RioTinto

# Argyle

## Mine Closure

Updates on the
**Argyle Mine Closure**

Issue 9
Q2 June 2025

## Welcome to the ninth edition of the Argyle Mine Closure Newsletter

I would like to start by acknowledging the Miriwoong and Gija people from the seven Dawang/Daam groups who are the Traditional Owners of the Barramundi Dreaming – the Tiltuwam, Mandangala, Yunurr/Yalangga, Neminuwarlin, Balaburr, Bilbildjing and Upper Jimbila people.

We are continuing to share this quarterly publication with a broader external audience including Traditional Owners, local community stakeholders as well as regulators. We want to share our progress more broadly as we prepare to finish the project.

Our demolition contract partner, Liberty Industrial, has made significant progress in the second phase of the infrastructure removal activities which include the Argyle village, power station, workshops, offices and airport. You will be able to see some great photos of the changes in the Argyle Village and power station in the Infrastructure section of this newsletter.

In this edition, we have also included a summary of our water management strategy that is included in our mine closure plan. This summary will detail the waterflows across the Argyle mining lease before closure and how the comprehensive closure water management strategy we are implementing ensures sustainable water flow after closure execution has completed.

If you have missed past editions of our newsletter, scan this QR code or visit us at **riotinto.com/en/operations/australia/argyle** to download a copy.

**Melissa Cundy**
General Manager
Argyle Closure

# 2025 Milestones

**2025**

**January**
- 2024/2025 revegetation season
- Village transition to the Completion Camp
- Workforce mobilised to Completion Camp

**2025**

**February**
Liberty Industrial re-mobilised

**2025**

**March**
- Argyle Village demolition started
- Power station removal commenced

**2025**

**June**
Bulk earthworks progressing in the North, South and on the Main Dam Embankment

We are here

2025

**October**
- Airport removal commencement
- Village reshaping commencement
- South Bulk earthworks completed

2025

**December**
- 2025/2026 revegetation season
- Infrastructure removal works completed

2026

**May**
Earthworks completed

**2026**

**August**
Site offices removal commencement

2025

**November**
- North-West works completed
- TSF surface completed
- Airport reshaping commencement

2025

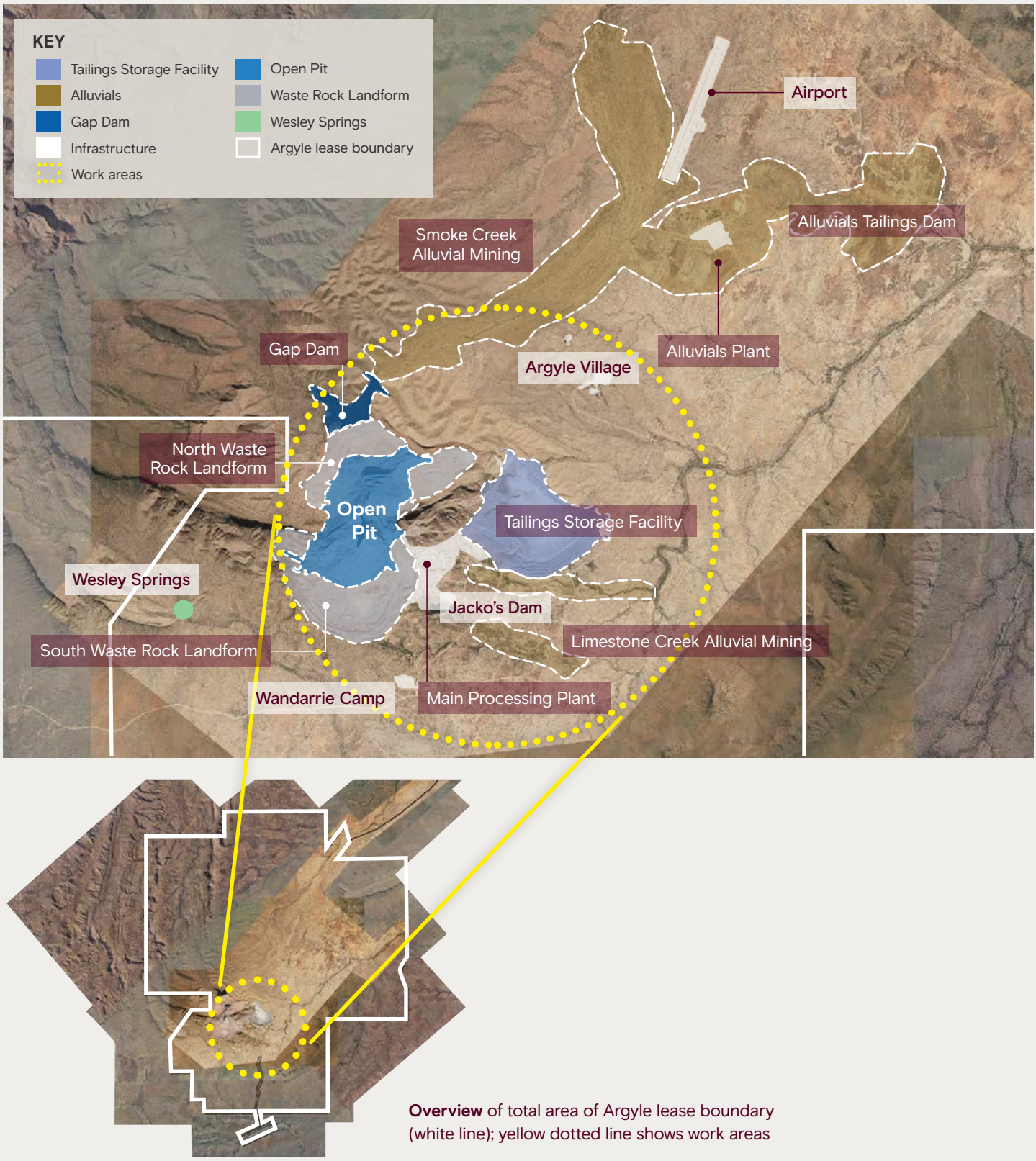
**April**
BoLF works completed

2026

**June 2026**

**Completion**
**Camp removal**

# Argyle Diamond Mine Closure
## Work Area Domains




**Overview** of total area of Argyle lease boundary (white line); yellow dotted line shows work areas

# Infrastructure

## What we did in Q2 2025

### Infrastructure removal works progressing

Demolition contract partner Liberty Industrial and remediation contract partner PTG Consulting are progressing with the SP2 phase of infrastructure removal works.

Liberty have continued to make progress with initial clean-ups, HAZMAT removal and demolition at the village and power station. PTG, working closely with Liberty, continue to undertake contaminated site investigations and support demolition, HAZMAT and remediation activities.

Key milestones for SP2 to date include:

- All electronic waste has been stripped before demolition and will be sent offsite and recycled instead of being disposed to on-site landfills.
- Argyle Village ~70% and the power station ~45% demolished.
- The third containment cell to take contaminated waste has been excavated and lining works have started.

***Main photo:*** *The demolition of Argyle Village continues*
***Above left:*** *Power station undergoing demolition*
***Above right:*** *The third containment cell*

- PTG have completed annual monitoring events for groundwater, surface water and fish sampling.

Overall for the project:

- 80% of all infrastructure removal work complete.
- 80% of all HAZMAT has been removed from site.
- 85% of Areas of Potential Concern (AoPC) have been investigated and remediated (where required).
- 43,000m$^3$ of soil has been placed in containment cells.
- 1,000m$^3$ of soil bioremediated.

## Coming up in Q3 2025
### What we're doing next

- Progressing demolition across the remaining 11 demolition lots.
- Removal of linear infrastructure including powerlines and underground services.
- Excavation of the final inert landfill cell at Wandarrie Landfill.
- Undertaking remediation activities including liming acidic soils, removal of bitumen coated pipe and soil removal and disposal in the containment cell.

# Landforms

*Above: 49ha of reprofiling works remains on the SWRL (total area 342ha)*

## What we did in Q2 2025

### Reprofiling works nearing completion on the South Waste Rock Landform

We have made significant progress on reprofiling works on the South Waste Rock Landform (SWRL) with a total of 293ha rehabilitated to date.

## Seepage infrastructure works commenced

As a part of our water management strategy for closure, work has started on 4 seeps on the natural seepage points on the South Waste Rock Landform.

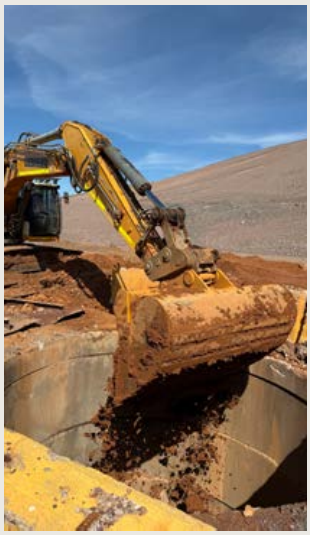
This infrastructure will help manage waterflows from within the South Waste Rock Landform, allowing them to be effectively neutralised before being released into the natural waterways on the Argyle lease.

Please refer to page 14 to learn more about the Argyle Closure water management strategy.

## Progress on the TSF west

Works in the TSF west work area are progressing well. 95% of tailings material has been covered with growth media in preparation for the 2025/2026 rehabilitation season.

Rehabilitation works completed before 2024/2025 have flourished. Monitoring of the adjacent Heritage site has recorded no adverse impacts in 20 weeks of monitoring.



## Backfilling of vent shafts

Gooring Jimbila Contracting (GJC) have completed the vent shaft backfilling works. These vent shafts were an important part of the underground mine infrastructure and allowed for air to be expelled from the underground. Creating an effective backfill ‘plug’ will reduce the risk of any settlement and deformation over time.

There were 5 vent shafts to backfill, and work was completed to the approved design. This involved bulk rockfill and 10m depth of stabilised fill for each vent shaft. Recognising the importance of this area to Traditional Owners, we are also removing the concrete collars from the vent shafts.

# Coming up in Q3 2025

- Ongoing growth media haulage

# Environment

## What we did in Q2 2025

### Latest Revegetation monitoring results

In May 2024, contract partner Stantec undertook monitoring of 2021/22, 2022/23 and 2023/24 season rehabilitation areas at the Argyle Diamond Mine. They used a combination of on-ground and remote-sensing approaches.

At the time of monitoring, year 1 monitoring was less than 6 months old while year 2 was approximately 18 months old, and year 3 monitoring was 2.5 years old.

The rehabilitation work at Argyle was monitored and reported against pre-2024 completion criteria. A report detailing progress against more specific criteria has been commissioned to be completed by Stantec and is currently in progress.

### Alluvials

Overall alluvial rehabilitation is performing well as it matures.

**ATD3 Rehabilitation**

- In the historically rehabilitated areas, the rehabilitation is performing well with monitoring showing high numbers of native vegetation and fauna, and low numbers of weeds.
- Monitoring also discovered one weed species (*Sida cordifolia*) that was unidentified before closure. This species was found in historically rehabilitated plots. As such, it will be included as a key target species in future weed campaigns in ATD3, with rehabilitation monitoring to determine if the weed has been successfully treated.




*This page and next page: Revegetation progress in the alluvials*

- Actively rehabilitated areas performed well across native species establishment metrics except for the 2021/22 rehabilitation which reported only 11 species present. Monitoring will continue to determine if this improves, with infill planting or reseeding to be investigated as options to improve species diversity.

**ATD4 Rehabilitation**

- In the historically rehabilitated areas at ATD4, native vegetation was performing well, with monitoring showing high numbers of native vegetation and fauna, and low numbers of weeds.
- New weed species *Bothriochloa pertusa* and *Sida cordifolia* were found in the historically rehabilitated sites. These weeds will be targeted in future weed management campaigns and monitored to determine if the species have been eliminated from the area.

**Landfill areas**

- The landfill areas are performing well in the first year of monitoring with progress of the rehabilitation meeting expectations for these early stages. As the vegetation matures, we expect to see an increase in the number of structural layers, number of plant species and mean plant cover.
- No weed presence was detected in this round of monitoring which is another positive sign for the early rehabilitation.






### Alluvial Mined Area

- The alluvial mined areas met all criteria on average. However, there was one plot that reported exceeding weed cover criteria (27% weed cover). This plot will be targeted in 2025 weed management campaigns and monitored to determine effectiveness of treatments.

### Weed trials and management concerns

- Weed management trials conducted at ATD4 including testing higher ratios of early establishing native species and testing pre-emergent herbicide application were affected by significant ponding. This resulted in a low proportion of seeded species being identified. This ponding also resulted in a high weed count, particularly *Jatropha gossypifolia* (bellyache bush) being present throughout the area.
- New weed species *Sida cordifolia*, *Bothriochloa pertusa*, and *Heliotropium indicum* need elimination. These species will be targeted during wet season weed management campaigns in 2025, with monitoring to determine effectiveness of treatments.
- Overall weed cover reduced in sites monitored in 2024 with the exception of the ATD5 infill planting area which had a weed cover exceeding 10%. Continued on-ground weed management is planned to reduce weed cover.

## Waste Rock Landforms (WRLs)

Rehabilitation efforts are generally progressing well with most vegetation meeting criteria across various sites including North Central (NC), North-East Upper (NEU), South Central (SC), South Lower (SL) and the ROM pad.

### Vegetation Success

- Most sites across varying maturity of rehabilitation met criteria for species richness, cover, fauna presence, plant reproduction, Nitrogen-fixing plants, and weed cover in the WRLs.
- Plant density (less than 3 plants per m²) were not met at all sites except for 2021/22 North Central rehabilitation. We plan to continue monitoring to ensure that if density in these areas doesn't increase as the vegetation continues to mature, we can take appropriate action.


*North Central (NC) revegetation progress*


*North East Upper (NEU) revegetation progress*

**Structural Layers**

- 2021/22 and 2023/24 North Central (NC) WRL and all South Waste Rock Landform (SWRL) are progressing well towards meeting the required number of structural layers. As the rehabilitation matures and slower growing upper storey species such as eucalyptus and corymbia mature, we expect the mean number of structural layers to increase.

**Erosion and Gully Monitoring**

- Remote sensing observations indicate that mean gully volumes increased in some areas of the WRLS. On-ground inspections are planned across all WRLs to assess if erosion will stabilise the gullies or if rework is needed.

## Seeding Trials

Seeding trials of 6Kg/Ha were undertaken at TSF and North Waste Rock Landform (NWRL) locations with early results indicating lower seeding intensity leads to reduced native species recruitment, (lower density, cover, and number of species) and higher weed cover compared to standard seeding of 8Kg/ha. Monitoring of these trials will continue, to determine how they progress as the rehabilitation matures. There is currently no plans to seed at rates below 8kg/ha.

## Tailings Storage Facility (TSF)

The rehabilitation was less than 6 months old at the time of monitoring. However, rehabilitation is progressing well at this early stage.

- Mean plant density and number of structural layers (lower, middle and upper storey) were low but are expected to improve as the rehabilitation matures given the high richness of species and low mean weed cover.

## Fauna

As part of rehabilitation monitoring, incidental fauna observations are recorded. Early signs show fauna returning to rehabilitated areas, with direct sightings of birds nesting in the WRL, as well as kangaroos being seen within rehabilitated areas.

A large range of invertebrates have also been identified, which provide the base of the food web for larger animals, and provide nutrient turnover in the soil. There is also developing litter and understory which will provide habitat for a range of species as the rehabilitation develops.

## Summary

Overall rehabilitation is performing well, with high native species cover, developing structural layers and habitat being created for native fauna. As expected, weeds continue to be the key challenge but ongoing weed management is reducing their impact over time. Plant density is also a challenge, however overall plant cover and diversity of species is a positive indicator that as the rehabilitation matures, plant density will also increase.

# Coming up in Q3 2025

- 2025 Rehabilitation Monitoring
- Results from drone-based weed survey
- Drone based herbicide application

# Communities

## What we did in Q2 2025

### Heritage inspections

During the months of April and May 2025, the Communities and Social Performance (CSP) team conducted site inspections of 23 heritage sites that were previously identified in the Argyle Diamond Mine Cultural Heritage Management Plan as being at risk from the closure phase works. The purpose of the heritage inspections is to ensure delineators and heritage signage is present and not missing, and to identify if there are any hazards or damage from weather conditions impacting the site. These inspections also help keep track of whether there is need for further maintenance on the heritage sites. Maintenance and management of heritage sites such as fencing and demarcation is a critical component of the work the CSP team does at Argyle. It also facilitates land access for Traditional Owners when visiting country.


## Manthe and cross culture sessions for the year of 2025 have commenced

With the weather cooling down at Argyle, we have already held 4 Manthe ceremonies and 6 cross-culture awareness training sessions, with 58 people attending both the Gija and Miriwoong Cross Culture sessions. So far in 2025 around 118 people have participated in Manthe ceremonies at Argyle.

In May, we held the first of the overnight cross-culture awareness sessions for 2025 at Wesley Springs and Second Gorge led by Gija Elder Helen Pinday and Mirriwoong Elder Ted Hall respectively. It was a great turn out of contractors and Rio Tinto employees who joined in on the culturally immersive experience.

# General community notices

## East Ridge Telstra tower removal update

Preparations are underway for removing the East Ridge Telstra tower. The tower provides mobile phone, VHF and broadcast radio coverage to Argyle and surrounding communities. As a part of the Argyle Mine Closure Plan, the East Ridge tower is scheduled to be turned off in September 2025 and removed in October 2025.

Once the East Ridge communications tower has been dismantled, the Telstra network coverage, VHF coverage and broadcast radio coverage for Argyle site and surrounding local communities will cease.

## Argyle airport removal update

The Argyle Airport is scheduled to commence demolition works in October 2025. The last flight out of Argyle will be on the 22nd of September 2025.

RFDS will no longer be able to land at Argyle airport post-22nd September 2025. Moving forward, the Warmun and Kununurra airports will continue to be utilised to provide RFDS support to surrounding local communities.

## Coming up in Q3 2025

Ethnographic and Archaeological survey with Traditional Owners scheduled for July and August.

Feature Story

# Argyle Closure Water Management Strategy

Water management is a critical aspect of mining operations – both during active extraction and long after a mine has closed.

The Argyle Diamond Mine Closure water management strategy is focused on managing the seepage of water from the waste rock landforms and tailings storage facility by neutralising or diluting as they flow into three main catchments that flow into Lake Argyle.

## What is seepage?

Seepage refers to water that infiltrates through the ground. In Argyle's case, the seepage from the waste rock landforms and tailings storage facility is a result of rainfall passing through the waste rock and tailings materials.

As the water moves through the waste rock or tailings, it can dissolve minerals and other materials, creating a liquid that may contain elevated concentrations of metals, salts, or other contaminants.

Seepage is a key environmental concern in mining because it can carry contaminants into nearby surface water or groundwater systems, potentially impacting ecosystems and water quality. Effective management includes monitoring seepage quality, designing landforms to minimise infiltration, and implementing control measures such as diversion and mixing infrastructure, liners or collection systems.

The mineral waste stored in Argyle's Waste Rock Landforms includes some Potentially Acid Forming (PAF) materials. The seepage of water from these landforms containing PAFs is known as Acid Metalliferous Drainage or AMD.

The Waste Rock Landforms also contain carbonates which can neutralise the Potentially Acid Forming materials. When seepage containing AMD mixes with seepage containing neutralising carbonates, or dilutes with water, the water flow becomes neutralised and safe to be released into the environment.

## Water bodies, catchments and seepage points

The seepage of water from the Waste Rock Landforms and Tailings Storage Facility flows into three main catchments, **Smoke Creek**, **Limestone Creek** and **Wesley Creek**.

Throughout operations and closure execution, infrastructure has been in place to support seepage management.

**Gap Dam** was built in 1995 and supplied raw water to the camp, mine and processing plant.

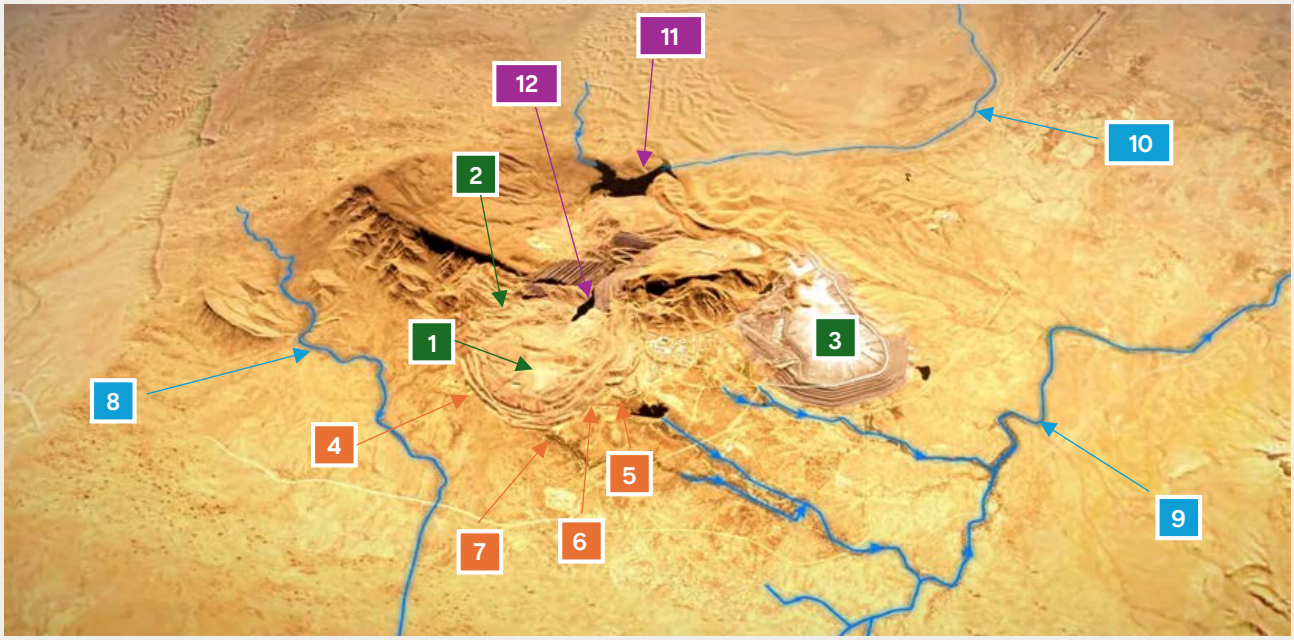
**Jacko's Dam** was built in 2000 and supported seepage management on the South Waste Rock Landform.

**Reclaim Pond 2B or RCP2B** captured seepage from the Tailings Storage Facility.

*Gap Dam*

The **pit lake** was formed after mine operations ceased and the dewatering pumps were progressively switched off and the underground filled with water – as planned.

The pit lake is also an important part of the Argyle water management strategy and will capture some of the seepage from the South Waste Rock Landform and TSF post-closure.




**Landforms (Green)**

1. South Waste Rock Landform
2. North Waste Rock Landform
3. Tailings Storage Facility (TSF)

**Seeps (Orange)**

4. EWS (acidic seep)
5. TWRD (acidic seep)
6. ICI
7. SWS

**Catchments (Blue)**

8. Wesley Creek
9. Limestone Creek
10. Smoke Creek

**Water bodies (Purple)**

11. Gap Dam
12. Pit Lake

*Two of the 4 seepage points located at the South Waste Rock Landform, EWS and TWRD, are mildly acidic as a result of the internal flow paths within the landform. The two acidic seeps are mixed with SWS or ICI seeps to either neutralise or dilute prior to release to the environment. AMD seepage from the North Waste Rock Landform flows into Gap Dam where it is effectively managed through dilution.*


*Jacko's Dam will be decommissioned during closure execution and 4 seepage structures will be installed to capture, control and divert water flows and assist seepage management.*

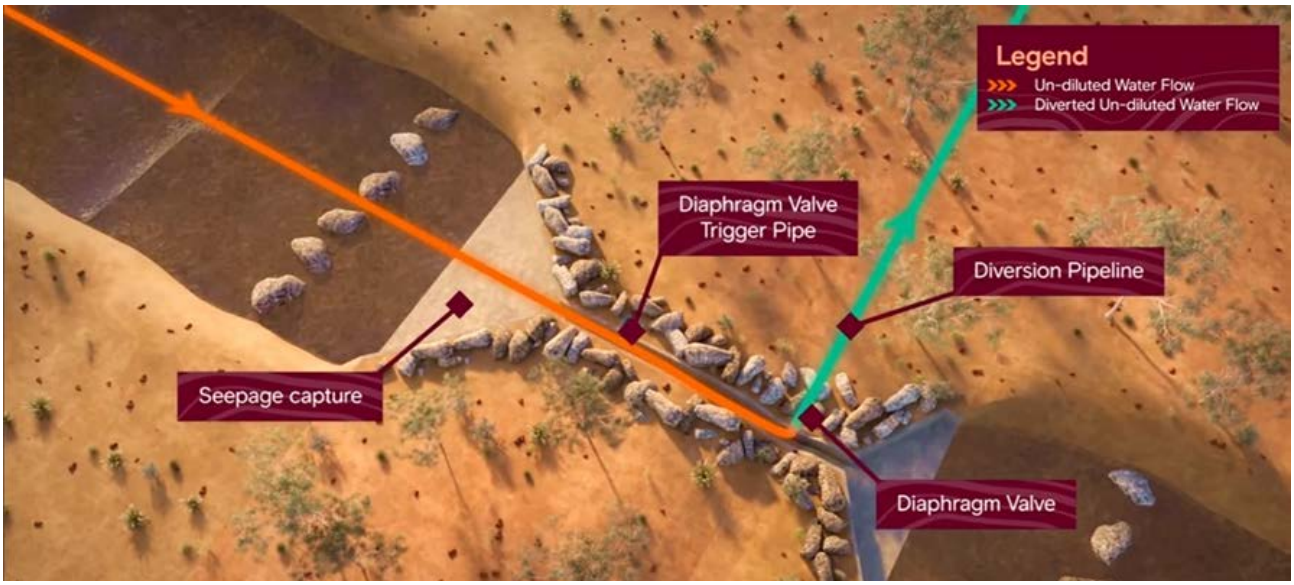
## Implementation of the water management strategy

Before implementing the water management strategy, the water flow around the Argyle site remains the same during the wet and dry seasons.

| Pre-closure water management | Post-closure water management |
|---|---|
| In the **South Waste Rock Landform**, the seepage points are the **EWS**, **SWS**, **ICI** and **TWRD**.<br>A trench filled with gravel-like tailings has been constructed at the EWS seep to slow down and neutralise the water before discharging to Wesley Creek. This acts like a natural filter.<br>Although the effectiveness of the coarse tails trench is expected to decline over time, the seepage infrastructure at EWS will ensure that water quality is maintained in the long term. The **ICI** and **TWRD** seeps discharge into Jacko's Dam, which overflows into the Limestone Creek catchment after rainfall. Jacko's Dam will continue to receive these discharges until the closure seepage management strategy is implemented. | **In the South Waste Rock Landform, seepage infrastructure will help manage waterflows from the four seepage points.**<br>In the dry season,<br>Water flow from the **EWS** seep below 7.5 litres per second are diverted to **SWS** seep to mix and neutralise before releasing into Limestone Creek.<br>Water flows from the ICI and TWRD seeps up to 20 litres per second are diverted into the pit lake through the underground to prevent flowing into Limestone Creek.<br>The Pit Lake will fill and stabilise over time, approximately up to 150 metres over 60 - 90 years, remaining below local groundwater levels.<br>In the wet season,<br>The larger volume of water due to rainfall dilutes the flow from the seeps.<br>Water flows from **EWS** above 7.5 litres per second are released directly into Wesley Creek after diluting with the rainwater.<br>Water from the **SWS** seep continues to release into Limestone Creek.<br>As Jacko's Dam will be decommissioned, seepage from **ICI** and with **TWRD** seeps above 20 litres per second flow into Limestone Creek. |
| In the **North Waste Rock Landform**, the seepage flows into Gap Dam where it is effectively managed through mixing and dilution. This will continue after closure. | Gap Dam is a critical component of the water strategy, and will mix and dilute seepage from the North Waste Rock Landform all year round. |
| After ceasing operations, the depositing of tailings into the AK1 Tailings Storage Facility also ceased. | The initial drained water from the **Tailings Storage Facility** will be pumped into the underground through the portal all year round.<br>When the water flow is less than 10 litres per second, the water seepage will be released to promote plant growth around the area.<br>The seepage does not contain AMD or other contaminants. |

## Seepage infrastructure

The seepage structures are made of concrete and will be installed at the base of the South Waste Rock Landform where the four seeps are located. The seepage structures will be regularly inspected during the monitoring and maintenance phase. They are designed and expected to function for about 300 years.




*In the **dry season,** or low flow scenarios where water flow is 7.5 litres per second or less, the water will be redirected through the diversion pipeline.*


*In the **wet season,** or high flow scenarios where the water flow is above 7.5 litres per second, the water will be released downstream into the creek through the flow discharge. Boulders are placed to protect the seep structure from debris that will cause damage and not fit down the 0.8m wide structure. These will need to be checked through the monitoring and maintenance phase.*

## Monitoring and Maintenance Phase

Once closure execution is completed, the site will enter a monitoring and maintenance phase where we will continue surface and ground water monitoring by collecting and analysing samples from various locations across the lease.

The monitoring and maintenance phase will continue for a minimum of 10 years to ensure ongoing safety and environmental stability.

## Contact us

If you'd like more information or if you have any queries about the closure, please get in touch **enquiries.argylediamondmine@riotinto.com**

Grievances and complaints phone number **1800 674 774**

To learn more about the Argyle Closure project, scan the QR code, or visit **riotinto.com/en/operations/australia/argyle**

RioTinto