitor in accordance with the operations manual. Action additional investigation and/or remediation options from TSF4 factual and interpretive report. Investigate the redundancy of the installed instrumentation and repair/replace as necessary. Complete a surface water assessment to determine the appropriate spillway arrangement and formalise closure spillway. Complete proposed investigation works at this location south-west corner. *These actions are in progress.*
Dam Safety Review 2024	No regulatory non-compliances. Seven material findings relating to seismic hazard assessments, stability assessments, instrumentation, erosion protection, mitigation strategies for failure modes.	Update seismic hazard assessments using the latest National Seismic Hazard Assessment data and revise liquefaction and slope stability assessments using updated seismic loading. Investigate the extent of uncontrolled fill at the south-west corner and update stability assessments accordingly. Review the performance of instrumentation and replace faulty instruments. Investigate and implement remedial measures for the failure modes with high residual risk ratings, particularly those related to embankment instability, to reduce the risks to tolerable levels. Conduct detail assessments for the failure modes with higher residual risk ratings, such as erosion, to better understand the risks and develop appropriate mitigation strategies. *These actions are in progress.*

Environmental and social monitoring

The Environmental Authority (EA) governing the Saraji Mine, EPML00862313, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken and notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event occurs, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and published on the DETSI website. No enforcement notices representing an environmental material finding for TSF no.4 were issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad ranging topics including a complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Significant events that may concern the safety of TSF No. 4 are managed by the Operations, Maintenance and Surveillance Manual and Emergency Action Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs, and
- muster points and evacuation routes.

A tactical response plan developed for TSF No. 4 provides operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework that will be implemented after a TSF failure. The RRR framework addresses each phase of

TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

Independent reviews

Review	Previous review	Next review
DSR	2024	2034
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in the Annual Report.

BMA – Old Tailings Dam Tailings Storage Facility

Facility location	Saraji South Mine, Queensland, Australia
Classification	Significant

Facility description

The Old Tailings Dam (OTD) TSF is situated on the Saraji South Mine, formerly known as Norwich Park Mine located in Queensland, Australia. The mine is located on the traditional lands of the Barada Barna people. The TSF was active between 1978 and 1998. Embankments were raised using the centreline and upstream methods over two stages. Currently no processing or tailings production activities are taking place onsite. However, routine site maintenance, rehabilitation and water management activities continue.

Summary information	
BHP site	Saraji South Mine
TSF name	Old Tailings Dam (OTD)
Coordinates	-22.769, 148.471
Current maximum height	15 metres
Area	89 hectares
Stored tailings volume	7 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the OTD TSF is Significant based on the Population at Risk assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for OTD was in 2021. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Storm event in excess of design storm capacity
	Inadequate containment of water or material
	Inadequate or failed operational process
	Subsidence or settlement
Embankment / Foundation failure	Internal erosion
	Slope instability
	Liquefaction

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the OTD TSF were assessed in 2021 and show the potential for human exposure should any of the embankments fail. Whilst no permanent population at risk is recorded within the

potential inundation zone of a hypothetical breach, sporadically used access roads within the Mine Lease would be impacted.

The estimated PAR at the OTD TSF is in the significant classification range of 1-10 people, comprising workers using adjacent haul roads.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than one square kilometre covered by tailings.
- Environmental impact: Minimal short-term loss or deterioration of habitat.
- Infrastructure impacted: Limited infrastructure or services and public roads may be inundated.

Design description

The facility's initial construction commenced in 1978, followed by centreline and upstream raises. OTD is a single-cell above-ground facility that relies on constructed embankments to contain the tailings on the north, west and south, with containment to the east provided by the site topography. Deposition ceased in 1998, when the operation redirected tailings to the Ramp 67 TSF.

Stage	Year completed	Description of design
Stage 1 – Starter embankments	1978	Design and construction of the OTD starter embankments. Stage 1 comprised Dam A and B (forming the Western embankment) and Dam C (forming the Northern embankment). Construction of the Western embankment to the crest level of 221.5 mRL. The Northern embankment was constructed to a crest level of 217.5 mRL.
Stage 2 – Centreline raise	1991	Embankment raising of Western and Northern embankment using centreline raise method, with 1m freeboard for a 1-in-100-year storm event. The embankment crest level varied between 266 mRL and 225.5 mRL.
Deposition ceased	1998	Tailings deposition ceased when OTD was repurposed as a return water dam and evaporation pond.
Tailings dam modifications – Upstream raise	2001	Embankment Protection. Re-construction of the Northern embankment and Western embankment to uniform crest level at 226.2 mRL to increase water storage capacity. Construction of spillway to crest level at 225.5 mRL. The intent of this raise was for pond freeboard, not containment of tailings.

Old Tailings Dam, 2025

The requirements for closing the OTD TSF align with local regulatory requirements, as outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. This period allows time for long-term settling, consolidation and drying to minimise a detrimental impact on closure cover. The TSF will be rehabilitated in line with the PRCP to achieve a final stable landform in accordance with applicable conditions laid out by the regulatory authorities. Monitoring will be conducted to ensure that the landform can achieve its nominated post-mining land use.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent review in 2024.

The most recent dam safety review was in 2021. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No regulatory non-compliances. Four findings to address surface degradation of the western embankment downstream slope.	Complete earthworks and reprofiling of identified embankment sections. *This action is in progress.*
Dam Safety Review 2021	No regulatory non-compliances. The recent slumping of the topsoil on the west embankment may cause severe erosion of the embankment if it is not treated.	Treat the outer edge of the western embankment to prevent further damage. *Actions to address this recommendation have been completed.*

Environmental and social monitoring

The Environmental Authority (EA) governing the Saraji South Mine, EPML00865013, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken as well as the notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and are published on the DETSI

website. No enforcement notices representing an environmental material finding for OTD have been issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders about the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage with stakeholders on the appropriateness of mitigation strategies
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad-ranging topics, including complaints and grievance mechanisms for community issues.

BHP undertook further perception research to understand community sentiment on broad-ranging topics of interest, including community services, health, safety and environment and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Significant events that may concern the safety of Saraji South Mine's TSFs are managed by the Emergency Action Plan. The plan outlines the specific incident, crisis, and emergency management system that will be used in the event of an emergency and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios, and
- applicable TARPs.

A tactical response plan is being developed for the OTD TSF. This will provide operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework that will be implemented after a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post failure) with the appropriate processes and actions required during each phase.

Independent reviews

Review	Previous review	Next review
DSR	2021	2031
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

BMA – Ramp 67 Tailings Storage Facility

Facility location	Saraji South Mine, Queensland, Australia
Classification	Significant

Facility description

The Ramp 67 TSF, formerly known as the Ramp 5 TSF, is an inactive in-pit facility situated on the Saraji South Mine, formerly known as Norwich Park Mine. The mine is located on the traditional lands of the Barada Barna people. Tailings were historically deposited in Ramp 67 TSF between 1998 and 2012. Currently no processing or tailings production activities are taking place onsite. However, routine site maintenance, rehabilitation and water management activities continue. The Ramp 67 TSF does not have a formally defined spillway, and no water reclaim infrastructure is present.

Summary information	
BHP site	Saraji South Mine (formerly known as Norwich Park Mine)
TSF name	Ramp 67 TSF
Coordinates	-22.765, 148.487
Current maximum height	N/A (In-pit facility)
Area	35 hectares
Stored tailings volume	8 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Ramp 67 TSF is Significant based on Population at Risk assessment criteria.

Summary of risk assessment

The most recent failure mode analysis for the Ramp 67 TSF was in 2023. The credible failure mode identified is presented in the table below.

Failure mode	**Initiating event**
Overtopping	Overtopping at a low point

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Ramp 67 TSF were assessed in 2022.

The estimated PAR at the Ramp 67 TSF is in the significant classification range of 1-10 people confined to the potential for site operational personnel using adjacent roads.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than five square kilometres covered by tailings.
- Environmental impact: Minimal short-term loss or deterioration of habitat.

- Infrastructure impacted: Low economic losses, the area contains limited infrastructure or services.

Design description

The facility is an in-pit TSF with the tailings stored below natural ground level, located east of the former coal handling and processing plant. Tailings was deposited in the Old Tailings Dam (OTD) between 1978 and 1998, and then in the Ramp 67 TSF between 1998 and 2012. The Ramp 67 TSF is currently inactive with no processing activities occurring at the site.

Stage	Year completed	Description of design
Tailings deposition started	1998	Tailings deposition into the OTD ceased and redirected into Ramp 67 TSF to the north, where mining had ceased. Ramp 67 TSF was also used for placement of coal rejects.
Operation care and maintenance	2012	The mine site entered care and maintenance and the Ramp 67 TSF status transitioned to “Inactive”.
Deregulated	2022	Ramp 67 TSF was reclassified as a non-regulated structure.

Ramp 67 TSF, 2025

The requirements closing the Ramp 67 TSF align with local regulatory requirements outlined in the Queensland Environment Protection Act 1994 and Progressive Rehabilitation and Closure Plan Guideline.

This process includes a period of inactivity prior to closure. This period allows time for long-term settling, consolidation and drying to minimise a detrimental impact on closure cover. The TSF will be rehabilitated in line with the PRCP to achieve a final stable landform in accordance with applicable conditions laid out by the regulatory authorities. Monitoring will be conducted to ensure that the landform can achieve its nominated post-mining land use.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent review in 2024.

The most recent dam safety review was in 2021. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review	No regulatory non-compliances.	Not applicable.

2024	No material findings.	
Dam Safety Review 2021	No regulatory non-compliances. Diversion drains require desilting for adequate storage capacity.	Remove sediment buildup in diversion drains. *This action has been completed*

Environmental and social monitoring

The Environmental Authority (EA) governing the Saraji South Mine, EPML00865013, is available on the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI) website. The EA details the required type and frequency of environmental monitoring to be undertaken as well as the notification requirements in the event of an incident that contravenes the conditions in the EA. The EA also outlines the process after such an event, including further monitoring, sampling, remediation action and action to prevent reoccurrence. Enforcement actions may be issued for non-compliance with conditions in the EA and are published on the DETSI website. No enforcement notices that would represent an environmental material finding for the Ramp 67 TSF have been issued in the last calendar year.

To understand the specific social impact of its TSFs, BHP initiated Human Rights and Social Impact Assessments for our Queensland metallurgical coal TSFs in 2023. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders about the risks, opportunities, and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage with stakeholders on the appropriateness of mitigation strategies
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established for our Queensland metallurgical coal mines to provide two-way feedback opportunities on broad topics including complaints and grievance mechanism for community issues.

BHP undertook further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social investment.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

The Emergency Action Plan manages significant events that may concern the safety of the Ramp 67 TSF. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident and has been reviewed by the RTFE and EOR. The plan includes responses proportional to the risk that credible failure scenarios pose and is integrated into the Site Emergency Response Plan, ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information, and
- applicable TARPs.

A tactical response plan is being developed for the Ramp 67 TSF. This will provide operational level detail for the first responders to an incident, with a focus on the people, equipment and response required during an emergency. The guideline primarily involves BMA resources due to proximity and site familiarity.

Where applicable, BMA collaborates with public sector agencies and emergency services to share information and jointly review and develop emergency preparedness and response plans.

In the event of a TSF failure, the Reconstruction, Restoration and Recovery (RRR) Plan details the long-term recovery framework that will be implemented after a TSF failure. The RRR framework addresses each phase of TSF failure (pre-failure, during failure and post-failure) with the appropriate processes and actions required during each phase.

Independent reviews

Review	Previous review	Next review
DSR	2021	2031
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Copper South Australia – Carrapateena Tailings Storage Facility

Facility location	Carrapateena, South Australia, Australia
Classification	High

Facility description

The Carrapateena TSF is an active facility situated on the Carrapateena mine, an underground copper/gold mine located, about 135 kilometres north-west of Port Augusta, Australia on the traditional lands of the Kokatha people. The TSF is a cross-valley zoned earth and rockfill embankment with a bituminous geomembrane upstream face lining and is located at the head of the Eliza Creek about 16 kilometres south of Lake Torrens. Commissioned in 2019, the TSF has undergone one downstream raise increasing the height of the facility by 13 metres.

Summary information	
BHP site	Carrapateena
TSF name	Carrapateena TSF
Coordinates	-31.287, 135.513
Current maximum height	31 metres
Area	336 hectares
Stored tailings volume	12.4 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Carrapateena TSF is High based on the Environment assessment criteria.

Summary of risk assessment

The most recent FMA for the Carrapateena TSF was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping of TSF embankment	Significant rain event
	Localised slump of tailings deposit resulting in surge
	Overfilling of tailings
	Unforeseen tailings flow path and isolated loss of freeboard
	Spillway blockage
	Landslide into storage area
	Failure of internal structures
	Construction settlement of embankment and loss of freeboard
	Earthquake and settlement of embankment and loss of freeboard
	Compromised decant system
	Stage 3 raise interface
Embankment instability	Seepage and high water pressure in embankment
	Foundation failure
	Seismic event

Failure mode	Initiating event
	Rainfall runoff and surface erosion
	Spillway discharge and undercutting erosion
	Excavation undercutting downstream toe and/or slope
	Tree root depressions and erosion at slope and/or toe
	Excessive loading of embankment
	High pond level followed by rapid drawdown
	Embankment cracking
Internal erosion	Seepage via fill around pipe penetrations
	Gravity decant system collapse
	Seepage through pipe trench backfill and erosion of interface material
	High pressure in outfall pipe
	Seepage through clay on crest of Stage 1 embankment
	Infiltration and seepage through Stage 2 crest
	Seepage and scour erosion
	Pond at embankment abutment interface and seepage
	Decaying tree roots
	Animal burrows

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF design and construction (preventative)
- External inspections and reviews (preventative)
- Operations, maintenance and surveillance practice (preventative)
- TSF Emergency Response Management (mitigative)
- Site emergency and crisis management (mitigative)

Impact assessment

The impacts of an embankment failure at the Carrapateena TSF were assessed in 2018 and indicated that a failure of the north embankment would flow downstream along Eliza Creek and could result in environmental impacts. The assessment found there was possible exposure risk outside of the mine lease boundary as the breach could reach Lake Torrens. The FMA is currently under review.

The estimated PAR at the Carrapateena TSF is in the low range with none identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings flow up to 15 kilometres from the TSF embankment.
- Environmental impact: The estimated environmental impact of the Carrapateena TSF is in the very high classification range of potential area of impact >20 kilometres. Tailings reaching Lake Torrens, South Australia, a significant cultural heritage site and national park.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

The TSF comprises a tailings storage area and a decant dam. Both the tailings storage and decant dam are formed by cross-valley embankments across the ephemeral Eliza Creek. The Stage 2 TSF embankment raise construction and installation of the Stage 2 tailings distribution system was completed in early 2023. In March 2023 the operation of the TSF was changed from down-valley deposition to up-valley deposition. Tailings are deposited into the TSF from a series of 28 outlet pipes along the TSF embankment fed by a tailings delivery pipeline.

The Stage 3 TSF embankment raise is in the project planning stage, due to start construction in 2027. The 10.8 metre downstream embankment raise will be constructed using borrow pit material and mine waste.

The original embankment (stage 1) was constructed with a decant access causeway including towers and outfall pipe extending to and through the embankment foundation. Stage 1 embankment maximum height was 18 metres. The Stage 2 downstream embankment raise was 13 metres with a maximum embankment height of 31 metres. Stage 2 embankment construction material was sourced and produced from waste rock stockpiled from early mine development.

The decant dam was constructed downstream of the TSF embankment with a maximum height of 9 metres. The cross section comprises a central clay core with upstream and downstream filters and rockfill shoulders. A seepage collection system along the downstream area of the decant dam was constructed in 2023.

Carrapateena TSF, 2025

The site decommissioning and rehabilitation strategy is detailed in the Carrapateena Program for Environment Protection and Rehabilitation 2024. This can be accessed here.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The TSF was commissioned in 2019, and a DSR has not yet been completed on the TSF. Material findings from the most recent review are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	The video cameras installed on TSF embankment crest in 2024 for monitoring tailings pipeline for potential breaks do not have a formalised monitoring program.	Implement hourly monitoring of cameras and incorporate requirement in the OMM manual. *This action has been completed.*

Environmental and social monitoring

The Carrapateena Program for Environment Protection and Rehabilitation 2024 details the required type and frequency of environmental monitoring to be undertaken. Results of the monitoring programs are reported annually in the Carrapateena Annual Mining Compliance Report to the Department of Energy and Mining. Details of this annual reporting are available here.

To understand the specific impact of our copper mining operations, BHP completed a Community Perception Survey in the Carrapateena region in 2024, and a Human Rights Impact and Opportunity Assessment was completed in 2025. Neither engagement identified any TSF related reportable material findings.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

Carrapateena's dam safety emergency plan (DSEP) applies to the TSF before, during and immediately following an emergency event. Where an incident, emergency or crisis management team has been established per BHP procedures, this will supersede the DSEP.

Emergency classification levels are defined within the DSEP to ensure all incident or emergency situations are identified and escalated to the required personnel.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- applicable TARPs, and
- credible flow failure scenarios.

Independent reviews

Review	Previous review	Next review
DSR	–	2025
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Copper South Australia – Tailings Storage Facility 1-3

Facility location	Olympic Dam, South Australia, Australia
Classification	Very High

Facility description

TSF1-3 is situated approximately 500 kilometres north-west of Adelaide, South Australia, Australia, on the traditional lands of the Kokatha people. TSF1-3 is an above-ground facility that relies on constructed embankments to contain the tailings. The embankments were raised using the upstream method with tailings deposited around the perimeter and a centrally located decant pond. The embankments incorporate the natural sand dunes within the TSF starter embankment and are raised using clay material mixed with the tailings. The outer layer of the upstream raise consists entirely of clay to separate tailings from the outside environment. TSF1-3 has been buttressed using clays sourced from the nearby area and armoured with rock for erosion protection.

Summary information	
BHP site	Olympic Dam
TSF name	TSF1-3
Coordinates	-30.439, 136.84
Current maximum height	30 metres
Area	155 hectares
Stored tailings volume	42 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for TSF1-3 is Very High based on the Potential Loss of Life, Environment and Health, Social and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for TSF1-3 was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Decant failure
	Larger flood than designed
	Inappropriate water/beach management
	Wave action eroding crest
	Loss of freeboard by deformation of embankment
	Loss of freeboard due to excavations on crest

Failure mode	Initiating event
Embankment	Embankment failure due to inadequate/inaccurate stability sections
	Improper embankment raise construction
	Weak layers within the foundation of the upstream portion of the embankment
	Loss of embankment strength due to high water pressure in the embankment
	Embankment erosion
	Cascading failure from one TSF to another
	Failure in drainage system
	Unknown geochemical conditions
	Internal erosion through embankment
	Liquefaction of the tailings by an earthquake
	Liquefaction of the tailings by another trigger
Foundation failure	High water pressure in the foundation
	Weakened limestone
	Weak geologic discontinuities
	Anomalous geological features
	Liquefaction of the foundation material by an earthquake
	Liquefaction of the foundation material by another trigger
	Internal erosion through the foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF integrity management (preventative)
- TSFs design and construction (preventative)
- TSF surveillance activities (preventative)
- Embankment raise management (preventative)
- Integrity of critical equipment (preventative)
- Incident response and evacuation (mitigative)

Impact assessment

The impacts of an embankment failure at TSF1-3 were assessed in 2021.

The estimated PAR at TSF1-3 is in the high classification range of 10-100 people comprising workers within the boundaries of the mine site.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings flow up to 4 kilometres from the TSF.
- Environmental impact: No areas of significant environmental habitat impacted and no endangered or species of concern impacted.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

TSFs 1, 2 and 3 were constructed as separate above-ground facilities sharing common embankments. The starter embankments of each TSF consist of a core of imported or natural sand, clay or rock, with existing sand dunes incorporated into the starter embankments where they align with the embankments. The external embankments of each TSF are lined internally with a layer of clay rich soil and externally with a layer of rock armour. The initial TSF1 design had a downstream embankment slope of 1 metre vertical for every 2.5 metres horizontal (1V:2.5H) and was constructed approximately 7 metres high with a crest width of 6.5 metres. During the mid-1990s, the overall downstream slope of the embankment was modified to 1V:2.75H.

TSFs 1, 2 and 3 embankments were raised in the upstream method, initially with raises 3 metres high, and from July 2000 with raises 1 metre high. Embankment raises were constructed using a mixture of excavated tailings and imported clay as fill. The upstream raise consists of an outer clay layer that provides separation of tailings from the outside environment. The tailings maximum rate of rise was limited to 2 metres per year. Over time, TSFs 2 and 3 have been combined into a single cell with TSF1-3 now considered a single TSF based on similar life cycle stage, heights and management systems.

TSF1-3, 2025

TSF1-3 ceased receiving tailings in 2011, is inactive and has planned closure trials. The site decommissioning and rehabilitation strategy is detailed in the 1997 Environmental Impact Statement.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent inspection in 2024.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No Material findings.	Not applicable.
Dam Safety Review 2024	The stability of TSFs does not meet target post-seismic requirements.	Carry out advanced deformation modelling informed by the current site investigation. Performance-based numerical modelling should validate ANCOLD requirements (under all loading conditions).

Review	Material findings	Recommendations
		Further assessment of the saturation condition of the in-situ tailings to be undertaken, to improve the susceptibility of TSF1-3 to tailings liquefaction. *This action is in progress*
	Foundation strength parameter updates are required.	Include recent site investigation and laboratory test results into TSF stability models. *This action is complete.*
	The dam break assessment requires an update.	Update dam break assessment of all TSFs with updated rheology and in-situ tailings conditions. Align dam break modelling with updated QRA assessments. *This action is in progress*
	The quantitative risk assessment requires an update.	Quantitative risk assessment to be updated following completion of advanced deformation modelling. *This action is complete.*

Environmental and social monitoring

Olympic Dam's Environmental Management Program has three specific requirements relating to the TSF: embankment stability of the TSF; tailings seepage; and fauna interaction with the TSF. Each requirement has leading indicators and associated compliance criteria agreed with and reported annually to the Department for Energy and Mining within the Environmental Protection and Management Program Report. Details of this annual reporting are published on our website.

To understand the specific impact of our copper mining operations, BHP conducts Human Rights and Social Impact and Opportunity Assessments for Olympic Dam. The most recent update was in FY2024 with no material findings.

We undertake further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social investment.

Community engagement forums provide two-way feedback opportunities on broad ranging topics and include a complaints and grievance mechanism for community issues.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Olympic Dam's emergency preparedness and response plan is described in our Incident Response Manual (IRM) and Business Continuity Plan.

The IRM applies to the TSF before, during and immediately following an emergency event. The IRM details the responses required to prepare for an emergency event, manage an escalating event and respond after an event has occurred. Where an incident, emergency or crisis management team has been established as per BHP procedures, this will supersede the IRM.

Emergency classification levels are defined within the IRM. Emergency levels are defined by the potential impact of a triggering event. A TARP details the response in the event a triggering event is identified. Duty cards define the role and responsibilities of key personnel for emergency levels.

The mitigating control for incident response and evacuation ensures a comprehensive process regarding design and verification of emergency preparedness and response.

Independent reviews

Review	Previous review	Next review
DSR	2024	2026
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Copper South Australia – Tailings Storage Facility 4

Facility location	Olympic Dam, South Australia, Australia
Classification	Very High

Facility description

TSF4 is situated approximately 500 kilometres north-west of Adelaide, South Australia, Australia, on the traditional lands of the Kokatha people. TSF4 is an above-ground facility that relies on constructed embankments to contain the tailings. The embankments are raised using the upstream method with tailings deposited around the perimeter and a centrally located decant pond. The embankments incorporate the natural sand dunes within the TSF starter embankment and are raised using clay rich material mixed with tailings. The outer layer of the upstream raise consists entirely of clay rich material to separate tailings from the outside environment. TSF4 abuts TSF1-3 on the eastern side, using the TSF1-3 embankment at this location to contain tailings. TSF4 has been buttressed on the northern, western and southern sides using clays sourced nearby. TSF4 is now classified as active due to a change in how BHP defines active and inactive tailings storage facilities, based on active management of seepage collection through the decant system.

Summary information	
BHP site	Olympic Dam
TSF name	TSF4
Coordinates	-30.444, 136.828
Current maximum height	34 metres
Area	170 hectares
Stored tailings volume	57 million cubic metres
Status	Active

Consequence classification

The consequence classification for TSF4 is Very High based on the Potential Loss of Life, Environment and Health, Social and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for TSF4 was in 2024. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Decant failure
	Larger flood than designed
	Inappropriate water/beach management
	Wave action eroding crest
	Loss of freeboard by deformation of embankment
	Loss of freeboard due to excavations on crest

Failure mode	Initiating event
Embankment instability	Embankment failure due to inadequate/inaccurate stability sections
	Improper embankment raise construction
	Weak layers within the foundation of the upstream portion of the embankment
	Loss of embankment strength due to high water pressure in the embankment
	Embankment erosion
	Cascading failure from one TSF to another
	Failure in drainage system
	Unknown geochemical conditions
	Internal erosion through embankment
	Liquefaction of the tailings by an earthquake
	Liquefaction of the tailings by another trigger
Foundation failure	High water pressure in the foundation
	Weakened limestone
	Weak geologic discontinuities
	Anomalous geological features
	Liquefaction of the foundation material by an earthquake
	Liquefaction of the foundation material by another trigger
	Internal erosion through the foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF integrity management (preventative)
- Design and construction TSFs (preventative)
- TSF surveillance activities (preventative)
- Embankment raise management (preventative)
- Integrity of critical equipment (preventative)
- Incident response and evacuation (mitigative)

Impact assessment

The impacts of an embankment failure at TSF4 were assessed in 2021.

The estimated PAR at TSF4 is in the high classification range of 10-100 people comprising workers within the boundaries of the mine site.

A catastrophic tailings release could result in the following impacts:

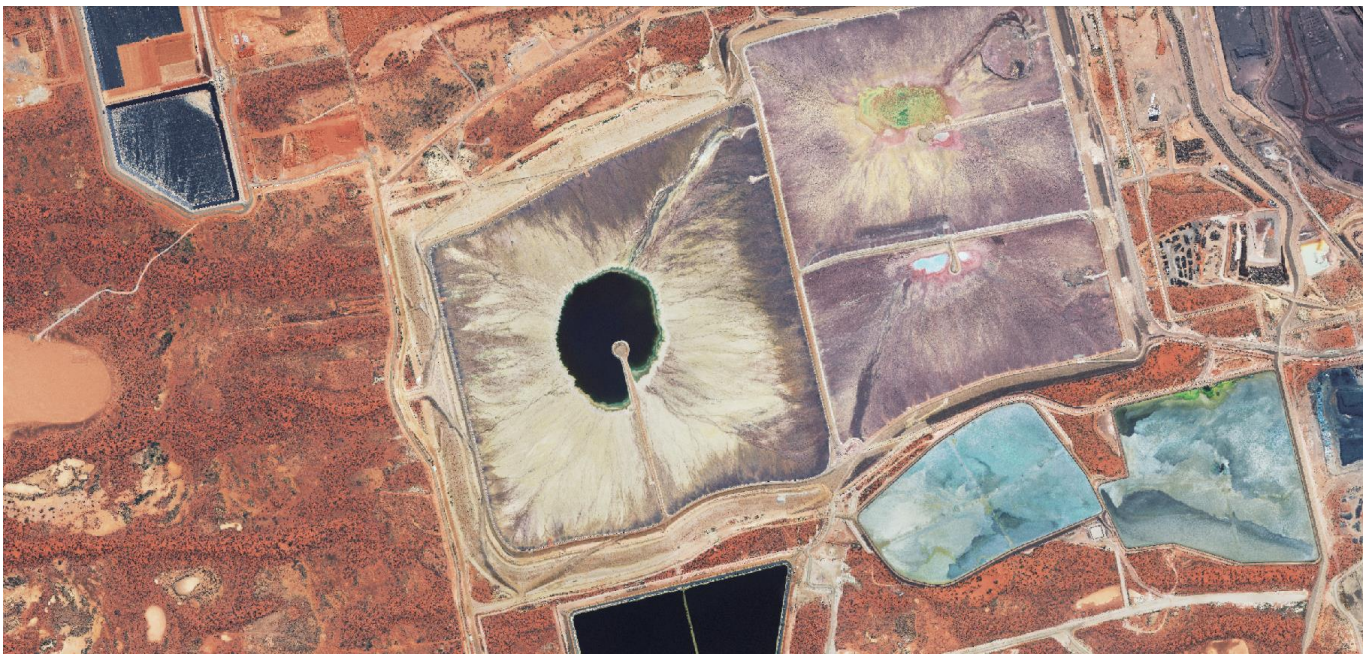
- Extent of Tailings flow: The tailings could flow up to 6 kilometres from the TSF
- Environmental impact: No areas of significant environmental habitat impacted and no endangered or species of concern impacted.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

TSF4 is an above-ground facility with starter embankments constructed of imported or natural sand and clay material to a height of approximately 6-7 metres and lined internally with a layer of clay-rich soil and externally with

a layer of rock armour. Existing sand dunes were incorporated into the starter embankment to align with the embankment. TSF4 has a downstream embankment slope of 1 metre vertical for every 2.75 metres horizontal (1V:2.75H).

TSF4 was raised using the upstream method using a mixture of excavated tailings and imported clay fill. The upstream raise consists of an outer clay layer that provides separation of tailings from the outside environment and a subsequent layer of rock armour for erosion protection. The maximum rate of tailings level increase was limited to 2 metres per year.



TSF4, 2025

TSF4 ceased receiving tailings in 2022 and is draining down ahead of closure works. The site decommissioning and rehabilitation strategy is detailed in the 1997 Environmental Impact Statement.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent inspection in 2024.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	The TSF4 decant pond was observed to be the same size as that of the operational TSFs.	Incorporate ongoing sustainment of TSF4 pond size in liquor balance model and site operation. *This action is complete*
Dam Safety Review 2024	The failure modes assessment and quantitative risk assessment should be updated.	Update FMA and QRA following biennial site investigation conducted in FY25. *This action is in progress*
	The presence or absence of potentially weak layers in the tailings should be ruled out.	CPT program to close out potential weak layer locations. *This action complete.*
	A coupled seepage analysis and stability assessment is recommended to assess drain-down time.	Undertake coupled seepage and stability analysis to estimate effect of phreatic draw down on embankment stability.

Review	Material findings	Recommendations
		This action is in progress

Environmental and social monitoring

Olympic Dam's Environmental Management Program has three specific requirements relating to the TSF: embankment stability of the TSF, tailings seepage, and fauna interaction with the TRS. Each requirement has leading indicators and associated compliance criteria agreed with and reported annually to the Department for Energy and Mining within the Environmental Protection and Management Program Report. Details of the annual reporting are published on our website.

To understand the specific impact of our copper mining operations, BHP conducts Human Rights and Social Impact and Opportunity Assessments for Olympic Dam. The most recent update was in FY2023 with no material findings.

We undertake further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social investment.

Community engagement forums provide two-way feedback opportunities on broad ranging topics and include a complaints and grievance mechanism for community issues.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Olympic Dam's emergency preparedness and response plan is described in our Incident Response Manual (IRM), and Business Continuity Plan.

The IRM applies to the TSF before, during and immediately following an emergency event. The IRM details the responses required to prepare for an emergency event, manage an escalating event and respond after an event has occurred. Where an incident, emergency or crisis management team has been established as per BHP procedures, this will supersede the IRM.

Emergency classification levels are defined within the IRM. Emergency levels are defined by the potential impact of a triggering event. A TARP details the response in the event a triggering event is identified. Duty cards define the role and responsibilities of key personnel for the emergency levels.

The mitigating control for incident response and evacuation ensures a comprehensive process regarding design and verification of emergency preparedness and response.

Independent reviews

Review	Previous review	Next review
DSR	2024	2026
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Copper South Australia – Tailings Storage Facility 5

Facility location	Olympic Dam, South Australia, Australia
Classification	Very High

Facility description

TSF5 is situated approximately 500 kilometres north-west of Adelaide, South Australia, Australia, on the traditional lands of the Kokatha people. TSF5 is an above-ground facility that relies on constructed embankments to contain the tailings. The embankments are raised using the upstream method with tailings deposited around the perimeter and a centrally located decant pond. The embankments incorporate the natural sand dunes within the TSF starter embankment and are raised using clay-rich material mixed with the tailings. The outer layer of the upstream raise consists entirely of clay-rich material to separate tailings from the outside environment. A TSF5 buttress project was completed in 2023 to provide additional stability using locally sourced sandy clay.

Summary information	
BHP site	Olympic Dam
TSF name	TSF5
Coordinates	-30.412, 136.832
Current maximum height	18 metres
Area	250 hectares
Stored tailings volume	37.7 million cubic metres
Status	Active

Consequence classification

The consequence classification for TSF5 is Very High based on the Potential Loss of Life, Environment and Health, Social and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for TSF5 was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Decant failure
	Larger flood than designed
	Inappropriate water/beach management
	Wave action eroding crest
	Loss of freeboard by deformation of embankment
	Loss of freeboard due to excavations on crest

Failure mode	Initiating event
Embankment instability	Embankment failure due to inadequate/inaccurate stability sections
	Improper embankment raise construction
	Weak layers within the foundation of the upstream portion of the embankment
	Loss of embankment strength due to high water pressure in the embankment
	Embankment erosion
	Failure in drainage system
	Unknown geochemical conditions
	Internal erosion through embankment
	Liquefaction of the tailings by an earthquake
	Liquefaction of the tailings by another trigger
Foundation failure	High water pressure in the foundation
	Weakened limestone
	Weak geologic discontinuities
	Anomalous geological features
	Liquefaction of the foundation material by an earthquake
	Liquefaction of the foundation material by another trigger
	Internal erosion through the foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF integrity management (preventative)
- Design and construction TSFs (preventative)
- TSF surveillance activities (preventative)
- Embankment raise management (preventative)
- Integrity of critical equipment (preventative)
- Incident response and evacuation (mitigative)

Impact assessment

The impacts of an embankment failure at TSF5 were assessed in 2021.

The estimated PAR at TSF5 is in the high classification range of 10-100 people comprising workers within the boundaries of the mine site.

A catastrophic tailings release could result in the following impacts:

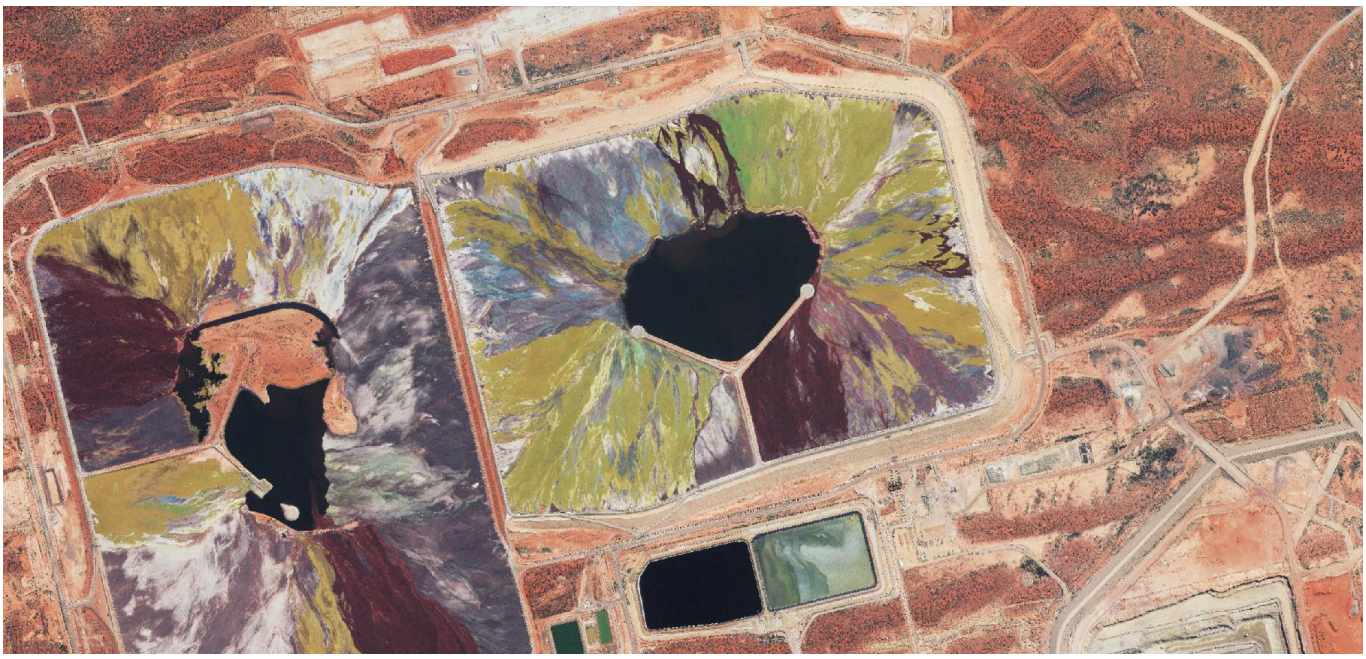
- Extent of Tailings flow: The tailings could flow up to 4 kilometres from the TSF
- Environmental impact: No areas of significant environmental habitat impacted and no endangered or species of concern impacted.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

TSF5 was constructed as an above-ground facility with starter embankments constructed mostly using sand from existing dunes. The embankments are lined internally with quarry scalp for erosion protection and an external layer of rock armour placed on the downstream slope. Existing sand dunes were incorporated into the starter

embankment where they aligned with the embankment. The height of the starter embankment ranges up to 8 metres, dependent on the natural sand dune level. TSF5 has a downstream embankment slope of 1 metre vertical for every 2.75 metres horizontal (1V:2.75H).

TSF5 is raised using the upstream method using a mixture of excavated tailings and locally sourced clay-rich material. The upstream raise consists of an outer clay-rich layer and a subsequent layer of rock armour for erosion protection. The maximum rate of tailings level increase is limited to 2 metres per year. The heights of the TSF5 raises range from 1 to 1.8 metres, with upstream and downstream slopes of 1V:2H and 1V:2.75H respectively.



TSF5, 2025

The site decommissioning and rehabilitation strategy is detailed in the 1997 Environmental Impact Statement.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings.	Not applicable.
Dam Safety Review 2024	The TARP should be updated.	Update operations maintenance and surveillance manual following biennial site investigation and revised stability assessments. *This action is in progress*
	The failure modes assessment and quantitative risk assessment should be updated.	Update FMA and QRA following biennial site investigation conducted in FY25. *This action is in progress*

Review	Material findings	Recommendations
	The seepage observed adjacent to TSF5 should be investigated further to determine its source.	Further geotechnical investigation to be undertaken to determine whether seepage interception measures are to be installed. *This action is in progress*
	The stability analysis for TSF5 should be completed for its design height.	Undertake stability analyses for final design height to improve planning for TSF design life. Slope stability studies can be used to inform alternative embankment stability measures. *This action is in progress*
	The deformation analysis should be updated based on the most recent geotechnical investigation.	Update deformation models for each TSF. Models to consider the results from laboratory testing on tailings and foundation units. *This action is in progress*

Environmental and social monitoring

Olympic Dam's Environmental Management Program has three specific requirements relating to the TSF: embankment stability of the TSF, tailings seepage, and fauna interaction with the TRS. Each requirement has leading indicators and associated compliance criteria agreed with and reported annually to the Department of Energy and Mining within the Environmental Protection and Management Program Report. Details of this annual reporting are published on our website.

To understand the specific impact of our copper mining operations, BHP conducts Human Rights and Social Impact and Opportunity Assessments for Olympic Dam. The most recent update was in FY2023 with no material findings.

We undertake further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social investment.

Community engagement forums provide two-way feedback opportunities on broad ranging topics and include a complaints and grievance mechanism for community issues.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Olympic Dam's emergency preparedness and response plan is described in our Incident Response Manual (IRM), and Business Continuity Plan.

The IRM applies to the TSF before, during and immediately following an emergency event. The IRM details the responses required to prepare for an emergency event, manage an escalating event and respond after an event has occurred. Where an incident, emergency or crisis management team has been established as per BHP procedures, this will supersede the IRM.

Emergency classification levels are defined within the IRM. Emergency levels are defined by the potential impact of a triggering event. A TARP details the response in the event a triggering event is identified. Duty cards define the role and responsibilities of key personnel for the emergency levels.

The mitigating control for incident response and evacuation ensures a comprehensive process regarding design and verification of emergency preparedness and response.

Independent reviews

Review	Previous review	Next review
DSR	2024	2026
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Copper South Australia – Tailings Storage Facility 6

Facility location	Olympic Dam, South Australia, Australia
Classification	Low

Facility description

TSF6 is situated approximately 500 kilometres north-west of Adelaide, South Australia, Australia, on the traditional lands of the Kokatha people. TSF6 is an above-ground facility that relies on constructed embankments to contain the tailings. The embankments are raised using the upstream method with tailings deposited around the perimeter and a centrally located decant pond. The embankments incorporate the natural sand dunes within the TSF starter embankment and are raised using clay-rich material mixed with the tailings. The outer layer of the upstream raise consists entirely of clay-rich material to separate tailings from the outside environment.

Summary information	
BHP site	Olympic Dam
TSF name	TSF6
Coordinates	-30.412, 136.832
Current maximum height	12.5 metres
Area	285 hectares
Stored tailings volume	11.4 million cubic metres
Status	Active

Consequence classification

The consequence classification for TSF6 is Low across all assessment criteria.

Summary of risk assessment

The most recent FMA for TSF6 was in 2025. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Embankment instability	Embankment failure due to inadequate/inaccurate stability sections
	Improper embankment raise construction
	Weak layers within the foundation of the upstream portion of the embankment
	Embankment erosion
	Failure in drainage system
	Unknown geochemical conditions
	Internal erosion through embankment
	Liquefaction of the tailings by an earthquake
	Liquefaction of the tailings by another trigger
Foundation failure	Weak layer
	Anomalous geological features
	Seismic liquefaction of the foundation material
	Liquefaction of the foundation material by another trigger
	Internal erosion through the foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF integrity management (preventative)
- Design and construction TSFs (preventative)
- TSF surveillance activities (preventative)
- Embankment raise management (preventative)
- Integrity of critical equipment (preventative)
- Incident response and evacuation (mitigative)

Impact assessment

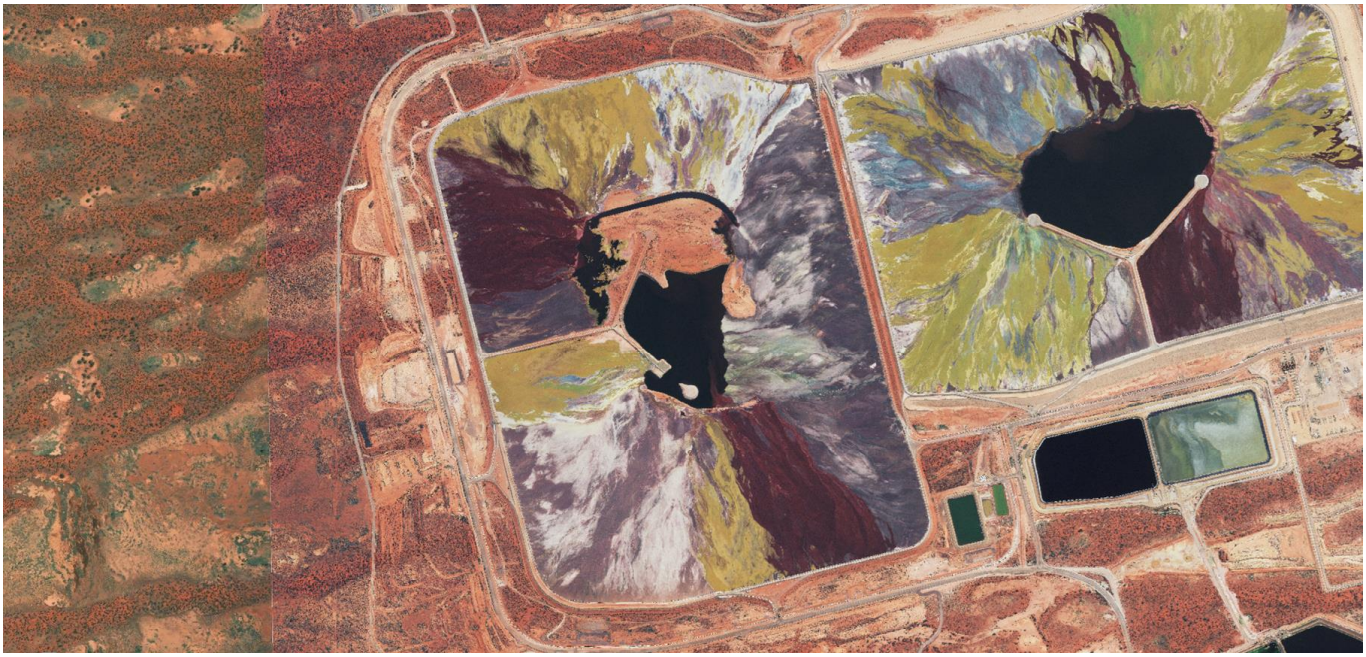
The impacts of an embankment failure at TSF6 were assessed in 2021. In accordance with the 2025 FMEA, all credible failure modes for catastrophic tailings release are considered highly unlikely at this time.

The estimated PAR at TSF6 is in the low range, with an estimated PAR of zero.

Design description

TSF6 was constructed as an above-ground facility with starter embankments constructed mostly using sand from existing dunes. The embankments are lined internally with quarry scalp for erosion protection and an external layer of rock armour placed on the downstream slope. Existing sand dunes were incorporated into the starter embankment where they aligned with the embankment. The height of the starter embankment ranges up to 9 metres, dependent on the natural sand dune level. TSF6 has a downstream embankment slope of 1 metre vertical for every 2.75 metres horizontal (1V:2.75H).

TSF6 is raised using the upstream method using a mixture of excavated tailings and locally sourced clay-rich material. The upstream raise consists of an outer clay-rich layer and a subsequent layer of rock armour for erosion protection. The maximum rate of tailings level increase is limited to 2 metres per year. The TSF6 embankment raises range from 1 to 1.5 metres, with upstream and downstream slopes of 1V:2H and 1V:2.75H respectively.



TSF6, 2025

The site decommissioning and rehabilitation strategy is detailed in the 1997 Environmental Impact Statement.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings.	Not applicable.
Dam Safety Review 2024	The stability should be assessed at final design height.	Undertake stability analyses for final design height to improve planning for TSF design life. Slope stability studies can be used to inform alternative embankment stability measures *This action is in progress*
	The failure modes assessment and quantitative risk assessment should be updated.	Update FMA and QRA following biennial site investigation conducted in FY25. *This action is in progress*

Environmental and social monitoring

Olympic Dam's Environmental Management Program has three specific requirements relating to the TSF: embankment stability of the TSF, tailings seepage, and fauna interaction with the TRS. Each requirement has leading indicators and associated compliance criteria agreed with and reported annually to the Department of Energy and Mining within the Environmental Protection and Management Program Report. Details of this annual reporting are published on our website.

To understand the specific impact of our copper mining operations, BHP conducts Human Rights and Social Impact and Opportunity Assessments for Olympic Dam. The most recent update was in FY2023 with no material findings.

We undertake further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social investment.

Community engagement forums provide two-way feedback opportunities on broad ranging topics and include a complaints and grievance mechanism for community issues.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

Olympic Dam's emergency preparedness and response plan is described in our Incident Response Manual (IRM), and Business Continuity Plan.

The IRM applies to the TSF before, during and immediately following an emergency event. The IRM details the responses required to prepare for an emergency event, manage an escalating event and respond after an event has occurred. Where an incident, emergency or crisis management team has been established as per BHP procedures, this will supersede the IRM.

Emergency classification levels are defined within the IRM. Emergency levels are defined by the potential impact of a triggering event. A TARP details the response in the event a triggering event is identified. Duty cards define the role and responsibilities of key personnel for the emergency levels.

The mitigating control for incident response and evacuation ensures a comprehensive process regarding design and verification of emergency preparedness and response.

Independent reviews

Review	Previous review	Next review
DSR	2024	2026
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Copper South Australia – Prominent Hill Tailings Storage Facility

Facility location	Prominent Hill, South Australia, Australia
Classification	Extreme

Facility description

The Prominent Hill TSF is an active facility situated on the Prominent Hill mine, an underground copper/gold mine located about 650 kilometres north-west of Adelaide, Australia on the traditional lands of the Antakirinja Matu-Yankunytjatjara people. The TSF is located within the southern waste rock dump and is referred to as an integrated waste landform, with waste rock around the facility. Commissioned in 2009, the TSF has undergone four expansions to increase the height of the facility. The embankments were built using the downstream method.

Summary information	
BHP site	Prominent Hill
TSF name	Prominent Hill TSF
Coordinates	-29.7384, 135.5763
Current maximum height	25 metres
Area	243 hectares
Stored tailings volume	63.9 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Prominent Hill TSF is Extreme based on the Potential Loss of Life assessment criteria.

Summary of risk assessment

The most recent FMA for the Prominent Hill TSF was in 2024. The credible failure modes identified are presented in the table below.

Failure Mode	Initiating Event
Embankment instability	Construction activities (contrary to design intent)
	Embankment degradation due to retrogressive failure of open pit
	Internal erosion
	Slope instability in foundation Sandy Clay
	Slope instability in foundation Bulldog Shale
	Pipe burst erosion
Foundation failure	Foundation strength failure – increased loading or high water pressure
	Liquefaction – static or seismic

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF design and construction (preventative)
- External inspections and reviews by the EOR (preventative)
- Operations, Maintenance and Surveillance OMS (preventative)

- TSF Emergency Response Management (mitigative)

Impact assessment

The impacts of an embankment failure at the Prominent Hill TSF were assessed in 2024 and indicated that a failure of the north or north-western embankments could result in human exposure as well as potential economic impacts. Of the failure scenarios, the northern failure scenario could result in the greatest human exposure. The assessment found there was no exposure risk outside of the mine lease boundary.

The estimated PAR at the Prominent Hill TSF is in the very high classification range of 100-1,000 people comprising workers within the mine site boundary, with PLL in the extreme classification range of more than 100 people.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The tailings could flow up to 2 kilometres from the TSF.
- Environmental impact: No areas of significant environmental habitat impacted and no endangered or species of concern impacted.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

The TSF is a circular cell attached to the waste dump. It has an average diameter of approximately 1,750 metres and storage surface area of 243 hectares. The containment embankments are constructed of a 6 metre wide compacted clayey mine waste layer surrounded by waste rock, integrated within the southern waste rock dump. The original embankment (stage 1) was constructed to 221 metres AHD, ranging in height between 5 to 9 metres (depending on the existing topography). Each subsequent raise (stages 2-5) has been constructed in 5 metre increments. The downstream Stage 6 embankment raise commenced construction in April 2025 and is due for completion in October 2025. The embankment raise height will be 5 metres.

Tailings are deposited around the perimeter of the facility. The decant pond is centrally located and accessed via a decant causeway from the north-western side of the TSF. Recovery of the decant water is via submersible pump which returns water to the processing plant for reuse.

The Prominent Hill TSF raises use a downstream methodology, using mine waste rock and clayey mine waste material. Downstream raises consist of an outer clay-rich layer and a subsequent layer of rock armour for erosion protection.

Prominent Hill TSF, 2025

The site decommissioning and rehabilitation strategy is detailed in the Prominent Hill Program for Environment Protection and Rehabilitation 2023. Details of this report are available here.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024. This report is pending and will be included in the next disclosure, and the 2023 findings have been provided.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	There is some uncertainty associated with the input parameters applied to materials in the base model and the presented slope stability analyses.	Undertake a geotechnical investigation to improve estimates of factor of safety for slope stability. *This action is complete*
	More data is required to interpret the flow rates from the horizontal bores.	Complete the installation of flow meters on the horizontal bores to monitor flow against TSF spigot deposition records. *This action is in progress*
Dam Safety Review 2024	There is uncertainty associated with the strength parameters of some material units informing the stability assessment.	Undertake a geotechnical investigation and data collection to update the TSF embankment and pit slope stability analysis to refine the analysis of TSF slope stability. *This action is complete*
	There is ongoing cracking of the clay liner observed, leading to potential slope stability issues.	Integrate special monthly inspections into the surveillance and monitoring routine by the EOR and RTFE to review the crest and upstream face, along with inspection of the toe along the North-Eastern quadrant and adjacent to the Southern open pit failure. *This action is complete*

Environmental and social monitoring

The Prominent Hill Program for Environment Protection and Rehabilitation 2023 details the required type and frequency of environmental monitoring to be undertaken. Results of the monitoring programs are reported annually in the Prominent Hill Annual Mining Compliance Report to the Department of Energy and Mining. Details of this annual reporting are available here.

To understand the specific impact of our copper mining operations, BHP completed a Community Perception Survey in the Prominent Hill region in 2024, and a Human Rights Impact and Opportunity Assessment was completed in 2025. Neither engagement identified any TSF related reportable material findings.

We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

Prominent Hill's Emergency Preparedness and Response Plan (EPRP) applies to the TSF before, during and immediately following an emergency event. Where an incident, emergency or crisis management team has been established as per BHP procedures, this will supersede the EPRP.

Emergency classification levels are defined within the EPRP to ensure all incident or emergency situations are identified, appropriately evaluated and escalated to the required personnel within specific time frames.

Key features of the plan include (but are not limited to):

- Applicable TARPs
- Credible flow failure scenarios
- Muster points and evacuation routes

Independent reviews

Review	Previous review	Next review
DSR	2024	2029
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Requirements with a status other than 'Meets'

The following summarises the requirements that have a conformance status other than 'meets'.

Requirement	Conformance Status	Conformance Status Details	Conformance Plan
5.4, 5.7	partially meets	Work is required to confirm all relevant potential failure modes have been captured.	Complete further investigations into the site geology and hydrogeological conditions and develop conceptual model to inform all relevant potential failure modes. Review failure modes assessment and identify and implement additional measures as appropriate to bring the risk to a level that is ALARP before August 2027 disclosure
7.2-7.4	partially meets	Monitoring system to be reviewed to ensure monitoring for all failure modes progression and unusual or unexpected readings in the Malu pit and TSF. TARPs are to be updated to reflect all relevant site information.	Existing monitoring system to be updated for any new failure modes ensuring integration between Malu pit and TSF. Update data monitoring routines to reflect all relevant site information inclusive of any new failure modes. Review and update the TARPs to ensure appropriate triggers and responses match potential new failure modes before August 2027 disclosure.

NSW Energy Coal – North Cut Tailings Storage Facility

Facility location	Mt Arthur Coal, New South Wales, Australia
Classification	Low

Facility description

The North Cut (NC) TSF at Mt Arthur Coal (MAC) mine is situated approximately nine kilometres south of Muswellbrook in the Hunter Valley, NSW, Australia, on the traditional lands of the Wanaruah/Wonnarua people. The NC TSF provides containment of coal tailings that was produced by the Coal Handling and Preparation Plant. Tailings deposition into NC TSF discontinued in 2004.

The NC TSF is situated within the existing mine lease boundaries and is adjacent to mine infrastructure such as the coal export conveyor, coal stockpiles and a water storage facility (Main Dam). The NC TSF uses a remnant open cut mine working pit and a constructed embankment along the western extent for tailings containment. In 2024 construction of an embankment buttress, capping and cover landform of the TSF was completed.

Summary information	
BHP site	Mt Arthur Coal
TSF name	North Cut TSF
Coordinates	-32.338, 150.897
Embankment height	13 metres (prior to cover and landform construction)
Area	20 hectares
Stored tailings volume	2.9 million cubic metres
Status	Inactive

Consequence classification

The GISTM consequence classification for the NC TSF is Low across all assessment criteria.

Summary of risk assessment

The most recent FMA for the NC TSF was undertaken in 2025. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Embankment instability	Incorrect material characterisation
	Embankment instability (seismic)
	Erosion of embankment
	High water pressure in embankment
	Design / construction flaws
Foundation failure	Incorrect material characterisation
	Liquefaction
	Foundation instability (seismic)
Internal Erosion	Internal erosion along drains
	Internal erosion through the embankment
	Internal erosion through the foundation
Capping instability	Erosion of capping

Failure mode	Initiating event
	Seismic deformation
	Settlement of underlying materials

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam inspections (preventative)
- dam design and construction (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the NC TSF were assessed in 2025. The dam break assessment considered the western extents of the NC TSF where the embankment underlies the recently constructed cover and landform.

The estimated PAR at the NC TSF is in the low range with none identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: 2500 cubic metres of tailings could be released.
- Environmental impact: Little to no natural environment expected to be impacted.
- Infrastructure impacted: It is expected there will be no impact to infrastructure beyond the boundaries of the mine site.

Design description

The NC TSF comprises a previously mined pit with single-stage downstream construction of the Western Embankment, comprising homogeneous compacted coarse rejects and dumped overburden materials with an emergency spillway on the embankment crest. The design was completed in 1993 and although construction and commissioning dates are not recorded, deposition ended in 2004.

In 2024, the embankment was buttressed using interburden mine waste (moderately to extremely weathered sandstone, siltstone and mudstone) and covered with a water-shedding landform using gravelly clay, topsoil and a native vegetation seed mix. Prior to the cover and landform construction, the embankment was 13 metres high and 220 metres long.

North Cut TSF, 2025

The NC TSF's rehabilitation was in accordance with the site's rehabilitation strategy. This broadly involved the placement of fill materials over the TSF. The final topographic landform design is intended to blend with the adjacent overburden dumps, and includes surface drainage features resembling a natural landform.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews with the most recent review occurring in 2024.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings.	Not applicable.
Dam Safety Review 2024	No FMA for capped TSF.	Conduct an FMA to reflect the current capped conditions. *This action is in progress*
	No risk assessment for capped TSF.	Conduct a risk assessment to reflect the current capped conditions. *This action is in progress*
	No dam break assessment for capped TSF.	Conduct a dam break assessment to reflect the current capped conditions. *This action is complete*
	No consequence classification for capped TSF.	Conduct a consequence classification assessment to reflect the current capped conditions. *This action is complete*

Environmental and social monitoring

The Project Approval governing the Mt Arthur Coal mine is Project Approval 09_0062, which is available on our website. This approval details the required type and frequency of environmental monitoring to be undertaken, as

well as notification requirements in the event of an incident that contravenes the approval conditions. It also outlines the process to follow after an event, including additional monitoring, sampling, remediation action, or action to prevent reoccurrence. Enforcement actions may be issued in the event of non-compliance with conditions in the approval, and these would be included in the Annual Review that is available on our website. There have been no environmental enforcement or improvement notices that relate to the NC TSF since the previous public disclosure.

In June 2022, BHP announced it would retain MAC in its portfolio as part of a managed process to close the operation in 2030. Closure planning studies are underway to support the final years of operation as well as the closure strategy for the MAC TSFs, this includes strengthening our knowledge base through the installation of additional monitoring boreholes and other technical studies.

As part of closure planning, a range of matters, including the MAC TSFs, will be assessed from a social perspective. These assessments and associated stakeholder engagements will provide BHP with the opportunity to:

- communicate the risks pertaining to MAC TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing MAC TSFs and mitigating negative impacts
- receive stakeholder feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for management of the TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing management of MAC TSFs

MAC has community engagement mechanisms to enable two-way feedback opportunities on broad ranging topics. This includes a Community Consultative Committee (CCC) and an established complaints and grievance mechanism for community issues. Information regarding CCC meetings and community complaints is published on our website. There is also publicly available information on the closure of the site in 2030.

MAC undertakes perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment and MAC's economic contribution and social investment. MAC will continue to listen, monitor and respond to community feedback provided through our established channels and continue to progress TSF related studies as closure planning progresses.

Emergency preparedness and response plan

The NC TSF Dam Safety Emergency Plan and Mt Arthur Coal Emergency procedure outline the specific incident, crisis, and emergency management system for use by onsite personnel. The plans provide a framework onsite personnel can use to manage an incident and has clear and defined objectives and responsibilities for incident recovery. It includes roles and responsibilities, escalation classifications, and external service contact details.

Anomalies identified during inspections are reviewed by the RTFE and EOR in accordance with TARPs within the emergency plan.

The evacuation order can be broadcast on the site's radio communications system by the control room operator, followed by the On Scene Coordinator assembling and dispatching the Emergency Response Team.

Independent reviews

Review	Previous review	Next review
DSR	2024	2034
SITR	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

NSW Energy Coal – SP1/SP2 Tailings Storage Facility

Facility location	Mt Arthur Coal, New South Wales, Australia
Classification	Low

Facility description

The SP1/SP2 TSF at Mt Arthur Coal (MAC) mine is situated approximately nine kilometres south of Muswellbrook in the Hunter Valley, NSW, Australia, on the traditional lands of the Wanaruah/Wonnarua people. The SP1/SP2 TSF provides containment of coal tailings that was produced by the Coal Handling and Preparation Plant in the 1980s and 1990s.

The TSF is situated within the existing MAC mine lease boundaries to the north of the MAC TSF and comprises mine spoil embankments atop an existing mine spoil dump. The TSF comprises two principal areas, SP1 and SP2, divided by an embankment. In 2012 a cover comprising mine spoil material was constructed over the TSF. Subsequently, topsoil has been stockpiled on top of the TSF spoil cover.

Summary information	
BHP site	Mt Arthur Coal
TSF name	SP1/SP2 TSF
Coordinates	-32.346, 150.899
Current maximum height	5 metres
Area	4 hectares
Stored tailings volume	0.08 million cubic metres
Status	Inactive

Consequence classification

The GISTM consequence classification for the SP1/SP2 TSF is Low across all assessment criteria.

Summary of risk assessment

The most recent FMA for the SP1/SP2 TSF was undertaken in 2025. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Embankment instability	Incorrect material characterisation
	Embankment instability (seismic)
	Erosion of embankment
	Liquefaction of layers in the embankment
	Internal erosion
	High water pressure in embankment
	Design / construction flaws
Foundation failure	Incorrect material characterisation
	Internal erosion
	Liquefaction of foundation layers
	Foundation instability (seismic)
Capping instability	Erosion of capping

Failure mode	Initiating event
	Seismic deformation
	Settlement of underlying materials

This TSF does not trigger the materiality threshold in BHP's risk framework, and is instead managed using the controls in BHP's Tailings and Water Storage Facilities Global Standard.

Impact assessment

The impacts of an embankment failure at the SP1/SP2 TSF were assessed in 2024.

The estimated PAR at the SP1/SP2 TSF is in the low range with none identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: An approximate maximum 4600 cubic metres of tailings could be released.
- Environmental impact: Little to no natural environment expected to be impacted.
- Infrastructure impacted: It is expected there will be no impact to infrastructure beyond the boundaries of the mine site.

Design description

The SP1/SP2 TSF is constructed on an existing mine spoil waste dump with embankments up to 5 metres high, constructed of siltstone / sandstone mine spoil. An internal embankment of mine spoil divides the TSF into two areas, SP1 and SP2. Deposition ended by the mid-1990s.

The TSF was capped in 2012 with a minimum thickness of 2 metres of mine spoil, covering the entire tailings surface. Subsequently, the covered surface has been used as a topsoil storage area with topsoil thickness up to 6 metres.

SP1/SP2 TSF, 2025

Rehabilitation of the TSF will be in accordance with the site's rehabilitation strategy. This broadly involves the placement of fill materials over the capped TSF. The final topographic landform design is intended to blend with the adjacent overburden dumps, and includes surface drainage features resembling a natural landform.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent review occurring in 2024.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings.	Not applicable.
Dam Safety Review 2024	Current consequence classification assessment is preliminary.	Undertake a dam break analysis and detailed consequence classification assessment. If the PLL is greater than 0, conduct a quantitative risk assessment. *This action is in progress*
	Tailings liquefaction assessment is limited to 2012 obtained data. The assessment has determined the tailings to be partially liquefiable.	Conduct additional CPTu investigations to characterise current state of the tailings and determine liquefaction potential. *This action is in progress*
	No Dam Safety Emergency Plan exists.	Develop a Dam Safety Emergency Plan. *This action has been completed*
	No Operation and Maintenance Manual exists.	Develop an Operation and Maintenance Manual. *This action has been completed*
	No surveillance regime exists.	Develop and implement a surveillance regime in accordance with ANCOLD guidelines and the GISTM. Visual inspections and a baseline survey should commence immediately. The regime should be based on credible failure modes and requirements, following confirmation of PAR/PLL. *This action is in progress*

Environmental and social monitoring

The Project Approval governing the Mt Arthur Coal mine is Project Approval 09_0062, which is available on our website. This approval details the required type and frequency of environmental monitoring to be undertaken, as well as notification requirements in the event of an incident that contravenes the approval conditions. It also outlines the process to follow after an event, including additional monitoring, sampling, remediation action, or action to prevent reoccurrence. Enforcement actions may be issued in the event of non-compliance with conditions in the approval, and these would be included in the Annual Review that is available on our website. There have been no environmental enforcement or improvement notices that relate to the SP1/SP2 TSF since the previous public disclosure.

In June 2022, BHP announced it would retain MAC in its portfolio as part of a managed process to close the operation in 2030. Closure planning studies are underway to support the final years of operation as well as the closure strategy for the MAC TSFs, this includes strengthening our knowledge base through the installation of additional monitoring boreholes and other technical studies.

As part of closure planning, a range of matters, including the MAC TSFs, will be assessed from a social perspective. These assessments and associated stakeholder engagements will provide BHP with the opportunity to:

- communicate the risks pertaining to MAC TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing MAC TSFs and mitigating negative impacts
- receive stakeholder feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for management of the TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing management of MAC TSFs

MAC has community engagement mechanisms to enable two-way feedback opportunities on broad ranging topics. This includes a Community Consultative Committee (CCC) and an established complaints and grievance mechanism for community issues. Information regarding CCC meetings and community complaints is published on our website. There is also publicly available information on the closure of the site in 2030.

MAC undertakes perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment and MAC's economic contribution and social investment. MAC will continue to listen, monitor and respond to community feedback provided through our established channels and continue to progress TSF related studies as closure planning progresses.

Emergency preparedness and response plan

The SP1/SP2 TSF Dam Safety Emergency Plan and Mt Arthur Coal Emergency procedure outline the specific incident, crisis, and emergency management system for use by onsite personnel. The plans provide a framework onsite personnel can use to manage an incident and has clear and defined objectives and responsibilities for incident recovery. It includes roles and responsibilities, escalation classifications, and external service contact details.

Anomalies identified during inspections are reviewed by the RTFE and EOR in accordance with TARPs within the emergency plan.

The evacuation order can be broadcast on the site's radio communications system by the control room operator, followed by the On Scene Coordinator assembling and dispatching the Emergency Response Team.

Independent reviews

Review	Previous review	Next review
DSR	2024	2034
SITR	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

NSW Energy Coal – SP3 Tailings Storage Facility

Facility location	Mt Arthur Coal, New South Wales, Australia
Classification	Low

Facility description

The SP3 TSF at Mt Arthur Coal (MAC) mine is situated approximately nine kilometres south of Muswellbrook in the Hunter Valley, NSW, Australia, on the traditional lands of the Wanaruah/Wonnarua people. The SP3 TSF provides containment of coal tailings (fine rejects) produced by the Coal Handling and Preparation Plant.

The TSF is situated within existing mine lease boundaries and is an in-pit facility that was augmented with the construction of rim embankments using mine spoil material. The rim embankments are understood to not retain any tailings. Deposition into the TSF ceased in the mid to late 1990s. A short re-mining campaign was undertaken in 2011 prior to the facility being capped in 2012, with an up to 18-metre-thick mine spoil cover over the tailings. In 2021, an asphalt-surfaced light vehicle carpark was constructed on the top surface of the facility.

Summary information	
BHP site	Mt Arthur Coal
TSF name	SP3 TSF
Coordinates	-32.346, 150.901
Current maximum height	N/A (In-pit facility)
Area	4.5 hectares
Stored tailings volume	0.5 million cubic metres
Status	Inactive

Consequence classification

The GISTM consequence classification for the SP3 TSF is Low across all assessment criteria.

Summary of risk assessment

The most recent FMA for the SP3 TSF was undertaken in 2025. The assessment identified no credible failure modes that would result in the catastrophic loss of tailings containment. The following failure modes would result in embankment instability without release of tailings.

Failure mode	**Initiating event**
Embankment instability	Incorrect material characterisation
	Embankment instability (seismic)
	Erosion of the embankment

This TSF does not trigger the materiality threshold in BHP's risk framework, and is instead managed using the controls in BHP's Tailings and Water Storage Facilities Global Standard.

Impact assessment

The impacts of an embankment failure at the SP3 TSF were assessed in 2024. No potential failure modes that would lead to a catastrophic tailings release were identified. The FMA is currently under review.

The estimated PAR at the SP3 TSF is in the low range with none identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: No tailings flow.
- Environmental impact: No areas of significant environmental habitat impacted and no endangered or species of concern impacted.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

SP3 is an in-pit TSF that was planned to be raised above the pit with the construction of rim embankments comprising mine spoil; however, tailings deposition remained below the level of the rim embankments and above-ground tailings deposition did not occur. After some of the tailings were reprocessed in 2011, the facility was subsequently capped with up to 18 metres of mine spoil in 2012. The design report for the capping works provided for placing fill over the void between the tailings surface and natural ground to promote consolidation. The capping design included four layers, with the thickness of the first three layers increasing progressively from 2 to 5 metres and no restriction on the thickness of the final layer, using light equipment for material placement. Compaction was achieved by vehicle movement over the surface to place successive layers.

Since the facility was capped, a light vehicle carpark with an asphalt surface was constructed for personnel working in the Mine Infrastructure Area (MIA) immediately to the south of SP3 TSF. A concrete pathway connects the carpark to the MIA.

SP3 TSF, 2025

Rehabilitation of the TSF will be in accordance with the site's rehabilitation strategy. This broadly involves the placement of fill materials over the capped TSF. The final topographic landform design is intended to blend with the adjacent overburden dumps, TSF embankments, and include water flow elements that promote a landform of natural appearance.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent review occurring in 2024.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings.	Not applicable.
Dam Safety Review 2024	Current consequence classification assessment is preliminary.	Undertake a dam break analysis and detailed consequence classification assessment. If the PLL is greater than 0.1, conduct a quantitative risk assessment. *This action is in progress*
	Tailings liquefaction assessment is limited to data obtained in 2011. The assessment has determined the tailings to be partially liquefiable.	Conduct additional CPTu investigations to characterise current state of the tailings and determine liquefaction potential. *This action is in progress*
	No Dam Safety Emergency Plan exists.	Develop a Dam Safety Emergency Plan. *This action has been completed*
	No Operation and Maintenance Manual exists.	Develop an Operation and Maintenance Manual. *This action has been completed*
	No surveillance regime exists.	Develop and implement a surveillance regime in accordance with ANCOLD guidelines and the GISTM. Visual inspections and a baseline survey should commence immediately. The regime should be based on credible failure modes and requirements, following confirmation of PAR/PLL. *This action is in progress*

Environmental and social monitoring

The Project Approval governing the Mt Arthur Coal mine is Project Approval 09_0062, which is available on our website. This approval details the required type and frequency of environmental monitoring to be undertaken, as well as notification requirements in the event of an incident that contravenes the approval conditions. It also outlines the process to follow after an event, including additional monitoring, sampling, remediation action, or action to prevent reoccurrence. Enforcement actions may be issued in the event of non-compliance with conditions in the approval, and these would be included in the Annual Review that is available on our website. There have been no environmental enforcement or improvement notices that relate to the SP3 TSF since the previous public disclosure.

In June 2022, BHP announced it would retain MAC in its portfolio as part of a managed process to close the operation in 2030. Closure planning studies are underway to support the final years of operation as well as the closure strategy for the MAC TSFs, this includes strengthening our knowledge base through the installation of additional monitoring boreholes and other technical studies.

As part of closure planning, a range of matters, including the MAC TSFs, will be assessed from a social perspective. These assessments and associated stakeholder engagements will provide BHP with the opportunity to:

- communicate the risks pertaining to MAC TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing MAC TSFs and mitigating negative impacts
- receive stakeholder feedback

- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for management of the TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing management of MAC TSFs

MAC has community engagement mechanisms to enable two-way feedback opportunities on broad ranging topics. This includes a Community Consultative Committee (CCC) and an established complaints and grievance mechanism for community issues. Information regarding CCC meetings and community complaints is published on our website. There is also publicly available information on the closure of the site in 2030.

MAC undertakes perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment and MAC's economic contribution and social investment. MAC will continue to listen, monitor and respond to community feedback provided through our established channels and continue to progress TSF related studies as closure planning progresses.

Emergency preparedness and response plan

The SP3 TSF Dam Safety Emergency Plan and Mt Arthur Coal Emergency procedure outline the specific incident, crisis, and emergency management system for use by onsite personnel. The plans provide a framework onsite personnel can use to manage an incident and has clear and defined objectives and responsibilities for incident recovery. It includes roles and responsibilities, escalation classifications, and external service contact details.

The SP3 TSF is limited to dam safety visual inspections. Anomalies identified during the inspections are reviewed by the RTFE and EOR in accordance with TARPs within the emergency plan.

The evacuation order can be broadcast on the site's radio communications system by the control room operator, followed by the On Scene Coordinator assembling and dispatching the Emergency Response Team.

Independent reviews

Review	Previous review	Next review
DSR	2024	2034
SITR	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

NSW Energy Coal – Mt Arthur Coal Tailings Storage Facility

Facility location	Mt Arthur Coal, New South Wales, Australia
Classification	Very High

Facility description

The Mt Arthur Coal Tailings Storage Facility (MAC TSF) at Mt Arthur Coal (MAC) mine is situated approximately nine kilometres south of Muswellbrook in the Hunter Valley, NSW, Australia, on the traditional lands of the Wanaruah/Wonnarua people. The MAC TSF provides containment of coal tailings (fine rejects) produced by the coal handling and preparation plant.

The MAC TSF is situated within existing MAC mine lease boundaries and comprises two principal areas separated by a large central waste dump: the West Cut Void and the South West Valley. Both use remnant open cut mine working pits and constructed embankments to contain the tailings. Multiple-spigot deposition with secondary tailings flocculation at point of discharge was introduced at both areas in 2024. Currently the spigots are positioned along the north-west embankment and adjacent to the northern end of the south-west embankment. All raises to the embankments comprise a 'top hat' construction methodology where the top of the previous raise provides the foundation for the subsequent raise.

Summary information	
BHP site	Mt Arthur Coal
TSF name	MAC TSF
Coordinates	-32.361, 150.897
Current maximum height	30 metres
Area	185 hectares
Stored tailings volume	36.4 million cubic metres
Status	Active

Consequence classification

The GISTM consequence classification for the MAC TSF is Very High based on Potential Loss of Life, and the Health, Social and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for the MAC TSF was undertaken in 2021. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Reduced spillway capacity from adjacent slope failure
	Reduced spillway capacity from mine activities
	Build-up of operational water on TSF, reducing capacity for extreme events
	Extreme single event that exceeds spillway capacity
	Extreme multiple events that exceed spillway capacity
	Waste material failure into TSF resulting in large wave
Embankment instability	Incorrect material characterisation
	Embankment instability (seismic)
	Internal erosion through the embankment

Failure mode	Initiating event
	Internal erosion into the waste material
	Internal erosion through connected voids in embankment
	Internal erosion from cracking
Foundation failure	Incorrect material characterisation
	In-situ geology features
	Internal erosion through connected voids in foundation
	Foundation instability (seismic)

The following controls have been designated as critical controls under the BHP Risk Framework:

- dam inspections (preventative)
- dam design and construction (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the MAC TSF were assessed in 2020. The dam break assessment considered the north-west, WCV and south-west embankments. A revised impact assessment was conducted in 2024 and is currently under review.

The estimated PAR at the MAC TSF is in the high classification range of 10-100 people comprising workers within the boundaries of the mine site.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: One million cubic metres of tailings could be released and run into Saddlers Creek and flow into the Hunter River.
- Environmental impact: Potential for the release of saline water from the tailings to run into Saddlers Creek and flow into the Hunter River.
- Infrastructure impacted: Edderton Road crossing of Saddlers Creek could be blocked by tailings up to 5 metres high. Golden Highway bridge over Saddlers Creek could be blocked by tailings up to 1.2 metres high.

Design description

The West Cut Void started as a below-ground facility that was expanded to above-ground storage by construction of two cross-valley embankments, the north-west embankment and the West Cut Void embankment. The South West Void comprises a previously mined pit with the construction of a cross-valley embankment, the south-west embankment, for above-ground storage.

The embankments have been constructed in two zones using siltstone / sandstone mine waste, with the upstream zone being compacted and the downstream zone uncompacted.

The West Cut Void embankment is 10 metres high and 750 metres long. The north-west embankment is 30 metres high and 580 metres long.

The South West Valley area has been created by the construction of a cross-valley embankment 400 metres long and 25 metres high, located at the western perimeter. The remaining perimeter comprises the natural material that hosted the coal seams and mine spoil waste dumps.

MAC TSF, 2025

To manage the risk associated with placing fill materials over the tailings at closure, MAC has implemented secondary tailings flocculation at point of deposition to promote drying and strength development of the tailings during the final years of operation. Expected long-term settlement of the landform after closure will be managed by developing a landform of sufficient height that can compensate for predicted long-term settlement without compromising the concept of a water-shedding landform.

Rehabilitation of the TSF following completion of tailings emplacement will be in accordance with the site's rehabilitation strategy. This broadly involves the placement of fill materials over the tailings surface to develop a water-shedding landform that can be revegetated to suit land end use. The final topographic landform design is intended to blend with the adjacent overburden dumps, TSF embankments and spillway, and include water flow elements that promote a landform of natural appearance.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent inspection in 2024. The report for the 2024 review is pending, and the findings from the 2023 review have been provided.

The most recent dam safety review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	Issues with access to real time data for in-place inclinometers and piezometers.	Troubleshoot and resolve prior to recommencement of tailings deposition and develop a routine for periodic review and analysis of the instrumentation data. *The action relating to the piezometer issue has been completed, and the action related to the inclinometer is in progress*
	Decant pumps removed from SWV decant pond.	Reinstate decant pumps. *This action has been completed*
Dam Safety Review 2024	There is no geological model in place.	Develop a geological model of the TSF site to gain a detailed understanding of the subsurface conditions, including the type and distribution of soils and rock,

Review	Material findings	Recommendations
		groundwater conditions and structural features such as faults and fractures. *This action is in progress*
	Elevated water levels at piezometer, S25, at the downstream location of the NW embankment.	Observe and monitor. *This action is in progress*
	On-going issues relating to access of continuous real-time monitoring for the in-place inclinometers and piezometers.	Resolve these issues. *The action relating to the piezometer issue has been completed, and the action related to the inclinometer is in progress*

Environmental and social monitoring

The Project Approval governing the Mt Arthur Coal mine is Project Approval 09_0062, which is available on our website. This approval details the required type and frequency of environmental monitoring to be undertaken, as well as notification requirements in the event of an incident that contravenes the approval conditions. It also outlines the process to follow after an event, including additional monitoring, sampling, remediation action, or action to prevent reoccurrence. Enforcement actions may be issued in the event of non-compliance with conditions in the approval, and these would be included in the Annual Review that is available on our website. There have been no environmental enforcement or improvement notices that relate to the MAC TSF since the previous public disclosure.

In June 2022, BHP announced it would retain MAC in its portfolio as part of a managed process to close the operation in 2030. Closure planning studies are underway to support the final years of operation as well as the closure strategy for the MAC TSFs; this includes strengthening our knowledge base through the installation of additional monitoring boreholes and other technical studies.

As part of closure planning, a range of matters, including the MAC TSFs, will be assessed from a social perspective. These assessments and associated stakeholder engagements will provide BHP with the opportunity to:

- communicate the risks pertaining to MAC TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing MAC TSFs and mitigating negative impacts
- receive stakeholder feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for management of the TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing management of MAC TSFs

MAC has community engagement mechanisms to enable two-way feedback opportunities on broad ranging topics. This includes a Community Consultative Committee (CCC) and an established complaints and grievance mechanism for community issues. Information regarding CCC meetings and community complaints is published on our website. There is also publicly available information on the closure of the site in 2030.

MAC undertakes perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment and MAC's economic contribution and social investment. MAC will continue to listen, monitor and respond to community feedback provided through our established channels and continue to progress TSF related studies as closure planning progresses.

Emergency preparedness and response plan

The MAC TSF Dam Safety Emergency Plan outlines the specific incident, crisis, and emergency management system for use by onsite personnel. The plan provides a framework onsite personnel can use to manage an incident and has clear and defined objectives and responsibilities for incident recovery. It includes roles and responsibilities, escalation classifications, evacuation points and route, and external service contact details.

The TSF is monitored by a network of automatic and manually read vibrating wire piezometers, fibre optic piezometers, survey monuments, water level indicators and inclinometers, and routine surveillance inspections. The automated instruments are connected to a control room with alarms that activate the emergency plan. The manual instruments have their data collected as per the OMS manual and reviewed by the RTFE and EOR.

Anomalies identified in the field during surveillance inspections or during collection and evaluation of monitoring data are escalated to the RTFE and Dam Owner in accordance with TARPs within the emergency plan.

The evacuation order can be broadcast on the site's radio communications system by the control room operator, followed by the On Scene Coordinator assembling and dispatching the Emergency Response Team. The emergency muster point is located on high ground adjacent to the mine offices.

Independent reviews

Review	Previous review	Next review
DSR	2024	2029
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

WAIO – Mt Whaleback Tailings Storage Facility

Facility location	Newman Operations West, Western Australia, Australia
Classification	High

Facility description

The Mt Whaleback TSF is located approximately 6 kilometres south-west of the Newman township, in the Pilbara region of Western Australia. The Nyiyaparli peoples are the traditional owners of the land where the Mt Whaleback Mine is situated. The TSF is an above-ground storage facility that combines engineered earth embankments with natural hills and valleys, and currently consists of two independently operated cells, TSF 1 and TSF 3. The embankments have typically been raised using the upstream method, and there have been eleven embankment raises for TSF 1 and eight for TSF 3.

Summary information	
BHP site	Newman Operations West
TSF name	Mt Whaleback TSF
Coordinates	-23.387, 119.676
Current maximum height	25 metres
Current area	145 hectares
Stored tailings volume	30 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Mt Whaleback TSF is High based on the Potential Loss of Life, Environment, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for Mt Whaleback TSF was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	Initiating Event
Overtopping	Insufficient capacity to contain/manage design storm even
	Rainfall exceeds design storm event
	Loss of freeboard due to settlement of perimeter embankment/bunds
	Loss of freeboard due to erosion or other material removal from containment bund
	Loss of freeboard due to placement of material within basin
	Spillway obstructed
	Inappropriate water / facility management
Internal Erosion	Failure of drainage / filter system leading to increased hydraulic gradient
	Dispersive material and sufficient hydraulic gradient
	Abutment failure due to poor tie-in and caves connectivity
Global Instability	Increase in pore pressures caused by failure of drainage / filter system
	Increase in pore pressures caused by rainfall event / surface water

Failure mode	Initiating Event
	Deformation leading to lateral extrusion
	Rapid loading resulting in static liquefaction
	Seismicity
	Insufficient strength or mischaracterisation of embankment/tailings
	Slope too steep
	Rapid drawdown
	Insufficient strength or mischaracterisation of foundation materials
	Differential settlement leading to cracking
	Internal erosion through foundation
	Abutment failure due to poor tie-in
	Erosion or removal of material from the downstream toe

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design and construction of the TSF (preventative)
- Operations management (preventative)
- Evacuation management (mitigating)
- Emergency response (mitigating)

Impact assessment

The impacts of an embankment failure at the Mt Whaleback TSF were assessed in 2022. Failure scenarios were considered for both sunny day and flood day failures.

The estimated PAR at the Mt Whaleback TSF is in the Significant range. This was achieved by the installation of the TSF barrier wall which separates the mining workforce and infrastructure to the North from the TSF. In the highly unlikely event of TSF failing to the North, the barrier wall would prevent the flow of water and tailings from impacting mine site infrastructure, personnel or the Newman community.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Towards the south, a TSF failure would follow the natural creek-line south-east of the TSF through an unpopulated area.
- Environmental impact: The inundation resulting from saddle dam 3 is largest for all scenarios assessed and has potential to reach the Fortescue River bridge at Newman.
- Infrastructure impacted: Public/shared infrastructure impacted.

Design description

The starter embankments of the Mt Whaleback TSF 1 and TSF 2 were constructed in 1985 to a height of 4 metres using compacted earth fill. The downstream slope is typically 1 metre vertical to 3.3 metres horizontal (1V:3.3H), with a crest width of 6 metres to allow for vehicle traffic and infrastructure placement. The starter embankments for TSF 3 were constructed in 1999 to a height of 12 metres, with similar dimensions to TSF 1, consisting of a compacted clay core and an outer shell constructed with compacted coarse rejects from the processing plant. The mine waste provides structural support and protects the clay core from erosion, while the clay reduces seepage into the embankment.

The raises used the upstream method. TSF 1 was raised using progressive 2 metre upstream raises, the embankment was stepped in twice during raising with two 6 metre wide benches to provide access to the downstream embankment and assist in stormwater management. The downstream slope is 1V:4.2H.

Raises to TSF 3 have typically been upstream lifts, except for two lifts: the first raise used the downstream method and the third raise used the centreline method. The average downstream slope of TSF 3 is 1V:3.3H, with a 6 metre wide horizontal bench.

At the end of life for the facility deposition will cease and the tailings will be managed to promote drying and settlement (consolidation) of the material. Once most of the tailings have consolidated the TSF will be capped with additional fill material to isolate the tailings and promote water runoff. Additional erosion protection will be placed to manage stormwater runoff. The surface of the TSF will be covered with a topsoil to encourage vegetation regrowth.

Mt Whaleback TSF, 2025

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent inspection in 2023.

The most recent dam safety review was in 2022. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	Cracking has been observed on the perimeter embankment of TSF 1 and TSF 3.	Continue to monitor and repair if cracking visible on the surface is greater than 50 mm *This action is in progress*
Dam Safety Review 2022	Cracking has been observed on the downstream embankment slope of TSF3.	The mechanism for the observed cracking should be investigated and documented *Monitoring is ongoing, and there are no concerns at present*
	Cracking has been observed on the downstream embankment slope of TSF 1.	The repair plan for the cracks should be enacted during next construction phase *This action is complete*
	The observed cracking on TSF 1 and TSF3 has not been considered in the existing QRA.	The likelihood of this leading to a TSF failure should be added to the QRA. *This action is in progress*
	Sinkholes observed on the tailings surface near the abutment of the TSF 1 west wall.	The mechanism and extent of the sinkholes should be investigated *This action is complete – note that the sinkholes were not related to the TSF embankment*

Review	Material findings	Recommendations
	Rock surface drains were not extended to the crest during prior embankment raise.	Consider extension of these drains as part of the next raise of the structure *This action will be reviewed during the next raise*

Environmental and social monitoring

Licence L4503/1975/14 covers the Mt Whaleback site. Water levels on the TSF are checked daily, and freeboard quarterly, while dust level is monitored across the site. No material findings directly associated with the TSF were made during the reporting period 1 July 2023 to 30 June 2024.

To understand the specific impact of our iron ore mining operations, BHP conducts Community and Human Rights Impact and Opportunity Assessments. The latest in FY2023 showed no material findings for tailings.

To support a comprehensive knowledge base for the Mt Whaleback TSF, BHP initiated a Social, Economic and Environmental Context Report in 2022 to support TSF design and safe tailings management. Socio-economic aspects were considered in this report.

BHP WAIO has community engagement mechanisms to enable two-way feedback opportunities on broad ranging topics. This includes a Stakeholder Engagement Group (SEG), Joint Technical Working Group (JTWG) and an established complaints and grievance mechanism for community issues.

We undertake further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social investment. We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

The Whaleback's emergency preparedness and response is described in our Evacuation Technical Process Instruction, Tactical Response Plan, Newman Operations Emergency Management Procedure and Business Continuity Plan.

The procedures and plan apply to the TSF before, during and immediately following an emergency event. It outlines the action to be taken in the event of emergency conditions, emergency contacts, trainings, communications with internal and external stakeholder and first responders, and it references the TARPs showing the triggers and levels for initiating an evacuation of the TSF.

Evacuation triggers the formation of the Incident Management Team (IMT), made up of Senior Management team members representing all areas of Operations. The IMT is responsible for coordinating the site level response to serious incidents. Executive Management Team and IMT Role Checklists define the role and responsibilities of key personnel for emergency scenarios.

Independent reviews

Review	Previous review	Next review
DSR	2022	2027
SITR	2024	2026

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

WAIO – Finucane Island Tailings Storage Facility

Facility location	Port Hedland, Western Australia, Australia
Classification	High

Facility description

The Finucane Island TSF (FITSF) is located on Finucane Island, in the bay of Port Hedland, where BHP currently operates an iron ore export facility. It is in the Pilbara region, approximately 1,600 kilometres north of Perth and 240 kilometres from Karratha city in Western Australia. Finucane Island is bordered by the Indian Ocean and is approximately 1 kilometre to the west of the residential town of Port Hedland. The Kariyarra people are the Traditional Owners of Finucane Island and broader Port Hedland area. The FITSF is an above ground facility, constructed in one lift and subdivided into cells by coarse waste material embankments. Deposition ceased in 2005, and it has been capped and partially rehabilitated with a small portion remaining uncapped.

Summary information	
BHP site	Finucane Island – Port Hedland
TSF name	Finucane Island TSF
Coordinates	-20.301, 118.559
Current maximum height	7 metres
Current area	27 hectares
Stored tailings volume	1.65 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the FITSF is High based on the Potential Loss of Life and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for FITSF was in 2024. The credible failure modes identified are presented in the table below.

Failure Mode	Initiating Event
Overtopping	Insufficient capacity to contain/manage design storm event
	Rainfall exceeds design storm event
	Loss of freeboard due to settlement of containment bunds
	Loss of freeboard due to erosion or other removal of material from containment bund
	Loss of freeboard due to placement of material within basin
	Spillway obstructed
	Inappropriate water / facility management
Internal Erosion	Dispersive material and sufficient hydraulic gradient
	Backward erosion due to increased stormwater volume storage
Global Instability	Rapid loading resulting in static liquefaction
	Seismicity

Failure Mode	Initiating Event
	Slope too steep

The following controls have been designated as critical controls under the BHP Risk Framework:

- FITSF Design and Construction (preventative)
- FITSF Operations Management (preventative)
- FITSF TARPs (mitigative)
- Emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Finucane Island TSF were assessed in 2020, considering five sunny day scenarios and one flood day scenario.

The estimated PAR at the FITSF is in the high classification range of 1-10 people, and includes maintenance and shutdown personnel near the western stockyards in proximity to the FITSF, and people accessing the ocean and shoreline areas near the FITSF.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Less than one square kilometre.
- Environmental impact: Surrounding vegetated areas and potentially entering the ocean, with no known Aboriginal or European heritage sites within the modelled areas of impact.
- Infrastructure impacted: Public/shared infrastructure impacted.

Design description

The FITSF was commissioned in 1987 and last received tailings in March 2005. The starter embankments were built using coarse reject material. The facility was built in a single stage and was originally subdivided into cells by forming internal embankments using coarse rejects. The downstream slopes of the embankments are typically 1 metre vertical for every 1.7 to 2.6 metres horizontal (1V:1.7H to 1V:2.6H). The embankments have been constructed approximately 7 metres high with a crest width varying from 5 metres to 10 metres. Tailings slurry was deposited from the perimeter, in layers approximately 100 - 200 mm thick with a slope of approximately 1V:200H. A wind fence was constructed on the eastern flank of FITSF in 2024 as a dust mitigation initiative for the adjacent stockyards.

The FITSF is inactive, and the historical deposition infrastructure has been removed from the facility. Following decommissioning, the FITSF was rehabilitated by capping the area with an average thickness of 0.6 metres of waste rock and unprocessed mined material. The capped surface was partially revegetated to reduce dust generation, minimise erosion and blend into the surrounding environment. A small portion of the FITSF surface in the south remains uncapped. The facility is shaped with a 0.5 per cent slope in a southern direction towards a stormwater containment bund to manage stormwater on the facility. Culverts have also been installed in the southern area to manage stormwater.

Construction of internal and external closure spillways is planned for FY2026 to manage the 1 in 10,000 annual exceedance probability design storm event with allowance for climate change. The physical constraints of surrounding operational infrastructure inhibits further improvements to achieving passive closure until other Port infrastructure is removed. The facility will continue to be managed in care and maintenance until passive closure can be achieved, or an alternative closure solution can be implemented.

Finucane Island TSF, 2025

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent inspection in 2024.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	There is uncertainty relating to the assumptions for foundation material strength on the north-western embankment.	Conduct site investigation to reduce uncertainty relating to material underlying the north-western embankment. *This action is in progress*
	The stability of localised sections of the dividing embankment requires improvement.	Backfill trench downstream from the dividing embankment. *This action is in progress*
Dam Safety Review 2023	Survey indicates that a section of the Stormwater Bund is lower than design by approximately 0.14 metres.	The elevations of the bund should be increased to the design elevation. *This action is complete*

Environmental and Social monitoring

Stored tailings are geochemically benign and do not represent an acid metalliferous drainage hazard. Impacts on groundwater and local mangrove habitat is negligible. Dust level is continuously monitored across the site to comply with Licence 4513/1969/18. No material findings directly associated with the FITSF were made during the reporting period 1 July 2023 to 30 June 2024.

To understand the specific impact of our iron ore mining operations, BHP conducts Community and Human Rights Impact and Opportunity Assessments. The latest in FY2023 showed no material findings for tailings.

BHP WAIO has community engagement mechanisms to enable two-way feedback opportunities on broad ranging topics. This includes a Stakeholder Engagement Group (SEG), a Joint Technical Working Group (JTWG) and an established complaints and grievance mechanism for community issues.

We undertake further perception research to understand community sentiment on broad ranging topics of interest including community services, health, safety and environment and BHP's economic contribution and social

investment. We continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

The FITSF's emergency preparedness and response is described in our FITSF Evacuation Procedure, Tactical Response Plan and Port Emergency Management Procedure.

The procedures and plan apply to the FITSF before, during and immediately following an emergency event. It outlines the action to be taken in the event of emergency conditions, emergency contacts, communications with internal and external stakeholder and first responders, and it references the TARPs where it is documented the triggers and levels for initiating an evacuation of the FITSF, including closure of the public access road.

Evacuation triggers the formation of the Incident Management Team (IMT), made up of Senior Management team members representing all areas of Operations. The IMT is responsible for coordinating the site level response to serious incidents. Executive Management Team and IMT Role Checklists define the role and responsibilities of key personnel for emergency scenarios.

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
SITR	2023	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Western Australia Nickel – Kambalda Tailings Storage Facility

Facility location	Kambalda Mine, Western Australia
Classification	High

Facility description

Western Australia Nickel operates the Kambalda Nickel Concentrator (NKC), located approximately 60km south of Kalgoorlie in Western Australia. The traditional owners recognised in this area are the Ngadju people and Marlinyu Ghoorlie people. NKC processes nickel ore from nickel mines in the area, not owned and operated by BHP, and discharges the tailings into a TSF, located approximately 3km to the north-east of the processing plant. The Kambalda TSF comprises four adjoining cells, referred to as TSF 1 (inactive), TSF 2 (inactive), TSF 3A (active) and TSF 3B (active). The two inactive cells have reached their currently approved final crest height and are not scheduled for any future embankment raises, while the two active cells have capacity to be raised in future.

Summary information	
BHP site	Kambalda, Western Australia
TSF name	Kambalda TSF
Coordinates	-31.171,121.688
Current maximum height	30 metres
Area	104 hectares
Current tailings volume	27 million cubic metres
Status	Active

Consequence classification

The consequence classification for Kambalda TSF is High based on Potential Loss of Life and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for the Kambalda TSF was completed in 2024. The credible failure modes identified are presented in the table below.

Failure Mode	Initiating event
Overtopping	Extreme rainfall
	TSF Operation
	Decant or underdrainage system failure
	Embankment settlement
	Spillway failure
Internal erosion	Large pond and internal erosion along a continuous defect or structural feature
Embankment instability	High water pressure in the embankment
	Earthquake
	Change in slope
	Excessive loading during construction activities

	Unrecognised weak layer
	Erosion of the embankment
Foundation failure	Excessive loading
	Unrecognised weak layer

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF Design & Construction (preventative control)
- TSF Operations & Inspection (preventative control)
- TSF Emergency Preparedness & Response (mitigative control)

Impact assessment

The impacts of an embankment failure at the Kambalda TSF were assessed in 2024.

The estimated PAR at the Kambalda TSF is in the significant classification range of 1-10 people, comprising mine site workforce.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The tailings may impact roads downstream, equipment used in operations, public health and areas of aboriginal heritage significance, general services and employment.
- Environmental impact: May impact surrounding environment.
- Infrastructure impacted: Public/shared infrastructure impacted.

Design description

The TSF consists of four above-ground cells referred as TSF 1, TSF 2, TSF 3A and TSF 3B. TSF 1 and TSF 2 have been inactive since 1989 and 2009, respectively. TSF 3A and TSF 3B are active and are available for future deposition.

TSF 1 was originally commissioned in 1969, although the details are limited, but it is known that a 13 metre high waste rock buttress was constructed. A geotechnical investigation provided details of the conceptual design for TSF 2, which was developed into two cells, with the embankments constructed using mine waste rock, and underdrainage was provided. TSF 3A and 3B originally were proposed to be one facility (TSF 3). There is limited historical documentation available on the construction of TSF 3, though there is some on the embankment cross-section which would later become TSF 3A. TSF 3A was raised multiple times via upstream raising with the latest raise completed in March 2015. Water is removed by gravity decant towers in each cell.

Until temporary suspension, TSF 3B was the only the only cell of the TSF that was operational and receiving tailings. TSF 1 and TSF 2 have been decommissioned but have not yet been rehabilitated. Two external return water ponds (RWPs) collect surface water from the TSFs. RWP2 collects water from TSF 1 and TSF 2 while RWP3 collects water from TSF 3A and TSF 3B, as well as water that is pumped from RWP2.

The requirements for closure of the Kambalda TSF align with the Kambalda Concentrator Mine Closure Plan, as required by the Mining Act 1978 (WA), and prepared in accordance with the Western Australian Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) Guideline on Preparing Mine Closure Plans. This process includes a period of inactivity prior to closure to enable long-term settling, consolidation and drying, which enables the safe movement of construction equipment movement onto the surface. Closure works will comprise TSF surface capping, slope buttressing, reprofiling and establishment of vegetation. The capping controls safety, dust, erosion, seepage and surface drainage risks. The retention of surface water manages rainfall, controls erosion, minimises infiltration beyond the growth media and waste rock and promotes the establishment of native vegetation.

Kambalda TSF, 2025

Performance review

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent review in 2024.

The most recent dam safety review was in 2018. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings.	Not applicable.
Dam Safety Review 2018	No material findings.	Not applicable.

Environmental and social monitoring

The Kambalda TSF monitoring requirements are detailed in the Department of Water and Environmental Regulation (DWER) License L5533/1976/11 for the management of air and water quality. This can be found on the DWER website. In accordance with the licence sampling, testing, and reporting of water samples is undertaken at several ground water monitoring bores around the TSF complex, as displayed in the licence. Groundwater in the vicinity of the TSF is monitored quarterly for water level and annually for water quality. No enforcement notices representing an environmental material finding for TSFs 1, 2, 3A and 3B have been issued in the previous calendar year. One non-compliance event was reported in 2024, with no enforcement action from DWER.

To understand the specific impact of our Western Australia Nickel operations, BHP conducts Community and Human Rights Impact and Opportunity Assessments. The latest in 2023 showed no material findings for tailings.

To understand the specific social impact of its Western Australian Nickel TSFs, BHP initiated a Human Rights Assessment for the Kambalda, Mt Keith and Leinster TSFs in 2025. This report summarises the assessment of potential adverse human rights impacts associated with the uncontrolled release of tailings from a TSF and identifies actions to manage the residual risk of these potential impacts.

BHP has community engagement forums and a complaints and grievance mechanism available for the local communities and undertakes bi-annual perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

Significant events that concern the safety of the Kambalda TSF are managed by the Emergency Management Plan and Tactical Response Plan. These documents detail the incident, crisis management and incident recovery management framework including defined objectives, responsibilities and processes.

Key features of the plan include (but are not limited to):

- roles & responsibilities
- people, equipment and response requirements
- credible flow failure scenarios that the plan addresses
- escalation classifications and processes
- details on internal and external stakeholders and where to find contact information
- muster points and evacuation routes

The TARP, appended to the Operations, Maintenance and Surveillance manual, provides details escalating concerns and the required actions and responsibility for response and remediation, up to enacting the emergency response.

If a failure occurs, the Emergency Response Team would be activated via site radio, and this would trigger the emergency procedure captured in the Tactical Response Plan.

Independent reviews

Review	Previous review	Next review
DSR	2018	2028
SITR	2023	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Requirements with a status other than 'Meets'

The following summarises the requirements that have a conformance status other than 'meets'.

Requirement	Conformance Status	Conformance status details	Conformance Plan
4.7, 5.7	Partially meets	The ALARP report is in draft.	An assessment against ALARP will be finalised and approved prior to the 2026 disclosure.

Western Australia Nickel – Baldivis Tailings Storage Facility

Facility location	Baldivis, Western Australia
Classification	Low

Facility description

Western Australia Nickel (WAN) operates the Nickel West Kwinana Refinery, situated 40 kilometres south of Perth in the City of Kwinana. The Baldivis TSF is located approximately 6 kilometres south-east of the Kwinana Refinery in the City of Rockingham. The traditional owners recognised in this area are the Gnaala Karla Booja people. The TSF, a lined facility within a natural depression, was constructed in 1969 and operated between 1972 and 1995. In 1998 a free-draining cover was applied to the tailings surface.

Summary information	
BHP site	Kwinana
TSF name	Baldivis TSF
Coordinates	-32.289, 115.806
Current maximum height	All tailings are stored below natural ground level with no embankments
Area	23 hectares
Current Stored Volume	0.8 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for Baldivis TSF is Low across all assessment criteria.

Summary of risk assessment

The most recent FMA for Baldivis was completed in 2025. The assessment identified no credible failure modes that would result in the catastrophic loss of tailings containment. One credible failure mode identified seepage of water currently retained in the tailings being released to the surrounding environment.

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF Design & Construction (preventative control)
- TSF Operations & Inspection (preventative control)
- TSF Emergency Preparedness & Response (mitigative control)

Impact assessment

The impacts of an embankment failure at the Baldivis TSF were assessed in 2020. No potential failure modes that would lead to a catastrophic tailings release were identified.

The estimated PAR at the Baldivis TSF is in the low range with none identified.

Potential impacts arising from seepage (the only credible failure mode identified) includes impact on surrounding ground and surface water receptors and the flora and fauna they support.

Design description

The Baldivis TSF was constructed in 1969 and commissioned in 1972 with the purpose or storing process residue from the Kwinana Refinery. The facility is located within a natural depression, and the floor of the TSF was lined with a geomembrane of unknown material type. Prior to 1974 a saddle embankment was constructed along the south of the TSF, less then 3 metres in height and with a 5 metre crest width. There are three lined evaporation

ponds immediately adjacent to the TSF. From 1972 – 1985 both solids and liquids were discharged to the TSF, with deposition of solids ceasing in 1985 due to process changes. Tailings were deposited from the perimeter of the facility while operational, and the TSF became inactive in 1995.

Following three years of desiccation and consolidation of the stored solids, capping was undertaken in 1998 comprising a geosynthetic clay liner, a polyethylene membrane, and a 2 metre sand cover. The cover system is water shedding.

The requirements for closure of the Baldivis TSF align with the Kambalda Concentrator Mine Closure Plan, and with the Western Australian Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) Guideline on Preparing Mine Closure Plans. The TSF cover includes features as identified in the closure design such as placement of erosion protection on the capped TSF surface and shaping the TSF so that rainfall safely flows to the surrounding environment. Additional works are identified for full closure: stripping the existing sand cover, adding additional lining and drainage, the extension of groundwater monitoring bores and reinstatement of the cover.

Baldivis TSF, 2025

Performance review

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent review in 2024.

A dam safety review is in progress and material findings, if any, will be presented in the next public disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings.	Not applicable.
Dam Safety Review 2025	Review in progress.	Not applicable.

Environmental and social monitoring

The Baldivis TSF monitoring requirements are detailed in the Department of Water and Environmental Regulation (DWER) License L8437/2010/3 for the management of air and water quality. This can be found on the DWER website. Additional monitoring is carried out for bores surrounding the TSF in accordance with the Baldivis Groundwater Operating Strategy (GWOS), satisfying conditions for the sites groundwater abstraction licence GWL 64889(6) issued under Section 5C of the Rights in Water and Irrigation Act 1914(WA). Groundwater in the vicinity of the TSF is monitored six monthly for water level and annually for water quality, subject to the pending approval

of the GWOS, which may change the frequency to quarterly, six monthly, and annual. No formal non-compliances have been reported for the site.

To understand the specific impact of our Western Australia Nickel operations, BHP conducts Community and Human Rights Impact and Opportunity Assessments. The latest in 2023 showed no material findings for tailings.

BHP has community engagement forums and a complaints and grievance mechanism available for the local communities and undertakes bi-annual perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

Since the TSF has been evaluated and found to have no credible failure modes related to geotechnical issues or the release of tailings or water from embankment failures, except for seepage from the basin, a specific emergency preparedness and response plan has not been developed. Instead, a TARP has been established that outlines the escalating concerns, required actions, and responsibilities for responding to and remediating any adverse environmental triggers resulting from seepage. The TSF is included in the broader site emergency response procedure and plan.

Independent reviews

Review	Previous review	Next review
DSR	2025	2035
SITR	2024	2026

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Requirements with a status other than 'Meets'

The following table summarises the requirements that have a conformance status other than 'meets'.

Requirement	Conformance Status	Conformance status details	Conformance Plan
1.1, 1.3, 3.4	Does not meet	The Human Rights Impact Assessment and Social, Economic and Environmental Context Report, and the community engagement process have not yet been completed.	Complete a Human Rights Impact Assessment and related engagements prior to the 2026 disclosure.
2.1, 2.2, 3.2, 4.3, 4.4, 4.5, 4.6, 4.8, 5.2, 5.3, 5.5, 5.6, 5.7	Partially meets	The Design Basis Report is not yet completed. The Water Balance model is currently in draft.	A Design Basis Report and water balance model will be completed prior to the 2026 public disclosure.
4.1, 4.2, 4.7	Does not meet	Consequence classification and design criteria have not yet been approved.	Review the consequence classification, design basis and assessment of risk against ALARP, prior to the 2026 disclosure.
5.4, 10.1	Partially meets	The FMA has been completed but is awaiting review by the SITR.	The FMA to be reviewed by the SITR prior to the 2026 disclosure.
6.3	Does not meet	A Construction Record Report has not yet been developed.	Develop a Construction Record Report prior to the 2026 disclosure.

Requirement	Conformance Status	Conformance status details	Conformance Plan
6.5	Does not meet	A Deviance Accountability Report has not yet been completed.	Complete a Deviance Accountability Report, prior to the 2026 disclosure.
13.1, 13.2, 13.3, 14.1	Does not meet	An EPRP has been developed in draft. The relevant community engagement has not yet been completed,	Finalise the EPRP and complete the relevant engagements with the community and public sector agencies, prior to the 2026 disclosure.

Western Australia Nickel – Leinster Tailings Storage Facility 1

Facility location	Leinster Mine, Western Australia
Classification	Low

Facility description

Western Australia Nickel (WAN) operates the Leinster Operation (NLN), situated in the north-east of Western Australia's Goldfields region, approximately 360 kilometres north of Kalgoorlie. The traditional owners recognised in this area are the Tjiwarl people. TSF 1 is inactive and is located approximately 500 metres north-west of the concentrator. Originally constructed in 1978, the facility became inactive in1986, and capping of the tailings and outer slopes has since been implemented.

Summary information	
BHP site	Leinster
TSF name	TSF 1
Coordinates	-27.809, 120.697
Current maximum height	12.5 metres
Area	20 hectares
Current Stored Volume	2 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for TSF 1 is Low across all assessment criteria.

Summary of risk assessment

The most recent FMA for Leinster was completed in 2024. The credible failure modes identified are presented in the table below.

Failure Mode	Initiating event
Overtopping	Extreme rainfall
	TSF Operation
	Decant system failure
	Embankment settlement
	Spillway failure
Internal erosion	Large pond and internal erosion along a continuous defect or structural feature
Embankment instability	High water pressure in the embankment
	Earthquake
	Change in slope
	Excessive loading during construction activities
	Unrecognised weak layer
	Erosion of the embankment

Failure Mode	Initiating event
Foundation failure	Excessive loading
	Unrecognised weak layer

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF Design & Construction (preventative control)
- TSF Operations & Inspection (preventative control)
- TSF Emergency Preparedness & Response (mitigative control)

Impact assessment

The impacts of an embankment failure at TSF 1 were assessed in 2024.

The estimated PAR at TSF 1 is in the low range with none identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The tailings could impact areas of aboriginal heritage significance, may impact water quality.
- Environmental impact: May impact areas of significant environmental habitat.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

TSF 1 was operational between 1978 and 1986, when it was permanently decommissioned. The history between these dates is undocumented, but it is known that raising was by the upstream method. The TSF has been capped and rehabilitated, with all external slopes and the top surface covered with oxide waste/growth medium, and the surface has been vegetated. The TSF perimeter is 1,600 metres, with a maximum embankment height of 12.5 metres.

All tailings delivery infrastructure has been removed. Rainfall inflows are released via a closure spillway along the north flank of the facility. A project to upgrade the spillway to achieve extreme consequence (passive closure) flood design criteria is in progress.

The requirements for closure of Leinster TSF 1 align with the Leinster Mine Closure Plan, as required by the Nickel (Agnew) Agreement Act 1974 (WA), and prepared in accordance with the Western Australian Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) Guideline on Preparing Mine Closure Plans.

TSF 1 has been decommissioned and rehabilitated. The TSF has been modified to manage rainfall, and includes features as identified in the closure design such as placement of erosion protection on the external embankments, shaping the TSF so that rainfall safely flows to the TSF surface, and capping of the tailings surface. The rehabilitated upper surface of the TSF is (topsoil and weathered waste rock) is generally stable, and supports a diverse range of healthy vegetation.

Some areas of the TSF 1 embankment will require reprofiling in conjunction with construction of surface water drainage management features on the TSF top surface, an ongoing monitoring and maintenance will be required.

Leinster TSF 1, 2025

Performance review

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent review in 2024.

The most recent dam safety review was in 2018. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	Erosion along the top surface of the perimeter of TSF 1 due to cracks.	Review the perimeter of TSF 1 on a quarterly basis and backfill any identified cracks along the top surface if erosion continues or becomes excessive (<300mm depth) through excavation, soil conditioning, backfill and compaction. *Monitoring is ongoing, and is incorporated in routine inspections and maintenance*
Dam Safety Review 2018	Numerous erosion gullies exist, indicating the upper surface cannot retain large storm events.	Complete a survey of the top surface and modelling of storm capacity against design storms. Construct perimeter bunds, based on the storm capacity modelling and the survey results. *These actions has been completed, based on surface water management upgrades in 2025 and continuous monitoring during routine inspections*

Review	Material findings	Recommendations
	Infiltration into surface cracks could result in internal erosion along the capping layer on the embankment slopes.	Infill erosion gullies. Infill surface cracks along the eastern flank, as well as at localised areas along the southern flank. Assess the proposed remedial measures against the closure plan requirements. Complete localised reshaping to remove any significant low points along the embankment crest. *Routine inspections and maintenance of erosion gullies is in progress, and the remaining action is open*

Environmental and social monitoring

TSF 1 monitoring requirements are detailed in Department of Water and Environmental Regulation (DWER) License L4612/1989/11 for the management of air and water quality. This can be found on the DWER website. In accordance with the licence sampling, testing, and reporting of water samples is undertaken at several ground water monitoring bores around the TSF complex, as displayed in the licence. Groundwater in the vicinity of the TSF is monitored quarterly for water level and annually for water quality. WAN have self reported non-compliance with tailings related conditions in previous Annual Environmental Reports to DWER, none of which have resulted in enforcement actions. Within the licences there are provisions for non-compliance events, none of which have been issued to the site.

To understand the specific impact of our Western Australia Nickel operations, BHP conducts Community and Human Rights Impact and Opportunity Assessments. The latest in 2023 showed no material findings for tailings.

To understand the specific social impact of its Western Australia Nickel TSFs, BHP initiated a Human Rights Assessment for the Kambalda, Mt Keith and Leinster TSFs in 2025. This report summarises the assessment of potential adverse human rights impacts associated with the uncontrolled release of tailings from a TSF and identifies actions to manage the residual risk of these potential impacts.

BHP has community engagement forums and a complaints and grievance mechanism available for the local communities and undertakes bi-annual perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

Significant events that concern the safety of Leinster TSF 1 are managed by the Emergency Management Plan and Tactical Response Plan. These documents detail the incident, crisis management and incident recovery management framework including defined objectives, responsibilities and processes.

Key features of the plan include (but are not limited to):

- roles & responsibilities
- people, equipment and response requirements
- credible flow failure scenarios that the plan addresses
- escalation classifications and processes
- details on internal and external stakeholders and where to find contact information
- muster points and evacuation routes

The TARP, appended to the Operations, Maintenance and Surveillance manual, provides details escalating concerns and the required actions and responsibility for response and remediation, up to enacting the emergency response.

If a failure has occurred, the Emergency Response Team would be activated via site radio, and this would trigger the emergency procedure captured in the Tactical Response Plan.

Independent reviews

Review	Previous review	Next review
DSR	2018	2028
SITR	2023	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Western Australia Nickel – Leinster Tailings Storage Facility 2/3

Facility location	Leinster Mine, Western Australia
Classification	High

Facility description

Western Australia Nickel (WAN) operates the Leinster Operation, situated in the north-eastern parts of Western Australia's Goldfields region, about 360km north of Kalgoorlie. The traditional owners recognised in this area are the Tjiwarl people. TSF 2/3 is active and is located approximately 2 kilometres north-east of the concentrator.

Summary information	
BHP site	Leinster
TSF name	TSF 2/3
Coordinates	-27.785, 120.706
Current maximum height	41.5 metres
Area	269 hectares
Current Stored Volume	50 million cubic metres
Status	Active

Consequence classification

The consequence classification for TSF 2/3 is High based on Potential Loss of Life, Environment, Health, Social and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for Leinster was completed in 2024. The credible failure modes identified are presented in the table below.

Failure Mode	Initiating event
Overtopping	Extreme rainfall
	TSF Operation
	Decant system failure
	Embankment settlement
	Spillway failure
Internal erosion	Large pond and internal erosion along a continuous defect or structural feature
Embankment instability	High water pressure in the embankment
	Earthquake
	Change in slope
	Excessive loading during construction activities
	Unrecognised weak layer
	Erosion of the embankment

Failure Mode	Initiating event
Foundation failure	Excessive loading
	Unrecognised weak layer

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF Design & Construction (preventative control)
- TSF Operations & Inspection (preventative control)
- TSF Emergency Preparedness & Response (mitigative control)

Impact assessment

The impacts of an embankment failure at TSF 2/3 were assessed in 2024.

The estimated PAR at TSF 2/3 is in the significant classification range of 1-10 people within the boundary of the mine site.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The tailings could impact areas of aboriginal heritage significance, may impact water quality.
- Environmental impact: May impact areas of state environmental significance.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

TSF 2 was commissioned in 1979 and was temporarily decommissioned in 1992. The facility was recommissioned and expanded to the east in 2009. From the starter dam the TSF was raised using the upstream method. In 2017 a rock buttress was constructed along the western flank and south-western corner of the TSF. The rock buttress was extended along the complete perimeter of TSF 2 in 2020.

TSF 3 was commissioned in 1992 as a standalone facility that was originally divided into four rectangular cells (A, B, C and D). In 1999 TSF 3 cells A and B were combined to form a single cell (AB), and in 2000 TSF 3 cells C and D were combined to form cell CD. A new decant causeway and gravity decant structure was constructed for each of the two combined cells. Cell E was constructed in 2001 to connect TSF 2 and TSF 3 as a single landform.

From the starter dam of each cell, the TSF cells were raised using the upstream method. Tailings were deposited from the perimeter of each cell (rotated between the cells), with decant ponds formed at the cell centres. TSF 2 and TSF 3 cells AB, CD and E operate with concrete gravity decant towers.

In 2019, the first stage of a waste rock buttress was constructed. Construction of the second stage of the buttress along the complete perimeter of the TSF 2/3 was completed in FY2021. The TSF crest is currently built to 105.59 mRL.

In 2021 the starter embankment of TSF 3 Cell F was constructed as a stand-alone structure (with future potential to be integrated with Cell AB). It has a central gravity decant system designed for future stages and is not in use, with water currently removed via pumping.

The requirements for closure of Leinster TSF 2/3 align with the Leinster Mine Closure Plan, as required by the Nickel (Agnew) Agreement Act 1974 (WA), and prepared in accordance with the Western Australian Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) Guideline on Preparing Mine Closure Plans.

It is expected that a cover solution similar to that implemented on TSF 1 would be similarly effective in managing dust and seepage potential. The closure process includes a period of inactivity prior to closure to enable long-term settling, consolidation and drying, which enables the safe movement of construction equipment movement onto the surface. Closure works will comprise TSF surface capping, slope buttressing, reprofiling and the establishment of vegetation. The capping controls safety, dust, erosion, seepage and surface drainage risks. The retention of surface water manages rainfall, controls erosion, minimises infiltration beyond the growth media and waste rock and promotes the establishment of native vegetation.

Leinster TSF 2/3, 2025

Performance review

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent review in 2024.

The most recent dam safety review was in 2018. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	The decant riser pipe of TSF 3 Cell AB is blocked.	Remove the blockage from the decant outlet pipe. *This action is complete*
	Storage of water in TSF 3 Cell E has been noted - TSF should not act as a water holding facility.	Water should be pumped directly to the RWP or the Harmony Pit. *This action is complete – all water is now pumped to Harmony Pit*
	There is embankment and buttress erosion on TSF 2	Area of cracking/erosion is repaired by backfill and monitored for further migration of fines following significant storm events. *The erosion gullies have been remediated, and monitoring is ongoing*
Dam Safety Review 2018	Numerous erosion gullies have been observed along the southern and eastern flanks of TSF 2/3. The gullies are not considered to affect slope stability, but if left unattended they could increase in extent and become safety risks. They are also unsightly and do not reflect the level of attention and housekeeping that are given to the TSFs.	Determine cause of water concentrating along the berms and flowing through windrows. Develop and implement remedial measures. Repair existing erosion gullies through backfilling with waste rock. *These actions are complete, and monitoring is ongoing*

Environmental and social monitoring

TSF 2/3 monitoring requirements are detailed in Department of Water and Environmental Regulation (DWER) License L4612/1989/11 for the management of air and water quality. This can be found on the DWER website. In accordance with the licence sampling, testing, and reporting of water samples is undertaken at several ground

water monitoring bores around the TSF, as displayed in the licence. Groundwater in the vicinity of the TSF is monitored quarterly for water level and annually for water quality. WAN have self reported non-compliance with tailings related conditions in previous Annual Environmental Reports to DWER, none of which have resulted in enforcement actions. Within the licences there are provisions for non-compliance events, none of which have been issued to the site.

To understand the specific impact of our Western Australia Nickel operations, BHP conducts Community and Human Rights Impact and Opportunity Assessments. The latest in 2023 showed no material findings for tailings.

To understand the specific social impact of its Western Australia Nickel TSFs, BHP initiated a Human Rights Assessment for the Kambalda, Mt Keith and Leinster TSFs in 2025. This report summarises the assessment of potential adverse human rights impacts associated with the uncontrolled release of tailings from a TSF and identifies actions to manage the residual risk of these potential impacts.

BHP has community engagement forums and a complaints and grievance mechanism available for the local communities and undertakes bi-annual perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

Significant events that concern the safety of Leinster TSF 2/3 are managed by the Emergency Management Plan and Tactical Response Plan. These documents detail the incident, crisis management and incident recovery management framework including defined objectives, responsibilities and processes.

Key features of the plan include (but are not limited to):

- roles & responsibilities
- people, equipment and response requirements
- credible flow failure scenarios that the plan addresses
- escalation classifications and processes
- details on internal and external stakeholders and where to find contact information
- muster points and evacuation routes

The TARP, appended to the Operations, Maintenance and Surveillance manual, provides details escalating concerns and the required actions and responsibility for response and remediation, up to enacting the emergency response.

If a failure has occurred, the Emergency Response Team would be activated via site radio, and this would trigger the emergency procedure captured in the Tactical Response Plan.

Independent reviews

Review	Previous review	Next review
DSR	2018	2028
SITR	2023	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Report.

Western Australia Nickel – Mt Keith Tailings Storage Facility

Facility location	Mt Keith Western Australia
Classification	High

Facility description

Western Australia Nickel (WAN) operates the Mt Keith Operation (NMK), situated in the north-eastern parts of Western Australia's Goldfields region, about 460km north of Kalgoorlie. The traditional owners recognised in this area are the Tjiwarl people. The Mt Keith TSF comprises two TSFs. TSF 1 is a decommissioned, above-ground paddock type facility with eastern and western cells. The operational facility comprises of a central discharge TSF (CDTSF), with a water storage area along the eastern flank from where supernatant water is pumped and returned to the concentrator for reuse. TSF 1 was operational between 1994 and 1996 and the design of the CDTSF commenced in 1995 and construction of the facility was completed in 1996.

Summary information	
BHP site	Mt Keith
TSF name	Mt Keith Tailings Storage Facility
Coordinates	-27.255, 120.595
Current maximum height	21 metres
Area	1470 hectares
Current stored volume	201.5 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Mt Keith TSF is High, based on Potential Loss of Life, Environment, Health, Social and Cultural, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA was in October 2024. The credible failure modes identified are presented in the table below.

Failure Mode	Initiating event
Overtopping	Extreme rainfall
	TSF Operation
	Decant system failure
	Embankment settlement
	Spillway failure
Internal erosion	Large pond and internal erosion along a continuous defect or structural feature
Embankment instability	High water pressure in the embankment
	Earthquake
	Change in slope
	Excessive loading during construction activities
	Unrecognised weak layer

Failure Mode	Initiating event
	Erosion of the embankment
Foundation failure	Excessive loading
	Unrecognised weak layer

The following controls have been designated as critical controls under the BHP Risk Framework:

- TSF Design & Construction (preventative control)
- TSF Operations & Inspection (preventative control)
- TSF Emergency Preparedness & Response (mitigative control)

Impact assessment

The impacts of an embankment failure at the Mt Keith TSF were assessed in 2024.

The estimated PAR at the Mt Keith TSF is in the significant classification range of 1-10 people, comprising mine site workforce.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The tailings could impact an area between 5-20 square kilometres and may impact areas of Aboriginal heritage significance and water quality.
- Environmental impact: Potential impact on Wanjarri Nature Reserve, water supplies used by surrounding stock and fauna and may contaminate surrounding surface and groundwater.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

TSF 1 has an eastern cell and a western cell. The TSF 1 embankment was raised in a downstream manner in 1995. The TSF has a downstream embankment slope of 1 metre vertical for every 2 metres horizontal (1V:2H). The dividing embankment and decant causeway of the TSF were constructed of homogenous earth fill. The perimeter embankment was constructed using mine waste rock. The TSF was decommissioned in 1996, and the facility has not been closed or rehabilitated.

The design of the CDTSF was predicated on the tailings beach achieving a long-term beach slope of ~2% to 3% to provide the target storage capacity, with a single-stage perimeter embankment. However, operational beach slopes are in the order of 0.5% to 1%, which has necessitated the construction and continual raising of an ‘inner’ embankment to contain the tailings as the tailings surface rises. Decant water is channelled via HDPE pipes installed through the inner embankment to a decant pond referred to as the Water Storage Area, contained between the inner and external embankments. Water is pumped from the decant pond to an external return water pond, for re-use in the concentrator.

The CDTSF outer embankment is of engineered earth fill construction, with embankment height varying from 2-5 metres. It supports the original ring-main tailings delivery pipeline on the crest that was operational during commissioning of the CDTSF. The perimeter embankment is considered a ‘non-water retaining’ embankment, as it was not designed and constructed to retain water ponding along its upstream side for extended periods. The section along the water storage area (eastern flank of CDTSF) includes an internal drain and cutoff trench and is designed as a water retaining embankment. It was sized to accommodate the 1:100-year ARI storm, with an embankment height varying from 3 – 5 metres.

The inner embankment ranges from 15 to 21 metres in height and is constructed from upstream raises of reclaimed tailings. The inner embankment has been constructed to retain tailings away from the perimeter embankment. In 2015 a buttress of oxide mine waste rock 3 - 4.5 metres in height and 8 metres in width was constructed along the kidney embankment (eastern flank of the inner embankment with a kidney shape). From 2017 to 2018 a 30 metre wide and 6 metre high waste rock buttress was constructed along the entire internal embankment, which

encapsulated the existing tailings/oxide buttress. In 2019, the waste rock buttress was raised to improve embankment stability. In 2024 the buttress was raised again, along the entire internal embankment perimeter.

During operation, the inner embankment was raised on an ongoing basis at an approximate rate of 1 metre per year. The waste rock buttress is approximately 2 metres below inner embankment crest elevation.

The requirements for closure of the Mount Keith TSF align with the Mount Keith Mine Closure Plan, as required by the Mining Act 1978 (WA), and prepared in accordance with the Western Australian Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) Guideline on Preparing Mine Closure Plans.

The closure process includes a period of inactivity prior to closure to enable long-term settling, consolidation and drying, which enables the safe movement of construction equipment movement onto the surface. Closure works will comprise TSF surface capping, slope buttressing, reprofiling and the establishment of vegetation. The capping controls safety, dust, erosion, seepage and surface drainage risks. The retention of surface water manages rainfall, controls erosion, minimises infiltration beyond the growth media and waste rock and promotes the establishment of native vegetation.

Mt Keith Tailings Storage Facility, 2025

Performance review

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent dam safety review was in 2017. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	There have been no changes in geometry of the external perimeter embankment since construction, apart from some erosion of slopes, but a review of the structural integrity of the embankment is recommended.	Geotechnical review of the external perimeter embankment to be undertaken and a stability assessment of this embankment be completed. *This action is in progress*
	The siltation of the filter material from the seepage collection drain, surrounding the sumps may restrict flow into the sumps.	The filter material should be cleaned to optimise flow into the sumps as well as the geofabric removed from the area. *This action is in progress*

Review	Material findings	Recommendations
	Ponding is present on TSF 1 East due to the decant being blocked.	The decant for TSF 1 East should be completely unblocked and reinstated to allow any ponded water to drain freely. *This action is in progress*
Dam Safety Review 2018	With ongoing raising of the embankment, and toe buttress, especially with extension of the LoA to 2040, the effect of excessive loading on the foundation materials is not known.	Complete a geotechnical investigation of the foundation conditions along the perimeter of the internal embankment, with the aim of assessing the strength and thickness of the foundation layers to cater for embankment raises of an additional 20 to 25m. *This action is complete*

Environmental and social monitoring

The Mt Keith TSF has ongoing monitoring requirements that are detailed in DWER Licenses L6453/1990/12 for the management of air and water quality. This can be found on the DWER website. In accordance with the licence sampling, testing, and reporting of water samples is undertaken at several ground water monitoring bores around the TSF complex, as displayed in the licence. Groundwater in the vicinity of the TSF is monitored quarterly for water level and annually for water quality. WAN have self reported non-compliance with tailings related conditions in previous Annual Environmental Reports to DWER, none of which have resulted in enforcement actions. Within the licences there are provisions for non-compliance events, none of which have been issued to the site.

To understand the specific impact of our Western Australia Nickel operations, BHP conducts Community and Human Rights Impact and Opportunity Assessments. The latest in 2023 showed no material findings for tailings.

To understand the specific social impact of its TSFs, BHP initiated a Human Rights Assessment for the Kambalda, Mt Keith and Leinster TSFs in 2025. This report summarises the assessment of potential adverse human rights impacts associated with the uncontrolled release of tailings from a TSF and identifies actions to manage the residual risk of these potential impacts.

BHP has community engagement forums and a complaints and grievance mechanism available for the local communities and undertakes bi-annual perception research to understand community sentiment on broad ranging topics of interest, including community services, health, safety and environment, and BHP's economic contribution and social investment.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

Significant events that concern the safety of the Mt Keith TSF are managed by the Emergency Management Plan and Tactical Response Plan. These documents detail the incident, crisis management and incident recovery management framework including defined objectives, responsibilities and processes.

Key features of the plan include (but are not limited to):

- roles & responsibilities
- people, equipment and response requirements
- credible flow failure scenarios that the plan addresses
- escalation classifications and processes
- details on internal and external stakeholders and where to find contact information
- muster points and evacuation routes

The TARP, appended to the Operations, Maintenance and Surveillance manual, provides details escalating concerns and the required actions and responsibility for response and remediation, up to enacting the emergency response.

If a failure has occurred or an evacuation is required, as predefined in the TARP, then a full evacuation of the TSF will need to be carried out including all areas inside and to the east of the predicted “Dam Break Failure and Influence Zones” (DBFIZ). All personnel working around the TSF, within the DBFIZ or in areas to the east of the TSF (typically only for environmental studies or for bore field access) must muster at the RHT shed located north-west of the TSF or at the nearest safe muster point. Communication to inform all personnel in these areas to move to their nearest muster point and all other personnel not to enter the potentially affected areas would be made via site radio. A response, including full site muster to ensure all people are accounted for, would then commence.

Independent reviews

Review	Previous review	Next review
DSR	2017	2027
SITR	2023	2025

Financial capacity

BHP’s financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Titanium Minerals – Former Dredge Pond

Facility location	Beenup, Western Australia, Australia
Classification	Low (currently under review)

Facility description

The Beenup mine site is located in the Southwest Region of Western Australia, approximately 17 kilometres north-east of Augusta and 260 kilometres south of Perth, on the traditional lands of the Wadandi and Bibbulmun (Pibelmen) people. The Beenup mine site includes the Former Dredge Pond TSF. Mining at Beenup commenced in 1997 and ended in April 1999. The Beenup mining operations are no longer active, and BHP has completed significant rehabilitation work. Rehabilitation of the site was largely completed in 2005, although monitoring and inspection of spillways and other engineered structures continues.

The Former Dredge Pond TSF comprises two (2) ponds/pools and each include a levee for the purpose of retaining wet season inflows, to maintain a wet cover: Former Dredge Pond Pool 2 includes the Cell 2 Levee (C2L), 250 metres in length and Former Dredge Pond Pool 3 includes Western Levee (WL), 500 metres in length. Although rehabilitation works have been completed for the entire site, the Former Dredge Pond TSF is currently classified as inactive. An ongoing monitoring and surveillance program for the TSF is being maintained in accordance with local guidelines and legislative requirements.

Summary information	
BHP site	Beenup
TSF name	Former Dredge Pond
Coordinates	- 34.233,115.257
Current maximum height	6 metres (Western Levee)
Area	74 hectares
Stored tailings volume	11.2 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Former Dredge Pond TSF is estimated to be Low across all assessment criteria. This classification is currently under review, based on changes to internal and industry guidelines.

Summary of risk assessment

The most recent FMA for the Former Dredge Pond TSF was in 2016. The credible failure modes are presented in the table below. The assessment identified no credible failure modes that would result in the loss of tailings containment. The following failure modes would result in embankment instability or release of water without release of tailings. The assessment only covered the Western Levee, and the failure modes assessment for the Cell 2 Levee is currently under review.

Failure mode	Initiating event
Embankment instability	Embankment instability (seismic or static)
	Settlement of embankment leading to loss of freeboard
	Instability due to intrinsic construction defect or externally imposed defect (e.g., tree root)
	Internal erosion through the embankment
	Overtopping embankment crest
Spillway	Erosion of spillways in flood event

Failure mode	Initiating event
Tailings Impoundment	Overtopping embankment crest
Foundation failure	Foundation instability (seismic or static)
	Internal erosion through the foundation

This TSF does not trigger the materiality threshold in BHP's risk framework, and is instead managed using the controls in BHP's Tailings and Water Storage Facilities Global Standard.

Impact assessment

The impacts of an embankment failure at the Former Dredge Pond TSF were assessed in 2016, under both a sunny day and flood failure scenario.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The tailings could cover up to one square kilometre.
- Environmental impact: Limited potential for environmental impacts due to sediment mobilisation, in the event one of the water retaining levees failed.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

The inactive dredge pond comprises a series of cells that were created by the construction of internal bunds behind the advancing dredge during operations. These bunds were formed from oversized materials screened by the floating mineral processing plant as it traversed the width of the pond. Clay and sand tailings generated by the floating mineral processing plant were deposited sub aqueously (below the tailings surface), behind these internal bunds. Two of these bunds were extended at closure to heights above the final dredge pond water level, creating the two pools described below. A further three remain partially constructed, two below the final dredge pond water level and one that extends above the summer minimum dredge pond level.

The dredge pond was mined to a depth of approximately 50 metres below ground level. It is groundwater fed with pond levels responding to groundwater fluctuations, with the average level 5 metres below ground level. During operations sand and clay fines tailings were deposited sub aqueously into the dredge pond. As part of the site rehabilitation works, additional clay fines tailings were relocated from temporary above-ground storage facilities to the dredge pond. The tailings have settled and consolidated to levels ranging from 2 – 15 metres below the pond surface where they will remain permanently saturated.

The C2L is an embankment constructed of compacted sand and, with the upper 0.5 metres classified as poorly graded coarse sand, overlaying medium to coarse sand with silt which extended to the foundation. The maximum height of the embankment is 4 metres and, the crest width is approximately 16 metres.

The WL was initially constructed as a temporary structure across a seasonal creek bed. The purpose of the levee was to maintain the operating water level within the dredge pond. The WL was later reconstructed in two stages to become a permanent structure within the rehabilitated area. The reconstructed WL is an earth fill embankment with an internal clay core keyed into the natural soil profile located upstream of the levee centreline. The levee was constructed on a sand foundation consisting of approximately 3 metres of silty sand overlying clayey sand. The levee has a maximum height of 6 metres, with upstream and downstream slopes of about 1 metre vertical for every 4 metres horizontal (1V:4H). A coarse sand toe drain was installed on the downstream toe between chainages 180 and 370. The WL is vegetated on the upstream and downstream slopes.

There are two operational spillways in place in Pool 2 and Pool 3 with the invert set to ensure the target water level is maintained during the wet season, so that a minimum wet cover is maintained based on the water balance. An auxiliary spillway for storm inflows is sized to the 1:100 annual exceedance probability storm event. In addition, a by wash floodway was cut through natural ground to reduce the risk of overtopping, should one of the operational spillways or the auxiliary spillway become blocked or restricted. The design flood capacity of the system is currently under review and was originally sized to store the probable maximum flood event starting from the maximum operating level.

Stage	Year completed	Description of design
Design	1994	Design completed
Construction	1995 – 1996	Excavation of starter dredge pond with spoil placed in MDSA
Operation	1997 – 1999	Mining operations and disposal of sand / fines
Rehabilitation	2000 – 2005	Reconstruction of Western Levee to meet rehabilitation design criteria.
Maintenance and monitoring	2005 – 2015	Maintenance and monitoring of Former Dredge Pond to demonstrate completion criteria
Rehabilitation completion criteria	2018	Rehabilitation completion criteria confirmed by regulator

Former Dredge Pond, 2025

Rehabilitation works for the site (including the Former Dredge Pond TSF) have been completed in accordance with regulatory requirements under the *Environmental Protection Act 1986* (WA), the *Mining Act 1978* (WA) and the *Minerals Sand (Beenup) Agreement Act 1995* (administered by the Department of Jobs, Tourism, Science and Innovation). The two key closure criteria related to:

- Ecological sustainability of the decommissioning and rehabilitation.
- Rehabilitation in accordance with the Beenup Rehabilitation Project Environmental Management Plan 2012 (EMP 2012), which outlined closure completion criteria.

A completion report providing evidence of achievement of the required closure criteria was submitted in 2018 and assessed by the relevant regulators. In November 2018 the WA Department of Water and Environmental Regulation (DWER), on the advice of relevant regulators including the DMP (now Department of Energy, Minerals and Environmental Regulation) advised that the above rehabilitation conditions can be considered complete.

Performance reviews

Following rehabilitation, performance reviews were completed in 2008, 2010, 2012, 2016, with the most recent review completed in 2022 by WSP.

A dam safety review is scheduled for 2025 and material findings, if any, will be included in the next relevant public disclosure.

Material findings from the most recent review are presented in the table below.

Review	Material Findings	Recommendations
Performance Review 2022	No evidence of adverse conditions was noted during site inspections. Notwithstanding this, a more detailed review of the stability under a 1:10,000 AEP earthquake should be undertaken.	Complete a full stability review under both static and earthquake loading conditions, up to the 1:10,000 AEP design earthquake event. The dam break assessment for the Western Levee should be updated to be consistent with the current industry standard, following which the QRA should also be updated. *These actions are in progress*

Environmental and social monitoring

The Beenup site (including the MDSA and Former Dredge Pond) have been monitored since active mining operations ceased. In 2018, confirmation was provided by the relevant regulators that BHP had met all required rehabilitation completion criteria, and the monitoring was reduced to six monthly groundwater sampling to check for significant changes. No material changes have been identified.

The Beenup Consultative Group (BCG) comprising a range of community stakeholders and, at times, local and State Government representatives was formed in 1989 to facilitate communication with the community about the Beenup Project. Meetings have occurred at least annually with the group as reported in Annual Environmental Reports, which are submitted to the regulator. Consultations with the BCG of relevance to the MDSA include presentation of findings from an independent review conducted in 2000, engagement on the approved closure strategy in 2001, and the outcomes from an independent audit in 2002. In response to the audit, groynes were constructed on the WL embankment to address concerns regarding potential wave erosion.

Emergency preparedness and response plan summary

Significant events that may concern the safety of Former Dredge Pond TSF are managed by the Site Emergency Response Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident. The plan includes responses proportional to the risk that credible failure scenarios posed.

Key features of the plan include (but are not limited to):

- Monitoring escalation chart (TARP)
- Emergency contact information
- Muster points

Independent reviews

Review	Previous review	Next review
DSR	None[1]	2025
SITR	None	To be scheduled

[1] A review was completed by GHD in 2016, which included most of the scope of a dam safety review, but did not make a formal statement of dam safety.

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in the Annual Report.

Requirements with a status other than 'Meets'

Please refer to the table of non-conformances at the end of the next section (MSDA TSF).

Titanium Minerals – Mine Development Storage Area

Facility location	Beenup, Western Australia, Australia
Classification	Low (currently under review)

Facility description

The Beenup mine site is located on freehold land in the Southwest Region of Western Australia, approximately 17 kilometres north-east of Augusta and 260 kilometres south of Perth, on the traditional lands of the Wadandi and Bibbulmun (Pibelmen) people. The Beenup mine site includes the Mine Development Storage Area (MDSA) TSF. Mining at Beenup commenced in 1997 and ended in April 1999. The Beenup mining operations are no longer active, and BHP has undertaken significant rehabilitation work. Rehabilitation of the site was largely completed in 2005, although monitoring and inspection of spillways and other engineered structures continues.

The MDSA is approximately circular in footprint, 800 metres along the north-south axis and 760 metres east-west measured at the external embankment toe. It contains sand and fines from the initial dredge pond excavation and fines from the early stages of dredging for mineral sands. During operation start-up, it also served as a water storage facility. Although rehabilitation works have been completed for the entire site, the MDSA TSF is currently classified as inactive. An ongoing monitoring and surveillance program for the TSF is being maintained in accordance with local guidelines and legislative requirements.

Summary information	
BHP site	Beenup
TSF name	MDSA
Coordinates	-34.225,115.263
Current maximum height	14 metres
Area	38.5 hectares
Stored tailings volume	3.8 million cubic metres
Status	Inactive

Consequence classification

The current consequence classification for the MDSA TSF is estimated to be Low across all assessment criteria. This classification is currently under review, based on changes to internal and industry guidelines.

Summary of risk assessment

The most recent FMA for the MDSA was in 2016. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Embankment instability	Embankment instability (seismic or static)
	Settlement of embankment leading to loss of freeboard
	Instability due to intrinsic construction defect or externally imposed defect
Spillway	Erosion of spillways in flood event
Tailings Impoundment	Overtopping embankment crest
Foundation failure	Foundation instability (seismic or static)

This TSF does not trigger the materiality threshold in BHP's risk framework, and is instead managed using the controls in BHP's Tailings and Water Storage Facilities Global Standard.

Impact assessment

The impacts of an embankment failure at the MDSA TSF were assessed in 2016. An updated dam breach assessment is in progress, and the outcome will be included in the next applicable public disclosure.

The estimated PAR at the MDSA TSF is in the low range with none identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The tailings could cover up to one square kilometre.
- Environmental impact: Potential environmental impacts with limited run-out potential.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

The MDSA embankment is of zoned downstream construction with a clay core, built in two stages. In 1995, the starter embankment was constructed to a height of 10 metres. The second stage in 1997 included a 6 metre raise to a total height of 16 metres. The material used in the construction of the embankment is primarily clay and rockfill, sourced from nearby borrow pits.

The first stage embankment was constructed of silty sand upstream and downstream of the clay core, and the core extended to 4 metres below the crest height. A 0.2 metre layer of ferricrete (silty gravel) was placed on the upstream slope and crest surfaces. Construction of the second stage occurred in 2 metre lifts.

The second stage of construction required the clay core to be keyed into the original clay core, trenching 4 metres into the existing embankment crest. Ferricrete was placed on the inner and outer slopes of the second stage lifts. The inner zone of the downstream slope was constructed using sand while ferricrete was placed into the outer zone. Tailings deposition was subaqueous (beneath the tailings surface) by single point perimeter discharge, with the discharge point located via a pontoon.

Following rehabilitation of the mine, some of the upper levels of fines with a higher sulphur content were relocated into the main dredge pond and the upper 1.7 metres of the MDSA embankment was removed. The remaining material is low in pyrite but has some potential for acid development if exposed to air.

To prevent acid formation the closure cover was designed so that the fines remain permanently saturated. This was achieved by placement of a sand cap within the containing embankment, 1.6 metres – 2.5 metres in thickness. The cap absorbs incident rainfall during the winter months to maintain saturation during hot and dry periods. Lime was mixed with the sand as an additional measure to control acid generation. The cap incorporates an inner perimeter ring drain to capture surface runoff and maintain permanent saturation of the underlying fines.

Surface water in excess of what can be absorbed by the sand cover and stored in the perimeter drain is managed passively via three external spillways, with the two spillways on the south-east designed to pass the probable maximum precipitation rainfall event. A third spillway on the north side of the facility has been constructed to provide redundancy.

Stage	Year completed	Description of design
Design	1994	Design completed.
Construction – Stage 1	1995	Construction of first stage completed.
Construction – Stage 2	1997	Construction of second stage completed.
Operation	1997 – 1999	Mining operations and disposal of sand / fines.
Rehabilitation	2000 – 2005	Most rehabilitation earthworks completed.
Rehabilitation completion criteria	2018	Rehabilitation completion criteria confirmed by regulator.

MDSA TSF, 2025

Rehabilitation works for the site (including the MDSA TSF) have been completed in accordance with regulatory requirements under the *Environmental Protection Act 1986* (WA), the *Mining Act 1978* (WA) and the *Minerals Sand (Beenup) Agreement Act 1995* (WA) (administered by the Department of Jobs, Tourism, Science and Innovation). The two key closure criteria related to:

- Ecological sustainability of the decommissioning and rehabilitation.
- Rehabilitation in accordance with the Beenup Rehabilitation Project Environmental Management Plan 2012 (EMP 2012), which outlined closure completion criteria.

A completion report providing evidence of achievement of the required closure criteria was submitted in 2018 and assessed by the relevant regulators. In November 2018 the WA Department of Water and Environmental Regulation (DWER), on the advice of relevant regulators including the Department of Mines and Petroleum (now Department of Energy, Minerals and Environmental Regulation) advised that the above rehabilitation conditions can be considered complete.

Performance reviews

Following rehabilitation, performance reviews were completed in 2008, 2010, 2012, 2016, with the most recent review completed in 2022 by WSP.

A dam safety review is scheduled for 2025 and material findings, if any, will be included in the next relevant public disclosure.

Material findings from the most recent review are presented in the table below.

Review	Material Findings	Recommendations
Performance Review 2022	No evidence of adverse conditions was noted during site inspections. Notwithstanding this, a more detailed review of the stability under a 1:10,000 AEP earthquake should be undertaken.	Complete a full stability review under both static and earthquake loading conditions, up to the 1:10,000 AEP design earthquake event. *This action is in progress*

Environmental and social monitoring

The Beenup site (including the MDSA and Former Dredge Pond) have been monitored since active mining operations ceased. In 2018, confirmation was provided by the relevant regulators that BHP had met all required

rehabilitation completion criteria, and the monitoring was reduced to six monthly groundwater sampling to check for significant changes. No material changes have been identified.

The Beenup Consultative Group (BCG) comprising a range of community stakeholders and, at times, local and State Government representatives was formed in 1989 to facilitate communication with the community about the Beenup Project. Meetings have occurred at least annually with the group as reported in Annual Environmental Reports, which are submitted to the regulator. Consultations with the BCG of relevance to the MDSA include presentation of findings from an independent review conducted in 2000, engagement on the approved closure strategy in 2001, and the outcomes from an independent audit in 2002.

Emergency preparedness and response plan summary

Significant events that may concern the safety of MDSA TSF are managed by the Site Emergency Response Plan. The plan outlines the specific incident, crisis and emergency management system to be used in the event of an emergency incident. The plan includes responses proportional to the risk that credible failure scenarios posed.

Key features of the plan include (but are not limited to):

- Monitoring escalation chart (TARP)
- Emergency contact information
- Muster points

Independent reviews

Review	Previous review	Next review
DSR	None[1]	2025
SITR	None	To be scheduled

[1] A review was completed by GHD in 2016, which included most of the scope of a dam safety review, but did not make a formal statement of dam safety.

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in the Annual Report.

Requirements with a status other than 'Meets'

The following summarises the requirements that have a conformance status other than 'meets', for both the MDSA and for the Former Dredge Pond TSFs.

Requirement	Conformance Status	Conformance status details	Conformance Plan
2.3, 2.4	Partially meets	Current breach analysis does not meet all GISTM requirements.	A revised breach analysis is in progress, and will be completed before the 2026 disclosure.
3.1	Partially meets	Water balance model requires an update.	The model will be reviewed and updated if required prior to the 2027 disclosure.
3.4	Partially meets	Management of change process is operative, but this is not triggered in the tailings management system (TMS).	Develop an OMS Manual with material change triggers, prior to the 2026 disclosure.
4.2, 4.3, 4.5, 4.7, 4.8	Partially meets	A design basis is in place but is currently under review, due to the review of the breach analysis.	Design basis to be revised and approved by AE once breach analysis has been completed, prior to 2026 disclosure.
4.6, 5.4	Partially meets	Failure modes assessment is currently under review for both TSFs. For the	Review failure modes assessment for engineering controls for brittle failure

Requirement	Conformance Status	Conformance status details	Conformance Plan
		Former Dredge Pond, current assessment does not include the Cell 2 Levee.	modes, and assess effectiveness of controls to minimise the risk to ALARP, prior to 2026 disclosure, including the Cell 2 Levee.
6.5, 6.6	Partially meets	Requirements not currently captured in TMS, though business processes are in place.	Ensure TMS captures triggers for management of change, the deviance accountability review, and review of new and emerging technologies prior to 2026 disclosure
7.1 – 7.5	Partially meets	Requirements not currently captured in TMS, though business processes are in place.	Ensure TMS captures monitoring requirements and TARPs based on credible failure modes and performance objectives, prior to 2026 disclosure.
8.2	Partially meets	Requirement not currently captured in TMS, though business processes are in place.	Ensure formal TMS outlines governance requirements, prior to 2026 disclosure.
8.3	Partially meets	Key Performance Indicators (KPIs) are in place, but do not currently consider all relevant tailings management roles.	Extend KPIs to relevant tailings management roles, prior to 2026 disclosure.
8.5	Partially meets	RTFE is in place, but formal appointment not yet completed.	Complete formal appointment of RTFE by AE, prior to 2026 disclosure.
8.6	Partially meets	Some requirements are outlined at a Corporate level, but some gaps exist in the site TMS.	Ensure TMS includes details on qualifications and experience for tailings management roles, prior to 2026 disclosure.
8.7, 10.6	Does not meet	Senior Independent Technical Reviewer (SITR) not currently appointed.	Appoint an SITR prior to the 2026 disclosure.
9.1, 9.2, 9.4, 10.4	Partially meet	Person acting in EOR role, but not formally appointed.	Ensure EOR is formally appointed by AE, prior to 2026 disclosure.
9.3, 9.5, 10.2	Does not meet	TMS does not currently capture these requirements.	Ensure TMS captures requirements for EOR interaction, process for change of and EOR, and review of the TMS prior to 2026 disclosure.
10.1	Partially meets	Risk assessment is in place, but was not reviewed by an SITR and requires review due to review of failure modes assessment and breach analysis.	Revised risk assessment to be reviewed by the SITR prior to 2026 disclosure.
10.5	Does not meet	Formal DSR not yet completed.	Complete a DSR prior to the 2026 disclosure.
11.1, 11.2	Does not meet	TMS does not currently capture these requirements.	Ensure TMS captures requirements to develop personnel and ensure they have appropriate input into tailings management, prior to 2026 disclosure.
13.1, 13.2, 13.3	Partially meets	Site-level processes are established but TMS requires updates to meet some of the requirements of GISTM.	TMS to capture relevant GISTM requirements under Principle 13, prior to 2026 disclosure.

Requirement	Conformance Status	Conformance status details	Conformance Plan
14.1 – 14.5, 15.1C	Does not meet	TMS does not currently address these requirements.	TMS to capture relevant GISTM requirements under Principles 13, 14 and 15, prior to 2026 disclosure.

Carajás – Antas Dam Tailings Storage Facility

Facility location	OZ Minerals Carajas, Pará, Brasil
Classification	High

Facility description

The Antas Dam TSF is situated on the Antas Norte Mine (OZ Minerals), located in the state of Pará in the north of Brazil. The TSF was designed in 2014 and is now used as a staging dam to supply water to the concentrator and for contingency tailings storage, as the mine now uses in-pit disposal. The Antas Dam TSF is an above-ground facility. The facility has been raised three times, using the downstream method.

Summary information	
BHP site	OZ Minerals Carajás
TSF name	Antas Dam
Coordinates (WGS84)	-6.234, -49.766
Current maximum height	25 metres
Area	33 hectares
Stored tailings volume	2.6 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Antas Dam is High, based on the Potential Loss of Life and Environment assessment criteria.

Summary of risk assessment

The most recent FMA for the Antas Dam was in 2025. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Rainfall in excess of design flood capacity
	Failure of pumping system
	Erosion of spillways in flood event
	Erosion of embankment, crest or slopes
	Loss of spillway integrity, or blockage
Foundation failure	Foundation instability (seismic or static)
	Internal erosion
	Deformation of weak layer
	High rates of seepage / failure to contain seepage
	Excessive foundation pore pressure
Embankment Instability	Internal erosion through embankment
	Erosion of embankment, crest or slopes
	Embankment instability (seismic or static)
	High rates of seepage / failure to contain seepage

Failure mode	Initiating event
	Erosion from burst pipe

The following controls have been designated as critical controls for the TSF:

- dam design and construction (preventative)
- dam operations, maintenance and surveillance (preventative)
- dam emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Antas Dam TSF were assessed in 2025.

The estimated PAR at the Antas Dam TSF is in the significant classification range of 1-10 people comprising workers within the boundaries of the mine site.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The tailings could flow up to 1.5 kilometres downstream.
- Environmental impact: Contamination of livestock, fauna impacts or water supply with low health impacts.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

The Antas Dam is an above-ground TSF with earth fill embankments. Following construction of the starter dam, the TSF was raised three times using the downstream method. Internal drainage consists of a vertical filter connected to a toe drain. Details of all four stages are shown in the table below.

Stage	Year completed	Design description
Initial Construction	2014	Construction of a 11 metres high starter embankment to 196 mRL of compacted earth fill.
Stage 1	2019	2 metre downstream raise to 198 mRL, taking the total embankment height to 21 metres, with an 8 metres crest width. A 4 metres wide buttress was constructed at the toe to 190 mRL.
Stage 2	2021	3 metre downstream raise to 201 mRL, taking the total embankment height to 24 metres, with a 12 metres crest width. A 4 metres wide buttress was constructed at the toe to 193 mRL.
Stage 3	2023	1 metre downstream raise to 202 mRL, taking the total embankment height to 25 metres, with a 10 metres crest width. A 4 metres wide buttress was constructed at the toe to 193 mRL. Construction of two channels: perimeter channel and a main spillway.

Antas Dam, 2025

Closure of the Antas Dam has been considered as part of the mine plan, and a conceptual closure plan is under development and will be aligned with local regulatory requirements and industry practice.

The closure concept includes a period of inactivity prior to closure, which will enable long-term settling, consolidation and drying. Once most of the expected settlement has occurred, the TSF will be modified to manage rainfall, and include features as identified in the closure design such as: placement of erosion protection on the external embankments; shaping the TSF so that rainfall safely flows to the surrounding environment; and capping of the tailings surface. The cover will be selected and finalised during the closure design phase, creating a landform in accordance with site conditions and local regulation.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent completed Dam Safety Review was in 2024. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings.	Not applicable.
Dam Safety Review 2024	No regulatory non-compliances. The material strength parameters of the embankment and of the tailings (including rheology) require review. A dam breach assessment review is required.	Complete a geotechnical investigation of the embankment and of the tailings, including a rheological assessment. Review the dam breach assessment and use this information to review the risk assessment. Review the EPRP. *These actions are in progress*

Environmental and social monitoring

The OZ Minerals Carajás mine is regulated for tailings management by SEMAS (Environment and Sustainability Agency of Pará/ Brazil). SEMAS details the required type and frequency of the environmental monitoring undertaken, and the notification requirements for an incident that contravenes the licence conditions. If an event occurs SEMAS would provide guidance on the response, including further monitoring, sampling, remediation, or

preventative actions. Enforcement actions may be issued for non-compliance with conditions and made publicly available. No enforcement notices representing an environmental material finding for the Antas Dam have been issued for the previous calendar year.

To understand the specific social impact of the TSFs, a Human Rights and Social Impact Assessment was completed for OZ Minerals in FY2024. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event
- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established to provide feedback opportunities on broad ranging topics and include a complaints and grievance mechanism for community issues.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

The emergency preparedness and response at the Antas is overseen by the ANM (Mining National Agency).

Significant events concerning the safety of the Antas Dam are managed by the Emergency Action Plan (known as the PAEBM under Brazilian regulation). The plan outlines the facility-specific TARPS and procedures to be followed in the event of an emergency or an incident and was developed in consultation with relevant external emergency service providers and reviewed by the RTFE and EOR. It includes responses proportional to the risk that credible failure scenarios pose. At a site level, this is integrated into the Site Emergency Response Plan (called the DCO under Brazilian regulation) ensuring consistency with the broader safety management plan.

Key features of the plan include (but are not limited to):

- roles and responsibilities
- credible flow failure scenarios
- details on internal and external stakeholders, and where to find contact information
- applicable TARPs
- muster points and evacuation routes

A Reconstruction, Restoration and Recovery Plan that will detail the long-term recovery framework in the unlikely event of a TSF failure is under development.

Independent reviews

Review	Previous review	Next review
DSR	2024	2027
SITR	None	To be scheduled

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Requirements with a status other than 'Meets'

The following summarises the requirements that have a conformance status other than 'Meets'.

Requirement	Conformance Status	Conformance status details	Conformance Plan
2.2	Partially meets	Additional hydrogeological data is required.	Further hydrogeological study will be completed prior to the 2026 public disclosure.
4.1, 10.1	Partially meets	The failure modes assessment and dam breach analysis require review.	The failure modes assessment, dam breach analysis and consequence classification will be reviewed prior to the 2026 public disclosure.
4.3, 4.7, 5.7	Does not meet	The assessment of risks against ALARP requires review.	The controls of credible failure modes against ALARP will be reviewed prior to the 2026 disclosure.
4.4; 4.5; 4.8; 5.1; 5.2; 5.3	Partially meets	The design basis requires review.	Review and update the design basis report, prior to the 2026 disclosure.
6.1, 10.2, 10.4, 10.6, 6.5, 6.6	Partially meets	The Tailings Management System requires review and alignment with the GISTM.	Review and update the Tailings Management System prior to the 2026 disclosure, including any required formal appointments.
7.1	Partially meets	The OMS Manual and monitoring program requires review and an update to meet the requirements of GISTM.	Develop an OMS Manual and related monitoring program, prior to the 2026 disclosure.
8.4	Partially meets	An Accountable Executive is in place, but there are not currently formal routine engagements.	Establish routine engagements with the Accountable Executive, prior to the 2026 disclosure.
8.7	Partially meets	A SITR is not currently appointed.	Appoint a SITR or ITRB, prior to the 2026 disclosure.
10.5	Partially meets	The 2023 and 2024 dam safety reviews were completed by the same third-party consultant.	Complete an independent dam safety review, prior to the 2027 disclosure.

Carajás – Antas Pit Tailings Storage Facility

Facility location	OZ Minerals Carajás, Pará, Brasil
Classification	Low *

* The consequence classification is currently under review

Facility description

The Antas Pit TSF is situated on the Antas Norte Mine (OZ Minerals), located in the state of Pará in the north of Brazil. The TSF is located in an exhausted mine pit. Tailings disposal in the Antas Pit commenced in 2022 and it is currently the primary TSF for the site.

Summary information	
BHP site	OZ Minerals Carajás
TSF name	Antas Pit
Coordinates (WGS84)	-6.241, -49.754
Current maximum height	NA
Area	6 hectares
Stored tailings volume	2.1 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Antas Pit TSF has been assumed to be Low across all assessment criteria, based on the current understanding of credible failure modes. The classification is currently under review.

Summary of risk assessment

An FMA is under development for this facility, and the failure modes from the existing risk assessment are summarised in the table below. Critical controls will be defined following completion of the FMA.

Failure mode	**Initiating event**
Slope instability resulting in loss of functionality	Slope failure
	Rockfall
Overtopping	Slope failure mobilising a wave
	Stormwater ingress in excess of freeboard

Impact assessment

The impacts of an embankment failure at the Antas Pit TSF are currently being assessed, along with the development of the FMA. The estimated PAR at the Antas Pit TSF is in the low range with none identified.

Design description

The Antas Pit is located in an area that was active from 2016 to 2021, with a maximum depth of approximately 160 metres. The maximum tailings level will be 5 metres below natural ground. As the tailings is stored below natural ground, there are no engineered retaining embankments and there is no emergency spillway.

Tailings are transported via pipeline from the concentrator plant and are deposited in the dam hydraulically using single-point subaqueous discharge. Water from the decant pond is pumped back to the processing plant for reuse. The maximum tailings level is below natural ground, and there are no engineered retaining embankments.

Antas Pit, 2025

Closure of the Antas Pit has been considered as part of the mine plan, and a conceptual closure plan is under development and will be aligned with local regulatory requirements and industry practice.

The closure concept includes a period of inactivity prior to closure, which will enable long-term settling, consolidation and draining. Once most of the expected settlement has occurred, closure work will progress in accordance with site conditions and local regulation.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2025. This reporting is being finalised and material findings, if any, will be included in the next disclosure.

The most recent completed Dam Safety Review was in 2024. An updated Dam Safety Review was initiated in 2025 and material findings, if any, will be included in the next disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2025	In progress.	Not applicable.
Dam Safety Review 2024	No material findings.	Not applicable.

Environmental and social monitoring

The OZ Minerals Carajás mine is regulated for tailings management by SEMAS (Environment and Sustainability Agency of Pará/ Brazil). SEMAS details the required type and frequency of the environmental monitoring undertaken, and the notification requirements for an incident that contravenes the licence conditions. If an event occurs SEMAS would provide guidance on the response, including further monitoring, sampling, remediation, or preventative actions. Enforcement actions may be issued for non-compliance with conditions and made publicly available. No enforcement notices representing an environmental material finding for Antas Pit have been issued for the previous calendar year.

To understand the specific social impact of its TSFs, a Human Rights and Social Impact Assessment was completed for OZ Minerals in FY2024. As part of the assessments, community consultations enabled us to:

- communicate the risks pertaining to TSFs in the unlikely situation of a failure event

- capture input from stakeholders around the risks, opportunities and impacts of managing TSFs and mitigating negative impacts
- provide an opportunity for stakeholders to provide feedback
- listen to stakeholder concerns, ideas and questions
- consider community feedback in the planning for ongoing management of TSFs
- engage in discussions regarding the appropriateness of mitigation strategies with stakeholders
- continue to build a foundation of engagement and consultation with stakeholders for the ongoing operation of the TSFs

Community engagement forums have been established to provide feedback opportunities on broad ranging topics and include a complaints and grievance mechanism for community issues.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan summary

The Emergency Preparedness and Response Plan for the Antas Pit TSF is currently under development. This plan will comply with relevant industry standards.

Independent reviews

Review	Previous review	Next review
DSR	2025[1]	2035
SITR	None	To be scheduled

[1] In progress.

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Requirements with a status other than 'Meets'

The following summarises the requirements that have a conformance status other than 'meets'.

Requirement	Conformance Status	Conformance status details	Conformance Plan
2.2	Partially meets	Additional hydrogeological data is required.	Further hydrogeological study will be completed prior to the 2026 public disclosure.
2.3; 3.4, 4.1, 4.2, 6.2; 10.1	Partially meets	The failure modes assessment and dam breach analysis require review.	The failure modes assessment, dam breach analysis and consequence classification will be reviewed prior to the 2026 public disclosure.
3.1, 7.2	Partially meets	The monitoring program requires review.	The monitoring program will be reviewed and updated prior to the 2026 public disclosure.
4.3; .4.7, 5.4, 5.7	Does not meet	The assessment of risks against ALARP requires review.	The controls of credible failure modes against ALARP will be reviewed prior to the 2026 disclosure.
4.4; 4.5; 4.8; 5.1; 5.2; 5.3; 5.5	Partially meets	The design basis requires review.	Review and update the design basis report, prior to the 2026 disclosure.

Requirement	Conformance Status	Conformance status details	Conformance Plan
6.1, 6.5, 6.6, 10.2, 10.4, 10.6	Partially meets	The Tailings Management System requires review and alignment with the GISTM.	Review and update the Tailings Management System prior to the 2026 disclosure, including any required formal appointments.
6.4, 7.1, 7.3, 7.4, 7.5	Does not meet	A formal OMS Manual is not in place.	Develop an OMS Manual and related monitoring program, prior to the 2026 disclosure.
8.4	Partially meets	An Accountable Executive is in place, but there are not currently formal routine engagements.	Establish routine engagements with the Accountable Executive, prior to the 2026 disclosure.
8.7	Partially meets	A SITR is not currently in place.	Appoint a SITR or ITRB, prior to the 2026 disclosure.
13.1; 13.2; 13.3; 13.4; 14.1	Partially meets	The Emergency Preparedness and Response Plan requires review and update.	Review and update the Emergency Preparedness and Response Plan before the 2026 disclosure.
14.3, 14.4	Partially meets	There is not currently a formal Business Continuity Plan.	Develop a Business Continuity Plan considering reconstruction, restoration and recovery, prior to the 2026 disclosure.

Legacy Assets – East Kemptville Tailings Management Area

Facility location	Nova Scotia, Canada
Classification	High

Facility description

The East Kemptville Site is located approximately 54 kilometres north-east of the town of Yarmouth and approximately 60 kilometres north-west of the town of Shelburne, in south-western Nova Scotia, Canada. Mine operations at East Kemptville commenced in 1985 and ceased in 1991, with milling operations stopping in January 1992. Reclamation began in 1992 and decommissioning was largely complete in 1999. East Kemptville is under active care and maintenance. The current configuration of the Site includes several management features, including the two flooded open pits, several waste rock and low-grade ore stockpiles, a coarse tailings pile (CTP), seepage and water reclaim pumping systems, two lime water treatment plants, one contact water diversion dam, and a series of contact water collection channels and ponds. There are three dams at site associated with the Tailings Management Area (TMA) including the North Dam, West Dam, and the South CTP Dam.

The TMA surface area is approximately 250 hectares with an uncovered vegetated surface. The TMA is contained in a topographical low with rising ground to the west, south, and east. The ultimate perimeter of the TMA is bound by two dams (North and West Dams) varying in maximum height from 6 to 9 metres and storing approximately 12.1 million cubic metres of acid generating tailings. The South CTP Dam bounds the southern extent of the CTP and is internal to the TMA. It is estimated that the maximum tailings thickness is approximately 24 metres.

Summary information	
BHP site	East Kemptville
TMA name	East Kemptville Tailings Management Area
Coordinates	44.11, -65.702
Current maximum height	9 metres
Area	250 hectares
Stored tailings volume	12.1 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the East Kemptville TMA is High based on the Environment assessment criteria.

Summary of risk assessment

The most recent FMA for the East Kemptville TMA was in 2023. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Overtopping during an extreme flood event, or from blockage of the spillway during a large storm event
	Overtopping due to erosion of the embankment crest by an extreme wind and/or flood event
Embankment Instability	Large flood event causes erosion of the spillway channel
	Sabotage from excavation
	Internal erosion in the foundation
Foundation failure	Static or seismic induced liquefaction due to an unidentified weak layer in foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design Integrity (preventative)
- Operations, maintenance, and surveillance (preventative)
- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of an embankment failure at the East Kemptville TMA were re-assessed in 2024 and reflect the condition the TMA and surrounds at that time.

The estimated temporary PAR at the East Kemptville TMA is in the significant classification range of 1-10 people, comprising workers who could be carrying out monitoring and surveillance activities on the dam, and residents in temporary structures downstream, during a sunny day failure only. During a flood failure, temporary PAR is assumed to be zero. There is no permanent PAR associated with the East Kemptville TMA.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings could reach the Tusket River.
- Environmental impact: Release of acid generating tailings and potential impact on the Rusty Blackbird population.
- Infrastructure impacted: Little to no damage expected to the Highway 203 bridge/culvert and a potential short-term disruption of highway traffic.

Design description

The primary containment dams (North and West Dams) were constructed in 1984, with the North Dam raised in 2007. The North and West Dam were constructed of well compacted, low permeability, homogeneous till with an internal blanket drain in the downstream zone. The North Dam served as a starter dam for containing the tailings and water. A 5 metres wide drain was also constructed between the CTP and the North Dam to prevent overtopping. The North Dam was raised in 2007 to account for settlement in select areas of the crest.

The West Dam was constructed as a low permeability water/tailings retention structure. The West Dam retains the Sedimentation Pond and Polishing Pond, south-west of the CTP. Both dams were founded on native in-situ glacial till, except for one segment of the West Dam which was keyed into fractured bedrock with infilled till.

The South CTP Dam was constructed in 1985 and retains the south end of the CTP and possibly some fine tailings. The South CTP Dam was constructed of waste rock that was dumped into the water at angle of repose.

The TSF is currently inactive, following reclamation which took place from 1992 to 1999. Closure activities for the TSF generally included re-grading of the coarse tailings to cover the fine tailings and keep them saturated, flattening and vegetating the slopes of the coarse tailings, and construction of several surface water collection drains. All contact water from the East Kemptville TSF is directed into the Buffer Pond, prior to treatment at the water treatment plant, and subsequently discharged into the pit lake, before being routed through a series of sedimentation and polishing ponds before being released to the environment. A monitoring program will continue to assess the performance of the TSF including review of instrumentation and water quality data.

Current activities are focused collecting and treating the acidic seepage and runoff mainly from the piles of coarse tailings, low-grade ore, and waste rock prior to discharging to the environment. Lime treatment is used to improve pH and reduce metal loading.

East Kemptville Tailings Management Area, 2025

The following table outlines the dams at the East Kemptville TMA:

Name	Embankment Length (metres)	Maximum Crest Height (metres)
North Dam	2,100	6
West Dam	1,050	9
South CTP Dam	500	11.6

1. The South CTP Dam is internal to the TMA and therefore is not reported as the maximum height of the facility.
2. The height of the South CTP Dam is estimated as it is constructed below water.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent review in 2024.

The most recent dam safety review was in 2021. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings or recommendations.	Not applicable.
Dam Safety Review 2021	Some of the assumptions made in the liquefaction assessment of the CTP may require review.	Complete additional site characterisation to consider liquefaction

Review	Material findings	Recommendations
	The post-peak stability assessment of the CTP North Slope and Rockfill Berm requires review.	potential, and an updated stability assessment. *This action is in progress. A geotechnical drill program was completed in 2024, and advanced material characterisation is ongoing. This information will be used to complete follow-up studies, including a liquefaction assessment, that will further assess the stability of select dams and aid in the understanding of the critical failure modes and risk.*

Environmental and social monitoring

Environmental and social monitoring programs are reported to meet BHP and regulatory requirements.

The environmental monitoring program at the site involves the following:

- Collection of surface water from specified regulatory and non-regulatory locations with analysis by independent accredited laboratory.
- Collection of groundwater from specified regulatory and non-regulatory well locations with analysis by an independent accredited laboratory.
- Collection of water from the final effluent spillway for acute lethality (toxicity) testing in conjunction with a full suite of water samples with testing at respective independent accredited laboratories.
- Collection of in-house water samples at locations of interest and measured for pH with a field pH meter and zinc concentrations with the in-house Atomic Absorption (AA) Spectrometer.

The table below presents the outcomes of the most recent round of environmental monitoring:

Area	Summary	Mitigations
Environmental Monitoring (most recent completed in 2023, and 2024 analysis is being finalised)	There is no evidence in the surface or groundwater monitoring results to suggest that there is increasing impact to the environment or that overall water quality has significantly changed or worsened in Big Meadow Brook or the East Tusket River.	No mitigation required at this time.
	Water and sediment quality within the East Tusket River is very similar upstream and downstream of mine influences. As for the Big Meadow Brook, results of toxicity testing conducted in 2015 suggested water quality downstream of the mine discharge was improved relative to upstream, and the observations concentrations in 2023 are consistent with those observed in 2015.	No mitigation required at this time.
	The treatment system performed well throughout the year, with all regulatory samples collected at the final effluent spillway in 2023 within permitted values.	No mitigation required at this time.

A stakeholder engagement and social investment plan has been developed for BHP's closed sites in Canada. Engagement is informed by BHP policy, the known interests of the communities where we operate, and regulatory requirements. Indigenous groups, local governments, non-governmental and community groups are engaged annually (or as required) to provide an update on environmental monitoring and reporting such as water quality, projects and infrastructure works such as dam improvements, and ongoing site maintenance such as road works. The most recent Community and Human Rights Study was complete in 2023 and did not find any mitigations

required at this time. Furthermore, no concerns or complaints from any individuals or the community at large were received in 2024.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), will respond to the emergency, depending on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene, protect life, the environment and property, and prevent further escalation of the event, and draws on the IMT for subject-matter expertise and tactical support.
- IMT undertakes the operational level response; manages the safety of people, environment, and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. If the event is escalated, the EMT will be activated for strategic support as necessary.
- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.
- CMT manages the strategic organisational/ corporate level response and provides support to an EMT when an event impacts: multiple assets within a region; multiple regions; reaches a defined severity level; or has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2021	2028
ITRB	2024	2026

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Lacnor Tailings Management Area

Facility location	Elliot Lake Tailings Management Areas, Ontario, Canada
Classification	Low

Facility description

The Lacnor tailings management area (TMA) is located approximately 5 kilometres north-east of Elliot Lake, Ontario, Canada. Lacnor mine operated from 1957 to 1960. The mine was rehabilitated in 1994. During operations, uranium tailings were deposited in the Lacnor TMA, which is now under active care and maintenance.

The Lacnor TMA is a dry vegetated storage facility and consists of a single tailings holding area contained by the natural topography of the site and by two rockfill embankments. A series of ditches on the tailings surface directs flows to a pond at the east end of the TMA. The pond collects runoff from the TMA for treatment and is contained by natural topography and an internal embankment separating it from the deposited tailings. A spillway channel directs flows from the pond to a valley which drains to the Nordic/Buckles TMA. Water is then treated in the Nordic/Buckles effluent treatment plant and discharged to a settling pond to passively flow offsite to Buckles Creek.

Summary information	
BHP site	Elliot Lake Tailings Management Areas
TSF name	Lacnor TMA
Coordinates	46.393, -82.585
Current maximum height	15 metres
Area	31.0 hectares
Stored tailings volume	1.8 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Lacnor TMA is Low based on the Population at Risk, Potential Loss of Life, Environment, Health, Social and Cultural, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for the Lacnor TMA was in 2024. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Extreme flood event
	Blockage of the spillway during a large storm event
	Seismic/static deformation of the crest
Embankment instability	High water pressure in the embankment combined with low strength materials in the embankment
	Earthquake causing instability of the downstream slope or deformation
	External erosion due to concentrated precipitation
	Internal erosion due to high water pressure, poor construction practices, differential settlement, new seepage paths
Foundation failure	Slumping/sliding due to low strength materials in the foundation

This TSF does not trigger the materiality threshold in BHP's risk framework, and is instead managed using the controls in BHP's Tailings and Water Storage Facilities Global Standard.

Impact assessment

The impacts of an embankment failure at the Lacnor TMA were qualitatively assessed in 2023 and reflect the condition of the TMA and surrounding area at that time.

The estimated PAR at the Lacnor TMA is in the low range with none identified, as the breach and outflow area are within an isolated valley limited to the Rio Algom property.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings are not expected to reach beyond Rio Algom property limits.
- Environmental impact: Potential release of uranium and acid generating tailings.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

The Lacnor TMA has two embankments retaining dry-covered tailings. Both dams were constructed with a rock fill downstream zone over the upstream tailings slope and founded on native soil. A summary of the embankment dimensions is provided in the table below.

Embankment	Crest length (metres)	Maximum height (metres)
Dam A	110	15.2
Dam B	104	12.2

Lacnor TMA, 2025

Dam A and B were constructed during operations across two bedrock valleys on the southern perimeter of the TMA. The tailings surface dips gently to the east towards the pond, where water overflows a rock channel into a valley downstream of Dam A and the watershed drains to the north perimeter of the Nordic/Buckles TMA. As part of decommissioning, Dam A and Dam B were upgraded by flattening the downstream slopes of the dams and constructing a toe embankment at each dam to improve stability and drainage.

Closure activities began at the Lacnor TMA in 1994 with the ultimate embankment configurations achieved in 1999. Runoff from the Lacnor TMA is directed into the Lacnor Pond, prior to treatment at the Nordic/Buckles ETP, and subsequently discharged into a settling pond and is then released to the environment. A monitoring program will

continue to assess the performance of the TMA including a review of instrumentation, seepage and water quality data.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent completed Dam Safety Review was in 2019. A Dam Safety Review was initiated in 2024, and material findings from that review, if any, will be included in the next disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Inspection 2024	No material findings or recommendations.	No material findings or recommendations.
Dam Safety Review 2019	No material findings or recommendations.	No material findings or recommendations.

Environmental and social monitoring

Environmental and social monitoring programs are reported to meet BHP and regulatory requirements. Annual monitoring of groundwater at the Lacnor TMA has been ongoing since 2006.

The outcomes of the most recent round of environmental monitoring are presented in the table below.

Area	Summary	Mitigations
Tailings Management Area Operational Monitoring Program for 2015-2019	Water quality has improved significantly over time, with decreasing trends observed for most parameters since 2003.	No mitigations required at this time.

A Stakeholder Engagement and Social Investment Plan (SESIP) has been developed for all closed sites in Canada. Engagement at Elliot Lake is driven by BHP policy, the known interests of the communities where we operate, our Canadian Nuclear Safety Commission licence and regulatory requirements. At Elliot Lake, we engage annually, or as needed, with Indigenous groups, local governments, non-governmental and community groups to update them on all work taking place on our sites and discuss any issues of concern This includes sharing information on environmental monitoring and reporting such as water quality, projects and infrastructure works such as dam improvements, and ongoing site maintenance such as road works. With community requests to access closed mining sites for recreational activities, BHP works with community groups in the Elliot Lake area on projects related to stewardship, community recreation and tourism.

Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), will respond to the emergency, depending on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene, protect life, the environment and property, and prevent further escalation of the event, and draws on the IMT for subject-matter expertise and tactical support.
- IMT undertakes the operational level response; manages the safety of people, environment, and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. If the event is escalated, the EMT will be activated for strategic support as necessary.

- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.
- CMT manages the strategic organisational/corporate level response and provides support to an EMT when an event impacts: multiple assets within a region; multiple regions; reaches a defined severity level; or has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2024	2034
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Milliken Tailings Management Area

Facility location	Elliot Lake Tailings Management Areas, Ontario, Canada
Classification	High

Facility description

The Milliken tailings management area (TMA) is located 2 kilometres north-east of the City of Elliot Lake, south of Milliken Mine Road in an area locally referred to as the Sheriff Creek Wildlife Sanctuary. The Milliken Mine and mill operated from 1958 to 1964 and directed 5.7 million tonnes of tailings to the Stanleigh TMA. The Milliken TMA is a water-covered storage facility and consists of a single holding area retained by an embankment. The tailings are covered in fill. The area has been developed into a wetland habitat (Sheriff Creek Wildlife Sanctuary).

Upstream of the Milliken TMA, the Sheriff Lake water level is managed by a concrete dam and spillway as well as two embankments during high water flows. Sheriff Creek (downstream of the Stanleigh TMA) is diverted around Sheriff Lake by a diversion channel to connect to the original creek downstream of Sheriff Lake. Within the Milliken TMA watershed, a historically impacted area from the Lacnor mine is contained by an embankment and maintained as a wetland.

Summary information	
BHP site	Elliot Lake Tailings Management Areas
TSF name	Milliken TMA
Coordinates	46.400, -82.647
Current maximum height	2 metres
Area	23 hectares
Stored tailings volume	0.05 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Milliken TMA is High based on the Environment, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for the Milliken TMA was in 2024. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Extreme flood event
	Blockage of the spillway during a large storm event,
	Upstream failure (Stanleigh Dam A or A1)
	Slumping/ settlement of dam crest due to deterioration of beaver dam in the foundation
Embankment Instability	Internal erosion due to material incompatibility, differential settlement and/or elevated high water pressures in the embankment
	Slumping/sliding due to undetected weak layer in embankment with increased water level
	Internal erosion due to high water pressure, poor construction practices, differential settlement, new seepage paths

Failure mode	Initiating event
Foundation Failure	Slumping/sliding due to low strength materials in the foundation
	Beaver dam in the foundation deteriorates

This TSF does not trigger the materiality threshold in BHP's risk framework, and is instead managed using the controls in BHP's Tailings and Water Storage Facilities Global Standard.

Impact assessment

The impacts of an embankment failure at the Milliken TMA were qualitatively assessed in 2023 and reflect the condition of the TMA and surrounding area at that time.

The estimated PAR at the Milliken TMA is in the significant classification range of 1-10 people, comprising of one person downstream once per month for inspections, and/or possible public use of walking paths and wildlife sanctuary.

A catastrophic tailings release could result in the following impacts:

- Extent of tailings flow: A small volume of tailings mixed with water could be released to Horne Lake and potentially Elliot Lake.
- Environmental impact: Potential release of uranium and acid generating tailings.
- Infrastructure impacted: Potential impact to Elliot Lake water supply, minor damage to power line crossing downstream, damage to Milliken Mine Road and public trails.

Design description

The Milliken TMA has one embankment retaining tailings (Sheriff Creek Park Berm). The Sheriff Creek Park Berm retains both water and tailings within the TMA. The berm is an earth-fill embankment constructed of sand, gravel and rockfill. The berm is equipped with two working spillways and an emergency spillway, and was designed to be overtopped during large storm events. The berm also serves as a walkway through the Sheriff Creek Wildlife Sanctuary.

The site also has two embankments retaining and redirecting water (Sheriff Lake Dam, Sheriff Lake Berm) and another embankment (Lacnor Creek Berm) within the watershed retaining water in a historically impacted area. Key information about the structure at the Milliken TMA is provided in the table below.

Structure	Crest length (metres)	Maximum height (metres)	Retained head at normal water level (metres)
Sheriff Creek Park Berm	457	1.8	1.5

Milliken TMA, 2025

Closure activities began at the Milliken TMA in the 1970s with the construction of the diversion channel and Sheriff Lake Berm at the north end of Sheriff Lake. The Sheriff Lake Dam was constructed in 1983, with upgrades to the south abutment along with the Sheriff Lake Berm being completed in 2010. In 1978, some of the coarser tailings were covered with approximately 1 metre of clean fill. In 1996 the beaver dam at the outlet of the wetlands was reinforced. In 2004/2005, the reinforced beaver dam was constructed into a berm (Sheriff Creek Park Berm); the crest was raised, armoured with coarse rock and an emergency spillway was constructed. The Lacnor Creek Berm was constructed in 2022 to replace the existing beaver dam.

A monitoring program will continue to assess the performance of the TMA including review of seepage and water quality data.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent completed Dam Safety Review was in 2019. A Dam Safety Review was initiated in 2024, and material findings from that review, if any, will be included in the next disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Inspection 2024	No material findings	Not Applicable
Dam Safety Review 2019	No material findings	Not Applicable

Environmental and social monitoring

Environmental and social monitoring programs are reported to meet BHP and regulatory requirements. The outcomes of the last round of environmental monitoring are presented in the table below.

Area	Summary	Mitigations
TMA Operational Monitoring Program for period 2015 to 2019	Since 2015, water samples collected at outlet of the Milliken TMA have met receiving environment benchmarks,	No mitigation required at this time.

Area	Summary	Mitigations
	and loadings have generally remained within the range observed since 2005, or decreased over time.	
Source Area Monitoring Program for period 2015 to 2019	Downstream (i.e., in Sheriff Creek just upstream of Elliot Lake), water quality is consistently lower than (or greater than for pH) SRWMP benchmarks, and has improved significantly over time.	No mitigation required at this time.
Annual Operational Care and Maintenance Report for calendar year 2024	Average concentrations indicate that all parameters are below receiving environment assessment criteria as applied to wetland water quality.	No mitigation required at this time

A Stakeholder Engagement and Social Investment Plan (SESIP) has been developed for all closed sites in Canada. Engagement at Elliot Lake is driven by BHP policy, the known interests of the communities where we operate, our Canadian Nuclear Safety Commission licence and regulatory requirements. At Elliot Lake, we engage annually, or as needed, with Indigenous groups, local governments, non-governmental and community groups to update them on all work taking place on our sites and discuss any issues of concern. This includes sharing information on environmental monitoring and reporting such as water quality, projects and infrastructure works such as dam improvements, and ongoing site maintenance such as road works. With community requests to access closed mining sites for recreational activities, BHP works with community groups in the Elliot Lake area on projects related to stewardship, community recreation and tourism.

Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), will respond to the emergency, depending on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene, protect life, the environment and property, and prevent further escalation of the event, and draws on the IMT for subject-matter expertise and tactical support.
- IMT undertakes the operational level response; manages the safety of people, environment, and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. If the event is escalated, the EMT will be activated for strategic support as necessary.
- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.
- CMT manages the strategic organisational/ corporate level response and provides support to an EMT when an event impacts: multiple assets within a region; multiple regions; reaches a defined severity level; or has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2024	2031
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Nordic Tailings Management Area

Facility location	Elliot Lake Tailings Management Areas, Ontario, Canada
Classification	Significant

Facility description

The Nordic/Buckles tailings management area (TMA) is located approximately 8 kilometres east of Elliot Lake, Ontario, Canada. Nordic Mine operated from 1957 to 1968. The areas were rehabilitated from the late 1980s and into the 1990s. During operations, uranium tailings were deposited in the Nordic/Buckles TMA, which is now under active care and maintenance.

The Nordic/Buckles TMA is a dry vegetated storage facility and comprises two tailings holding areas divided by an embankment. Historically impacted areas and seepage collection ponds are managed by several small containment embankments. Most of the tailings are stored in the east tailings area which is contained by the natural topography of the site and four rockfill embankments. Surface runoff and seepage from the east tailings area is collected in a drainage line that runs along the toe of the embankments to the effluent treatment plant. The remaining tailings are stored in the west tailings area which is contained by the natural topography of the site, and a sand and gravel embankment. Surface runoff and seepage from the west tailings area is directed to a water collection pond retained by a sand and gravel embankment that is pumped to the effluent treatment plant. Seepage is collected from the west tailings area into two seepage collection ponds, and water is pumped to the effluent treatment plant and settling pond. Water treated in the effluent treatment plant is then discharged to the settling pond to passively flow off site.

Summary information	
BHP site	Elliot Lake Tailings Management Areas
TSF name	Nordic/Buckles TMA
Coordinates	46.382, -82.607
Current maximum height	12 metres
Area	114 hectares
Stored tailings volume	8.0 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Nordic/Buckles TMA is Significant based on the Population at Risk, Environment, Health, Social, and Cultural, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for the Nordic/Buckles TMA was in 2024. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Extreme storm event
	Spillway blockage with debris from beaver activity or large storm event (Dam A, Dam B)
Embankment instability	Slumping/sliding due to high water pressure in the embankment combined with low strength materials in the embankment
	Seismic event leads to deep seated downstream slope failure

Failure mode	Initiating event
	Internal erosion due to high water pressure, poor construction practices, differential settlement, new seepage paths
	External erosion due to concentrated surface water flow,
Foundation failure	Slumping/sliding due to low strength/liquefiable materials (Dam C only)

This TSF does not trigger the materiality threshold in BHP's risk framework, and is instead managed using the controls in BHP's Tailings and Water Storage Facilities Global Standard.

Impact assessment

The impacts of an embankment failure at the Nordic/Buckles TMA were assessed in 2023 and reflect the condition of the TMA and surrounding area at that time. Failure impact assessments were carried out for the embankment retaining the contact water pond (Dam A) and included scenarios of cascading failure of the downstream embankment to understand the range of consequences to the surrounding areas.

The estimated PAR at the Nordic/Buckles TMA is in the significant classification range of 1-10 people, comprising workers at the effluent treatment plant, and users of the nearby highway and roads.

A catastrophic release could result in the following impacts:

- Extent of Tailings flow: Majority of tailings are not expected to reach beyond Rio Algom property limits; some tailings mixed in water (suspended solids) could flow offsite to Horne Lake, and possibly Elliot Lake.
- Environmental impact: Potential release of uranium and acid generating tailings.
- Infrastructure impacted: Erosion of Ski Hill Rd. and culvert, Highway 108 could be blocked.

Design description

Nordic/Buckles TMA has five embankments retaining tailings (Dam B, C, D, E, and F), one embankment managing the runoff from the TMA (Dam A) and seven embankments managing onsite contact water and freshwater (ESCP Dam, WSCP Dam, Coffer Pond Berm, Nordic Settling Pond Berm, Westner Lake Outlet Berm, Ryan Lake Outlet Berm, Buckles Diversion Berm, Buckles Wetland Berm, HPP Berm).

Dam B retains dry-covered tailings in the West Arm, while Dams C, D, E, and F retain dry-covered tailings in the Nordic Main Basin. Dam A retains contact water runoff and seepage from the West Arm tailings area prior to treatment at the effluent treatment plant.

All the TMA dams were constructed during mining operations, and there are no known records of their original design and construction. During decommissioning, the TMA dams were upgraded by widening the dam crests, flattening the slopes and adding rockfill toe berms. From the design and as-built reports of upgrade construction, it was found that the original embankments of Dams C, D, E were constructed with rockfill and founded on bedrock or original till, and Dam F was constructed with rockfill on top of a thick layer of granular overburden. Dams A and B were constructed with sand and gravel material. Dams A and F have been equipped with emergency spillways, consisting of concrete broad crested weirs.

Key information about the structures at Nordic/Buckles TMA embankments are provided in the table below.

Structure	Crest length (metres)	Maximum height (metres)
Dam B	61	3.0
Dam C	183	10.0
Dam D	61	8.5
Dam E	213	10.0
Dam F	915	12.2

Nordic/Buckles TMA, 2025

Closure activities began at the Nordic/Buckles TMA in 1972 with the ultimate configuration of all TMA embankments achieved between 1997 and 2000. Runoff from the Nordic Main Basin and West Arm is directed into the effluent treatment plant; after treatment it is then released into a settling pond before discharge into Buckles Creek. A monitoring program will continue to assess the performance of the TMA including review of instrumentation, seepage and water quality data.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent completed Dam Safety Review was in 2019. A Dam Safety Review was initiated in 2024, and material findings from that review, if any, will be included in the next disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Inspection 2024	Upgrade Pond A infrastructure to replace aging infrastructure as well as retain the winter EDF within Pond A without siphoning to the WSCP.	Geotechnical investigation and pumphouse design initiated in 2023. *This action is in progress*
Dam Safety Review 2019	No material findings.	Not applicable.

Environmental and social monitoring

Environmental and social monitoring programs are reported to meet BHP and regulatory requirements. Annual monitoring of both pore water and groundwater at the Nordic TMA have been ongoing since 2006. Groundwater chemistry monitored within the West Arm of the Nordic TMA is generally stable to improving over time but remains acidic with elevated concentrations of sulphate and iron.

The outcomes of the most recent round of environmental monitoring are presented in the table below.

Area	Summary	Mitigations
Tailings Management Area Operational Monitoring Program for 2015-2019	Surface water quality has generally shown little change over time.	No mitigation required at this time.
Source Area Monitoring Program for 2015-2019	Effluent treatment has performed well, with discharge achieving effluent limits at the final release from site.	No mitigation required at this time.
Annual Groundwater Monitoring Program for 2024	Groundwater downgradient of the TMA was generally improving over time. However, tailings-influenced groundwater has intersected the well nests located east of Dam F and south of Dam E as indicated by decreasing water quality.	Increased frequency of sampling at the 95N-,M13-, and M14- series wells was continued to in 2025 to establish groundwater quality trends in the area downgradient of Dams E and F.
Annual Operational Care and Maintenance Report for 2024	Nordic effluent at the final point of control (N-19), was in compliance with discharge criteria.	No mitigation required at this time.

A Stakeholder Engagement and Social Investment Plan (SESIP) has been developed for all closed sites in Canada. Engagement at Elliot Lake is driven by BHP policy, the known interests of the communities where we operate, our Canadian Nuclear Safety Commission licence and regulatory requirements. At Elliot Lake, we engage annually, or as needed, with Indigenous groups, local governments, non-governmental and community groups to update them on all work taking place on our sites and discuss any issues of concern. This includes sharing information on environmental monitoring and reporting such as water quality, projects and infrastructure works such as dam improvements, and ongoing site maintenance such as road works. With community requests to access closed mining sites for recreational activities, BHP works with community groups in the Elliot Lake area on projects related to stewardship, community recreation and tourism.

Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), will respond to the emergency, depending on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene, protect life, the environment and property, and prevent further escalation of the event, and draws on the IMT for subject-matter expertise and tactical support.
- IMT undertakes the operational level response; manages the safety of people, environment, and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. If the event is escalated, the EMT will be activated for strategic support as necessary.
- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.
- CMT manages the strategic organisational/corporate level response and provides support to an EMT when an event impacts: multiple assets within a region; multiple regions; reaches a defined severity level; or has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2024	2034
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Panel Tailings Management Area

Facility location	Elliot Lake Tailings Management Areas, Ontario, Canada
Classification	High

Facility description

The Panel tailings management area (TMA) is located 19 kilometres north-east of the City of Elliot Lake, immediately north of Quirke Lake. The Panel Mine operated from 1958 to 1961, then reactivated and operated from 1978 to 1990. During operations, uranium tailings were deposited in the Panel TMA, which is now under active care and maintenance. Rehabilitation of the TMA was completed throughout the 1990s.

The Panel TMA comprises two water-covered storage basins connected by a rock-cut spillway channel. The Main Basin is retained by four perimeter embankments separated by bedrock ridges. The Main Basin overflows through a rock-cut spillway channel into the South Basin, which acts as a clarification pond and is retained by two perimeter embankments. Water from the South Basin is batch treated in the effluent treatment plant and discharged into settling ponds. The treated effluent eventually reports to Quirke Lake. A historically impacted area, downstream of the South Basin, is managed by a containment embankment (Pond C). There are two freshwater diversion systems located north and west of the Main Basin. The north diversion consists of three small embankments and a diversion channel that diverts water to Rochester Creek away from the TMA. The south diversion consists of a diversion channel that diverts water to Panel Creek and Quirke Lake.

Summary information	
BHP site	Elliot Lake Tailings Management Areas
TSF name	Panel Tailings Management Area
Coordinates	46.524, -82.552
Current maximum height	23 metres
Area	131 hectares
Stored tailings volume	11 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Panel TMA is High based on the Environment, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for the Panel TMA was in 2024. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Extreme storm event
	Static slumping/settlement of dam crest
	Spillway/channel blockage with debris from beaver activity or large storm event
	Inappropriate water management
	Rockfall into main dam spillway
	Seismic deformation of dam crest
	Wave action causing erosion of upstream face and crest

Failure mode	Initiating event
	External erosion of the downstream face and crest
Embankment Instability	Seismic event leads to deep seated downstream slope failure
	Undetected weak layer in compacted tailings in upstream shell and rapid rise in water level triggers static liquefaction
	Internal erosion due to material incompatibility, differential settlement, high water pressures in embankment and/or filter dislocation/cracked core caused by seismic induced deformation
	Internal erosion due to poor construction practices, quality control or frost cracking, or preferential flow path in foundation
	Internal erosion due to root paths, animal burrows or flow along decommissioned decant pipe (Dam D)
	High water pressure in embankment caused by filter blockage
Foundation Failure	Slumping/sliding due to low strength materials in the foundation
	Undetected loose layer in the foundation liquefies during an earthquake
	Differential settlement of foundation materials leading to arching

This TSF does not trigger the materiality threshold in BHP's risk framework, and is instead managed using the controls in BHP's Tailings and Water Storage Facilities Global Standard.

Impact assessment

The impacts of an embankment failure at the Panel TMA were assessed in 2023 and reflect the condition of the TMA and surrounds at that time. Failure impact assessments were carried out for the embankments retaining both the Main Basin and the South basin to understand the range of consequences to the surrounding areas.

The estimated PAR at the Panel TMA is in the significant range of 1-10 people, comprising workers at the treatment plant.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings mixed with water could flow to Quirke Lake and/or Rochester Creek, Rochester Lake, Geiger Lake.
- Environmental impact: Potential release of uranium and acid generating tailings.
- Infrastructure impacted: Damage to access roads, treatment plant and power supply, potential damage to private property on Rochester Creek.

Design description

The Panel TMA consisting of the Main Basin and the South Basin has six embankments retaining tailings (Dams A, B, D, E, F, and H) and four embankments managing historically impacted areas, onsite contact water and freshwater (Pond C Berm, Dam K, Berm W1/W2, and Berm W3).

Dams B, D, E and H provide containment of tailings and the water cover at the Main Basin and Dams A and F provide containment of tailings and water cover at the South Basin. These dams are zoned earth fill embankments with a till core, filter zones and sand and gravel shells. The till core in Dams A and F are supplemented by a vertical reinforced concrete cut-off wall which is lined with a Hypalon membrane on the upstream side. In addition to the till core, for Dams B and D, the initial construction incorporated a Hypalon membrane secured to a concrete anchor beam formed on bedrock. Dams A, D, E, F and H are founded on bedrock. Dam B is founded on both bedrock and granular overburden.

Key information about the structures at Panel TMA is provided in the table below.

Structure	Crest length (metres)	Maximum height (metres)	Retained head at normal water level (metres)
Dam A	183	10	8.2
Dam B	203	20	18.3
Dam D	98	23	21.3
Dam E	335	11	9.1
Dam F	247	5	4.0
Dam H	101	8	6.1

Panel Tailings Management Area, 2025

Closure activities began at the Panel TMA in 1989 with the ultimate crest heights of all Panel TMA embankments achieved between 1989 and 1992. Two spillways were constructed during closure activities to manage stormwater (one east of Dam D leading from the Main Basin into the South Basin and another by Dam F at the southern end of the South Basin). Water is batch treated in the Panel TMA effluent treatment plant and discharged into the settling ponds below Dam F. The treated water is discharged to the environment where it eventually reaches Quirke Lake. A monitoring program will continue to assess the performance of the TMA including review of instrumentation, seepage and water quality data.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent completed Dam Safety Review was in 2019. A Dam Safety Review was initiated in 2024, and material findings from that review, if any, will be included in the next disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Inspection 2024	Review operating water levels in the South Basin as it appears insufficient storage is available for the EDF, or it could be the result of survey discrepancy.	Continue evaluating options to restore storage of the EDF or alter South Basin design basis. *This action is in progress*

Review	Material findings	Recommendations
	Available freeboard for Dams A and F do not meet minimum environmental design storm requirements.	Investigate alternatives to reinstate the required freeboard for Dam A and Dam F (i.e., lower south basin spillway or increase crest elevation). *This action is in progress*
Dam Safety Review 2019	Select structures have no previous stability analysis completed.	Complete stability analyses for structures that have not yet been assessed. *This action is in progress*
	It appears that the EDF would not be properly contained at the South Basin.	The EOR should route the EDF using the latest hydrologic model to assess the ability of the facility to contain the EDF volume. *This action is in progress*

Environmental and social monitoring

Environmental and social monitoring programs are reported to meet BHP and regulatory requirements. The outcomes of the last round of environmental monitoring are presented in the table below.

Area	Summary	Mitigations
TMA Operational Monitoring Program for period 2015 to 2019	Since decommissioning, water quality has improved and is approaching levels consistent with post decommissioning predictions.	No mitigation required at this time.
Source Area Monitoring Program for period 2015 to 2019	Water treatment remains effective at maintaining effluent concentrations below discharge criteria.	No mitigation required at this time.
Annual Operational Care and Maintenance Report for calendar year 2024	Panel effluent at the final point of control (P-14) remained in compliance with discharge criteria.	No mitigation required at this time.
Annual Groundwater Monitoring Report 2024	All Panel monitoring stations have exhibited circumneutral pH for over a decade, with acidity concentrations below the Laboratory Reporting Limit since monitoring began. Iron concentrations at P-20 and P-16A have been relatively stable since the early 2000's, with concentrations of iron at P-31 showing a statistically significant increasing trend since 2007. Iron concentrations have been increasing gradually at P-31 since 2007. However, the concentrations have remained within the target range with some relatively minor fluctuations between 0.25 and 0.42 mg/L between 2019 to 2023 and decreased by an order of magnitude to 0.079 mg/L in 2024.	No mitigation required at this time.

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annually, or as needed, with Indigenous groups, local governments, non-governmental and community groups to update them on all work taking place on our sites and discuss any issues of concern. This includes sharing information on environmental monitoring and reporting such as water quality, projects and infrastructure works such as dam improvements, and ongoing site maintenance such as road works. With community requests to access closed mining sites for recreational activities, BHP works with community groups in the Elliot Lake area on projects related to stewardship, community recreation and tourism.

Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), will respond to the emergency, depending on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene, protect life, the environment and property, and prevent further escalation of the event, and draws on the IMT for subject-matter expertise and tactical support.
- IMT undertakes the operational level response; manages the safety of people, environment, and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. If the event is escalated, the EMT will be activated for strategic support as necessary.
- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.
- CMT manages the strategic organisational/ corporate level response and provides support to an EMT when an event impacts: multiple assets within a region; multiple regions; reaches a defined severity level; or has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2024	2031
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Pronto Tailings Management Area

Facility location	Elliot Lake Tailings Management Areas, Ontario, Canada
Classification	Very High

Facility description

The Pronto tailings management area (TMA) is located approximately 20 kilometres south-west of Elliot Lake and 22 kilometres east of Blind River, Ontario, Canada. The TMA is within the traditional territory of the Anishinabek. Pronto mine operated from 1955 to 1970. The mine was closed and decommissioned from 1997 to 2000. During operations, uranium and copper tailings were deposited in the Pronto TMA, which is now under care and maintenance.

The Pronto TMA is a dry vegetated storage facility and consists of two tailings holding areas divided by an internal embankment, three water ponds and an upstream freshwater diversion. Most of the tailings are stored in the east tailings area which is contained by natural topography and a rock embankment with a maximum height of 13 metres. The remaining tailings are stored in the west tailings area which is contained by the natural topography of the site. Two spillways direct the flow from each tailings holding area downhill to a water pond for treatment. Water is treated in the effluent treatment plant then discharged to a series of ponds to passively flow offsite. The holding pond collects runoff from the TMA for treatment, as well as treatment solids and tailings. The holding pond is south of the TMA and contained by the Causeway Dam at the west end.

Summary information	
BHP site	Elliot Lake Tailings Management Areas
TSF name	Pronto TMA
Coordinates	46.200, -82.700
Current maximum height	13 metres
Area	47 hectares
Stored tailings volume	3 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Pronto TMA is Very High based on the Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for the Pronto TMA was in 2024 and focused on the highest consequence embankment (Causeway Dam) as a representative structure of the Pronto TMA. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Overtopping during an extreme flood event, or from blockage of the spillway during a large storm event
Embankment instability	Slumping/sliding due to high water pressure in the embankment, low strength materials in the embankment
	Earthquake causing instability of the downstream slope or deformation
	Internal erosion due to high water pressure, poor construction practices, differential settlement, shortening of seepage paths (i.e. from tree roots, animal burrows, frost cracks)

Failure mode	Initiating event
	External erosion from wave action, vehicle traffic or other causes
	Sabotage from explosives or excavation
Foundation failure	Slumping/sliding due to low strength materials in the foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design integrity (preventative)
- Operations, maintenance and surveillance activities (preventative)
- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of an embankment failure at the Pronto TMA were assessed in 2023 and reflect the condition of the TMA and surrounds at that time. Failure impact assessments were carried out for the embankment retaining the upstream contact water pond (Causeway Dam) and included scenarios of cascading failure of the downstream embankments as well as failure of the most downstream embankment (Dam E) to understand the range of consequences to the surrounding areas.

The estimated PAR at the Pronto TMA is in the significant classification range of 1-10 people, comprising workers at the treatment plan, and users of the nearby highway, roads and railway.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings could reach Lake Huron.
- Environmental impact: Potential release of uranium and acid generating tailings.
- Infrastructure impacted: Highway 17 could be blocked, along with the Huron Central Railway.

Design description

Pronto TMA has one embankment retaining tailings (Dam A) and six embankments managing onsite contact and freshwater (Dam D, Dam E, Dam F, Causeway Dam, ETP Diversion Berm and Freshwater Diversion Dam).

Dam A is a rock embankment that retains dry and re-vegetated tailings. The Causeway Dam retains contact water runoff and seepage from the tailings areas prior to treatment at the effluent treatment plant. Dams D, E and F retain treated water in the various water ponds. The ETP Diversion Berm creates a pond to maintain seepage gradients towards the holding pond. Dams A, D and E are constructed of rock or sand and gravel while Dam F has a silt and sand core and rock outer. The Causeway Dam is a zoned earth fill embankment with a silt core, sand, gravel and rock layers. Key information about the structures at Pronto TMA is provided in the table below.

Structure	Crest length (metres)	Maximum height (metres)	Retained head at normal water level (metres)
Dam A	140	13	11.7
Dam D	60	3.5	1.4
Dam E	45	2	1.7
Dam F	75	5	3.7
Causeway Dam	150	10	3.4
ETP Diversion Berm	4	1.5	1.0

Pronto TMA, 2025

Closure activities began at the Pronto TMA in 1997 with the ultimate crest heights of all TMA embankments achieved between 1998 and 1999. Two spillways were constructed during closure activities (one south of Dam A and another at the western end of the west tailings area) to divert runoff from the east and west into a pond prior to treatment at the effluent treatment plant, then released into subsequent ponds before reaching Lake Huron. A monitoring program will continue to assess the performance of the TMA including review of instrumentation, seepage and water quality data.

In future, the seepage and runoff from the TMA may meet environmental criteria for discharge from the site without active treatment. At that stage, the effluent treatment plant could be removed and the Causeway Dam breached to connect the pond to the downstream pond. Furthermore, no active water management would be required. Currently, there is no timeline for the site to be transitioned to this post-closure state as active water treatment continues to be necessary based on current water quality.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent completed dam safety review was in 2019. A Dam Safety Review was initiated in 2024, and material findings from that review, if any, will be included in the next disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	Erosion protection appears to have been removed from Dam E spillway during routine maintenance.	Dam E spillway and embankment to be re-surveyed and compared with design intent and repaired as required. *This action is in progress. Spillway has been re-surveyed, but spillway capacity yet to be confirmed.*
	Crest of Saddle Dam was damaged by Ontario Hydro during nearby powerline maintenance.	Repair Saddle Berm once Ontario Hydro has completed the maintenance on power lines and no longer requires the berm for access. *This action is in progress*
Dam Safety Review 2019	No material findings or recommendations.	No material findings or recommendations.

Environmental and social monitoring

Environmental and social monitoring programs are reported to meet BHP and regulatory requirements. The outcomes of the last round of environmental monitoring are presented in the table below.

Area	Summary	Mitigations
TMA Operational Monitoring Program for period 2015 to 2019	Since 2003, several improvements in Effluent Treatment Plant incoming water quality have occurred, including reductions in concentrations of acidity, cobalt, sulphate and uranium, and an increase in pH, while other constituents such as iron and radium-226 have remained relatively stable	No mitigation required at this time.
Source Area Monitoring Program for period 2015 to 2019	Concentrations of barium, cobalt and uranium have been decreasing since 2003. Since 2003, there has been a slight increase in the concentration of radium-226, although levels remain well below the discharge criterion (0.37 Bq/L) and below the Serpent River Watershed Management Plan benchmark of 0.5 Bq/L.	If concentrations of Ra-226 continue to rise, an investigation into the cause should be conducted.
Annual Operational Care and Maintenance Report for calendar year 2024	Pronto effluent at the final point of control met discharge compliance within calendar year 2024.	No mitigation required at this time.
Annual Groundwater Monitoring Program for calendar year 2024	Annual groundwater monitoring began in 2023. The groundwater quality data collected show that pH is circumneutral and acidity is below laboratory reporting limits. Iron and sulphate are generally low.	As a result of environmental licensing modernisation, a groundwater monitoring program was developed for the Pronto site in 2023.

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Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), will respond to the emergency, depending on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene, protect life, the environment and property, and prevent further escalation of the event, and draws on the IMT for subject-matter expertise and tactical support.

- IMT undertakes the operational level response; manages the safety of people, environment, and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. If the event is escalated, the EMT will be activated for strategic support as necessary.
- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.
- CMT manages the strategic organisational/ corporate level response and provides support to an EMT when an event impacts: multiple assets within a region; multiple regions; reaches a defined severity level; or has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2024	2029
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Quirke Tailings Management Area

Facility location	Elliot Lake Tailings Management Areas, Ontario, Canada
Classification	Very High

Facility description

The Quirke tailings management area (TMA) is located approximately 16 kilometres north of Elliot Lake, Ontario, Canada, and within the traditional territory of the Anishinabek. The Quirke uranium mine was in operation from 1956 to 1961, maintained in an idle state from 1961 to 1968, and in operation from 1968 until closure in 1990. The mine was closed and decommissioned from 1992 to 1996. During operation, uranium tailings were deposited into the Quirke TMA, which is now under active care and maintenance.

The Quirke TMA is a water covered storage basin contained by natural topography and eight perimeter embankments. The TMA is terraced by four internal embankments, dividing the TMA into five cells with a total of 14 metres of elevation change from west to east. Contact water from the TMA is treated at the effluent treatment plant, discharged into a series of settling ponds, before discharging to the Serpent River. A freshwater diversion system at gravel pit lakes allows water to be drawn from the lake into the TMA as needed to maintain the water cover. Freshwater diversions were also constructed at Evans Lake and Lake C to divert freshwater away from the TMA.

Summary information	
BHP site	Elliot Lake Tailings Management Areas
TSF name	Quirke TMA
Coordinates	46.509, -82.657
Current maximum height	26 metres
Area	192 hectares
Stored tailings volume	28 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Quirke TMA is Very High based on the Environment, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for the Quirke TMA was in 2024. It focused on the highest consequence embankments (Dams G1, G2, K1, Main Dam, Dam L, Dyke 14, Dyke 15, Dyke 16 and Dyke 17) as representative structures of the Quirke TMA. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Overtopping during a flood event, from blockage of the spillway during a large storm event, or from spillway blockages from maintenance or snow/ice
Embankment	Slumping/sliding due to high water pressure in the embankment, low strength materials in the embankment
	Earthquake causing instability of the downstream slope or deformation
	Internal erosion due to high water pressure, poor construction practices, differential settlement, shortening of seepage paths (i.e. from tree roots, animal burrows, frost cracks)
	External erosion from wave action, vehicle traffic
	Sabotage from explosives or excavation
Foundation	Slumping/sliding due to low strength materials in the foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design integrity (preventative)
- Operations, maintenance and surveillance activities (preventative)
- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of an embankment failure at the Quirke TMA were assessed in 2023 and reflect the condition of the TMA and the surrounding area at that time. Various embankment failure scenarios were carried out to cover different flow paths and range of consequences from an embankment failure.

The estimated PAR at the Quirke TMA is in the significant classification range of 1-10 people, comprising users of the nearby roads and people undertaking recreational activities in the area.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings could reach up to 10 kilometres downstream of the TMA.
- Environmental impact: Potential loss of fish and wildlife habitat in Serpent River and Quirke Lake.
- Infrastructure impacted: Highway 639 and Panel Mine Road could be blocked.

Design description

The structures at Quirke TMA consist of eight perimeter embankments (Dams G1, G2, I, J, K1, K2, L and Main Dam), four internal embankments (Dykes 14, 15, 16 and 17), two freshwater diversion/ management embankments (Dams H and M), two settling pond embankments (Dams D and E) and one wetland embankment (Dyke Q-23).

All Quirke TMA perimeter embankments consist of a low-permeability clay gravel mix (glacial till) core, downstream filter zone, upstream tailings outer layer, downstream sand and gravel outer layer, erosion protection layers on the upstream and downstream slopes, and a drain at the base. The outer slope ratio is 1 metre vertical to every 2 metres horizontal (1V:2H). A summary of the perimeter and internal embankment dimensions is provided in the table below.

Structure	Crest length (metres)	Maximum height (metres)	Retained head at normal water level (metres)
Main Dam	259	25.9	18.6
Dam G1	212	8.2	6.6
Dam G2	197	4.6	3.2
Dam I	292	7.6	4.0
Dam J	273	11.9	9.5
Dam K1	251	16.8	15.2
Dam K2	197	10.7	9.1
Dam L	650	12.2	10.7
Dyke 14	1280	6.1	3.9
Dyke 15	1224	9.1	4.3
Dyke 16	521	8.2	4
Dyke 17	517	4.9	2.1

The perimeter embankments were constructed during the mine operating periods. The main dam was originally constructed in 1970 and entirely rebuilt between 1989 and 1990. Dams G1, G2, I, J, K1, K2, and L were built between 1980 and 1989. Dam J and Dam L were the only embankments constructed in two stages: Dam J was constructed using the upstream raise method; while Dam L was built using the centreline raise method. During operation, embankments were constructed from waste rock and tailings as a platform for tailings deposition. As the tailings deposition progressed, new embankments were built over tailings and previous embankments were buried.

Quirke TMA, 2025

The internal embankments were upgraded for closure and designed to retain tailings and maintain a flooded water cover over the tailings surface. The internal embankments are zoned earth structures that generally consist of a compacted glacial till cap placed on top of the original embankment crest and slopes, erosion protection zones placed on top of the till cap, and an upstream compacted glacial till blanket to limit seepage through the embankment. Spillways were constructed in each embankment to allow water to flow east from Cell 14 to Cell 18 and the effluent treatment plant and provide conveyance for flood flows during storm events. The tailings surfaces were also regraded to achieve a minimum water cover of 0.6 metres.

The final height of the perimeter embankments was achieved by 1990 with all tailings cells flooded by 1996 following construction of the internal embankments. The ultimate embankment crest heights are designed to maintain a flooded, saturated tailings surface and freeboard (the space between the tailings surface and the embankment crest) required for closure. Water from Cell 18 is allowed to flow into the effluent treatment plant for treatment to remove contaminants and meet the appropriate environmental criteria. Once treated, the water passes through a series of settling ponds to allow treatment precipitates to settle out before the water passively discharges into the Serpent River.

The current configuration of the Quirke TMA water cover and perimeter embankments constitutes the post-closure design. The embankments are assessed as per the monitoring plan for all future credible failure modes.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent completed Dam Safety Review was in 2019. A Dam Safety Review was initiated in 2024, and material findings from that review, if any, will be included in the next disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Inspection 2024	Insufficient freeboard on several embankments.	Investigate methods to reinstate the required freeboard. *This action is in progress*
	The culvert inlets on Dam E have shown signs of corrosion since 2010 and are nearing the end of their service life.	Continue to monitor condition of culverts through Dam E during routine surveillance and plan to replace in near future. *Monitoring has been incorporated into routine inspections and planning to replace culverts has been initiated.*
Dam Safety Review 2019	The liquefaction assessment indicated that there are potential concerns with the stability of the internal embankments.	The EOR should perform a quantitative assessment of potential liquefaction triggers and establish trigger thresholds. Remedial measures for the internal embankment structures located downstream of the embankments should be planned and implemented to address the stability concerns and mitigate the consequences of a potential failure. *These actions are in progress*

Environmental and social monitoring

Environmental and social monitoring programs are reported to meet BHP and regulatory requirements. The outcomes of the most recent round of environmental monitoring are presented in the table below.

Area	Summary	Mitigations
TMA Operational Monitoring Program for period 2015 to 2019	In-basin water quality continues to improve since closure with decreasing trends for mine indicator parameters (or increasing in the case of pH).	No mitigation required at this time.
Source Area Monitoring Program for period 2015 to 2019	Treated effluent from the facility has consistently achieved discharge criteria.	No mitigation required at this time.

Area	Summary	Mitigations
Serpent River Watershed Monitoring Program (SRWMP) for period 2015 to 2019	In the Quirke Lake sub-watershed receiving environment, water quality typically met SRWMP benchmarks over the 2015 to 2019 period. Water quality within the Quirke Lake sub-watershed has generally improved since 2003.	No mitigation required at this time.
Annual Groundwater Monitoring Program for calendar year 2024	No appreciable change in seepage from the perimeter embankments has been observed during the last five years. Porewater chemistry – overall, acidity, iron, and sulphate concentrations have been stable or decreasing over time at all monitoring stations, reflecting the continued and ongoing improvement in water quality within the TMA. Groundwater quality downgradient of the Main Dam, Dam G2 and Dam K1 have been stable or improving pH and decreasing concentrations of acidity, sulphate and iron.	No mitigation required at this time.
Annual Operational Care and Maintenance Report for calendar year 2024	Quirke effluent at the final point of control (Q-28) met discharge compliance within calendar year 2024.	No mitigation required at this time.

A Stakeholder Engagement and Social Investment Plan (SESIP) has been developed for all closed sites in Canada. Engagement at Elliot Lake is driven by BHP policy, the known interests of the communities where we operate, our Canadian Nuclear Safety Commission licence and regulatory requirements. We engage annually, or as needed, with Indigenous groups, local governments, non-governmental and community groups to update them on all work taking place on our sites and discuss any issues of concern. This includes sharing information on environmental monitoring and reporting such as water quality, projects and infrastructure works such as dam improvements, and ongoing site maintenance such as road works. With community requests to access closed mining sites for recreational activities, BHP works with community groups in the Elliot Lake area on projects related to stewardship, community recreation and tourism.

Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to the release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), are involved in responding to the emergency dependent on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene; protect life, the environment and property; and prevent further escalation of the event and draws on the IMT for subject-matter expertise and tactical support.
- IMT undertakes the operational level response; manages the safety of people, environment, and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. If the event is escalated, the EMT will be activated for strategic support as necessary.
- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.

- CMT manages the strategic organisational/ corporate level response and provide support to an EMT when an event impacts: multiple assets within a region; multiple regions; reaches a defined severity level; or has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2024	2029
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Spanish American Tailings Management Area

Facility location	Elliot Lake Tailings Management Areas, Ontario, Canada
Classification	Low

Facility description

The Spanish American tailings management area (TMA) is located 10 kilometres north-east of the City of Elliot Lake, north of Stanrock Road on the south shore of Quirke Lake. The Spanish American mill operated from 1958 to 1959. During operations, uranium tailings were deposited in the Spanish American TMA, which is now under active care and maintenance.

The Spanish American TMA consists of a single storage basin with two embankments located at the western outlet that contain the tailings and water cover. There is no effluent treatment plant at the Spanish American TMA. Drainage from the watershed passes through a spillway located on one of the embankments and drains to the Denison TMA-1 (owned by Denison Mines Inc.) where it is treated before it is released to the environment.

Summary information	
BHP site	Elliot Lake Tailings Management Areas
TSF name	Spanish American TMA
Coordinates	46.472, -82.602
Current maximum height	2.0 metres
Area	12.0 hectares
Stored tailings volume	0.30 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Spanish American TMA is Low across all assessment criteria.

Summary of risk assessment

The most recent FMA for the Spanish American TMA was in 2024. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Extreme storm event
	Spillway blockage with debris from beaver activity
	Wave action causing erosion of upstream face and crest
	External erosion of the downstream face and crest
Internal Erosion	Internal erosion through foundation
	Internal erosion through embankment
	Differential settlement of foundation materials
Embankment instability	Seismic event
	Undetected weak layer in till core

This TSF does not trigger the materiality threshold in BHP's risk framework, and is instead managed using the controls in BHP's Tailings and Water Storage Facilities Global Standard.

Impact assessment

The impacts of an embankment failure at the Spanish American TMA were qualitatively assessed in 2023. Failure impact assessments were completed for both outlet embankments and included failure of the embankments to understand the range of consequences to the surrounding areas.

The estimated PAR at the Spanish American TMA is in the low range with none identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings mixed with water could reach Denison TMA-1 and would be contained within the TMA.
- Environmental impact: Potential release of uranium and acid generating tailings to downstream flow path between Spanish American TMA and Denison TMA-1.
- Infrastructure impacted: No public infrastructure impacted, minimal damage to infrastructure on site.

Design description

The Spanish American TMA has two embankments (North Outlet Berm and South Outlet Berm) retaining tailings and the water cover.

Both the North and South Outlet Berms are zoned earth fill embankments with a central till core and a cobble and boulder shell and are founded on bedrock. A spillway is located on the South Outlet Berm. The embankments were designed as overflow structures.

Key information about the structures at the Spanish American TMA is provided in the table below.

Structure	Crest length (metres)	Maximum height (metres)	Retained head at normal water level (metres)
South Outlet Berm	24	1.8	1.1
North Outlet Berm	24	1.8	0.8

Spanish American TMA, 2025

Closure activities began at the Spanish American TMA in 1989 with the current outlet embankment being built in 1994 and the spillway located at the South Outlet Berm. Approximately 90,000 cubic metres of tailings was relocated from the eastern end to the western end of the TMA.

A monitoring program will continue to assess the performance of the TMA including ongoing reviews of water quality data.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent completed Dam Safety Review was in 2019. A Dam Safety Review was initiated in 2024, and material findings from that review, if any, will be included in the next disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Inspection 2024	No material findings.	Not Applicable.
Dam Safety Review 2019	No material findings.	Not Applicable.

Environmental and social monitoring

Environmental and social monitoring programs are reported to meet BHP and regulatory requirements. The outcomes of the last round of environmental monitoring are presented in the table below.

Area	Summary	Mitigations
TMA Operational Monitoring Program for period 2015 to 2019	Since 2003, surface water quality within the Spanish-American TMA has improved.	No mitigation required at this time.
Annual Operational Care and Maintenance Report for calendar year 2024	Review of annual average concentrations over the last five years indicate all parameters consistently meet receiving environment assessment criteria, except for radium. The Spanish American TMA discharges to the Denison TMA with the discharge flow path remaining within CNSC licensed boundaries.	No mitigation required at this time.

A Stakeholder Engagement and Social Investment Plan (SESIP) has been developed for all closed sites in Canada. Engagement at Elliot Lake is driven by BHP policy, the known interests of the communities where we operate, our Canadian Nuclear Safety Commission licence and regulatory requirements. At Elliot Lake, we engage annually, or as needed, with Indigenous groups, local governments, non-governmental and community groups to update them on all work taking place on our sites and discuss any issues of concern. This includes sharing information on environmental monitoring and reporting such as water quality, projects and infrastructure works such as dam improvements, and ongoing site maintenance such as road works. With community requests to access closed mining sites for recreational activities, BHP works with community groups in the Elliot Lake area on projects related to stewardship, community recreation and tourism.

Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), will respond to the emergency, depending on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene, protect life, the environment and property, and prevent further escalation of the event, and draws on the IMT for subject-matter expertise and tactical support.
- IMT undertakes the operational level response; manages the safety of people, environment, and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. If the event is escalated, the EMT will be activated for strategic support as necessary.
- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.
- CMT manages the strategic organisational/ corporate level response and provides support to an EMT when an event impacts: multiple assets within a region; multiple regions; reaches a defined severity level; or has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2024	2034
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Stanleigh Tailings Management Area

Facility location	Elliot Lake Tailings Management Areas, Ontario, Canada
Classification	Very High

Facility description

The Stanleigh tailings management area (TMA) is located approximately 3 kilometres north-east of Elliot Lake, Ontario, Canada, within the former Crotch Lake, and within the traditional territory of the Anishinabek. Stanleigh mine operated from 1956 to 1964, was reactivated in 1983 and ceased operations in 1996. The mine was closed and decommissioned from 1997 to 2000. Throughout operations, uranium tailings were deposited in the Stanleigh TMA which is now under active care and maintenance.

The Stanleigh TMA is a water covered storage basin contained by natural topography and five perimeter embankments. Water from the TMA is treated at an effluent treatment plant and discharged into a settling pond before being released to McCabe Lake. The settling pond is retained by natural topography and an embankment. The TMA and the settling pond have emergency spillways to divert large storm events toward McCabe Lake. Select freshwater catchment areas are diverted away from the Stanleigh TMA by five diversion dams.

Summary information	
BHP site	Elliot Lake Tailings Management Areas
TSF name	Stanleigh TMA
Coordinates	46.448, -82.599
Current maximum height	23 metres
Area	370 hectares
Stored tailings volume	13 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Stanleigh TMA is Very High based on the Environment, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for the Stanleigh TMA was in 2024. This focused on the highest consequence perimeter embankment (Dam A) as a representative structure of the Stanleigh TMA. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Embankment instability	Slumping/sliding due to a high-water pressure in the embankment, low strength materials in the embankment
	Embankment instability (seismic)
	Liquefaction of tailings in the upstream basin or deformation causing the crest to settle below the water level
	Internal erosion through embankment
	Sabotage from explosives or excavation
Foundation failure	Slumping/sliding due to low strength materials in the foundation
Overtopping	Overtopping of the lower structures

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design integrity (preventative)
- Operations, maintenance and surveillance activities (preventative)
- Emergency preparedness and response (mitigative).

Impact assessment

The impacts of an embankment failure at the Stanleigh TMA were assessed in 2023, reflecting the condition of the TMA and surrounds at that time. Failure assessments were carried out for two of the perimeter embankments (Dam A and Dam B), as these were determined to have the greatest potential risk for failure and consequences to the surrounding areas. The Dam A failure scenario was identified in the 2018 FMA process as posing the greatest perceived risk to safety and environment compared with other Stanleigh TMA structures.

The estimated PAR at the Stanleigh TMA is in the significant classification range of 1-10 people, comprising workers at the Elliot Lake water treatment plant, people involved in recreational activities in the area, and travellers on the nearby highway.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings could reach Esten Lake.
- Environmental impact: High levels of tailings mixed in water (suspended solids) could be deposited into Elliot Lake and could potentially make the water in Elliot Lake no longer suitable for drinking.
- Infrastructure impacted: Highway 108 could be blocked, with potential impacts to the Elliot Lake water treatment plant.

Design description

The structures at Stanleigh TMA consist of five perimeter embankments (Dam A, A1, B, C, E), a settling pond embankment and five freshwater diversion dams (Dams R3, R5, 8, 9, and 10).

All perimeter embankments and the settling pond dam include a low permeability natural clay/gravel mix (glacial till) core, compacted gravel or rock upstream and downstream outer layers (except Dam A where a portion of the upstream shell was constructed from compacted tailings), internal transition and filter layers, and internal drainage systems. The perimeter embankments were founded on bedrock, while the settling pond dam was founded on dense glacial till. The embankment designs were assessed prior to construction to ensure slope stability was maintained in all stages of their operation. A summary of the perimeter embankment dimensions is provided in the table below.

Structure	Crest length (metres)	Maximum height (metres)	Retained head at normal water level (metres)
Dam A	125	22.9	18.3
Dam A1	66	9.8	5.2
Dam B	335	18.3	15.2
Dam C	274	11	6.1
Dam E	61	1.5	<1

The first stage of the Stanleigh TMA was completed in 1981. Dam A was constructed to an approximate height of 16.8 metres (363.1 metres above sea level) in the south-west corner of the Stanleigh TMA. Dam B was constructed as a concrete spillway structure in the south-east end of the Stanleigh TMA. Stage 1 of tailings deposition commenced in 1983.

As part of the Stanleigh TMA closure plan, Dams A and B were raised and three additional perimeter embankments (Dams A1, C and E) constructed to facilitate the containment of the long-term water cover for the tailings.

Dam A was the only embankment raised from a starter-dam (Stage 1 configuration). During Stage 2 of construction, Dam A was raised to its final height of 22.9 metres (crest elevation of 369.2 metres above sea level) in 1998. The embankment was raised using the upstream method by extending the till core on an angle towards the TMA, and surrounding by zoned sand and gravel transitions and waste rock outer layers.

The original Dam B concrete spillway structure was removed during Stage 2 of closure facility construction and replaced with a zoned earth fill embankment in 1998. This required the construction of a temporary upstream dam for dewatering purposes, which was included in the final configuration of Dam B.

Dam A1 is located in a natural low point at the southern limit of the Stanleigh TMA. It was constructed in a localised valley identified as a potential seepage path for surface water into Sheriff Lake.

Dam C is located at the western limit of the Stanleigh TMA. Similar to Dam B, a cofferdam was constructed upstream to facilitate dewatering and construction activities and incorporated into the final cross-section of Dam C.

Dam E was constructed in 1992 in the valley crossing the south-west portion of the western end of the TSF. This valley was identified as presenting a potential seepage path for groundwater towards Lake 10 once the tailings water cover was established. Dam E was constructed to a Stage 1 crest elevation of 369.3 metres above sea level, however, was not raised as initially planned due to the cessation of mine operations and tailings deposition. It is currently operating at its Stage 1 configuration.

The crest elevations of Dams B and Dam C are lower so if the facility spillway is blocked, water will overtop Dams B and C instead of Dams A and A1. This diverts the flood path away from the Milliken TMA and Elliot Lake.

Stanleigh TMA, 2025

Closure activities commenced at the Stanleigh TMA in 1997 with the ultimate crest heights of all Stanleigh TMA perimeter embankments achieved in 1998. Perimeter embankment crest heights were designed to maintain flood conditions and freeboard (the space between the tailings surface and the embankment crest) required for closure. When operations ceased and tailings were no longer deposited into the TMA, the water balance no longer included operational uses for water reclaimed from the TSF. A flooded cover system was selected for closure, in which the tailings are flooded to effectively manage acid generation and radiation exposure caused by airborne releases from exposed tailings.

To handle a potential surplus of water within the tailings water cover due to large storm events, a spillway was constructed adjacent to Dam B during closure. Water is released into the settling pond downstream of Dam B where it is treated then passively released into McCabe Lake. A final monitoring point to confirm the discharge meets the required environmental criteria is at the settling pond spillway.

Routine inspections completed by operations personnel, annual dam safety inspections, regular risk reviews and the regular dam safety review, assess and manage the potential risk to downstream communities and environment.

The current configuration of the Stanleigh TMA and perimeter embankments constitutes the post-closure design. The embankments are assessed as per the monitoring plan for all future credible failure modes.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent completed Dam Safety Review was in 2019. A Dam Safety Review was initiated in 2024, and material findings from that review, if any, will be included in the next disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Inspection 2024	No material findings or recommendations.	No material findings or recommendations.
Dam Safety Review 2019	No material findings or recommendations.	No material findings or recommendations.

Environmental and social monitoring

Environmental and social monitoring programs are reported to meet BHP and regulatory requirements. The table below presents the outcomes of the most recent round of environmental monitoring:

Area	Summary	Mitigations
TMA Operational Monitoring Program for period 2015 to 2019	Surface water quality in the Stanleigh TMA has improved over time, based on decreasing concentrations of cobalt, iron, manganese, radium-226, sulphate and uranium.	No mitigation required at this time.
Source Area Monitoring Program for period 2015 to 2019	Treated effluent from the Stanleigh Facility has shown improvement over time, based on decreasing concentrations of cobalt, iron, manganese, sulphate and uranium. However, both barium and radium-226 have increased over time in response to refractory radium conditions (causing treatment inefficiency). Since the introduction of a modified treatment method in 2018, radium-226 and barium concentrations have decreased (i.e. peak in 2017).	Continued use of modified treatment method to manage radium levels.
Serpent River Watershed Monitoring Program for period 2015 to 2019	In the May Lake sub-watershed, (2015 to 2019 period), annual mean concentrations of water quality analytes at key monitoring locations were consistently lower than (or greater than for pH) SRWMP benchmarks.	No mitigation required at this time.
Annual Groundwater Monitoring Program for calendar year 2024	Over the last five years, groundwater elevations down gradient of Dam A and Dam B have remained relatively constant. Water quality has significantly improved or remained stable over time as evidenced by decreases in acidity, iron, and sulphate concentrations, and	No mitigation required at this time.

Area	Summary	Mitigations
	increases in pH from acidic to close to neutral values. Water quality data collected in 2024 is similar to data collected over the last five years and aligns with the overall stable to improving trends.	
Annual Operational Care and Maintenance Report for calendar year 2024	Stanleigh effluent at the final point of control met discharge compliance within calendar year 2024.	No mitigation required at this time.

A stakeholder engagement and social investment plan has been developed for BHP's closed sites in Canada. Engagement is informed by BHP policy, the known interests of the communities where we operate, and Canadian Nuclear Safety Commission licence and regulatory requirements. Indigenous groups, local governments, non-governmental and community groups are engaged annually (or as required) to provide an update on environmental monitoring and reporting such as water quality, projects and infrastructure works such as dam improvements, and ongoing site maintenance such as road works. With community requests to access closed mining sites for recreational activities, BHP works with community groups in the Elliot Lake area on projects related to stewardship, community recreation and tourism.

Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to the release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), respond to the emergency depending on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene; protect life, the environment and property; and prevent further escalation of the event. The FRT draws on the IMT for subject-matter expertise and tactical support.
- IMT undertakes the operational level response; manages the safety of people, environment and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. When the event is escalated, the EMT are activated for strategic support as necessary.
- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.
- CMT manages the strategic organisational/ corporate level response and provide support to an EMT when an event impacts multiple assets within a region, an event impacts multiple regions, reaches a defined severity level or an event has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2024	2029
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation is available in our Annual Report.

Legacy Assets – Poirier Tailings Storage Facility

Facility location	Poirier Tailings Storage Facility, Québec, Canada
Classification	Low

Facility description

The former Poirier Mine was an underground copper and zinc mine located approximately 100 kilometres north of Amos, and 6 kilometres west of Joutel, in north-western Québec, Canada. During mine operation, approximately 2.8 million cubic metres of high sulphide tailings and waste fill were deposited in the TSF at Poirier, which is bounded by one perimeter dam and covers a total area of 50 hectares. The Poirier tailings are a low plasticity fine-grained material with significant acid mine drainage (AMD) potential.

The Poirier Mine operated from 1966 to 1994. Rio Algom Ltd. (RAL), now a member of the BHP Group, operated the Poirier Mine from 1965-1975 with several other non-BHP Group companies operating the mine over the following roughly 20 years. In the late 1990s, the Québec Government requested that RAL prepare a reclamation plan and RAL completed reclamation and environmental monitoring pursuant to Certificates of Authorization from 1998-2001 and 2004-2011. BHP continues to conduct voluntary tailings and environmental monitoring of the former Poirier Mine and TSF.

Summary information	
BHP site	Poirier
TSF name	Poirier Tailings Storage Facility
Coordinates	49.446, -78.392
Current maximum height	12 metres
Area	50 hectares
Stored tailings volume	2.8 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Poirier TSF is Low across all assessment criteria.

Summary of risk assessment

The most recent FMA for the Poirier TSF was in 2017. This was reviewed for completeness and pertinence by the EOR in 2025. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Embankment instability	Cover or embankment instability related to high water pressure in the embankment or from erosion at the toe of the slope
	Embankment instability caused by a large seismic event
Overtopping	Erosion of the cover surface leading to the obstruction of the ring ditch or discharge channel

This TSF does not trigger the materiality threshold in BHP's risk framework, and is instead managed using the controls in BHP's Tailings and Water Storage Facilities Global Standard.

Impact assessment

The impacts of an embankment failure at the Poirier TSF were re-assessed in 2025 and reflect the condition of the TSF and surrounds at that time. The Poirier TSF is in a highly remote rural area, with Matagami the nearest inhabited community approximately 70 kilometres to the north-east.

The estimated PAR at the Poirier TSF is in the low range with none identified.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings could flow up to an estimated 150 metres from the downstream toe.
- Environmental impact: There are small streams around the Poirier TSF that could be impacted by the release of acid generating tailings; however, a potential failure would not cause any long-term loss to the environment and the impact would be of short duration and limited extent.
- Infrastructure impacted: There are very limited services and infrastructure that could be impacted by a dam failure. The public roadway located approximately 350 metres from the downstream toe would not be affected by a tailings release.

Design description

The Poirier TSF was initially built on flat terrain with a starter embankment constructed of compacted clay excavated from inside the TSF footprint. The starter embankment was 3 to 4 metres high. However, there is no detailed information available on the design or construction of the starter embankment. The foundation beneath the TSF is predominantly a layer of varved silty clay underlying a surficial layer of peat and organic matter.

The perimeter dam was raised using the upstream method with tailings deposited by spigot. An embankment made of rockfill was present along most of the tailings area perimeter and was absent only over a 300 metre length of the dam at the north-west corner. The crest height of the embankment ranges from 7 to 12 metres, and the embankment length of the perimeter dam is 1,200 metres. The tailings has a maximum thickness of approximately 10 metres.

As part of the reclamation works, the slope of the perimeter embankment was regraded to a slope of 1 metre vertical to five metres horizontal (1V:5H) and the entire facility was covered with a high-density polyethylene (HDPE) liner. The centre of the TSF was covered with a smooth 1.5 mm HDPE liner and the perimeter and discharge channel were covered with a textured 2 mm HDPE liner. The liner was covered with 0.5 metres of clay and 0.5 metres of till. On the external slope, one meter of till was used as a cover on top of the 0.5 metre clay layer. A geodrain, consisting of a HDPE geogrid contained between two geotextiles, was placed on top of the textured liner on the slope to improve drainage.

There is no water treatment associated with the Poirier TSF and water is released directly to the environment. A voluntary monitoring program will continue to assess the performance of the TSF including review of instrumentation and water quality data. Water management features constructed for the restored TSF include the following:

- An interior ring drainage line between the centre of the TSF and the upstream crest of the perimeter embankment to convey surface runoff from the cover towards the discharge channel.
- A spillway at the north-eastern end of the TSF.
- A perimeter toe drain system to collect and convey the TSF seepage towards the open drainage lines via lateral finger drains that extend beneath the dam perpendicular to the toe.

Poirier Tailings Storage Facility, 2025

The Poirier site is in active care and maintenance with activities focussed on routine OMS tasks.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024.

The most recent dam safety review was in 2019. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Inspection 2024	No material findings.	Not Applicable.
Dam Safety Review 2019	No material findings.	Not Applicable.

Environmental and social monitoring

The Environmental Monitoring Program for the Poirier TSF is described in the OMS Manual and includes the following elements:

- Surface water sampling and collection of field parameters.
- Toxicity sampling.
- Measurement of groundwater levels at piezometers.
- Groundwater sampling and collection of field parameters.

The table below presents the outcomes of the most recent round of environmental and social monitoring.

Area	Summary	Mitigations
Environmental Monitoring	Results of the 2024 Environmental Monitoring Program at the Poirier site indicate that although the site is still impacted by previous mining activities, trends demonstrate that water quality is improving in many areas, particularly in the Kananewesig watershed.	No mitigation required at this time.

A Stakeholder Engagement and Social Investment Plan has been developed for BHP's closed sites in Canada. Engagement is informed by BHP policy, the known interests of the communities where we operate, and regulatory requirements. Indigenous groups, local governments, non-governmental and community groups are engaged annually (or as required) to provide an update on environmental monitoring and reporting such as water quality, projects and infrastructure works such as dam improvements, and ongoing site maintenance such as road works. The most recent Community and Human Rights Study was complete in 2023. Furthermore, no concerns or complaints from any individuals or the community at large were received in 2024.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), will respond to the emergency, depending on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene, protect life, the environment and property, and prevent further escalation of the event, and draws on the IMT for subject-matter expertise and tactical support.
- IMT undertakes the operational level response; manages the safety of people, environment, and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. If the event is escalated, the EMT will be activated for strategic support as necessary.
- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.
- CMT manages the strategic organisational/ corporate level response and provides support to an EMT when an event impacts: multiple assets within a region; multiple regions; reaches a defined severity level; or has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2019	2029
ITRB	2024	2026

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Selbaie Tailings Facility

Facility location	Québec, Canada
Classification	High

Facility description

The Selbaie Site is located approximately 94 kilometres north of the town of Villebois, in north-western Québec, Canada. Mine operations at Selbaie occurred from 1981 to 2004. Reclamation began toward the end of operations and decommissioning was largely complete by 2006. Selbaie is inactive and under care and maintenance. Key features at the site include the waste rock dump, TSF, a pit lake, several tailings and water dams, and the water management and treatment system comprising ponds, pump stations and pipelines, spillways, a seepage collection system, drainage lines, and a water treatment plant. Other features include a pyrite dump, pyrite-overburden dump, overburden dump, oxidised tailings area, and the former plant site area.

The TSF surface area is approximately 175 hectares with a 1 metre thick vegetated till cover. The TSF contains ten dams varying in height from 6 to 24 metres, storing approximately 18 million cubic metres of potentially acid generating copper-zinc tailings. The tailings is estimated to range from 1.75 to 20 metres depth, with an average of 14.2 metres across the TSF.

Summary information	
BHP site	Selbaie
TSF name	Selbaie Tailings Storage Facility
Coordinates	49.799, -78.957
Current maximum height	24 metres
Area	175 hectares
Stored tailings volume	18 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Selbaie TSF is High based on the Environment, and the Infrastructure & Economics assessment criteria.

Summary of risk assessment

The most recent FMA for the Selbaie TSF was in 2024. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Water management infrastructure is blocked and/or the pumping system fails
	Extreme wind and/or flood event results in waves eroding the crest
	Deformation or erosion of the downstream slope
Embankment instability	Large seismic event causes embankment instability
	Excavation or erosion at the toe of the dam results in embankment instability
	Rapid drawdown of a pond downstream of the TSF
	High water pressure in the embankment
	Weak layer in the foundation

Failure mode	Initiating event
	Internal erosion
Foundation failure	Seismic event
	Strain weakening material in the foundation
	Undetected weak layer in the foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Dam integrity (preventative)
- Operations, maintenance, and surveillance activities (preventative)
- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of an embankment failure at the Selbaie TSF were re-assessed in 2024 and reflect the condition the TSF and surrounds at that time.

The estimated temporary PAR at the Selbaie TSF is in the significant classification range of 1-10 people, comprising workers who could be carrying out monitoring and surveillance activities on the dam during a fair-weather failure only. During a flood-induced failure, conditions would be such that no one would be present on most dams; however, there is the possibility for people to be present on the public road to the north of the site. Loss of life is unspecified under a fair-weather failure and not expected under a flood-induced failure. There is no permanent PAR associated with the Selbaie TSF.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings could reach the Wawagosic River.
- Environmental impact: Release of acid generating tailings. It is anticipated that there could be significant loss or deterioration of important fish and wildlife habitat in the Wawagosic River and some of its tributaries, forested areas, and riparian zones to the south, north and, west of the TSF.
- Infrastructure impacted It is unlikely that a hypothetical dam breach would result in significant impacts to infrastructure outside of the mine site. Failure is not expected to damage the MERN Bridge, located 2 kilometres downstream on the Wawagosic River, but could temporarily impact the public road to the north of the site. A hypothetical failure of select dams has the potential to affect the onsite water treatment plant.

Design description

The first tailings containment dam (RM4) was constructed between 1979 and 1981. Tailings were initially contained only in dam RM4. The profile of the tailings pile was initially selected to ensure a tailings capacity of 18 million cubic metres. During operations, the beach slope of the tailings was significantly less than the proposed slope, leading to the need for additional tailings storage. In 1987, the construction of peripheral and internal rockfill dams (RM5A, RM5B) commenced, to increase tailings storage capacity. Existing tailings dams were raised from their existing elevation from 1987 to 1988. From 1992 to 1995, the TSF perimeter dams RM3, RM4, RM5A, RM5B, and RM5C were raised using glacial till from open stripping. Further detail is provided in the table below. The downstream dam slope angles range from 1 metre vertical to 1.3 metres horizontal (1V:1.3H) for RM6 to 1V:4.2H for RM5CE/RM5CW.

Closure studies commenced in 1993. To prepare for reclamation, it was planned that tailings would be stored in the TSF until September 2001, with the remainder to be stored in the open pit. By 1996-2004, the site ceased operation, proceeding with executing closure studies and site improvements including assessing options to reduce the infiltration rate through the waste rock pile. Surface collection drains were constructed around the pile to collect surface runoff and acid exfiltration, directed to the central pond.

Closure activities were completed in 2006 for the TSF, with the closure concept relying on a till cover that maintains the water level for the tailings beach to limit oxidation. All contact water from the Selbaie TSF is directed into the North Pond, prior to treatment at the water treatment plant, and subsequently discharged into the pit lake and then released to the environment. A monitoring program will continue to assess the performance of the TSF including review of instrumentation and water quality data.

Dam	Design description	Crest length (metres)	Maximum height (metres)
RM3	Downstream construction. Clay core with downstream silty to sandy till shell. The upstream shell comprises waste rock.	985.0	16.0
RM4	Upstream construction. Starter Dam consisted of clayey till core. Additional upstream raises comprised silty to sandy till with select placement of waste rock along the foundation. Sand filter chimney drain constructed along downstream portion of dam.	811.0	24.0
RM5A	Upstream construction. Clay core with downstream silty to sandy till shell. The upstream shell was constructed on tailings. The lower three quarters of the upstream shell is waste rock with the upper one quarter silty to sandy till, with a sand filter chimney drain.	743.0	22.0
RM5B	Upstream construction. Like RM5A. Clay core with downstream silty to sandy till shell. The lower half of the upstream shell is silty to Sandy till at the base, followed by waste rock. The upper half was constructed on tailings and is silty to sandy till with a sand filter chimney drain.	229.0	17.0
RM5CE	Upstream construction. The lower three quarters of the dam is comprised of a clay core, downstream silty to sandy till shell, and upstream waste rock shell. The upstream waste rock shell was constructed on tailings. The upper one quarter was also constructed on tailings and is silty to sandy till, with a sand filter chimney drain.	235.0	6.0
RM5CW	Upstream construction. The lower three quarters of the dam is comprised of a sloped clay core, downstream silty to sandy till shell, and an upstream shell of silty to sandy till followed by waste rock. The upper one quarter is silty to sandy till. The majority of the RM5CW dam is founded on tailings.	310.0	12.0
RM6	Upstream construction. Starter waste rock embankment with downstream silty to sandy till fill. Additional upstream raises were constructed on tailings.	1308.0	20.0
RM7	Upstream construction. Starter dam consisted of waste rock. Subsequent raises included a silty to sandy till core with waste rock shells. Non-woven geotextile believed to be placed along foundation of silty to sandy till core. The RM7 dam is internal to the TSF and is founded on tailings.	435.0	8.0
RM8	Upstream construction. Silty to sandy till core with waste rock shells. The RM8 dam is internal to the TSF and is founded on tailings.	511.0	11.0
RM9	Downstream construction. Silty to sandy till fill.	783.0	10.0

Selbaie Tailings Storage Facility, 2025

The Selbaie site is in active care and maintenance with activities focused on the collection and treatment of impacted water prior to release from site, and infrastructure improvements as required.

Performance reviews

The EOR conducts annual inspections and performance reviews, with the most recent review in 2024.

The most recent dam safety review was in 2022. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Inspection 2024	No material findings.	Not Applicable.
Dam Safety Review 2022	No material findings.	Not Applicable.

Environmental and social monitoring

Post-closure environmental monitoring for the Selbaie TSF is based on issued Certificates of Authorization by the Quebec Ministry of Environment. On-site monitoring has evolved over time in response to information needs that have arisen since closure and involves the following:

- Collection of surface water samples to track environmental performance of the site as well as the effectiveness of activities completed as part of the site closure.
- Collection of groundwater samples to monitor quality and the tracking of changes in groundwater level since mining was discontinued.
- Collection of water from the final effluent for toxicity testing.

The table below presents the outcomes of the most recent round of environmental monitoring.

Area	Summary	Mitigations
Environmental Monitoring	Groundwater and surface water quality has improved following rehabilitation measures, with water quality results from the wells installed around the Pit Lake, the waste rock dump, and the	No mitigation required at this time.

Area	Summary	Mitigations
	tailings area stabilizing themselves in recent years.	
	For 2024, the sampling results subject to the limits and requirements of Directive 019 and those of the certificate of authorization for the final effluent were all found to be compliant.	No mitigation required at this time.
	Treatment efficiency for this year was comparable to previous years in terms of required lime consumption for a volume of water to be treated, furthermore the data shows the plant requires less lime for the same amount of water treated. This indicates the affluent water quality is getting better over time.	No mitigation required at this time.

A Stakeholder Engagement and Social Investment Plan has been developed for BHP's closed sites in Canada. Engagement is informed by BHP policy, the known interests of the communities where we operate, and regulatory requirements. Indigenous groups, local governments, non-governmental and community groups are engaged annually (or as required) to provide an update on environmental monitoring and reporting such as water quality, projects and infrastructure works such as dam improvements, and ongoing site maintenance such as road works. The most recent Community and Human Rights Study was complete in 2023 and did not find any mitigations required at this time. Furthermore, no concerns or complaints from any individuals or the community at large were received in 2024.

We will continue to listen, monitor and respond to community feedback provided through our established channels.

Emergency preparedness and response plan

The EPRP provides guidance in the event of incidents that could lead to release of tailings or contact water into the environment.

The emergency response teams, including crisis management team (CMT), emergency management team (EMT), incident management team (IMT), and the field response team (FRT), will respond to the emergency, depending on the severity of the emergency. The EPRP provides a hierarchy of response to the incident as follows:

- FRT provides initial response work autonomously or with external emergency response agencies to control the scene, protect life, the environment and property, and prevent further escalation of the event, and draws on the IMT for subject-matter expertise and tactical support.
- IMT undertakes the operational level response; manages the safety of people, environment, and assets in the local area; and provides support to an FRT when an event reaches a defined severity level. If the event is escalated, the EMT will be activated for strategic support as necessary.
- EMT manages the strategic asset and/or regional level response and provides support to IMT at a defined severity level.
- CMT manages the strategic organisational/ corporate level response and provides support to an EMT when an event impacts: multiple assets within a region; multiple regions; reaches a defined severity level; or has BHP-wide implications.

Independent reviews

Review	Previous review	Next review
DSR	2022	2029
ITRB	2024	2026

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Potash – Coarse Tailings Storage Facility

Facility location	Jansen, Saskatchewan, Canada
Classification	High

The Jansen Coarse TSF is a new TSF at the Jansen potash project, with construction in progress. It is located approximately 140 kilometres east of Saskatoon, Saskatchewan, Canada, and in Treaty 4 Territory, lands of the Cree, Saulteaux, Dakota, Nakota, Lakota, and on the homeland of the Métis. The Coarse TSF will store coarse tailings which will consist of medium to coarse-grained salt crystals.

The TSF will be located immediately south of the surface infrastructure designated area. The TSF location balances proximity to operations with other key factors such as minimising its area above the uppermost groundwater aquifer, maximising storage and minimising its footprint through a square design, and allowing for surface infrastructure and future design. The Coarse TSF is planned to be constructed in phases to minimize footprint and retain agricultural use for as long as possible. The design of the Coarse TSF is expected to provide tailings storage for the life of mine.

The expected method of deposition for the coarse tailings will be the state-of-practice where the tailings are pumped to the Coarse TSF in conventional brine slurry whole the pile will be formed using various discharge locations and shaped by mechanised equipment. The coarse tailings pile will use benching to increase pile elevation and maintain pile stability. The tailings area will be contained within a perimeter embankment constructed from locally sourced silt and clay rich material (i.e., glacial till). During tailings deposition, brine runoff will flow to a brine return channel that runs along the perimeter of the Coarse TSF. Brine will be recycled back to the mill by a floating brine pumping barge located within the Coarse TSF. Excess brine will be pumped to a disposal wellfield for injection into a regulator approved disposal horizon below the mining zone, consistent with industry practice.

The following table details the potential impacts from the Coarse TSF, and the mitigation measures that will be adopted.

Impact	Mitigation
Brine seepage from the TSF into surficial aquifers and groundwater leading to environmental and third-party groundwater user impacts.	The TSF is located over unoxidised glacial till that provides natural containment.
	A containment ditch surrounds the TSF to intercept brine migration in the surficial aquifers.
	Extensive groundwater monitoring network installed with regular monitoring planned. A response plan will be developed to support mitigative action if contamination is detected.
	Slurry cut-off walls are included in the basis of design to mitigate impacts to groundwater.

The following table details the other TSF designs considered and the outcome of the multi criteria assessment, with the preferred option being the one that was adopted.

TSF Design	Safety	Operations	Environment	Cost	Closure	Overall
Traditional slurried tailings facility with single embankment	Good	Good	Moderate	Good	Moderate	Good (Preferred option)
Traditional tailings facility with single embankment using paste tailings	Good	Poor	Poor	Poor	Poor	Poor

Ring embankment style facility with slurried tailings	Moderate	Good	Moderate	Good	Moderate	Moderate
Ring embankment hybrid of filtered tailings embankment with slurried tailings interior	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Ring embankment hybrid of filtered tailings embankment with interior thickened tailings	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Paste tailings ring embankment shell with interior thickened tailings	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Entire facility filtered tailings (dry stack)	Good	Moderate	Moderate	Moderate	Moderate	Moderate

Consequence classification

The consequence classification for the Jansen Coarse TSF is High based on potential Population at Risk, Environment, Health, Social and Cultural, and Infrastructure and Economics assessment criteria.

Potash – Fine Tailings Storage Facility

Facility location	Jansen, Saskatchewan, Canada
Classification	High

The Jansen Fine TSF is a new TSF at the Jansen potash project, with construction in progress. It is located approximately 140 kilometres east of Saskatoon, Saskatchewan, Canada, and in Treaty 4 Territory, lands of the Cree, Saulteaux, Dakota, Nakota, Lakota, and on the homeland of the Métis. The Fine TSF will store fine tailings which will consist of silt and clay particles with some fine salt.

The TSF is located immediately south of the surface infrastructure designated area. The Fine TSF will be constructed in phases to minimise its footprint and retain agricultural use for as long as possible. Storage capacity will also be increased by a downstream raise. The design of the Fine TSF is expected to provide tailings storage for the life of mine.

The expected method of deposition for the fine tailings is sub-aerial deposition using a central discharge point. Thickened fine tailings will be pumped to the Fine TSF where the tailings will flow from the central discharge point to form a cone. Layers of tailings will build up over time, and the cone will gradually expand. This method of deposition is expected to lower water content of the deposited tailings, increase density and strength of the cone, and reduce the footprint of the facility.

The tailings area will be contained by a perimeter embankment constructed from locally sourced silt and clay rich material (i.e., glacial till). Brine will be stored within the Fine TSF footprint in a decant pond located along the south side of the Fine TSF. Brine will be transferred from the decant pond to the Jansen Coarse TSF for recirculation or disposal.

The following table details the potential impacts from the Fine TSF, and the mitigation measures that will be adopted.

Impact	Mitigation
Brine seepage from the TSF into surficial aquifers and groundwater leading to environmental and third-party groundwater user impacts.	The TSF is located over unoxidised glacial till that provides natural containment.
	A containment ditch surrounds the TSF to intercept brine migration in the surficial aquifers. Slotted drainage pipes installed within the surficial aquifer will re-direct seepage to the brine return system.
	Extensive groundwater monitoring network installed with regular monitoring planned. A response plan will be developed to support mitigative action if contamination is detected.
	Slurry cut-off walls are included in the basis of design to mitigate impacts to groundwater.

The following table details the other TSF designs considered and the outcome of the multi criteria assessment, with the preferred option the one that was adopted.

TSF Design	Safety	Operations	Environment	Cost	Closure	Overall
Sub-aerial disposal (cone)	Good	Good	Moderate	Moderate	Moderate	Good (Preferred option)
Co-mingled disposal	Moderate	Moderate	Moderate	Good	Poor	Moderate
Sub-aqueous disposal	Good	Moderate	Poor	Poor	Poor	Poor

Sub-aerial disposal (stacked)	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Washed fine tailings	Good	Poor	Poor	Poor	Good	Moderate

Consequence classification

The consequence classification for the Jansen Fine TSF is High based on potential Population at Risk, Environment, Health, Social and Cultural, and Infrastructure and Economics assessment criteria.

Escondida – Hamburgo Tailings Storage Facility

Facility location	Escondida, Antofagasta, Chile
Classification	Under assessment *

* *The classification is under assessment due to the expansion of the Escondida pit*

Facility description

The Escondida mine site is located in the Atacama Desert in northern Chile, 170 kilometres to the south-east of the city of Antofagasta. The site has an elevation of 3,100 metres above sea level and is the traditional territory of the Peine community. The Hamburgo TSF lies immediately south-east of the Escondida pit. The facility received tailings between 1991 and 2002 and is now inactive. Initially, tailings from the Los Colorados flotation plant were deposited directly into the natural basin. However, the area was later subdivided into multiple compartments through the construction of internal embankments, arranged sequentially to enhance water recovery.

The embankments, constructed from waste rock material excavated from the pit, were partially founded on tailings in areas with prior deposition. They were gradually raised as tailings levels increased, using a combination of downstream and centreline methods, depending on the location. The total length of the embankments is approximately 9,680 metres, with an average elevation of 3,072 metres, while the average elevation of tailings stored in the TSF is 3,052 metres above sea level.

Summary information	
BHP site	Escondida
TSF name	Hamburgo TSF
Coordinates	-24.295, -69.053
Current maximum height	65 metres
Area	508 hectares
Stored tailings volume	320 million cubic metres
Status	Inactive

Consequence classification

The GISTM consequence classification is for the Hamburgo TSF is under assessment, and will be reviewed once the FMA and DBA are completed.

Summary of risk assessment

The FMA for the Hamburgo TSF is currently under development.

Impact assessment

The impacts of an embankment failure at the Hamburgo TSF are under assessment.

Design description

The Hamburgo TSF operated between 1991 and 2002 to store tailings from the Los Colorados flotation plant. The facility is located in a natural basin (Salar de Hamburgo), where tailings were initially deposited across the entire basin. However, due to water evaporation losses and the need to optimise water recovery, the deposition area was later divided into various compartments, known as paddies, through the sequential construction of rockfill embankments.

The embankments were constructed progressively, partially over tailings, using the centreline method for internal embankments and the downstream method for external embankments. Some paddies were partially covered with rockfill, while others remained exposed. By 1998, tailings deposition had transitioned primarily to paddies 6–9.

Deposition officially ceased in 2002, though paddy 5 remained active as an emergency storage area until 2017, after which no further tailings deposition has occurred at the Hamburgo TSF.

The Hamburgo TSF's current conditions remain broadly consistent with its last significant modifications. However, the Escondida Pit expansion has impacted the surrounding conditions, necessitating further assessment to address information gaps and accurately evaluate the facility's state. A construction history summary is provided below:

Stage	Year completed	Design description
Initial Operation	1991	Tailings deposition began in the natural basin (Salar de Hamburgo), forming a large pond.
Paddy Division	1993-1995	The area was subdivided into various paddies through sequential construction of rockfill embankments to improve water recovery.
Deposition Expansion	1994-1998	Sequential deposition continued, progressively raising embankments; paddies 6–9 became the primary deposition areas.
Waste rock integration	1998-2001	Waste rock was placed over some paddies, particularly in the north embankment area.
Deposition Cessation	2002	Tailings deposition ceased, and the site was partially repurposed for waste rock disposal.
Paddy 5 - emergency area	2002-2017	Paddy 5 remained active to store tailings in emergencies when the pipeline system from Los Colorados to the Laguna Seca TSF failed or required maintenance.
Transversal embankment	2012-2015	New embankments were built over tailings to support construction of dewatering wells and ensure vehicular access.
Current State (Present)		Assessment of changed conditions around the Hamburgo TSF due to expansion of the Escondida Pit.

Hamburgo TSF, 2025

The Escondida Closure Plan describes measures for meeting the end of mining land use objectives. It is reviewed and updated in accordance with local regulations and current practice.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection completed in 2025. The report is under development and review by the EOR and material findings, if any, will be reported in the next disclosure.

The first dam safety review has been scheduled for 2025.

Environmental and social monitoring

The environmental monitoring program for the Hamburgo TSF complies with the provisions of RCA No. 48/98, which approved modifications and expansions related to sulphide ore extraction and processing. There were no material findings against these provisions for the previous calendar year.

In addition, communities can raise concerns about the Hamburgo TSF through BHP's community complaints and grievance process. Developed in accordance with the United Nations Guiding Principles (UNGPs) on Business and Human Rights and the ICMM's Guide to Handling and Resolving Local-level Concerns and Grievances, this process provides a structured mechanism for recording, addressing and resolving complaints and grievances in a timely and effective manner.

Emergency preparedness and response plan summary

The Emergency Preparedness and Response Plan for the Hamburgo TSF is currently under development in response to ongoing changes in the surrounding conditions of the TSF.

The plan will be structured into two independent components: an Emergency Preparedness Plan and an Emergency Response Plan and will integrate with external emergency services and SENAPRED (National Service for Disaster Prevention and Response), as required by Chilean Law 21.364

Independent reviews

Review	Previous review	Next review
DSR	-	2025
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Requirements with a status other than 'meets'

Requirement	Conformance Status	Conformance Status Details	Conformance Plan
1.3	Partially meets	The impact of Hamburgo TSF failure is limited to internal infrastructure, with no external community risk, but formal engagement with affected internal stakeholders (operational workers) remains incomplete.	Formally recognise operational workers as impacted stakeholders and complete engagement before the 2026 disclosure.
3.1	Partially meets	Evaluation of climate change is outdated and does not reflect recent data or risk scenarios.	Formal documentation will be updated before the 2026 disclosure.
3.4	Partially meets	The information is outdated and needs to reflect the current context of the site to assess adaptative management.	Updates to the information is ongoing and will integrate material change documentation before the 2026 disclosure.
4.3	Partially meets	The design basis is not currently approved by the Accountable Executive (AE).	Approval of the design basis by the AE prior to 2026 disclosure.
4.4	Partially meets	Design criteria to address credible failure modes have been identified but	Update and consolidate design criteria to incorporate recent changes in the site, ensuring EOR review and record keeping in the knowledge base and

Requirement	Conformance Status	Conformance Status Details	Conformance Plan
		is not consolidated, and there is no formal version reviewed by the EOR.	Tailings Management System prior to the 2027 disclosure.
4.5	Partially meets	Preliminary design criteria for slope stability and infiltration control needs to be updated and integrated with ongoing investigations.	Complete and validate design criteria for slope stability and infiltration and ensure robust tracking in the updated design basis and TMS prior to 2027 disclosure.
4.6, 5.4	Partially meets	There is no specific assessment of brittle failure modes linked to conservative design criteria.	Brittle failure modes assessment and design basis report to be updated prior to the 2026 disclosure, with EOR validation.
4.7, 5.7	Partially meets	There is no formal ALARP evaluation that reflects the current condition of Hamburgo TSF and it needs to be related to the consequence classification.	Following the FMA and dam breach assessment update, consequence classification, risk assessment and an assessment of risk against ALARP will be conducted and approved by the AE prior to the 2027 disclosure.
5.2, 5.5, 5.6	Partially meets	Key closure documents exist but need to be updated to align with GISTM. Closure and post-closure design needs to be adapted with the long-term plan of Escondida pit.	Update the closure plan and develop a post-closure plan and ensure formal validation by the AE prior to the 2027 disclosure.
6.1	Partially meets	Post-closure management remains incomplete, with TMS and ESMS still under development and not fully adapted.	Develop a formal tailings management system (TMS) and environmental and social management system (ESMS) for the Hamburgo TSF in its inactive stage, validate design intent with the EOR, and document governance in the TMS prior to the 2027 disclosure.
6.4	Partially meets	An OMS manual adapted to the inactive condition is under development.	Complete the OMS manual and ensure full integration and training within the developing tailings management system prior to the 2026 disclosure.
7.1 – 7.5	Partially meets	The monitoring program is being implemented under EOR directions. Formal integration into the TMS, traceability and reporting mechanisms is still required.	Complete the monitoring program, integrate it into the TMS, ensure EOR-validated data reporting prior to the 2026 disclosure.
8.2	Partially meets	The TMS is still under development. Formal validation, full implementation and integration is still pending.	Finalise and approve the TMS aligned with GISTM, integrate it with operations, establish formal governance and reporting prior to the 2027 disclosure.
8.3	Partially meets	BHP corporate policies link safety to incentives, but there's no clear evidence that these apply to roles specifically responsible for the Hamburgo TSF.	Formally confirm Hamburgo TSF key roles are included in the short-term incentive scheme with safety-related key performance indicators, and update role descriptions prior to the 2026 disclosure.
10.2	Partially meets	ESMS remains under development, and periodic review processes, while	Develop an ESMS to reflect environmental and social risks prior to the 2027 disclosure.

Requirement	Conformance Status	Conformance Status Details	Conformance Plan
		acknowledged, have not been fully implemented or documented.	
10.5	Partially meets	A formal DSR has not yet been conducted for the Hamburgo TSF.	Complete a DSR prior to the 2026 disclosure.
11.1 – 11.4	Partially meets	Training and competency tracking are not formalised, operational knowledge is not integrated, collaboration is unstructured, and incident learning systems are lacking.	Ensure the TMS enables training and knowledge integration, formalises collaboration for the TSF inactive phase, and implements a system for lessons learned prior to the 2026 disclosure.
13.1- 13.3	Partially meets	Hamburgo TSF-specific EPRP is still under development and lacks drills, validated protocols, and full TMS integration.	Finalise and approve the EPRP with key role validation, conduct training and drills, and coordinate with SENAPRED, prior to the 2027 disclosure.
14.1 – 14.2	Partially meets	Hamburgo TSF lacks a specific post-failure mitigation and recovery plan, and current assessments have not been consolidated into a long-term response strategy.	Develop a consolidated post-failure impact assessment and recovery plan aligned with the TMS and corporate systems, prior to the 2027 disclosure.

Escondida – Laguna Seca Tailings Storage Facility

Facility location	Escondida, Antofagasta, Chile
Classification	Extreme

Facility description

The Escondida mine site is located in the Atacama Desert, in the north of Chile, 170 kilometres to the south-east of the city of Antofagasta. The site has an elevation of 3,100 metres above sea level and is the traditional territory of the Atacama People. The Laguna Seca TSF is located 15 kilometres south-west of the Escondida orebody in the Domeyko mountain range, at an approximate elevation of 2,900 metres above sea level. The Laguna Seca TSF is located in a natural depression that drains to the north-west, with a single cross-valley retaining embankment. The crest of the embankment is at an elevation of 2,963 metres above sea level and has been constructed in seven downstream raises since operations began in 2002.

Summary information	
BHP site	Escondida
TSF name	Laguna Seca TSF
Coordinates	-24.408, -69.123
Current maximum height	59 metres
Area	4,240 hectares
Stored tailings volume	1,324 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Laguna Seca TSF is Extreme based on the Potential Loss of Life, and Health, Social and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for Laguna Seca was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Deformation of the embankment crest
	Drainage system failure
	Debris flow into the TSF
	Precipitation (extreme rainfall) or snowmelt exceeding estimates
	Inadequate planning and control of the decant pond
	Inadequate prediction of water balance
	Non-compliance with the minimum requirements in the growth plan
Embankment instability	Static liquefaction due to pore pressure changes
	Seismic liquefaction of embankment
	Inadequate characterisation of the geotechnical parameters of the embankment
	Failure to detect the progression of a failure mechanism due to insufficient surveillance (instrumentation, interpretation, etc.)

Failure mode	Initiating event
	Static or dynamic stability assessment with results below the acceptability criteria
	Outdated seismic risk analysis
	Design changes made during construction
	Non-compliance with the compaction or material specifications during embankment construction
	Increase in the water table level of the embankment above the design levels
	Insufficient geological, geotechnical and hydrogeological characterisation of the foundation, the main embankment, and the side embankments
	Insufficient geotechnical instrumentation
	Lack of waterproofing of the upstream slope or failure of the geomembrane
	Inadequate planning and control of the decant pond
	Pond location too close to the embankment ahead of an extreme rain event
	Prolonged outage to the tailings thickener
	Failure of the pumping system downstream of the embankment (series of extraction wells)
	Loss of capacity of the drains due to precipitation of silts, clogging or damage
	Internal erosion associated with hydraulic conditions, the intrinsic susceptibility of the material, and/or stress conditions
	Filter system in drains poorly designed/constructed
	Geological discontinuities of high permeability that constitute preferential pathways for water flows
	Presence of hydraulic gradient zones close to the critical areas within the embankment and/or in the foundation soil
	Preferential flow through cavities in the embankment from dissolution of soluble salts, poorly compacted material etc.
Foundation failure	Presence of a weak soil horizon in the foundation soil
	Water flow through the foundation by preferred pathways (due to erodible or soluble soil strata)
	Low strength geological discontinuities
	Activation of geological faults

The following controls have been designated as critical controls under the BHP Risk Framework:

- Planning, operation and maintenance (preventative)
- Dam safety governance and audits (preventative)
- Construction quality assurance and control (preventative)
- Design and studies (preventative)
- Monitoring and comprehensive control (both preventative and mitigative)
- Access management and reduction PAR (mitigative)
- Emergency response plan and business continuity plan (mitigative)

Impact assessment

The impacts of an embankment failure at the Laguna Seca TSF were assessed in 2022. The worst-case failure impact scenario for the Laguna Seca TSF occurs when there are workers constructing the next raise of the TSF embankment.

The estimated PAR at the Laguna Seca TSF is in the Very High classification range of 100-1,000 people. All are mine workers within the boundaries of the mine site.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings could travel up to 25 kilometres downstream of the embankment.
- Environmental impact: No areas of significant environmental habitat impacted and no endangered or species of concern impacted.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

The starter embankment of the Laguna Seca TSF was built in 2001 to a height of 15 metres, with a crest width of 15 metres to support vehicle traffic for the operators and the tailings distribution pipeline. The embankment has been raised using the downstream method with material sourced from dedicated areas near the embankment.

The Laguna Seca TSF is located in the Laguna Seca basin which was formed by mountains. The catchment basin has direct drainage to the north-west and covers approximately 287 square kilometres. The natural topographic features of the area were used for the storage of the tailings, combined with the cross-valley embankment constructed across the outlet of the basin.

The TSF has been raised in several stages using the downstream method and is planned to reach an elevation of 3,010 metres above sea level at its final stage. The raise stages of the embankment and their respective crest heights are shown in the following table.

Stage	Project	Condition	Elevation (metres above sea level)	Height (metres)
1	Starter Dam	Constructed	2,919	15
2	Raise of the embankment	Constructed	2,931	27
3	3rd raise of the embankment	Constructed	2,940	36
4	4th raise of the embankment, drainage system extension	Constructed	2,940	36
5	5th raise of the embankment	Constructed	2,947.5	43.5
6	6th raise of the embankment	Constructed	2,955	51
7	7th raise of the embankment	Constructed	2,963	59
8	8th raise of the embankment	Projected	2,971	67
9	9th raise of the embankment	Projected	2,979	75
10	10th raise of the embankment	Projected	2,987	89
11	11th raise of the embankment	Projected	2,995	91
12	12th raise of the embankment	Projected	3,003	99
13	13th raise of the embankment	Projected	3,010	106

Up to stage 6, the embankment slopes were 1 metre vertical for every 1.8 metres horizontal (1V:1.8H) on the upstream side of the embankment, and 1V:2H on the downstream side, with intermediate benches in the slope. Currently, on stage 7, the embankment slope is 1V:2H on the upstream side and 1V:2.7H on the downstream side.

For all stages, a minimum height between the tailings and the embankment crest of 5 metres, and a crest width of 15 metres is required to be maintained.

Water is recovered for reuse in processing operations using an embankment drainage system, a network of wells and the decant pond through a collection tower and pumping system.

Laguna Seca TSF, 2025

The Escondida Closure Plan describes the following measures for the Laguna Seca TSF:

- Placing soil and rock to level the final surface with a target thickness of 0.7 metres.
- Metal mesh perimeter fence and mounds of material from the mine waste dump placed 1.5 to 2 metres high, 2 – 5 metres from the TSF edge, and hazard warning signs as appropriate.
- Decommissioning and removal of all equipment.

The Escondida Closure Plan is reviewed and updated in accordance with local regulations and current practice.

Performance reviews

The EOR conducts annual facility inspections and performance reviews with the most recent reviews in 2023 and 2024. The report from the 2024 inspection is still being finalised and any material findings will be included in the next disclosure.

The most recent dam safety review was completed in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No material findings.	Not applicable.
Dam Safety Review 2023	Drainage system needs to be included in the next raise design.	Develop trade off associated with the drainage system considering the variable topography of the area. *This action has been completed*

Environmental and social monitoring

Environmental monitoring programs are reported to meet regulatory requirements. The table below shows the specific requirements related to the Laguna Seca TSF monitoring that are reported to Authorities.

Area	Material findings	Mitigations
Annual report and census of Andean flamingo presence in the Laguna Seca Tailings Dam	No material findings	No mitigation required at this time
Infiltration control, covering water level measurement, groundwater chemistry, surface geophysics, Water Quality Measurement at the Drain, outcrop, recovered water, curtain wells, observation wells	No material findings	No mitigation required at this time

In addition, communities can raise concerns about Laguna Seca TSF through our community complaints and grievance process. Developed according to the effectiveness criteria of the United Nations Guiding Principles (UNGPs) on Business and Human Rights and the ICMM's Guide to Handling and Resolving Local-level Concerns and Grievances, the process provides a local mechanism for recording complaints and grievances and addressing them in a timely and effective manner. This is a consistent method for identifying, recording, addressing and evaluating concerns, complaints and grievances from the community or related stakeholders. To date, no active complaints related to the Laguna Seca TSF have been recorded.

Emergency preparedness and response plan

The Emergency Preparedness and Response Plan is covered in two separate plans: the Emergency Preparedness Plan (EPP) and the Emergency Response Plan (ERP).

The EPP describes the hazards identification based on credible flow failures, the specific incident, resources to manage the emergency and preparedness against an emergency. The EPP provides step-by-step actions, organised according to different levels of danger and consequences, to prevent or mitigate the effects on the population and the environment. Measures range from early intervention up to the evacuation of personnel. Key parameters for defined hazards are tracked and if deviation is noted, the action plan is initiated.

The ERP includes the procedures to be followed during an emergency resulting from failures that occur in the facilities of Laguna Seca TSF, and it includes the activities to be carried out in case of deviations in critical parameters.

Together, these describe the specific incident, crisis and emergency management systems for use by Laguna Seca TSF on-site workers. They provide a framework the workers can use to manage an incident, with clear and defined objectives, roles and responsibilities for incident recovery.

In the lead up to the activation of an alarm, workers follow the General Emergency Procedure. This procedure dictates that the alarm is activated for the area of concern, for example the tailings transportation system, the embankment area or a general evacuation alarm. This alarm alerts the personnel in the affected area and the personnel responsible for managing such an alarm.

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation is available in our Annual Report.

Pampa Norte – Spence Tailings Storage Facility

Facility location	Spence, Antofagasta, Chile
Classification	Very High

Facility description

The Spence Mine is located in the Sierra Gorda district, in the province of Antofagasta and Region of Antofagasta. The site is 1,600 metres above sea level, approximately 62 kilometres south-west of the city of Calama and 150 kilometres north-east of the city of Antofagasta. The Spence TSF is located approximately 8 kilometres West of the Spence Open Pit, and includes infrastructure for tailings containment (Main Dam, Northwest Dam, and Northeast Dam), tailings disposal (Cells), and Operational Pond (Protection Dike). Additionally, the TSF has a system for reclaiming process water from the pond and drains.

Summary information	
BHP site	Spence
TSF name	Spence TSF
Coordinates	-22.742, -69.326
Current maximum height	31.6 metres
Area	1,800 hectares
Stored tailings volume	505 million cubic metres
Status	Active

Consequence classification

The consequence classification for the Spence TSF is Very High based on the Environment, and the Health, Social and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for the Spence TSF was in 2024. The credible failures modes identified are presented in the table below.

Failure Modes	**Initiating event**
Overtopping	Storm event larger than design event
	Reduction of the total water storage capacity of the TSF
	Seismic event with a higher deformation than estimated
Embankment Instability	Instability (seismic or static)
	Earthquake larger than the design event
	Internal erosion through dam material
Foundation	Static liquefaction
	Dynamic liquefaction
	Seepage rates greater than expected
	Washing out of foundation materials
	Internal erosion through foundations
	Internal erosion through left abutment

Failure Modes	Initiating event
	Foundation collapse

The following controls have been designated as critical controls under BHP Risk Framework:

- Planning, operation and maintenance (preventive)
- Monitoring and surveillance (preventive and mitigative)
- Quality assurance and control during construction (preventive)
- Key materials on site (preventive)
- Emergency preparedness plan (preventive)
- Emergency Response Plan, Medium and Long-term Recovery Plan, Business Continuity Plan (mitigative)

Impact assessment

The impacts of an embankment failure at the Spence TSF were assessed in 2022.

The estimated PAR at the Spence TSF is in the high classification range of 10-100 people. All are mine workers associated with the operation of the TSF.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Inundated area of 43.6 square kilometres and total runout distance of 33 kilometres.
- Environmental impact: No protected areas or priority sites for conservation would be affected.
- Infrastructure impacted: Gas Atacama pipeline and ENEL power transmission lines.

Design description

Construction of the Spence TSF was approved in 2017, and initial operation was in 2021. The design includes the Main Dam on the west of the site, constructed with borrowed material, along with a permeable Protection Dam that confines the operational pond, and six secondary dams located around the TSF perimeter. Currently, the Northeast, Northwest, and West Dam have been constructed, while the South, Southwest, and East dams are planned for future development. The TSF is currently in its first stage of development.

Tailings are deposited in cells separated by internal embankments, allowing water to flow through the Protection Dam and collecting in the Operational Pond. The drainage system consists of drainage fingers parallel to the Main Dam alignment, which connect to a collector drain that directs all flows to the main recirculation sump downstream.

The following table presents the design characteristics of the main embankments of the facility. A general layout of the main structures of the TSF Spence is presented below. The slopes are expressed in metres vertical to metres horizontal (V:H) while the elevation is expressed in metres above sea level.

Dam	Downstream slope (V:H)	Upstream slope (V:H)	Elevation Starter dam	Final Crest Elevation	Maximum Height (metres)
Main	1:2.2	1:2	1,603	1,641	65
Northwest	1:4	1:2	1,615	1,645	45
Northeast	1:4	1:2	1,605	1,642	52
East	1:4	1:2	1,620	1,645	28
South	1:4	1:2	1,626	1,650	30
West	1:4	1:2	1,615	1,648	39

Dam	Downstream slope (V:H)	Upstream slope (V:H)	Elevation Starter dam	Final Crest Elevation	Maximum Height (metres)
Southwest	1:4	1:2	1,625	1,649	30

Spence TSF, 2025

Changes in the design are currently being evaluated as part of the tailings management strategy update to optimise the configuration of the facility.

The Spence Closure Plan describes measures for meeting the end of mining land use objectives for the site, including the TSF. It includes decommissioning of the tailings delivery and water management infrastructure, reshaping, and placement of cover material over exposed slopes.

The Spence Closure Plan is reviewed and updated in accordance with local regulations and current practice.

Performance reviews

The EOR conducts annual tailings facility inspections and performance reviews, with the most recent inspection in 2024. The report for the 2025 annual performance review is being finalised and material findings, if any, will be included in the next disclosure.

The first dam safety review was completed in 2024. The material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	The anchoring of the geomembrane is installed in loose materials.	Inspect the impermeabilisation of the slopes and benches under construction, in the “El Lagarto” Dump. *This action is in progress*
	The existing test pit does not cover all of the relevant features.	Extend the test pit along the length of the dam and towards the upstream edge of the crest, including the filter material. *This action is in planning*
	An ash layer has been located under the already installed geomembrane (Spence Growth Option Project).	Remove identified ash layer and overlaying geomembrane. *This action has been completed*

Review	Material findings	Recommendations
	Excavation slopes of Berm 1 are too steep and are not backed by the geometry design.	Upgrade as soon as possible the profile of the Berm 1 excavation slopes. *This action is in progress*
	Water flows can be observed going through the decoupling berm in the Protection Embankment.	Test pits excavation for remediation of Berm 1603 (1.603 m,a.s.l.). *This action has been completed*
	Management of infiltrations trough Protection Dike.	Drainage of trench in Berm at 1609 elevation, Cells 7, 8 and 9. *This action is in progress*
Dam Safety Review 2024	The geotechnical characterisation of the foundation soils and borrow materials is limited considering the designer's conclusions.	Perform permeability tests as well as monotonic and dynamic strength tests on the dam materials. Reassess the dilative or contractive behaviour of these materials. *This action is in planning*
	Based on the understanding gained through the development of the DSR, it has been determined that the FMEA assessments conducted have not considered the condition of the preferential flow path introduced by the upstream drainage systems of the dams.	Develop a FMEA assessment including the described condition. If any remediation measure is implemented, the FMEA must also consider the risk assessment during the construction phase. *This action is in planning*
	The E-O deviation channel sustained structural damage due to overtopping and degradation.	Based on updated hydrological data, asses the current and projected performance of the TSF hydraulic structures. Conduct annual inspections and perform necessary repairs on the deviation channel to ensure it meets the design performance criteria. *This action is in planning*
	The foundation soil of the Northwest dam, with an extensive salt zone, could lead to the formation of a preferential flow path.	Excavate the salt outcrop and replace it with low-permeability backfill material. Any upstream liner could also be considered. Implement action plans for the management of highly soluble salt strata, considering EOR and RTFE recommendations. *This action is in planning*

Emergency preparedness and response plan

The Emergency Preparedness and Response Plan contains two separate plans: the Emergency Preparedness Plan (EPP) and the Emergency Response Plan (ERP). Together, they provide a framework that the staff can use to manage an incident, with clear and defined goals, roles, and responsibilities.

The EPP identifies hazards, assesses capabilities, and prepares the site to respond to a TSF emergency and recover once it is over. This plan identifies preparedness measures (step-by-step actions) associated with emergencies related to the integrity of the tailings deposit, to prevent or mitigate the effects on the population and the environment.

The ERP presents the measures applied during situations that could result in an emergency that impacts on the safety of people, the environment, or facilities and infrastructure. This plan has been developed considering the

credible failure modes of the Spence TSF and the mitigating actions that will avoid the loss of human life and minimise damage to the environment and property.

The ERP nominates roles for each type of alert in the TSF and the communication flow at each operational level. This plan details the evacuation process, the escalation process to senior management, and the process for informing the community and external stakeholders.

Independent reviews

Review	Previous review	Next review
DSR	2024	2029
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation is available in our Annual Report.

Legacy Assets – Ambrosia Lake Tailing Storage Facility Cells 1 and 2

Facility location	Ambrosia Lake West, New Mexico, United States of America
Classification	High

Facility description

The Ambrosia Lake West (ALW) is a former uranium mill site and is located approximately 40 kilometres north of Grants, New Mexico. The Site is currently owned and operated by Rio Algom Mining LLC (RAML), a subsidiary of BHP. The ALW facility is regulated under U.S. Nuclear Regulatory Commission Source Materials License SUA-1473 Amendment No. 65.

The site was operated between 1958 and 2003. Tailings at the Site were deposited into two TSFs, Cell 1 and Cell 2, during operations which have since been reclaimed with covers that include a radon barrier, frost protection, and riprap. Cell 1 impounds 27 million metric tonnes of tailings, with an area over 105 hectares, and Cell 2 impounds 3 million metric tonnes of tailings spread over 36 hectares. Cell 2 also contains demolished structures and debris from the mill site. The TSFs at the site are in a state of closure and are managed by an onsite BHP operations team.

Summary information		
BHP site	Ambrosia Lake	
TSF name	Cell 1	Cell 2
Coordinates	35.394, -107.829	35.396, -107.836
Current maximum height	27 metres	17 metres
Area	101 hectares	24 hectares
Stored tailings volume	25 million cubic metres	
Status	Inactive	Inactive

Consequence classification

The consequence classifications for Cells 1 and 2 are High based on the Population at Risk assessment criteria.

Summary of risk assessment

The most recent FMA for Cells 1 and 2 was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Extreme flood event
	Blockage of the spillway during a large storm event.
Embankment instability	Large storm event causes diversion channel blockage and erosion of the embankment
	Seismic liquefaction during an extreme earthquake event
	Foundation failure due to characterisation gap of weak layer in foundation material

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design integrity (preventative)

- Operations, maintenance, and surveillance (preventative)
- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of an embankment failure at the ALW TSFs TSF were assessed in 2022. The Cell 1 failure scenario considered an overtopping failure, assuming a probable maximum precipitation event occurs over the TSF and the spillway is blocked. The blocked spillway forces the precipitation to pond over Cell 1. The domed top of Cell 2 prevents an overtopping failure.

The estimated PAR at the ALW TSFs is in the high classification range of 10-100 people due to potential impacts to highway 509 and any potential BHP employees or contractors on site. Ambrosia Lake is a remote, minimally staffed site, no injury or fatality to BHP employees or contractors is likely.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 6 million cubic metres of tailings and water released from the TSF for the dam breach plus PMF failure.
- Environmental impact: No significant loss or deterioration of fish or wildlife habitat. Loss of marginal habitat only.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

Construction of Tailings Cell 1 and Tailings Cell 2 and their seven associated dams (TC1-N, TC1-NE, TC1-S, TC2-N, TC2-E, TC2-S, and TC2-W) was completed between the late 1950s up until the early 1970s. The tailings facilities were raised using the upstream method, with deposition from spigots and spread using a bull dozer.

The Cell 1 tailings storage comprises three dams: TC-1 N, TC-1 NE and TC-1 S. Starter dams were constructed of compacted, low-permeability, native clayey soil derived from the Mancos Formation. Tailings Cell Dam TC-2E later formed the west dam of TC-1.

Cell 2 tailings storage comprises four dams: TC-2 N, TC-2 E, TC-2 S and TC-2 W. Cell 2 starter dams were constructed of compacted tailings and compacted native, clayey soils. Construction materials that were used vary depending on their location and construction date of the dams. TC-2 received tailings, materials from evaporation ponds, miscellaneous equipment, debris from dismantled buildings, and other materials not salvaged or removed from the site. Much of the northern portion of Cell 2 was constructed as a landfill for disposal of these miscellaneous materials.

A bypass channel was constructed in 1976 along the north and east sides of TC-1 and TC-2 to intercept upstream flow in local arroyos (ephemeral streams), both natural and from mine discharge, and divert it around the evaporation ponds and back into the arroyo farther downstream. Additionally, a series of seepage interception trenches were constructed in 1984 between the tailings impoundments and local arroyos to intercept seepage from the TSFs.

Tailings TC-1 and TC-2 and associated embankment structures have been re-graded to not exceed a slope of 1 metre vertical for every five metres horizontal (1V:5H) and were capped with low permeability soil cover and riprap in accordance with local guidelines. The tailings surface has been re-graded to promote drainage.

Cell covers 45 centimetres in thickness were constructed of compacted, low-permeability Mancos shale, with 30 centimetres of frost protection coarse rock bedding and coarse rock, for a total cover thickness of approximately 0.9 metres.

Ambrosia Lake Cell 1 & 2, 2025

Performance reviews

The EOR conducts annual facility inspections and performance reviews with the most recent review in 2024.

The most recent dam safety review was completed in 2019. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings.	Not applicable.
Dam Safety Review 2019	No material findings.	Not applicable.

Environmental and social monitoring

The U.S. Nuclear Regulatory Commission (NRC) regulates the TSFs on the ALW Site, and addresses groundwater under source material license SUA-1473.5. RAML's permits for the ALW Site also require groundwater monitoring.

Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in the Groundwater Sampling and Analysis Plan (SAP) and the Groundwater Sampling Standard Operating Procedure (SOP). The SAP and SOP are reviewed periodically for relevance and new information. The table below presents details on the key elements of the SAP and SOP as they relate to TSFs.

Area	Summary	Mitigations
Environmental Monitoring	The NRC License requires semi-annual/quarterly/monthly reporting for certain monitoring locations.	Not applicable.
	The NRC License requires monitoring for radon gas emanating from the TSFs	Not applicable.
	Data collected in support of DP-67, DP-71, and DP-362 are reported semi-annually to the NMED. Reports for DP-169 are provided on the same schedule under separate cover.	Not applicable.

Area	Summary	Mitigations
Social Monitoring	In March 2023 a Community and Human Rights Baseline Study was conducted by Verisk Maplecroft for US Legacy Assets in New Mexico.	Not applicable.

We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and tribes. These engagements include sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needs basis, usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Environmental and social monitoring

Environmental monitoring programs comply with regulatory requirements in accordance with the provisions of RCA No. 275/2017 and RCA No. 64/2020, which include the following components: water, air, vegetation and wildlife. These are uploaded to the monitoring platform of the Superintendence of Environment (environment authority). There were no material findings against these provisions for the previous calendar year.

In addition, communities can raise concerns about Spence TSF through our community complaints and grievance process. Developed according to the effectiveness criteria of the United Nations Guiding Principles (UNGPs) on Business and Human Rights and ICMM's Guide on Handling and Resolving Local-level Concerns and Grievances, the process provides a local mechanism for recording complaints and grievances and addressing them in a timely and effective manner. This is a consistent method for identifying, recording, addressing and evaluating concerns, complaints and grievances from the community or related stakeholders.

Emergency preparedness and response plan

BHP Legacy Assets applies the Crisis and Emergency Management (CEM) framework. This framework is designed to ensure scalable teams and resources are available to respond to any crisis or emergency impacting Legacy Assets operations. The Incident Management Team (IMT) and Field Response Team (FRT) Plans provide the framework for emergency response implementation at the site. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP is supported by site specific credible scenario ERPs (including dam failure) and training exercises.

Independent reviews

Review	Previous review	Next review
DSR	2019	2025
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Copper Cities No. 2 Tailings

Facility location	Globe-Miami district, Arizona, United States of America
Classification	Very High

Facility description

No. 2 Tailings is located approximately 5 kilometres north of the towns of Miami and Globe, in Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the Globe-Miami area to the Gila River and Salt River Pima Maricopa Indian communities. The TSF was operated from the early 1950s to 1975 storing approximately 34 million cubic metres of tailings. No. 2 Tailings is the largest (by volume) of the TSFs at Copper Cities and was the first to be constructed. The facility uses constructed embankments and natural topography to contain the tailings, with the embankments raised by the upstream method using coarse tailings sourced from the beach. There is a small pond on the west side of the facility called the No. 2 Tailings Evaporation Pond.

The embankment crest has a maximum slope height of 107 metres. The downstream face has an overall slope angle of 1 metre vertical for every 2.1 metres horizontal (1V:2.1H) with an inter-bench slope of approximately 1V:1.6H. The tailings impoundment surface area is approximately 81 hectares with a typical pond area of 8 hectares. Tailings thickness is up to 85 metres. No. 2 Tailings included two perimeter starter embankments constructed of locally sourced conglomerate. The crest and downstream slopes are lightly vegetated with a cover of grass and shrubs. The impoundment is lightly vegetated near the embankment crest. The surface becomes less vegetated closer to No. 2 Evaporation Pond.

Summary information	
BHP site	Copper Cities
TSF name	No.2 Tailings
Coordinates	33.445, -110.850
Current maximum height	107 metres
Area	81 hectares
Stored tailings volume	34 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for No. 2 Tailings is Very High based on the Potential Loss of Life, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for No.2 Tailings was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Heavy rain raises the reservoir level above the crest, resulting in a dam breach
	Deformation of embankment from earthquake results in overtopping
	Progressive erosion results in overtopping

Failure mode	Initiating event
Embankment instability	Earthquake causes all or a portion of the tailings to liquefy
	The base or side of the embankment is eroded, leading to a slope failure
	Concentrated flows on the downstream slope progressively erode the slope
	Loss of embankment strength due to high water pressure
	Internal erosion through embankment
Foundation failure	Internal erosion through foundation
	Weak zone in foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design of the TSF closure components (preventative)
- Operating surveillance activities (preventative)
- Emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Copper Cities TSFs were assessed in 2018. The scenario considers a slope failure of the embankment caused by an earthquake triggering a flow of tailings.

The estimated PAR at the No.2 Tailings is in the high classification range of 10-100 people, comprising mine workers in buildings, workers in a nearby parking lot, and motorists using the nearby highway.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 5.4 million cubic metres of tailings released from the TSF.
- Environmental impact: No areas of significant environmental habitat impacted and no endangered or species of concern impacted.
- Infrastructure impacted: Highway 188 could be blocked by tailings up to 20 metres high.

Design description

Construction of No. 2 Tailings commenced in the 1950s with two perimeter starter embankments (Starter Dam 1 and 2) built of locally sourced conglomerate. Starter Dam 1 was built to an approximate height of 25 metres (1,000 metres above sea level) and a width of 9 metres. Starter Dam 2 was built to an approximate height of 7.5 metres (1,020 metres above sea level) and a width of 6 metres.

Tailings were discharged into No. 2 Tailings from the 1950s to 1975. The starter embankment crest was raised using the upstream method. Tailings were deposited from the crest with a decant pond maintained on the western side of the impoundment. The embankment was raised in stages of between 9.7 metres and 12 metres with a step in over the tailings of 8 metres. Raises using the upstream method were constructed of tailings sand sourced from the deposited tailings beach using a cable operated bucket excavator (dragline). Nominal compaction was applied to the outer 4.5 metres of each raise from the movement of the dragline over the embankment during placement. The maximum crest height of the final embankment is approximately 107 metres (1,088 metres above sea level).

No.2 Tailings, 2025

No. 2 tailings is under active management as part of the closure plan for all closed facilities in the BHP Globe-Miami complex. At present, the sites are working on implementing remedial measures, in accordance with BHP's tailings risk mitigation program. A final closure design is in progress.

The base closure scope for No.2 tailings includes:

- constructing a buttress or other measures to add additional tailings stability
- regrading and covering the tailings facilities

The post-closure design includes monitoring, care and maintenance after closure activities have been completed. Monitoring of the TSF is aligned with the GISTM and the BHP's *Tailings and Water Storage Facilities Global Standard*.

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent occurring in 2024.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	The colour coding of the pond level staff gauge should be verified.	Following completion of the current update to the OMS manual, verify the colour coding of the staff gauge. *This action is in planning*
Dam Safety Review 2023	No material findings.	Not applicable.

Environmental and social monitoring

The TSFs within the Globe-Miami Arizona area fall within a region of historical mining activity and under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP), which is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
WQARF Program	Ongoing site characterisation and monitoring information inform Source Remediation Plans (SRPs). The results of the EMP and updates to the progress of the SRPs are issued to ADEQ as required. More information can be found here.	Continue site characterisation and groundwater quality monitoring and progress SRPs in consultation with ADEQ.
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here.	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan includes No. 2 Tailings and outlines our engagement drivers and key stakeholders. Engagement drivers include legal and regulatory requirements as well as our commitment to consult and engage with communities. We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and tribes to share information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needed basis, usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The Copper Cities EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection.
- Step 2: emergency level determination.
- Step 3: response activation, notification, and communication.
- Step 4: response.
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Copper Cities No. 8 Tailings

Facility location	Globe-Miami district, Arizona, United States of America
Classification	Very High

Facility description

No. 8 Tailings is located approximately 5 kilometres north of the towns of Miami and Globe, in Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the Globe-Miami area to the Gila River and Salt River Pima Maricopa Indian communities. The TSF was operated from 1965 to 1975 and stores approximately 7.5 million cubic metres of tailings. No. 8 Tailings is the second largest TSF (by volume) at Copper Cities and uses a constructed embankment and natural topography to contain the tailings. The impoundment area is approximately 33 hectares with a typical pond area of 4.5 hectares. The embankment crest has a maximum height of 91 metres with tailings thickness up to 65 metres. The embankment is approximately 550 metres long at the crest and is located along the south-east edge of the facility. The downstream slope is approximately 1 metre vertical for every 2.3 metres horizontal (1V:2.3H) and 1V:1.5H between benches in the overall slope.

Summary information	
BHP site	Copper Cities
TSF name	No.8 Tailings
Coordinates	33.451, -110.848
Current maximum height	91 metres
Area	33 hectares
Stored tailings volume	7.3 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for No. 8 Tailings is Very High based on the Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for No.8 Tailings was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Heavy rain raises the reservoir level above the crest, resulting in a dam breach
	Deformation of embankment from earthquake results in overtopping
	Progressive erosion results in overtopping
Embankment instability	Earthquake causes all or a portion of the tailings to liquefy
	The base or side of the embankment is eroded, leading to a slope failure
	Concentrated flows on the downstream slope progressively erode the slope
	Loss of embankment strength due to high water pressure
	Internal erosion through embankment

Failure mode	Initiating event
Foundation failure	Internal erosion through foundation
	Weak zone in foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design of the TSF closure components (preventative)
- Operating surveillance a (preventative)
- Emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Copper Cities TSFs were assessed in 2018. The scenario considers a slope failure of the dam caused by an earthquake that would trigger a flow of tailings.

The estimated PAR at the No.8 Tailings is in the significant classification range of 1-10 people, comprising motorists using the nearby highway.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 3.1 million cubic metres of tailings released from the TSF.
- Environmental impact: No areas of significant environmental habitat impacted and no endangered or species of concern impacted.
- Infrastructure impacted: Highway 188 could be blocked by tailings up to 20 metres high.

Design description

Construction of No. 8 Tailings commenced in 1965 with one perimeter starter embankment made of clay, sand and gravel (believed to be locally sourced conglomerate). The starter embankment had a maximum embankment slope height of 10.5 metres (995 metres above sea level) and a crest width of 11 metres.

Tailings were deposited until 1975. The raises from the starter embankment were constructed using the upstream method, with incremental raise heights varying between 9.1 and 12.2 metres and step-ins over the tailings of up to 12.5 metres. The final maximum embankment crest height is approximately 91 metres (1,075 metres above sea level).

No.8 Tailings, 2025

The Copper Cities TSFs are currently under active management as part of the closure plan that covers all closed facilities in the BHP Globe-Miami complex. The sites are currently working on implementing remedial measures in accordance with BHP's tailings risk mitigation program. A final closure design is in progress. The base closure scope for the Copper Cities Site includes the following activities:

- constructing a buttress or other measures to add tailings stability
- regrading and covering the tailings facilities

The post-closure design includes monitoring, care and maintenance after closure activities have been completed. Monitoring of the TSFs, in keeping with the GISTM and BHP's *Tailings and Water Storage Facilities Global Standard*, will continue while BHP remains responsible for the sites.

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent review in 2024.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	The colour coding of the pond level staff gauge should be verified.	Following completion of the current update to the OMS manual, verify the colour coding of the staff gauge. *This action is in planning*
Dam Safety Review 2023	No material findings.	Not applicable.

Environmental and social monitoring

The TSFs within the Globe-Miami Arizona area fall within a region of historical mining activity and are subject to regulation by the Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
WQARF Program	Ongoing site characterisation and monitoring information inform Source Remediation Plans (SRPs). The results of the EMP and updates to the progress of the SRPs are issued to ADEQ as required. More information can be found here.	Continue site characterisation and groundwater quality monitoring and progress SRPs in consultation with ADEQ.
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here.	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan includes No. 8 Tailings and outlines our engagement drivers and key stakeholders. Engagement drivers include legal and regulatory requirements as well as our commitment to consult and engage with stakeholders and local communities. We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and tribes. These engagements include sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needed basis, usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The Copper Cities EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Copper Cities No.9 Tailings

Facility location	Globe Miami District, Arizona, United States of America
Classification	Significant

Facility description

No. 9 Tailings is located approximately 5 kilometres north of the towns of Miami and Globe, in Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the Globe-Miami area to the Gila River and Salt River Pima Maricopa Indian communities. The TSF was operated from approximately 1966 to 1975 storing approximately 2 million cubic metres of tailings. The facility is bounded by an upstream raised valley-fill dam on the south side and by natural ground on all other directions. There is a waste rock dump at the downstream slope of the tailings dam which was either part of the starter dam or placed to support the toe of the dam.

The maximum height of the facility is approximately 24 metres. The overall downstream embankment slope is approximately 1 metre vertical for every 1.8 metres horizontal (1V:1.8H) with inter-bench slopes of approximately 1V:1.3H. The No. 9 TSF has an estimated surface area of 11 hectares. A small evaporation pond area is located within the TSF on the north end of the facility and has an estimated surface area of 0.4 hectares. The impoundment surface is sloped away from the dam crest.

Summary information	
BHP site	Copper Cities
TSF name	No. 9 Tailings
Coordinates	33.442, -110.888
Current maximum height	24 metres
Area	11 hectares
Stored tailings volume	2 million cubic metres
Status	Inactive

Consequence classification

The consequence classifications for No. 9 Tailings is Significant based on the Population at Risk assessment criteria.

Summary of risk assessment

The most recent FMA for No. 9 Tailings was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Large rainfall event erodes or overtops the embankment
	Large rainfall event re-saturates the slope
	Seismic event causing loss of freeboard combined with a storm event
Embankment instability	Pipe bursts causing erosion of the downstream slope
	Seismic event causes unidentified layer to liquefy
	Large storm event causes culvert blockage leading to erosion
Internal erosion	High water level causes development of seepage

The following controls have been designated as critical under the BHP Risk Framework:

- Design integrity (preventative)
- Operations, maintenance, and surveillance (preventative)
- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of an embankment failure at the No. 9 Tailings were assessed in 2018. The No. 9 failure scenario considered an overtopping failure. The impoundment overtops during the 72-hour probable maximum precipitation event. An overtopping failure would breach the dam and release a slurry of pond water and tailings.

The estimated PAR at No. 9 Tailings is in the significant range of 1-10 people, comprising of BHP staff assumed present at the time of the failure event. In 2023 an estimate of the Population at Risk (PAR) for No. 9 Tailings was developed based on runout polygons and dam breach runout models.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 641,000 cubic metres of tailings and water released from the TSF for the dam breach plus PMF failure.
- Environmental impact: No significant loss or deterioration of fish or wildlife habitat. Potential contamination of livestock/fauna water supply with no health effects.
- Infrastructure impacted: Loss of seasonal workplaces, and infrequently used transportation routes.

Design description

The No. 9 Tailings Storage Facility was operational from 1966 to 1975. The facility is founded on granite bedrock, which was encountered in investigation holes drilled at the crest and the toe of the dam; however, there is also the possibility of the presence of alluvium within the foundation.

There are no detailed design or construction records for No. 9 Tailings. Available information indicates the presence of one starter dam shown on historical drawings. The upstream raise heights were reported to be 11 metres and a step-in width of 8 metres, and were constructed using tailings sand borrowed from the beach using a cable-operated bucket excavator (dragline). Light compaction of the outer 5 metres of each raise was by dragline traffic. The embankment length is 85 metres, with a maximum crest height of 24 metres.

From 2024 to 2025, re-sloping activities were undertaken to achieve a downstream slope of 1 metre vertical for every three metres horizontal (1V:3H). The slopes were then covered with waste rock and seeded with plants. These activities improved slope erosion characteristics and improved site safety and access and were intended as an interim risk reduction measure while a final closure design is currently being progressed. The base closure scope for the site includes regrading and covering the tailings facilities.

No. 9 Tailings, 2025

A final closure design is in progress. The base closure scope for the Copper Cities Site includes the following activities:

- constructing a buttress or other measures to add tailings stability.
- regrading and covering the tailings facilities.

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent review in 2024.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	The colour coding of the pond level staff gauge should be verified.	Following completion of the current update to the OMS manual, verify the colour coding of the staff gauge. *This action is in planning*
Dam Safety Review 2023	No material findings.	Not applicable.

Environmental and social monitoring

No.9 Tailings is located within a region of historical mining activity and falls under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP), which is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
Environmental Monitoring	WQARF Program: Ongoing site characterisation and monitoring information inform Source Remediation Plans (SRPs). The results of the EMP	Continue site characterisation and groundwater quality monitoring and

Area	Summary	Mitigations
	and updates to the progress of the SRPs are issued to ADEQ as required. More information can be found at: https://azdeq.gov/pinal-creek	progress SRPs in consultation with ADEQ.
	AZPDES MSGP for Stormwater discharge associated with the Mineral Industry: Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found at: https://azdeq.gov/MSGP_Industrial/Mining	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan includes No. 9 Tailings and outlines BHP's engagement drivers and key stakeholders. Engagement drivers include legal and regulatory requirements as well as our commitment to consult and engage with communities. BHP engages with elected officials, local community groups, regulators and tribes to share information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needed basis, usually driven by projects. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The No. 9 Tailings EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Copper Cities No.10 Tailings

Facility location	Globe Miami District, Arizona, United States of America
Classification	Significant

Facility description

No. 10 Tailings is located approximately 5 kilometres north of the towns of Miami and Globe, in Arizona, United States of America. The TSF was operated from approximately 1966 to 1972 storing approximately 2.6 million cubic metres of tailings. The facility is bounded by an upstream raised valley-fill dam on the south side and by natural ground on all other directions. There is a waste rock dump at downstream toe area of the tailings dam which was either part of the starter dam or placed to support the toe of the dam.

The reported maximum height of the facility is approximately 24 metres. The overall downstream embankment slope is approximately 2.3H:1V with inter-bench slopes of approximately 1.5H:1V. The No. 10 TSF has an estimated surface area of 17 hectares. A small evaporation pond area is located within the TSF on the north end of the facility, but the pond is typically dry. The impoundment surface is sloped away from the dam crest.

Summary information	
BHP site	Copper Cities
TSF name	No. 10 Tailings
Coordinates	33.445, -110.894
Current maximum height	24 metres
Area	17 hectares
Stored tailings volume	2.6 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for No. 10 Tailings is Significant based on the Population at Risk assessment criteria.

Summary of risk assessment

The most recent FMA for No. 10 Tailings was in 2022. The credible failure modes identified are presented in the table below.

Failure Mode	Initiating event
Overtopping	Large rainfall event erodes or overtops the embankment
	Large rainfall event re-saturates the slope
	Seismic event causing loss of freeboard combined with a storm event
Embankment instability	Pipe bursts causing erosion of the downstream slope
	Seismic event causes unidentified layer to liquefy
	Large storm event causes culvert blockage leading to erosion
Internal Erosion	High water level causes development of seepage

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design integrity (preventative)
- Operations, maintenance, and surveillance activities (preventative)
- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of an embankment failure at the No. 10 Tailings were assessed in 2018. The No. 10 failure scenario considered an overtopping failure. The impoundment overtops during the 72-hour probable maximum precipitation event. An overtopping failure would breach the dam and release a slurry of pond water and tailings.

The estimated PAR at the No. 10 Tailings is in the significant classification range of 1-10 people, comprising of BHP staff assumed present at the time of the failure event.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 1,357,000 cubic metres of tailings and water released from the TSF for the dam breach plus flood flows.
- Environmental impact: No significant loss or deterioration of fish or wildlife habitat. Potential contamination of livestock/fauna water supply with no health effects.
- Infrastructure impacted: Loss of seasonal workplaces and infrequently used transportation routes.

Design description

The No. 10 Tailings Storage Facility was operational from 1966 to 1972. The facility is founded on crystalline dacite bedrock and Whitetail Conglomerate. There are no detailed design or construction records for No. 10 Tailings. Available information indicates the presence of one starter dam shown on historical drawings.

The upstream raise heights were reported to be 11 metres and were constructed using tailings sand borrowed from the beach using a cable-operated bucket excavator (dragline). Light compaction of the outer 5 metres of each raise was by dragline traffic. From 2024 to 2025, re-sloping activities were undertaken to achieve a 1V:3H downstream slope. The slopes were then covered with waste rock and seeded with native plants. These activities improved slope erosion characteristics and improved site safety and access. The embankment length is 85 metres, with a maximum crest height of 24 metres.

From 2024 to 2025, re-sloping activities were undertaken to achieve a downstream slope of 1 metre vertical for every three metres horizontal (1V:3H). The slopes were then covered with waste rock and seeded with plants. These activities improved slope erosion characteristics and improved site safety and access and were intended as an interim risk reduction measure while final closure design is currently being progressed. The base closure scope for the site includes regrading and covering the tailings facilities.

No. 10 Tailings, 2025

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent review in 2024.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	The colour coding of the pond level staff gauge should be verified.	Following completion of the current update to the OMS manual, verify the colour coding of the staff gauge. *This action is in planning*
Dam Safety Review 2023	A tension crack was observed along the downstream crest of No. 10 Tailings.	It is recommended that the area around the observed tension crack should be demarcated to prevent inadvertent access onto the potentially unstable ground and continue monitoring. The location should also be added to the list of inspection points in the OMS manual. *This action is complete*
	No material findings.	Not applicable.

Environmental and social monitoring

No.10 Tailings is located within a region of historical mining activity and falls under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP), which is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
Environmental Monitoring	WQARF Program: Ongoing site characterisation and monitoring information inform Source Remediation Plans (SRPs). The results of the EMP and updates to the progress of the SRPs are issued to ADEQ as required. More information can be found at: https://azdeq.gov/pinal-creek	Continue site characterisation and groundwater quality monitoring and progress SRPs in consultation with ADEQ.
	AZPDES MSGP for Stormwater discharge associated with the Mineral Industry: Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found at: https://azdeq.gov/MSGP_Industrial/Mining	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan includes No. 10 tailings and outlines BHP's engagement drivers and key stakeholders. Engagement drivers include legal and regulatory requirements as well as our commitment to consult and engage with communities. BHP engages with relevant congressional delegations, state and local elected officials, local community groups, regulators and tribes to share information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needed basis, usually driven by projects. BHP is committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The No. 10 Tailings EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Lisbon Upper Tailings Impoundment and Lower Tailings Impoundment

Facility location	Lisbon Mine Tailings Storage Facility, Utah, United States of America
Classification	High

Facility description

The Lisbon TSFs are in San Juan County, approximately 6 kilometres south-west of La Sal, Utah. The site is currently owned and operated by Rio Algom Mining LLC, a subsidiary of BHP. The site is regulated under Utah Department of Environmental Quality (UDEQ), Division of Waste Management and Radiation Control (DWMRC) Radioactive Material License UT 1900481, Amendment 7. Mine and mill operations occurred between 1972 and 1988. Tailings at the site were deposited into two TSFs, the Upper Tailings Impoundment (UTI) and the Lower Tailings Impoundment (LTI), during operations which have since been reclaimed with covers that include a radon barrier. Approximately 2 million cubic metres of tailings were produced and stored within the two impoundments. The TSFs at the site are inactive.

Summary information		
BHP site	Lisbon	
TSF name	Upper Tailings Impoundment (UTI)	Lower Tailings Impoundment (LTI)
Coordinates	38.267, -109.289	38.267, -109.283
Dam height	25 metres	18 metres
Area	20 hectares	20 hectares
Stored tailings volume	1 million cubic metres	1 million cubic metres
Status	Inactive	Inactive

Consequence classification

The consequence classifications for the UTI and the LTI are High based on the Environment assessment criteria.

Summary of risk assessment

The most recent FMA for the UTI and the LTI was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Extreme flood event
	Blockage of the spillway during a large storm event
Embankment instability	Seepage along the historic decant pipe
	High water pressure in the embankment from an extreme flood event

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design integrity (preventative)
- Operations, maintenance, and surveillance (preventative)
- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of an embankment failure at the Lisbon Upper and Lower Tailings were assessed in 2022. The scenario deemed most credible was overtopping failure which leads to liquefaction and mobilisation of tailings. The scenario assumes the following: A 72-hour probable maximum precipitation event occurs; the diversion channel becomes blocked with debris from upstream near the crest of the UTI; unable to continue down the diversion channel, flood flows overtop the channel banks and flows over the crest of the UTI, flooding the LTI; the LTI spillway is overwhelmed by the increased flow and the LTI crest overtops. The scenario was broken into two cases, Case A and Case B.

Case A is the worst-case scenario during which it is assumed that the overtopping flows are erosive and result in liquefaction of a portion of the tailings in both the UTI and LTI.

Case B represents a less severe failure during which the flows that overtop the UTI do not erode the UTI embankment. The resulting overtopping flows pond on top of the LTI, which then overtops. The flows overtopping the LTI are considered erosive and result in liquefaction of a portion of the tailings in the LTI only.

The estimated PAR at the Lisbon Mine TSFs is in the significant classification range of 1-10 people; comprising of one ranch, and the site trailer located approximately 3 kilometres from the Site, which could be partially inundated during a flood-induced failure event.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 300,000 cubic metres of tailings and water released from the TSFs for Case A; and up to 175,000 cubic metres of tailings and water released from the TSFs for Case B.
- Environmental impact: The areas surrounding the site and downstream are not significant wildlife habitats but flows from a flood-induced failure would reach the Colorado River and could potentially be transported to Lake Powell in southern Utah. The environmental consequences were determined by the assumed remediation effort in a flood failure scenario.
- Infrastructure impacted: The area contains limited infrastructure and services that could be impacted.

Design description

There are two tailings impoundments at the Lisbon site: the Upper Tailings Impoundment (UTI) and the Lower Tailings Impoundment (LTI). The UTI is located immediately east and slightly in elevation than the LTI.

The LTI was designed and constructed using the downstream method in 1971. The LTI embankment was constructed of sandy silts with clay soils obtained from the site and compacted in 200 millimetre layers in accordance with Atomic Energy Commission (AEC) and U.S. Nuclear Regulatory Commission (NRC) requirements, with approvals granted by the State of Utah Water Pollution Control Act for the construction of tailings disposal dams. The embankment was raised in two stages during its operation. Construction of the final stage required the excavation and backfilling of a key trench, the placement of a graded-sand blanket and chimney drains, and the placement and compaction of a fine sand shell. When the LTI was rehabilitated in 2009, a 1.7 to 1.8 metre thick radon attenuation cover was added to the existing top of the tailings impoundment.

The UTI was designed in approximately 1974 and raised in the early 1980s using the downstream method. The UTI Dam is an earthen dam without a drain or filter. It was built on a prepared native soil foundation approximately 3 metres) thick, underlain by bedrock. Contaminated demolition debris and soil from the mill area were buried at the toe of the dam during rehabilitation works. When the UTI was rehabilitated in 2009, a 1.7 to 1.8 metre thick radon attenuation cover was added to the existing top of the tailings impoundment and to the embankment.

Upper Tailings Impoundment & Lower Tailings Impoundment, 2025

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2023 and 2024. The 2024 review report is currently being finalised and material findings, if any, will be included in the next public disclosure.

The most recent dam safety review was in 2019. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No material findings.	Not applicable.
Dam Safety Review 2019	A site-specific Operations, Maintenance, and Surveillance Manual and emergency response preparedness manual was not available for the facility.	Prepare a site-specific OMS Manual. Prepare a site-specific emergency response preparedness manual. *This action is complete*

Environmental and social monitoring

The TSFs located at the Lisbon Mine Site fall under the regulation of the Utah Department of Environmental Quality (UDEQ), Division of Waste Management and Radiation Control (DWMRC) Radioactive Material License UT 1900481, Amendment 7.

Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in the Groundwater Sampling and Analysis Plan (SAP) and the Groundwater Sampling Standard Operating Procedure (SOP). The SAP and SOP are reviewed periodically for relevance and new information. The table below presents details on the key elements of the SAP and SOP as they relate to TSFs.

Area	Summary	Mitigations
Environmental Monitoring	DWMRC Radioactive Materials License #UT1900481, Amendment 7 Condition 29 and the groundwater monitoring program require quarterly water level measurements and, at a minimum, annual groundwater sampling from the License wells. There are 14 License	N/A

Area	Summary	Mitigations
	wells and 48 “non-License” hydrogeology wells on and near the Site. Any License wells that exceed the compliance limits set in the License may require quarterly or monthly groundwater sampling as approved by the DWMRC.	
Social Monitoring	In March 2023 a Community and Human Rights Baseline Study was conducted by Verisk Maplecroft for US Legacy Assets in Utah.	N/A

We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and tribes. These engagements include sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needs basis, usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

BHP Legacy Assets applies the Crisis and Emergency Management (CEM) framework. Incident Management Team (IMT) and Field Response Team (FRT) Plans provide the framework for emergency response implementation at the site. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP is supported by site specific credible scenario ERPs (including dam failure) and training exercises.

Independent reviews

Review	Previous review	Next review
DSR	2019	2025
ITRB	2024	2025

Financial capacity

BHP’s financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Canyon Tailings Storage Facility

Facility location	Globe-Miami district, Arizona, United States of America
Classification	Very High

Facility description

The Canyon TSF is located approximately 1 kilometre north of the town of Miami, in Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the Globe-Miami area to the Gila River and Salt River Pima Maricopa Indian communities. Canyon Tailings was operational from the mid-1910s to early-1920s to store tailings and surplus leach solution. Natural topography and constructed embankments are used to contain the tailings. The tailings impoundment surface area is around 6.5 hectares with no active pond. The Canyon Tailings are retained at the north and south ends of a natural valley by cross-valley embankments: south-east dam and north-west roadway berm. The north-west roadway berm is believed to have been constructed of locally sourced materials, while the south-east dam was constructed of tailings.

The south-east embankment maximum slope height is approximately 48 metres (1,080 metres above sea level), has a width that varies between 97.5 to 103.5 metres, and an overall slope of approximately 1 metre vertical for every 5 metres horizontal (1V:5H). A steeper upper bench near the crest of the embankment has a slope of 1V:1.6H and height of 15 metres. In recent closure works, the north-west roadway berm was removed to allow for water drainage to the north.

Summary information	
BHP site	Miami Unit
TSF name	Canyon Tailings
Coordinates	33.405, -110.870
Current maximum height	48 metres
Area	7 hectares
Stored tailings volume	3 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for Canyon TSF is Very High based on the Potential Loss of Life assessment criteria.

Summary of risk assessment

The most recent FMA for the Canyon TSF was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Embankment instability	Temporary high water pressures in the embankment
	Earthquake causes a portion of the tailings to liquefy
	Blocking or failure of spillway and erosion of tailings
	Ponded water flows into the tailings leading to internal erosion

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design of the TSF closure components (preventative)

- Operating surveillance activities (preventative)
- Emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Canyon TSF were assessed in 2023 and reflect the condition of the TSF and surroundings at that time. The sunny day and flood failure scenarios are the same and consider slope failure caused by an earthquake event.

The estimated PAR at the Canyon TSF is in the high classification range of 10-100 people, comprising mine workers, residents in nearby buildings and road users.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Tailings could flow toward the nearby highway but are not expected to reach the highway.
- Environmental impact: Tailings could impact Bloody Tanks Wash downstream which is an ephemeral channel.
- Infrastructure impacted: Only infrastructure within BHP property boundary would be affected.

Design description

The Miami Unit Mine operated from 1909 to 2013 with copper ore mined by underground block caving, open pit, and in-situ leaching methods. The Canyon TSF was constructed in the early 1910s to store tailings from mining operations at Miami Unit Mine. There are no detailed records of the start-up design.

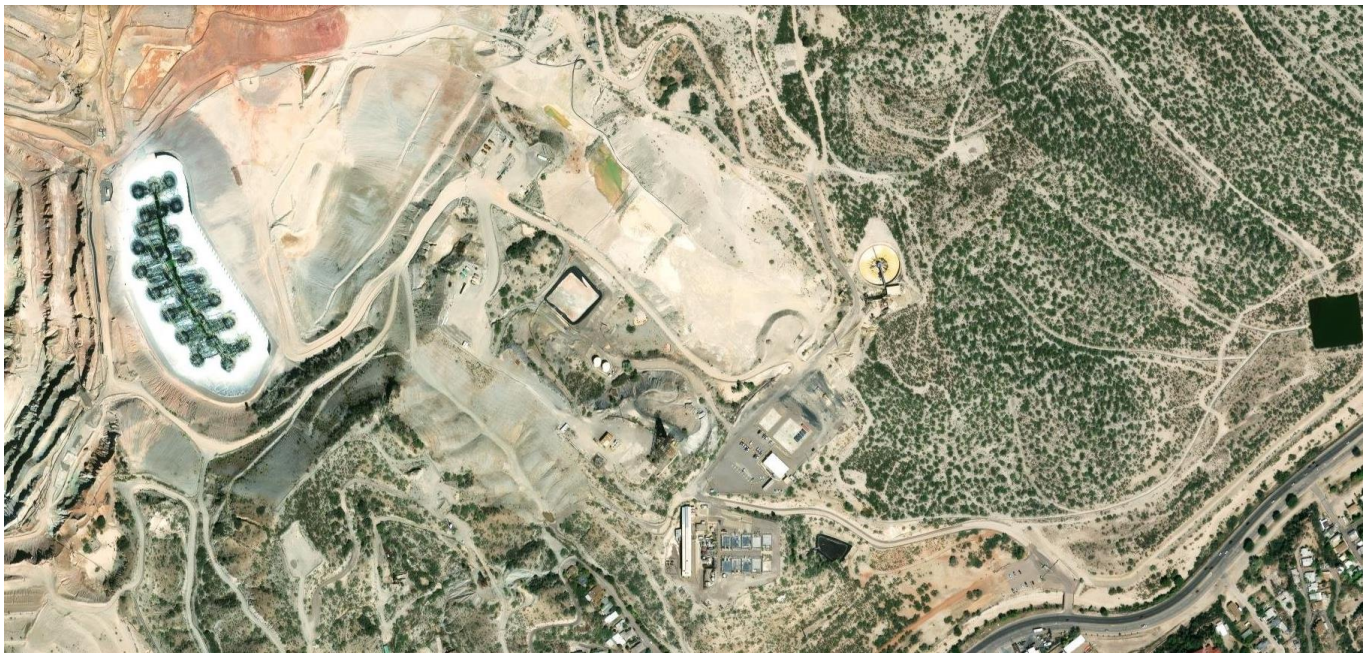
The facility was in operation until the early 1920s with the south-east embankment thought to be constructed using the upstream method. Drill holes through the crest of the south-east embankment penetrated approximately 37.8 metres of tailings. The upstream raises were constructed from tailings sand sourced from the tailings stored in the TSF. The degree of compaction, if any, applied to the embankment fill is not known. Photographs show a cable operated bucket excavator (dragline) moving over the embankment crest on railroad tracks.

During operations, the south-east dam abutted an adjacent TSF (the Miami No. 2 Tailings facility). Some of the No. 2 Tailings are in place beneath the plant used to thicken the tailings, which was located near the contact between Canyon and No.2 Tailings. Tailings were transported and deposited within the TSF via a network of channels supported on wooden trestles.

From 1988 to 2001, some Canyon tailings were re-processed for metal extraction using hydraulic mining methods. The re-processed tailings were subsequently deposited into Deep Pit at the Copper Cities site, north of Miami Unit.

Once the Canyon TSF is closed, further mitigation work may be required to meet BHP expectations for long-term tailings risk. The base closure scope for the Miami Unit site is based on regrading and covering the Canyon TSF to achieve the required safety standards, protect water quality and meet BHP standards.

The post-closure design includes monitoring, care and maintenance after closure activities have been completed. In keeping with the GISTM and BHP's *Tailings and Water Storage Facilities Global Standard*, monitoring of the TSF will continue while BHP remains responsible for the sites.



Canyon Tailings, 2025

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2024.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2024	No material findings.	Not applicable.
Dam Safety Review 2023	No material findings	Not applicable

Environmental and social monitoring

The TSFs within the Globe-Miami Arizona area all fall within a region of historical mining activity and all fall under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
WQARF Program	Ongoing site characterisation and monitoring information inform Source Remediation Plans (SRPs). The results of the EMP and updates to the progress of the SRPs are issued to ADEQ as required. More information can be found here.	Continue site characterisation and groundwater quality monitoring and progress SRPs in consultation with ADEQ.
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan.	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

Area	Summary	Mitigations
	Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here.	

An internal BHP stakeholder engagement plan includes Canyon TSF and outlines our engagement drivers and key stakeholders. Engagement drivers include legal and regulatory requirements as well as our commitment to consult and engage with stakeholders and local communities. We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and Tribes. These engagements include sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needed basis usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The Canyon TSF EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Miami Unit No. 2 TSF

Facility location	Globe-Miami district, Arizona, United States of America
Classification	High

Facility description

The Miami Unit No. 2 TSF is located approximately 1 kilometre north of the town of Miami, in Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the Globe-Miami area to the Gila River and Salt River Pima Maricopa Indian communities. Approximately 34 million tonnes of tailings were deposited using the upstream method between 1911 and 1932 and between 1989 and 2001, approximately 29 million tonnes of tailings were reprocessed for additional copper recovery. The reprocessed tailings were deposited into Deep Pit at BHP's Copper Cities site. BHP rehabilitated the Miami Unit No. 2 TSF site between 2005 and 2006.

Summary information	
BHP site	Miami Unit
TSF name	No. 2 Tailings Storage Facility
Coordinates	33.408, -110.867
Current maximum height	10 metres
Area	76 hectares
Stored tailings volume	2.2 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Miami Unit No. 2 is High based on the Population at Risk, Potential Loss of Life, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for the Miami Unit No. 2 TSF was in 2022. The credible failure modes identified are presented in the table below. These will be reviewed once additional site investigation and characterisation has been completed.

Failure mode	**Initiating event**
Embankment Instability	Earthquake event
Internal Erosion	Large storm event

The following controls have been designated as critical controls under the BHP Risk Framework:

- Dam integrity (preventative)
- Operations, maintenance, and surveillance activities (preventative)
- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of a hypothetical release were determined by performing a simplified run-out assessment, which indicated potential impacts to a public highway downstream. A more detailed assessment to better assess the potential for impacts to downstream infrastructure is planned, following a site investigation and characterisation program.

The estimated PAR at the Miami Unit No. 2 TSF is in the high classification range of 10-100 people.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The tailings could runout between 425 metres and 490 metres downstream from the existing toe.
- Environmental impact: No areas of significant environmental habitat impacted and no endangered or species of concern impacted.
- Infrastructure impacted: Potential impact to downstream public highway.

Design description

The No. 2 TSF was constructed prior to 1911 using the upstream method, with spigots to deposit tailings from the crest. Approximately 34 million tonnes of tailings were deposited between 1911 and 1932. Between 1989 and 2001 approximately 29 million tonnes of tailings were reprocessed for additional copper recovery. The remaining tailings and landscape were sloped, recontoured and covered by rock. Concrete lined surface water collection drains were constructed and routed to a collection pond. The reclaimed surface of the facility currently supports healthy vegetation.

No. 2 Tailings Storage Facility, 2025

Performance reviews

Since the rehabilitation works were completed in 2006, an annual inspection and performance review and a dam safety review have not yet been completed. The timing is outlined in the summary of non-conforming requirements at the end of this TSF disclosure.

Environmental and social monitoring

The TSFs within the Globe-Miami Arizona area all fall within a region of historical mining activity and all fall under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs:

Area	Summary	Mitigations
WQARF Program	Ongoing site characterisation and monitoring information inform Source Remediation Plans (SRPs). The results of the EMP and updates to the progress of the SRPs are issued to ADEQ as required. More information can be found here: https://azdeq.gov/pinal-creek	Continue site characterisation and groundwater quality monitoring and progress SRPs in consultation with ADEQ.
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here: https://azdeq.gov/MSGP_Industrial/Mining	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan includes No. 2 Tailings and outlines BHP's engagement drivers and key stakeholders. Engagement drivers include legal and regulatory requirements as well as BHP's commitment to consult and engage with stakeholders and local communities. BHP engages with relevant congressional delegations, state and local elected officials, local community groups, regulators and Tribes. These engagements include sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needed basis usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The Miami Unit No. 2 EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
SITR	2025	2026

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Summary of requirements where conformance is not "Meets"

Requirement	Conformance Status	Conformance status details	Conformance Plan
2.2, 3.4, 4.2, 4.4, 4.5, 4.6, 4.8, 5.2, 5.4, 5.5, 5.7, 6.4, 7.1, 7.2, 7.3, 7.4, 11.1, 11.2	Partially meets	Select studies, assessments, and documents are outstanding for the Miami Unit No.2 TSF, including: a Knowledge Base Report, a recent annual performance review, Dam Safety Review, and an OMS Manual. BHP has not formally appointed an EOR for the Miami Unit No.2 TSF.	A qualified engineering firm was engaged in 2024 and provided a proposal to facilitate a Tailings Dam Safety and Geotechnical Review of the Miami Unit No.2 TSF. The scope included in this proposal will achieve an overall GISTM conformance status of 'meets' once complete. The scope will be complete prior to the 2027 disclosure.
7.5, 9.1, 9.2, 9.4, 10.4, 10.5	Does not meet		

Legacy Assets – Old Dominion Tailings Storage Facility No. 1

Facility location	Globe-Miami District, Arizona, United States of America
Classification	Very High

Facility description

Old Dominion Tailings 1 (ODT1) is located approximately 2 kilometres from the towns of Globe and Miami in Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the Globe-Miami area to the Gila River and Salt River Pima Maricopa Indian communities. The TSF, the largest at Old Dominion, is located east of Upper Pinal Creek, north of the smaller ODT2, and north-west of a waste dump. This facility uses natural topography and a constructed embankment to contain the tailings. The TSF has a maximum embankment height of 37 metres (varying between 1,074 metres and 1,084 metres above sea level), and a downstream slope of 1 metre vertical for every 2 metres horizontal (1V:2H) near the buttress and 1V:3H elsewhere. The TSF has no active pond and a minimum width of the placed tailings from the embankment crest to the pond area of approximately 50 metres.

Summary information	
BHP site	Old Dominion
TSF name	Old Dominion Tailings 1
Coordinates	33.416, -110.795
Current maximum height	37 metres
Area	13 hectares
Stored tailings volume	2 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for ODT1 is Very High based on the Potential Loss of Life, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for ODT1 was in 2023. The credible failure modes identified are presented in the table below.

Failure Mode	Initiating event
Overtopping	Blockage of spillway leads to overtopping
Embankment instability	Temporary high-water pressures in embankment
	Seismic event causes all or a portion of the tailings to liquefy
	Flood leading to erosion at the base of the embankment
	Progressive erosion of the slope through natural or human processes
	Internal erosion from ponded rainfall

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design of the TSF closure components (preventative)
- Operating surveillance activities (preventative)
- Emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at ODT1 were assessed in 2023. The sunny day and flood failure scenarios for ODT1 considered slope failure caused by an earthquake that would trigger a tailings flow.

The estimated PAR at ODT1 is in the high classification range of 10-100 people, comprising residents in a nearby trailer park, railway workers on the nearby rail line, and motorist using the nearby highway.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 0.6 million cubic metres of tailings released.
- Environmental impact: No areas of significant environmental habitat impacted and no endangered or species of concern impacted.
- Infrastructure impacted: Nearby highway and railway could be impacted.

Design description

The Old Dominion Mine was operated by Phelps Dodge from 1881 to 1931. Mining activities included underground mining, crushing, milling and smelting. Mining activities carried out in the Old Dominion site produced three main tailings impoundments ODT1, ODT2 and ODT3. ODT2 is believed to have been the first TSF constructed and was previously called No.1 Tailings Pond. ODT1 is believed to have been constructed after ODT2 and was referred to as Slime Pond No.10.

Each of the Old Dominion TSFs have a perimeter dam that retains tailings against the natural ridgeline. The facilities were raised using the upstream method. Based on historic photographs, ODT1 was operational after 1918; however, no detailed construction records are available. ODT1 is thought to have been constructed using the upstream method. Mining activities ceased in 1931 due to reduced copper prices and increased seepage into the underground shafts.

Closure construction was completed as part of site-wide closure works from 2002 to 2006. Soil cover for the facility was sourced at Noftsger Hill. Embankment slopes were regraded to 1V:3H and covered with 0.6 metres of cover soil and 0.15 metres of rock cover. The tailings surface was graded to a slope ranging from 1V:22H to 1V:28.5H towards a diversion channel along the east boundary and covered with 0.75 metres of soil. A rock buttress 230 metres long was constructed against the north-west slope to increase the long-term slope stability. The buttress was founded on bedrock (Gila Conglomerate and Dacite). Rock material used to construct the buttress was hauled from a nearby waste dump (ODW1), placed in 1.5 metres layers and compacted. The inner (excavated) slope of the buttress was excavated at 1V:1H prior to placement of the rock material. Downstream slopes of the buttress were graded at 1V:2H while the tailings above the buttress were graded at 1V:2.5H.

Final closure plan details are still in progress, as is the existing tailings closure strategy. The final surface will be revegetated and pre-mining drainage patterns re-established where appropriate.

The post-closure design includes monitoring, care and maintenance after closure activities have been completed. In keeping with the GISTM and BHP's *Tailings and Water Storage Facilities Global Standard*, monitoring of the TSF will continue while BHP remains responsible for the site.

Old Dominion Tailings 1, 2025

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2023 and 2024. The 2024 review report is currently being finalised and material findings, if any, will be included in the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No material findings.	Not applicable.
Dam Safety Review 2023	No material findings	Not applicable

Environmental and social monitoring

The TSFs within the Globe-Miami Arizona area fall within a region of historical mining activity and under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
WQARF Program	Ongoing site characterisation and monitoring information inform Source Remediation Plans (SRPs). The results of the EMP and updates to the progress of the SRPs are issued to ADEQ as required. More information can be found here.	Continue site characterisation and groundwater quality monitoring and progress SRPs in consultation with ADEQ.
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the	Continue monitoring stormwater as required by the AZPDES MSGP and

Area	Summary	Mitigations
	Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here.	adjust management practices as needed.

An internal BHP stakeholder engagement plan includes ODT1 and outlines BHP's key stakeholders and engagement drivers including legal and regulatory requirements and commitments to consult and engage with local communities. We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and Tribes, sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagements and take place on an as-needs basis, usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The Old Dominion EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Old Dominion Tailings No. 2

Facility location	Globe-Miami District, Arizona, United States of America
Classification	High

Facility description

Old Dominion Tailings Storage Facility No. 2 (ODT2) is located approximately 2 kilometres from the towns of Globe and Miami in Arizona, United States of America. ODT2 is located to the east of Upper Pinal Creek and to the south of ODT1. It was likely constructed before 1918. ODT2 has a maximum height of 12 metres and a downstream slope of 1 metre vertical for every 3 metres horizontal (1V:3H). The toe of ODT2 is contiguous to the right-of-way of the Arizona Eastern Railroad. ODT2 and ODT1 are separated by a major diversion channel, designated W1-SJ, which discharges to the Upper Pinal Creek through a 2 metre diameter culvert.

The reclamation cover on the impoundment surface and downstream slope of ODT2 is sloped to shed water and prevent the development of a permanent pond. However, the surface has been graded to a concrete lined diversion channel (T2-E) that runs over the impoundment surface and discharges into W1-SJ diversion channel.

Summary information	
BHP site	Old Dominion
TSF name	Old Dominion Tailings No. 2
Coordinates	33.413, -110.795
Current maximum height	12 metres
Area	4.5 hectares
Stored tailings volume	0.3 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for ODT2 is High based on the Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for ODT2 was in 2023. The credible failure modes identified are presented in the table below.

Failure Mode	Initiating event
Overtopping	Extreme storm event
	Upstream catchments is altered due to extreme storm event
Embankment instability	Large seismic event causes liquefaction of tailings and slope instability
	Slump failure of the unsaturated tailings slope.
	Extreme flood conditions saturate tailings combined with a large seismic event
	Extreme flooding results in toe erosion and embankment instability

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design integrity (preventative)
- Operations, maintenance, and surveillance (preventative)

- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of an embankment failure at ODT2 were assessed in 2023.

The estimated PAR at ODT2 is in the significant classification range of 1-10 people, comprising of BHP staff that were assumed to be present in the downstream area at the time of the failure event.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Basedon a slumping type failure, the tailings would travel no further east than North Broad Street.
- Environmental impact: No significant loss or deterioration of fish or wildlife habitat.
- Infrastructure impacted: High economic losses affecting infrastructure, public transportation, and commercial facilities.

Design description

The Old Dominion Mine was operated by Phelps Dodge from 1881 to 1931. Mining activities included underground mining, crushing, milling and smelting. Mining activities carried out in the Old Dominion site produced three main tailings impoundments ODT1, ODT2 and ODT3. ODT2 is believed to have been the first TSF constructed on site (prior to 1918) and was previously called No.1 Tailings Pond. There are detailed records describing the construction history or deposition methods of ODT2 during operations. The facility is founded on alluvium, Gila conglomerate and weathered Madera diorite.

Each of the Old Dominion TSFs have a perimeter dam that retains tailings against the natural ridgeline. The facilities were raised using the upstream method. The toe is immediately adjacent to the Arizona Eastern Railroad right-of-way (a minimum setback of approximately 2 metres). The maximum crest height is 12 metres, and the embankment length is 384 metres.

Closure construction, integrated into site-wide rehabilitation works, was completed from 2002 to 2006. The cover on the impoundment surface and downstream slope of ODT2 is sloped to shed water and prevent the development of a permanent pond. The surface has been graded toward a concrete lined diversion channel (T2-E) that runs over the impoundment surface and discharges into W1-SJ diversion channel.

Old Dominion Tailings No. 2, 2025

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2023 and 2024. The 2024 review report is currently being finalised and material findings, if any, will be included in the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No material findings.	Not applicable.
Dam Safety Review 2023	No material findings.	Not applicable.

Environmental and social monitoring

The TSFs within the Globe-Miami Arizona area fall within a region of historical mining activity and under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
Environmental Monitoring	WQARF Program: Ongoing site characterisation and monitoring information inform Source Remediation Plans (SRPs). The results of the EMP and updates to the progress of the SRPs are issued to ADEQ as required. More information can be found here: https://azdeq.gov/pinal-creek	Continue site characterisation and groundwater quality monitoring and progress SRPs in consultation with ADEQ.
	AZPDES MSGP for stormwater discharge associated with Mineral Industry: Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here: AZPDES Industrial Stormwater MSGP | ADEQ	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal stakeholder engagement plan includes ODT2 and outlines BHP's key stakeholders and engagement drivers including legal and regulatory requirements and commitments to consult and engage with local communities. We engage with elected officials, local community groups, regulators and Tribes, sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagements and take place on an as-needs basis, usually driven by projects. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The ODT2 EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Old Dominion Tailings No. 3

Facility location	Globe-Miami District, Arizona, United States of America
Classification	High

Facility description

Old Dominion TSF No. 3 (ODT3) is located approximately 2 kilometres from the towns of Globe and Miami in Arizona, United States of America. ODT3 is located to the east of Upper Pinal Creek and to the north of ODT1. It was likely constructed after 1927. ODT3 has a maximum height of 18 metres and a downstream slope of 1 metre vertical for every 3 metres horizontal (1V:3H). The toe of ODT3 is nearly bordering to the right-of-way of the Arizona Eastern Railroad.

The reclamation cover on the impoundment surface and downstream slope of ODT3 is sloped to shed water and prevent the development of a permanent pond. However, the surface has been graded to a diversion channel (T3-E) that runs along the upslope extent of the impoundment surface, which is concrete-lined and graded from north to south, before discharging into Box Canyon.

Summary information	
BHP site	Old Dominion
TSF name	Old Dominion Tailings No. 3 (ODT3)
Coordinates	33.422, -110.800
Current maximum height	18 metres
Area	6.5 hectares
Stored tailings volume	3.13 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for ODT3 is High based on the Population at Risk, Potential Loss of Life, and Infrastructure and Economics assessment criteria.

Summary of risk assessment

The most recent FMA for ODT3 was in 2023. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Embankment instability	Extreme seismic event
	Spillway blockage plus extreme rain event

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design integrity (preventative)
- Operations, maintenance, and surveillance (preventative)
- Emergency preparedness and response (mitigative)

Impact assessment

The impacts of an embankment failure at ODT3 were assessed in 2023. A dam breach tailings runout assessment, based on numerical model, was conducted for ODT3 in 2018. The ODT3 failure scenario considered a runout slope failure triggered by liquefaction of the saturated, contractive tailings layers during a large seismic event. In the case of a failure, the mobilised tailings flow north-west, and adequate confinement at the toe backs up flow, causing tailings to flow over the north and south abutments. Downstream, the mobilised tailings cross Upper Pinal Creek, impacting downstream development, and continue flowing north-west and west, stopping at the west end of the valley floor where an upslope is encountered.

The estimated PAR at ODT3 is in the significant classification range of 1-10 people comprising of BHP staff assumed present at the time of the failure event along with employees at the sewage treatment plant nearby. The PAR was developed based on runout polygons and dam breach runout models.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The mobilised tailings crosses Upper Pinal Creek impacting the downstream development and flows towards north-west and west, and stops at the west end of the valley floor where an upslope is encountered.
- Environmental impact: No significant loss or deterioration of fish or wildlife habitat. Loss of marginal habitat only.
- Infrastructure impacted: High economic losses affecting infrastructure, public transportation, and commercial facilities.

Design description

The Old Dominion Mine was operated by Phelps Dodge from 1881 to 1931. Mining activities included underground mining, crushing, milling and smelting. Mining activities carried out in the Old Dominion site produced three main tailings impoundments ODT1, ODT2 and ODT3. There is no detailed record describing the construction history or deposition methods of ODT3 during operations, but ODT3 was likely constructed after 1927, possibly referred to as No. 1 Tailings Pond. The facility is founded on alluvium, Gila conglomerate and weathered Madera diorite.

Each of the Old Dominion TSFs have a perimeter dam that retains tailings against the natural ridgeline. The facilities were raised using the upstream method. The retaining dam at ODT3 has a maximum crest height of approximately 18 metres, a downstream slope of 1 metre vertical for every three metres horizontal (1V:3H), and an embankment length of 227 metres. The toe is approximately 60 metres east of the Arizona Eastern Railroad right-of-way and is elevated above the Upper Pinal Creek Channel, relative to the other TSFs.

Closure construction, integrated into site-wide rehabilitation works, was completed from 2002 to 2006. To prevent the development of a permanent pond, the impoundment surface is sloped to shed water to a diversion channel (T3-E) that runs along the up-slope extent of the impoundment. The up-slope diversion channel is concrete-lined and graded from north to south. The channel extends beyond the tailings impoundment surface and discharges into Box Canyon.

Old Dominion Tailings No. 3, 2025

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2023 and 2024. The 2024 review report is currently being finalised and material findings, if any, will be included in the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No material findings.	Not applicable.
Dam Safety Review 2023	No material findings.	Not applicable.

Environmental and social monitoring

The TSFs within the Globe-Miami Arizona area fall within a region of historical mining activity and under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
Environmental Monitoring	WQARF Program: Ongoing site characterisation and monitoring information inform Source Remediation Plans (SRPs). The results of the EMP and updates to the progress of the SRPs are issued to ADEQ as required. More information can be found here: https://azdeq.gov/pinal-creek	Continue site characterisation and groundwater quality monitoring and progress SRPs in consultation with ADEQ.
	AZPDES MSGP for stormwater discharge associated with Mineral	Continue monitoring stormwater as required by the AZPDES MSGP and

Area	Summary	Mitigations
	Industry: Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here: AZPDES Industrial Stormwater MSGP | ADEQ	adjust management practices as needed.

An internal stakeholder engagement plan includes ODT3 and outlines BHP's key stakeholders and engagement drivers including legal and regulatory requirements and commitments to consult and engage with local communities. We engage with elected officials, local community groups, regulators and Tribes, sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagements and take place on an as-needs basis, usually driven by projects. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The ODT3 EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – San Manuel No. 1/2 Tailings Storage Facility

Facility location	San Manuel, Arizona, United States of America
Classification	Very High

Facility description

No. 1/2 TSF is located approximately 50 kilometres north-east of Tucson, Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the San Manuel area to the Gila River Indian community. No. 1/2 TSF, the oldest TSF at San Manuel, uses natural topography and constructed embankments to contain the tailings. It is north-east of the former plant site, abuts No. 3/4 TSF to the south-east, and is separated from No. 10 TSF by a channel along the north side. Construction of No. 1 TSF commenced in 1950 and continued until 1990, however, it was only used intermittently as a back-up facility after 1970. During operations No. 1 TSF and No. 2 TSF were merged to form the current configuration (No. 1/2 TSF). There is one embankment structure with a maximum slope height of 70 metres (906 to 910 metres above sea level). The overall downstream slope is approximately 1 metre vertical for every 2.7 metres horizontal (1V:2.7H). The embankment was raised using coarse grained tailings.

Summary information	
BHP site	San Manuel
TSF name	No.1/2 TSF
Coordinates	32.626, -110.601
Current maximum height	70 metres
Area	254 hectares
Stored tailings volume	76 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for No. 1/2 TSF is Very High based on the Environment, and Health, Social, and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for No. 1/2 TSF was in 2018. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Overtopping	Flood event causes overtopping of the road berm within the No. 1/2 TSF diversion
Embankment instability	Temporary high water pressures in the embankment
	Seismic event causes all or a portion of the tailings to liquefy
	The embankment is modified causing reduced stability
	Concentrated flows on the outer slope form erosion gullies and progressively erode the slope

Failure mode	Initiating event
Foundation failure	The foundation is modified causing reduced stability
	High water pressure causing seepage in internally unstable material in the foundation
	Internal erosion occurs due to seepage in a material that is internally unstable
	Weak zone in foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design of the TSF closure components (preventative)
- Operating surveillance activities (preventative)
- Emergency response (mitigating)

Impact assessment

The impacts of an embankment failure at the No.1/2 TSF were assessed in 2018. The sunny day and flood failure scenarios for No.1/2 TSF considered slope failure caused by an earthquake event which could trigger a tailings flow.

The estimated PAR at the No.1/2 TSF is in the significant classification range of 1-10 people, comprising workers managing the TSF and residents of a nearby ranch.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The extent of tailings flow was not calculated specifically for TSF No. 1/2, with the extent estimated to be similar to the adjacent No. 10 TSF that released up to 69 million cubic metres of tailings from the TSF.
- Environmental impact: Released tailings could reach the San Pedro River which is classified as ‘critical habitat’ by the Arizona Game and Fish Department. A sensitive bird reserve habitat could also be impacted.
- Infrastructure impacted: A pump station downstream of the TSF could be impacted, which could affect water supply to San Manuel.

Design description

The mine was operated from 1948 to 1999. Activities included underground block caving, open pit mining and heap leaching. No. 1 TSF was constructed in 1950 with a starter embankment built from locally sourced material to an elevation of 838 metres above sea level. TSF operations began in 1955.

Tailings were initially deposited by a feeder pipe placed on the starter embankment with embankment raises constructed by dredging the pond with a cable operated bucket excavator (dragline). From 1960 to 1990, tailings were deposited at the facility via a centrifugal separator, with the underflow (coarse fraction) being used to construct embankment raises and the overflow (fine fraction) discharged into the TSF. During operations, No. 1 TSF and No. 2 TSF were merged to form the current configuration (No. 1/2 TSF). Background design information notes that during operation, the ponds were decanted via a series of buried pipelines that conveyed water to a collection pond at the base of the TSF.

Closure activities were carried out at San Manuel between 2005 and 2007. Embankment slopes were regraded to provide a uniform slope. Slopes were covered with 0.6 metres of soil and/or rock. Coarse soil cover was sourced from designated areas upslope of No. 5 TSF and No. 6 TSF. Fine materials were sourced from the clean water diversion channel excavation waste material. Tailings surfaces were covered with 0.3 metres of clean cover soil, sourced from natural ground immediately upstream of the impoundment, and vegetated. Limited material placement was used in the pond areas to facilitate drainage.

No.1/2 TSF, 2025

The site currently operates in long-term active care and maintenance with regulatory requirements for ongoing care and maintenance activities. Additional closure activities are under consideration.

The post-closure design includes monitoring, care and maintenance after closure activities are complete. In keeping with the GISTM and BHP's *Tailings and Water Storage Facilities Global Standard*, monitoring of the TSF will continue while BHP remains responsible for the site.

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2023 and 2024. The 2024 review report is currently being finalised and material findings, if any, will be included in the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No material findings.	Not applicable.
Dam Safety Review 2023	Piezometer TARP thresholds.	Establish TARP thresholds for select VWPs where TARP thresholds have not been established. *To be incorporated into the next OMS Manual update*

Environmental and social monitoring

The TSFs located in San Manuel Arizona area fall under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through Arizona's Aquifer Protection Permit (APP) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations

APP Groundwater Quality Monitoring and Groundwater Elevation Monitoring	Monitoring for groundwater quality and groundwater elevation occurs regularly and the results are submitted to ADEQ as necessary. More information can be found here.	Not applicable.
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here.	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan includes the No. 1/2 TSF and outlines BHP's key stakeholders and engagement drivers. These include legal and regulatory requirements and our commitment to consult and engage with local communities. We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and tribes. These engagements include sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needs basis, usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The San Manuel EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure.

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – San Manuel No. 3/4 Tailings Storage Facility

Facility location	San Manuel, Arizona, United States of America
Classification	Very High

Facility description

No. 3/4 TSF is located approximately 50 kilometres north-east of Tucson, Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the San Manuel area to the Gila River Indian community. The TSF uses constructed embankments and natural topography to contain the tailings. It stores the largest volume of tailings on the site and has the second largest impoundment area. The facility is situated between No. 1/2 TSF and No. 5 TSF. No. 3 TSF and No. 4 TSF were merged during operations to form the current configuration (No. 3/4 TSF). The facility was in operation from 1957 to the end of site operations in 1999. There is a single embankment structure with a maximum slope height of 67 metres (approximately 910 metres above sea level), and crest width of 45 metres. The tailings surface is typically dry with no active pond. The overall downstream slope is 1 metre vertical for every 2.8 metres horizontal (1V:2.8H). The embankment was raised using coarse grained tailings in the upstream method.

Summary information	
BHP site	San Manuel
TSF name	No.3/4 TSF
Coordinates	32.615, -110.588
Current maximum height	67 metres
Area	368 hectares
Stored tailings volume	118 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for No. 3/4 TSF is Very High based on the Environment, and Health, Social, and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for No. 3/4 TSF was in 2018. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Flood event raises the reservoir level above the crest, resulting in a dam breach
Embankment instability	Temporary high water pressures in the embankment
	Seismic event causes all or a portion of the tailings to liquefy
	The embankment is modified causing reduced stability
	Concentrated flows on the downstream slope form erosion gullies and progressively erode the slope
Foundation failure	The foundation is modified causing reduced stability
	High water pressure causing seepage in internally unstable material in the foundation
	Internal erosion occurs due to seepage in a material that is internally unstable

Failure mode	Initiating event
	Weak zone in foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design of the TSF closure components (preventative)
- Operating surveillance activities (preventative)
- Emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the No.3/4 TSF were assessed in 2018. The sunny day and flood failure scenarios for the TSF considered slope failure caused by an earthquake that would trigger a tailings flow.

The estimated PAR at the No.3/4 TSF is in the significant classification range of 1-10 people, comprising workers managing the TSF.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: The extent of tailings flow was not assessed specifically for No. 3/4 TSF, with the extent estimated to be similar to the adjacent No.5 TSF, with up to 19 million cubic metres of tailings released from the TSF.
- Environmental impact: Released tailings could reach the San Pedro River which is classified as ‘critical habitat’ according to the Arizona Game and Fish Department. A sensitive bird reserve habitat could also be impacted.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

TSF operation commenced in 1957 with a starter embankment constructed with a crest 30 metres wide and side slopes graded to 1 metre vertical for every 1.5 metres horizontal (1V:1.5H).

Tailings were deposited from 1957 to 1995 using centrifugal separators located on the starter embankment crest, with raises carried out using the upstream method. From 1995 to 1999, tailings were deposited from a series of perimeter discharge points. Available design information notes that during operation, the ponds were decanted via a series of buried pipelines that conveyed water to a collection pond.

Closure activities were carried out at San Manuel between 2005 and 2007. Slopes were covered with 0.6 metres of soil and/or rock. Coarse soil cover was sourced from designated areas upslope of No. 5 TSF and No. 6 TSF. Fine materials were sourced from the clean water diversion channel excavation waste material. Tailings surfaces were covered with 0.3 metres of clean cover soil sourced from natural ground immediately upstream of the impoundment and vegetated. Limited material placement was used in the pond areas to facilitate drainage.

No.3/4 TSF, 2025

The site currently operates in a long-term active care and maintenance with regulatory requirements for ongoing care and maintenance activities. Additional closure activities are under consideration.

The post-closure design includes monitoring, care and maintenance after closure activities have been completed. In keeping with the GISTM and BHP's *Tailings and Water Storage Facilities Global Standard*, monitoring of the TSF will continue while BHP remains responsible for the site.

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2023 and 2024. The 2024 review report is currently being finalised and material findings, if any, will be included in the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No material findings.	Not applicable.
Dam Safety Review 2023	Piezometer TARP thresholds.	Establish TARP thresholds for select VWPs where TARP thresholds have not been established. *To be incorporated into the next OMS Manual update*

Environmental and social monitoring

The TSFs located in San Manuel Arizona area fall under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through Arizona's Aquifer Protection Permit (APP) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
APP Groundwater Quality Monitoring and Groundwater Elevation Monitoring	Monitoring for groundwater quality and groundwater elevation occurs regularly and the results are submitted to ADEQ as necessary. More information can be found here.	Not applicable.
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here.	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan includes No.3/4 TSF and outlines key stakeholders and engagement drivers. These include legal and regulatory requirements and our commitment to consult and engage with local communities. We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and Tribes. These engagements include sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needs basis, usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The San Manuel EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure.

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – San Manuel No. 5 Tailings Storage Facility

Facility location	San Manuel, Arizona, United States of America
Classification	Very High

Facility description

No. 5 TSF is located approximately 50 kilometres north-east of Tucson, Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the San Manuel area to the Gila River Indian community. The TSF uses natural topography and constructed embankments to contain the tailings. No.5 TSF abuts No. 3/4 TSF along the west side and No. 6 TSF to the east and was operational from 1964 until 1999. The maximum height is 76 metres (904 metres to 905 metres above sea level). No.5 TSF was raised using the upstream method and has no sustained pond.

Summary information	
BHP site	San Manuel
TSF name	No.5 TSF
Coordinates	32.606, -110.574
Current maximum height	76 metres
Area	215 hectares
Stored tailings volume	62 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for No. 5 TSF is Very High based on the Environment, and Health, Social, and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for No.5 TSF was in 2018. The credible failure modes identified are presented in the table below.

Failure mode	**Initiating event**
Embankment instability	Temporary high water pressures in the embankment
	Seismic event causes all or a portion of the tailings to liquefy
	The embankment is modified causing reduced stability
	Concentrated flows on the downstream slope form erosion gullies and progressively erode the slope
Foundation failure	The foundation is modified causing reduced stability
	High water pressure in the embankment causing seepage through internally unstable material in the foundation
	Internal erosion occurs due to seepage through a material that is internally unstable
	Weak zone in foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design of the TSF closure components (preventative)
- Operating surveillance activities (preventative)
- Emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the No.5 TSF were assessed in 2018. The sunny day and flood failure scenarios for the TSF considered slope failure caused by an earthquake that triggered a tailings flow. The flood failure scenario also considered blocking of the south diversion channel leading to overtopping of the embankment between No. 5 TSF and No. 6 TSF.

The estimated PAR at the No.5 TSF is in the significant classification range of 1-10 people, comprising workers managing the TSF.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 19 million cubic metres of tailings released from the TSF.
- Environmental impact: Released tailings could reach the San Pedro River which is classified as 'critical habitat' according to the Arizona Game and Fish Department. A sensitive bird reserve habitat could also be impacted.
- Infrastructure impacted: No public/shared infrastructure impacted.

Design description

TSF operation commenced in 1964 with a starter embankment constructed with a crest 30 metres wide and side slopes graded to 1 metre vertical for every 1.5 metres horizontal (1V:1.5H).

Tailings were deposited from 1964 to1995 using centrifugal separators located on the starter embankment crest, with raises carried out using the upstream method. From 1995 to 1999, tailings were deposited from perimeter discharge points. Available design information notes that during operation, ponds were decanted via a series of buried pipelines that conveyed water to a collection pond.

Closure activities were carried out at San Manuel between 2005 and 2007. Slopes were covered with 60 centimetres of soil and/or rock. Coarse soil cover was sourced from designated areas upslope of No. 5 TSF and No. 6 TSF while fine materials were sourced from the clean water diversion channel excavation waste material. Tailings surfaces were covered with 0.3 metres of clean cover soil, sourced from natural ground immediately upstream of the impoundment, and vegetated. Limited material placement was used in the pond areas to facilitate drainage.

The site currently operates in a long-term active care and maintenance with regulatory requirements for on-going care and maintenance activities. Additional closure activities are under consideration.

The post-closure design includes monitoring, care and maintenance after closure activities have been completed. In keeping with the GISTM and BHP's *Tailings and Water Storage Facilities Global Standard*, monitoring of the TSF will continue while BHP remains responsible for the site.

No.5 TSF, 2025

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2023 and 2024. The 2024 review report is currently being finalised and material findings, if any, will be included in the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No material findings.	Not applicable.
Dam Safety Review 2023	Piezometer TARP thresholds.	Establish TARP thresholds for select VWPs where TARP thresholds have not been established. *To be incorporated into the next OMS Manual update*

Environmental and social monitoring

The TSFs located in San Manuel Arizona area fall under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through Arizona's Aquifer Protection Permit (APP) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
APP Groundwater Quality Monitoring and Groundwater Elevation Monitoring	Monitoring for groundwater quality and groundwater elevation occurs regularly and the results are submitted to ADEQ as necessary. More information can be found here.	Not applicable.

Area	Summary	Mitigations
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here.	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan includes No.5 TSF and outlines key stakeholders and engagement drivers. These include legal and regulatory requirements and our commitments to consult and engage with local communities. We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and Tribes. Engagement includes sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives, and occur on an as-needs basis, usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The San Manuel EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure.

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – San Manuel No. 6 Tailings Storage Facility

Facility location	San Manuel, Arizona, United States of America
Classification	Very High

Facility description

No. 6 TSF is located approximately 50 kilometres north-east of Tucson, Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the San Manuel area to the Gila River Indian community. No.6 TSF is the eastern-most facility on the San Manuel site and the closest to the San Pedro River. The setback distance between No. 6 TSF and the San Pedro River is approximately 300 metres. The facility uses natural topography and constructed embankments to contain the tailings. No. 5 TSF bounds this facility towards the west and the San Pedro River to the north. This facility was operational from 1970 until 1999. The maximum embankment height is 76 metres (858 metres to 860 metres above sea level). No.6 TSF was built using the upstream method and has no sustained pond. The overall downstream slope is 1 metre vertical for every 3.4 metres horizontal (1V:3.4H).

Summary information	
BHP site	San Manuel
TSF name	No.6 TSF
Coordinates	32.609, -110.560
Current maximum height	76 metres
Area	173 hectares
Stored tailings volume	56 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for No.6 TSF is Very High based on the Environment, and Health, Social, and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for No.6 TSF was in 2018. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Flood event raises the reservoir level breaching the interior embankment between No. 5 and No. 6
	Flood event occurs that exceeds the design event for the spillway and diversion channel erosion protection
Embankment instability	Temporary high water pressures in the embankment
	Seismic event causes all or a portion of the tailings to liquefy
	The embankment is modified causing reduced stability
	Concentrated flows on the downstream slope progressively erode the slope

Failure mode	Initiating event
Foundation failure	The foundation is modified causing reduced stability
	High water pressure in the embankment causing seepage through internally unstable material in the foundation
	Internal erosion occurs due to seepage through a material that is internally unstable
	Weak zone in foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design of the TSF closure components (preventative)
- Operating surveillance activities (preventative)
- Emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the No.6 TSF were assessed in 2018. The sunny day and flood failure scenarios for the TSF considered slope failure caused by an earthquake that trigger a tailings flow. The flood failure scenario also considered blocking of the south diversion channel and leads to overtopping of the embankment between No. 5 TSF and No. 6 TSF.

The estimated PAR at the No. 6 TSF is in the significant classification range of 1-10 people, comprising workers managing the TSF.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 3 million cubic metres of tailings released from the TSF.
- Environmental impact: Released tailings could reach the San Pedro River which is classified as ‘critical habitat’ according to the Arizona Game and Fish Department. A sensitive bird reserve habitat could also be impacted.
- Infrastructure impacted: No impact to public or shared infrastructure.

Design description

TSF operation commenced in 1970 with a starter embankment constructed with a crest 30 metres wide and side slopes graded to 1 metre vertical for every 1.5 metres horizontal (1V:1.5H).

Tailings were deposited from 1970 to 1995 using centrifugal separators located on the starter embankment crest, with raises carried out using the upstream method. From 1995 to 1999, tailings were deposited using a series of perimeter discharge points. Background design information notes that during operation, the ponds were decanted via a series of buried pipelines that conveyed water to a collection pond.

Closure activities were carried out at San Manuel between 2005 and 2007. Slopes were covered with 0.6 metres of soil and/or rock. Coarse soil cover was sourced from designated areas upslope of No. 5 TSF and No. 6 TSF while fine materials were sourced from the clean water diversion channel excavation waste material. Tailings surfaces were covered with 0.3 metres of clean cover soil, sourced from natural ground immediately upstream of the impoundment, and vegetated. Limited material placement was used in the pond areas to facilitate drainage.

Currently, the site operates in a long-term active care and maintenance with regulatory requirements for ongoing care and maintenance activities. Additional closure activities are under consideration.

No.6 TSF, 2025

The post-closure design includes monitoring, care and maintenance after closure activities have been completed. In keeping with the GISTM and BHP's *Tailings and Water Storage Facilities Global Standard*, monitoring of the TSF will continue while BHP remains responsible for the site.

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2023 and 2024. The 2024 review report is currently being finalised and material findings, if any, will be included in the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No material findings.	Not applicable.
Dam Safety Review 2023	Piezometer TARP thresholds.	Establish TARP thresholds for select VWPs where TARP thresholds have not been established. *To be incorporated into the next OMS Manual update*

Environmental and social monitoring

The TSFs located in San Manuel Arizona area fall under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through Arizona's Aquifer Protection Permit (APP) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
APP Groundwater Quality Monitoring and Groundwater Elevation Monitoring	Monitoring for groundwater quality and groundwater elevation occurs regularly and the results are submitted to ADEQ	Not applicable.

	as necessary. More information can be found here.	
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here.	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan covers No.6 TSF and outlines BHP's key stakeholders and engagement drivers, including legal and regulatory requirements and commitments to consult and engage local communities. We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and Tribes, sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagements occur on as as-needs basis. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The San Manuel EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – San Manuel No. 10 Tailings Storage Facility

Facility location	San Manuel, Arizona, United States of America
Classification	Very High

Facility description

No. 10 TSF is located approximately 50 kilometres north-east of Tucson, Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the San Manuel area to the Gila River Indian community. No.10 TSF is the northern-most facility at the San Manuel site and the largest in terms of impoundment area. The facility uses constructed embankments and natural topography to contain the tailings, and is surrounded on three sides by No Name Wash (north), surface water diversion channel (south) and the San Pedro River (east). This facility was operational from 1970 until 1999. The maximum embankment height is 91 metres (887 metres to 889 metres above sea level). No.10 TSF was built using the upstream method. The overall downstream slope is 1 metre vertical for every 3.3 metres horizontal (1V:3.3H). The TSF has no sustained pond.

Summary information	
BHP site	San Manuel
TSF name	No.10 TSF
Coordinates	32.644, -110.613
Current maximum height	91 metres
Area	370 hectares
Stored tailings volume	109 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for No. 10 TSF is Very High based on the Environment, and Health, Social, and Cultural assessment criteria.

Summary of risk assessment

The most recent FMA for No.10 TSF was in 2018. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Flood causes the diversion channel to become partially blocked, diverts flow into the No.10 TSF impoundments and raises the reservoir level above the crest
Embankment instability	Temporary high water pressures in embankment
	Seismic event causes all or a portion of the tailings to liquefy
	The embankment is modified reducing stability
	Concentrated flows on the downstream slope form erosion gullies and progressively erode the slope
Foundation failure	The foundation is modified reducing stability
	High water pressure in the embankment causing seepage in internally unstable material in the foundation
	Internal erosion occurs due to seepage in a material that is internally unstable
	Weak zone in foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design of the TSF closure components (preventative)
- Operating surveillance activities (preventative)
- Emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the No.10 TSF were assessed in 2018. The sunny day and flood failure scenarios for the TSF considered slope failure caused by an earthquake that would trigger a tailings flow.

The estimated PAR at the No.10 TSF is in the significant classification range of 1-10 people, comprising workers managing the TSF and residents of a nearby ranch.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 69 million cubic metres of tailings released from the TSF.
- Environmental impact: Released tailings could reach the San Pedro River which is classified as 'critical habitat' according to the Arizona Game and Fish Department. A sensitive bird reserve habitat could also be impacted.
- Infrastructure impacted: A pump station downstream of the TSF could be impacted, which could affect water supply to San Manuel.

Design description

TSF operation commenced in 1970 with a starter embankment constructed with a crest 30 metres wide and side slopes graded to 1 metre vertical for every 1.5 metres horizontal (1V:1.5H).

Tailings were deposited from 1970 to 1995 using centrifugal separators located on the starter embankment crest, with raises carried out using the upstream method. From 1995 to 1999, tailings were deposited using a series of perimeter discharge points. Available design information notes that during operation, the ponds were decanted via a series of buried pipelines that conveyed water to a collection pond.

Closure activities were carried out at San Manuel between 2005 and 2007. Embankment slopes were regraded to provide a uniform slope and covered with 0.6 metres of soil and/or rock. Coarse soil cover was sourced from designated areas upslope of No. 5 TSF and No. 6 TSF. Fine materials were sourced from the clean water diversion channel excavation waste. Impoundment surfaces were covered with 0.3 metres of clean cover soil, sourced from natural ground immediately upstream of the facility, and vegetated. Limited material placement was used in the pond area to facilitate drainage. The western half of No. 10 TSF impoundment surface was covered with clean cover soil and vegetation while the eastern half was covered with an alternative cover system as a trial to test long-term vegetation. On this half, the existing 10 centimetres of cover was mixed into the tailings and covered by a new cover 20 centimetres in thickness.

No.10 TSF, 2025

The site currently operates in a long-term active care and maintenance with regulatory requirements for on-going care and maintenance activities. Additional closure activities are under consideration.

The post-closure design includes monitoring, care, and maintenance after closure activities have been completed. In keeping with the GISTM and BHP's *Tailings and Water Storage Facilities Global Standard*, monitoring of the tailings storage facilities will continue while BHP remains responsible for the sites.

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2023 and 2024. The 2024 review report is currently being finalised and material findings, if any, will be included in the next public disclosure.

The most recent dam safety review was in 2023. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	No material findings.	Not applicable.
Dam Safety Review 2024	Piezometer TARP thresholds.	Establish TARP thresholds for select VWPs where TARP thresholds have not been established. *To be incorporated into the next OMS Manual update*

Environmental and social monitoring

The TSFs located in San Manuel Arizona area fall under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through Arizona's Aquifer Protection Permit (APP) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP) which is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
APP Groundwater Quality Monitoring and Groundwater Elevation Monitoring	Monitoring for groundwater quality and groundwater elevation occurs regularly and the results are submitted to ADEQ as necessary. More information can be found here.	Not applicable.
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here.	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan includes No.10 TSF and outlines BHP's key stakeholders and engagement drivers, including legal and regulatory requirements and commitments to consult and engage with local communities. We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and Tribes, sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagements take place on an as-needs basis, usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The San Manuel EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2023	2028
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

Legacy Assets – Solitude Tailings Storage Facility

Facility location	Globe-Miami District, Arizona, United States of America
Classification	Extreme

Facility description

The Solitude TSF is located in Globe, near the community of Little Acres, Arizona, United States of America. The Tribes in Arizona have deferred management of cultural resources in the Globe-Miami area to the Gila River and Salt River Pima Maricopa Indian communities. The Solitude TSF is the only facility at the site, receiving tailings from the Miami mine from 1928 to 1959. The TSF has not operated since 1959. A nominal vegetative cover was placed on the facility in 1965.

The TSF is an above-ground facility using natural topography and embankments to contain tailings. The embankment comprises three contiguous segments including the Main Embankment, South Wing Wall, and North Wing Wall. The Main Embankment consists of an initial starter embankment that was progressively raised with tailings sand using the upstream method. The maximum height of the facility is approximately 70 metres. The approximate crest lengths of the Main Embankment, South Wing Wall and North Wing Wall are 975, 745, and 245 metres, respectively. The embankment crest is graded from approximately 1,112 metres above sea level at the north end to about 1,109 metres above sea level at the south end, to match the tailings surface. The downstream slope of the embankments have been re-sloped to 1 metre vertical for every 3 metres horizontal (1V:3H) by the ongoing construction of the Solitude Closure Tailings Buttress (SCTB) which was constructed to address potential geotechnical failure modes which pose risk to the population downstream. The maximum height is 70 metres, with a maximum width of approximately 305 metres. There is no actively managed pond at the Solitude TSF however, rainfall from the tailings surface and upstream catchments drains to Blue Lake located at the upstream end of the TSF or collects in local depressions on the tailings surface and evaporates or infiltrates. In 2013, a spillway was constructed to divert excess floodwater from Blue Lake to Russell Gulch.

Summary information	
BHP site	Solitude
TSF name	Solitude TSF
Coordinates	33.392, -110.831
Current maximum height	70 metres
Area	240 hectares
Stored tailings volume	58.7 million cubic metres
Status	Inactive

Consequence classification

The consequence classification for the Solitude TSF is Extreme based on the Potential Loss of Life assessment criteria.

Summary of risk assessment

The most recent FMA for the Solitude TSF was in 2022. The credible failure modes identified are presented in the table below.

Failure mode	Initiating event
Overtopping	Flood event that exceeds the design event or changed upstream conditions
	Reduced spillway capacity through blockage
	Embankment settlement leading to overtopping

Failure mode	Initiating event
	Failure of natural slopes above TSF leads to overtopping wave
Embankment instability	Flood and/or high reservoir level leading to high water and pressure levels in the embankment
	The embankment base is modified reducing stability
	Progressive external erosion of the embankment
	Flood leading to erosion at the base of the embankment
	Internal erosion from cracking, or unknown buried structures, or collapse of decant tunnels
Foundation Failure	Undetected weak layer in foundation

The following controls have been designated as critical controls under the BHP Risk Framework:

- Design of the TSF closure components (preventative)
- Operating surveillance activities (preventative)
- Emergency response (mitigative)

Impact assessment

The impacts of an embankment failure at the Solitude TSF were assessed in 2020 and reflect the condition of the TSF and surroundings at that time. The flood failure scenario considered overtopping at the low point along the South Wing Wall. Natural flood flows would occur at the same time downstream of the failure location. The sunny day scenario considers a slope failure of the Main Embankment that would trigger a tailings flow.

The estimated PAR at the Solitude TSF is in the very high classification range of 100-1,000 people, comprising residents down gradient of the TSF.

A catastrophic tailings release could result in the following impacts:

- Extent of Tailings flow: Up to 3.4 million cubic metres of tailings released.
- Environmental impact: The tailings could reach Roosevelt Lake, impacting the water quality.
- Infrastructure impacted: Several public roads and residential buildings could be inundated.

Design description

The Solitude TSF is the only major mining facility at the site. It was commissioned for tailings deposition in 1928 when the No.2 Tailings facility at Miami Unit was reaching capacity. A starter embankment was constructed however details are not available.

Tailings were discharged into the facility from approximately 1928 to 1959. It is believed the facility was raised using the upstream method. Tailings were pumped from the Miami Unit plant to the facility in steel and wooden pipelines and discharged from the embankment crest. Tailings were discharged to the facility until 1959 and it was closed in 1965 to the standards of the day.

BHP acquired the Solitude site through the purchase of Magma Copper Company on 13 February 1996. No construction or operations records are available prior to this date. The site has been under care and maintenance since BHP acquired it in 1996.

Planning and design for long-term closure commenced in 2015. The Solitude TSF is currently under active closure, in line with the Closure Management Plan, which includes all closed facilities in the BHP Globe-Miami complex. At present, the sites are working on implementing remedial measures, in accordance with BHP's tailings risk mitigation program.

Solitude TSF, 2025

A buttress is currently being constructed on the downstream slopes of the perimeter embankment to establish factors of safety with respect to slope stability consistent with the requirements for extreme loading per GISTM Annex 2. The project has progressed to a point where the required factor of safety improvement has met BHP's internal guidance and industry guidelines, and the project will continue with a focus on completing the surface water management aspects (cover and collection drains). Additional closure activities currently proposed at Solitude include:

- Upgrading the existing flood storage and conveyance configuration to manage the extreme loading design flood in a manner that is protective of the communities downstream.
- Assessment of a cover that manages water moving through the TSF to meet requirements for downgradient groundwater.
- Removal, remediation, and closure of the sediment ponds immediately downstream of the TSF.

These closure upgrades intend to address the material risks identified in the FMA.

The post-closure design includes monitoring, care, and maintenance after closure activities have been completed. In keeping with the GISTM and BHP's *Tailings and Water Storage Facilities Global Standard*, monitoring of the TSF will continue while BHP remains responsible for the site.

Performance reviews

The EOR conducts annual tailings facility reviews with the most recent reviews in 2023 and 2024. The 2024 review report is currently being finalised and material findings, if any, will be included in the next public disclosure.

The most recent completed dam safety review was in 2018. The 2024 dam safety review is being finalised and material findings, if any, will be included in the next public disclosure. Material findings from the most recent reviews are presented in the table below.

Review	Material findings	Recommendations
Annual Performance Review 2023	Spillway is undersized for final closure (duplicate finding from the 2018 Dam Safety Review below).	As per below. *This action is in progress*
Dam Safety Review 2018	Spillway is undersized for final closure.	Upgrade the spillway to accommodate the selected inflow design flood. *This action is in progress*

Environmental and social monitoring

The TSFs within the Globe-Miami Arizona area fall within a region of historical mining activity and under the regulation of Arizona Departments of Environmental Quality (ADEQ). Groundwater is managed through the Pinal Creek Water Quality Assurance Revolving Fund (WQARF) and surface water is managed through the Arizona Pollutant Discharge Elimination System (AZPDES) Multi-Sector General Permit (MSGP). Environmental monitoring programs are reported to meet both company and regulatory requirements. These are described in detail in an Environmental Monitoring Plan (EMP). The EMP is reviewed periodically for relevance and new information. The table below presents details on the key elements of the EMP as they relate to TSFs.

Area	Summary	Mitigations
WQARF Program	Ongoing site characterisation and monitoring information inform Source Remediation Plans (SRPs). The results of the EMP and updates to the progress of the SRPs are issued to ADEQ as required. More information can be found here.	Continue site characterisation and groundwater quality monitoring and progress SRPs in consultation with ADEQ.
AZPDES MSGP for stormwater discharge associated with the Mineral Industry	Stormwater discharges from the site are monitored per AZPDES MSGP-2019 requirements as outlined in the Stormwater Pollution Prevention Plan. Impacted surface water is managed on-site and clean water is discharged from the site. The results of monitoring programs are issued to ADEQ as required. More information can be found here.	Continue monitoring stormwater as required by the AZPDES MSGP and adjust management practices as needed.

An internal BHP stakeholder engagement plan includes Solitude TSF and outlines BHP's key stakeholders and engagement drivers, including legal and regulatory requirements and commitments to consult and engage with local communities. We engage with relevant congressional delegations, state and local elected officials, local community groups, regulators and Tribes, sharing information on projects, environmental monitoring and reporting, infrastructure works, ongoing site maintenance and social investment and economic development initiatives. Engagement takes place on an as-needs basis, usually driven by projects. We are committed to collaborating with communities and pursuing economic collaboration opportunities. Further perception research is undertaken to understand community sentiment on a range of topics.

Emergency preparedness and response plan

The Solitude EPRP is described in the Arizona Closed Sites Incident Management Team (IMT) and Field Response Team (FRT) Plan, which provides the framework for emergency response implementation at the Arizona closed sites. The EPRP provides external and internal agencies with the necessary information to facilitate the mobilisation and coordination of personnel and equipment in a timely manner in the event of an emergency impacting, or with the potential to impact, the site and surrounding area. The FRT will provide an initial response to an incident and draw on the IMT for subject matter expertise and tactical support. The IMT will engage the Emergency Management Team (EMT) for strategic support as necessary.

The EPRP outlines the five-step response procedure:

- Step 1: incident detection
- Step 2: emergency level determination
- Step 3: response activation, notification and communication
- Step 4: response
- Step 5: terminating/standing down the response

Independent reviews

Review	Previous review	Next review
DSR	2024	2029
ITRB	2024	2025

Financial capacity

BHP's financial capacity, including provision for closure and rehabilitation, is available in our Annual Report.

BHP