



Case studies

PLATINUM



Re-imagining
mining to improve
people's lives

A woman with her hair in a bun, wearing a blue zip-up jacket with the Anglo American logo, is leaning over and looking at a tablet held by a young boy. The boy is wearing a school uniform consisting of a dark jacket over a light blue shirt and a dark sweater with a V-neck and blue stripes. He is looking intently at the tablet. In the background, other children in similar school uniforms are visible, looking on. The setting appears to be a classroom or a community center with a green brick wall.

FutureSmart Mining™
– owned by Anglo American plc
nuGen™ – owned by Anglo American plc

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 ESG data tables are available on our website in Excel.

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Leadership

Our role in the circular economy

CircuLab *Litteracy* project to promote learning and recycling



In 2021 a team from Anglo American Platinum launched the *Litteracy* project, through the Anglo American internal circular economy incubator CircuLab. The project is aimed at promoting financial literacy through reverse recycling.

The *Litteracy* team will be partnering with reverse vending machine company, Imagined Earth, to place a reverse vending recycling machine at a participant school in one of our host communities.

This project incorporated the principles of a circular economy – based on minimising waste in all its forms – in a very practical way, and at the same time contributing to uplifting and creating sustainable, thriving communities.

Instead of the user putting in money and getting a product out (like at a candy vending machine), the user puts waste into the machine, which then releases a monetary reward in the form of partner coupons, vouchers and even fractional equity shares.

By promoting recycling in a fun, interactive way and adding a monetary reward component to it, the vending machines allow children in our host communities to benefit from what would previously have become waste.

The vending machines provides communities with access to a sustainable means of recycling – instead of traditional waste disposal services that do not recycle. Access to the vending machines also means that product and material offtakes can be used by community organisations that require such materials.

With regards to land use, there will also be an opportunity to hopefully use land used for dumping waste for school and community vegetable gardens or other sustainable projects.

In 2022, Anglo American received 14 applications from Anglo American Platinum, of which two were selected for the CircuLab programme and the *Litteracy* project is currently in the expansion phase.

By introducing a reverse vending machine at one of our host schools, the team behind the *Litteracy* project hope to:

- Create less waste to landfill
- Create a healthier and less polluted natural environment
- Create a CSI opportunity to deliver meaningful and impactful sustained opportunities into communities by supplying the material offtake to established community organisations which reuse such materials
- Increase awareness around recycling, sustainability and the circular economy
- Teach children the principles of financial literacy and allow for meaningful economic participation
- Enable regular recycling reporting – it is granular, accurate and in line with extended producer responsibility legislation.

Their goal is to provide a platform that allows children in communities within our mining doorstep to find sustainable ways to reuse waste while taking care of the environment and simultaneously boosting local economies. This project hopes to assist in building thriving communities, build local capacity and create sustainable livelihoods and shared sustainable prosperity in our host communities.

Zero harm

Focus on safety

Comprehensive blast-on-mesh coverage to be introduced at Dishaba



During 2022, blast-on-mesh was rolled out to Tumela Upper Mine and will continue during 2023 at Dishaba Mine, and other identified areas, in an effort to mitigate one of our priority unwanted events. Historically, the majority of fall-of-ground incidents have occurred within the face area and were associated with face drilling and safe 'declaration' activities.

Blast-on-mesh is the installation of wire mesh to prevent loose rock from falling and endangering employees below.

Amandelbult began underground stoping trials of blast-on-mesh in 2021. As part of the trial, two panels at the Tumela 16W Shaft applied the mesh in areas where ground conditions had deteriorated. Work on both panels was successfully and safely completed, with very positive feedback received from the crews at the mine.

The next phase of the programme was approved in 2022, for all conventional panels at Tumela 15E Shaft to be converted onto blast-on-mesh to address the geotechnical risk associated with the area.

All stoping panels at Dishaba Mine have adopted blast-on-mesh by the end of 2023. Based on the trials we have done, we are confident that this initiative will make a significant positive

contribution to reducing fall-of-ground incidents at the mine. The implementation of blast-on-mesh significantly reduces the area that the crew needs to declare safe at the start of a shift, minimising the risk associated with entry examination and providing a permanent real cover where rock drill operators will be working.



Zero harm continued

Focus on safety continued

Scraper winch proximity detection system introduced at Amandelbult

Technology plays a key role in underpinning Anglo American Platinum's commitment to zero harm. To reach the goal of eliminating injuries and fatalities, the company continuously works on finding new solutions, including technologies, that improve our safety management system.

One technology we recently introduced at our Amandelbult operations is the scraper winch proximity detection (SWPD) system to mitigate the risk of winch-related incidents. The SWPD system was developed by mining equipment company DMR Technologies.

The technology uses a tracking device and magnetic sensor to intercept potential human contact with the scraper rope: it detects a person's cap lamp as they approach the scraper gulley and triangulates the distance to the centre of the gulley. If the person walks into the danger zone, the scraper winch stops safely.

The system was designed to:

- Indicate the scraper winch's operational status
- Enable communication between personnel and scraper winch operator
- Enable personnel to trip the winch at any point along the scraper path
- Enable personnel to lock-out the winch in the event of an emergency
- Enable automatic tripping of the winch by means of proximity detection in the scraper path
- Provide self-diagnostics to conduct more efficient fault finding when problems occur.

This is an industry 'game changer' as far as enabling detection, communication and lock-out of the scraper winch at a remote location.

The success of this technology would ensure that the risk of injury or fatality as a result of employees entering a scraper winch path will be drastically reduced.



Zero harm continued

Focus on health and occupational health

Mental health in employees' hands

In 2021, an analysis of workplace incidents showed that the frames of mind of employees and contractors at the start of shifts had an influence on potential incidents and hazards.



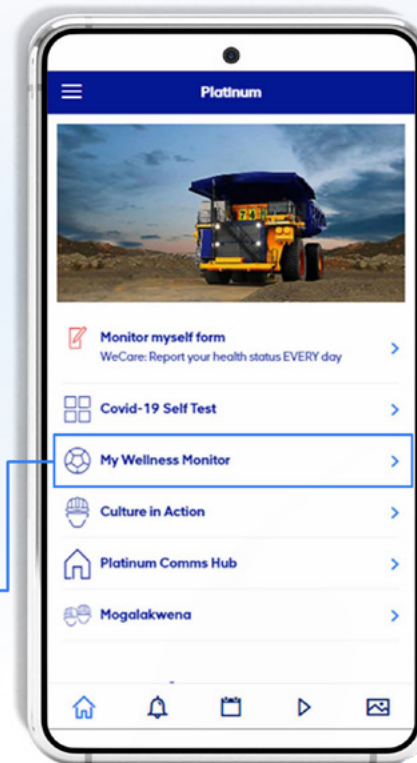
My Wellness Monitor

Access My Wellness Monitor from the Engage app home screen.

It allows employees who are experiencing mental wellness difficulties to reach out for support to receive the necessary assistance.

How to access My Wellness Monitor:

Select My Wellness Monitor on the Engage app.



In response, we have developed an integrated wellness monitor that resides on the employee app, Engage, to support employees in need of immediate help, and provide ongoing support and education.

What is integrated wellness? It may be thought of as wellbeing – a sum of cognitive, behavioural and emotional wellbeing. Conditions such as stress, depression and anxiety affected wellness and were exacerbated during the pandemic. Company-based research showed that levels of depression, anxiety, stress, memory problems and fatigue all rose during and after the pandemic.

Through our integrated wellness monitor, we are aiming to develop a means for a 'psychological check-in' to:

- Identify employees who may be at risk and need support
- Provide preventative longer-term support measures, including counselling
- Raise awareness of wellbeing and mental health
- Promote help-seeking behaviours and emotional wellbeing practices
- Derive a regular measure of organisational wellbeing, through a daily survey.

The app is already used as a valuable communications tool by around 25% of employees and resides on their own phones, placing this support literally in their hands. The information is encrypted, and available in four languages – English, Setswana, Sepedi and isiXhosa, the dominant languages spoken by employees.

Use of the app is completely voluntary, and information shared is held in the strictest confidentiality. Employees must give express permission, for example, before a trained counsellor may contact them.

The app is currently being piloted at Mogalakwena, and will be rolled out across the company in 2023.



Leadership and culture

Promoting culture in action

"Enabling you" – a programme to promote the inclusion of people with disabilities



Our goal, and the goal of the Anglo American Group, is to ensure that employees living with disabilities have access to all the resources they require. Anglo American launched the Enabling You strategy in 2019 and, in order to give it impetus, Anglo American Platinum relaunched the programme in 2022.

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At our company it is a decentralised programme, with each business unit responsible for developing and sustaining it based on their work environment and the requirements of their staff living with disabilities. But we began by interviewing a range of affected individuals in order to establish the barriers they face.

One of the biggest barriers is the attitudes of managers and other staff towards people with disabilities. We have held a workshop with human resources management to plan sensitisation training, and to establish managers who are responsible for the rollout of the strategy.

The work next year will be centred on the social model, which speaks to how to remove barriers that are disabling the person as opposed to as opposed to focusing on the person's impairment or disability. Those barriers are found in aspects of our infrastructural setup and our attitudes.

Business units will be establishing task teams, in which people living with disabilities are represented, to plan how to remove barriers. In addition, we have initiated an apprenticeship programme for five people. The disciplines for which candidates are appointed – human resources, corporate affairs, project management, engineering and SHE – deliberately include some technical fields. This is because of prejudices that view people living with disabilities as being unable to operate in such fields.

Leadership and culture continued

Promoting culture in action continued

Getting to grips with GBV

Sexual harassment and gender-based violence (GBV) is widespread in South Africa and other patriarchal societies, with women being disproportionately affected. We believe we have a duty to take action to reduce and eliminate GBV perpetrated against our employees.

Anglo American Platinum's GBV response and prevention plan is aimed at addressing the systemic root causes of GBV in the company and crafting a response and prevention strategy in our culture in action roadmap. This plan was launched at our leadership summit in July 2022, where discussions highlighted the urgent need to prioritise GBV prevention.

One of the proposals at the summit was for the formation of various additional governance structures, such as the GBV advisory panel, which serves as an advisor and sounding board. Advisory panel comprises Senior Managers and convenes quarterly. The purpose is to provide thought leadership, guide and support GBV work and take ownership of the GBV work. Going further, GBV reference groups were created at our sites. The members of these groups will play a key role in ensuring that the solutions devised are implemented and sustained. Reference groups comprised individuals at various levels in the organisation from various disciplines also representing varying minority groups ie LGBT+.

Our GBV prevention work is anchored in co-creation and collaboration to ensure ownership and shared accountability. Our partnership with the Living with Dignity hub has elevated our case management response. The hub enables survivors to report GBV incidents safely and obtain the help they need.

A critical element of addressing and eradicating GBV is to build psychological safety, which will enable our employees to challenge and report unacceptable behaviour. AAP's I&D strategy is rooted in creating an enabling environment that promotes psychological safety. Various channels of reporting unacceptable behaviour for employees are made available. Consideration has been given to how working conditions

of females can render them vulnerable as victims of GBV thus ensuring that suitable PPE and female facilities are available is important.

We recognise that fear has been the leading reason for under-reporting GBV incidents. However, through our work, we are seeing an increase in reporting. This year, 57 cases of GBV were

reported to and investigated through the hub. Investigations are underway for 33 of these, with 21 concluded and closed. Three cases are currently unconfirmed. The outcomes of the investigations vary and can range from a recommendation for disciplinary action or other avenues such as mediation and facilitation, depending on the particulars of the case and the approach chosen by the victim.



GBV advisory panel



Upholding human rights

Enabling you – independent human rights due diligence at Unki Mine



An independent consultant was engaged in January 2022 to conduct a human rights due diligence study to help us assess Unki's salient human rights risks more accurately.

The study intentionally integrated the UNGPs reporting requirements, as well as IRMA requirements on human rights due diligence. It was guided by the Anglo American social way 3.0 and toolkit, which aims to embed human rights issues across the operation's activities.

A range of impact areas was considered, with a significant number excluded as non-salient, before the salient risks were assessed more closely. This detailed analysis helped the assessors determine a risk rating, while recognising the management measures already in place, and providing recommendations for what more needs to be done to manage each risk.

Overall, this approach helped highlight how Unki can continue its progress in embedding human rights due-diligence systems that are fit for purpose, rigorous and mature.

Healthy environment

Climate change

Hydrogen valley – creating new engines of economic activity through hydrogen



Anglo American Platinum has for some years been working on successfully developing, scaling and deploying hydrogen-based fuel systems. We have invested in innovative ventures and enabling technologies, and initiated collaboration across industry, with the goal of optimising the potential of green hydrogen.

The hydrogen valley is a Department of Science and Innovation-led initiative, supported by Anglo American, ENGIE and Bambili Energy. A feasibility study released in October 2021 identified three possible hubs – Johannesburg, extending to Rustenburg and Pretoria; Durban, encompassing the city and Richards Bay; and Limpopo province centred around our Mogalakwena Mine – which would integrate hydrogen into South Africa's economy.

Nine key pilot projects have been identified across these hubs and recommended to be prioritised by developers. They span the transport, industrial and construction sectors. We focused on four of these projects. Work continued on the mine haul trucks and roll-out at Mogalakwena. Progression of work on hydrogen for logistic trucks and buses continued. A feasibility study on stationary fuel cell system was completed.

Establishing a South African hydrogen valley is seen as an opportunity with great potential to unlock growth, revitalise the industrial sector, and position the country as an exporter of cost-effective green hydrogen to the world. Hydrogen valleys have been used successfully in other countries to promote clean emerging technologies and their commercial viability in support of emissions reduction.

It includes plans to develop of a hydrogen society roadmap aimed at aligning energy stakeholders around the common goal of a just and inclusive net-zero economy by 2050. It is a significant step towards developing a global hydrogen economy and will be an important catalyst in driving a just energy transition in South Africa.

Investments in the Hydrogen South Africa programme aim to create mechanisms for the uptake of publicly financed intellectual property and support small, medium and micro enterprises.



Healthy environment continued

Climate change continued

nuGen haul truck unveiled at Mogalakwena



The development of nuGen is a world first. Developed by Anglo American in partnership with First Mode, the 2MW hydrogen battery hybrid truck generates more power than its diesel predecessor and is capable of carrying a 290 tonne payload. It forms part of the integrated nuGen Zero Emission Haulage Solution, where Anglo American partnered with Engie to deliver a hydrogen production and refuelling elements to the system, as well as our FutureSmart Mining programme, an innovation-led approach to sustainable mining that commits us to carbon-neutrality across our operations by 2040.

A milestone in our strategy to decarbonise our operations was unveiling a prototype of the world's largest hydrogen-powered mine haul truck at Mogalakwena in May 2022.

The full roll-out of this initiative will displace the use of diesel at our mines by 2028. We are also exploring switching smaller heavy-duty vehicles to hydrogen and fuel-cell technology.

The nuGen truck is retrofitted from a diesel-powered vehicle, using multiple fuel-cell modules in parallel that generate around 800kW of power. Hydrogen enters the fuel cell from the tank and mixes with oxygen to create water in a chemical reaction catalysed by platinum. This generates electricity used to power the motors that drive the wheels. The only emission is water vapour.

The power management and battery systems in the truck have been developed to improve overall efficiency by recovering energy when the haul truck travels downhill through regenerative braking. This energy, stored in the battery, together with the hydrogen, extends the truck's range and reduces its out-of-cycle time. Since hydrogen refuelling is significantly faster than recharging batteries, the truck can deliver much higher availability to operations.

A bespoke software solution safely manages the power and energy between the fuel-cell batteries and vehicle drive train. In developing and implementing this proof-of-concept prototype, a number of challenges are being addressed, including:

- The sheer scale of the truck – haul trucks weigh over 500 tonnes fully loaded
- The challenging operating environment – rough road conditions include undulations and extreme temperatures
- The need for uncompromising safety.

A second-generation prototype is in construction, and we aim to start replacing or retrofitting our entire fleet of trucks with zero-emission hydrogen fuel cell technology, starting in 2025.

As part of the integrated nuGen solution, we have also built a zero-emission hydrogen production, storage and refuelling complex at Mogalakwena. This complex boasts a 3.5MW electrolyser, the largest in Africa, and a solar PV field to support operation of the haul truck. Once totally operational, the full-sized system will be close to 100MW in size.

The existing facility can produce 99.97% pure hydrogen, and comprises two compressors and hydrogen storage tanks with 800kg of capacity at 500 bars of pressure. The hydrogen is not converted to a liquid but stays in a gaseous state and is transported at high pressure.

Implementing this technology across the entire fleet has the potential to eliminate significant diesel emissions at our open-pit mines. Currently, each diesel haul truck in operation consumes around 900,000 litres of diesel a year, making diesel the largest contributor to our scope 1 emissions.

The hydrogen systems that serve these trucks also have the potential to serve as local and regional hubs for the emerging hydrogen economy, fuelling the development of a renewable energy ecosystem.

Healthy environment continued

Managing mineral waste – TSFs

Hydraulic dewatered stacking to be introduced at Mogalakwena

Mineral processing operations commonly use large amounts of water to recover valuable minerals. This produced large volumes of wet tailings that are disposed in conventional TSFs.

All our operations are located in water-constrained areas, making water conservation a priority. In addition, the safest construction and maintenance of TSFs is imperative for the company, for communities and for the environment.

The introduction of hydraulic dewatered stacking (HDS) in the Anglo American group is a strategic enabler of the FutureSmart Mining innovation-led approach to mining and a major step towards the group's water-less mining ambition. Not only does HDS allow us to reclaim and reuse water but, in doing so, we can create stable, dry, economically viable land after mining ends.

The adoption of coarse particle recovery, another valuable FutureSmart Mining technology, was instrumental in the development of HDS. It allows larger-size particles of material to be processed, reducing the need for grinding to a smaller size and lowering energy consumption. It also makes it easier for us to drain and recover water during the processing phase and recycle it.



HDS targets the geotechnical and water recovery performance of filtered tailings but without the carbon footprint. Laboratory and proof-of-concept testing have proved the robustness of fines-free sand as a filtering medium.

Anglo American embarked on an ambitious demonstration of this technology after building a bespoke 250,000m³ capacity HDS tailings facility at the El Soldado copper mine in Chile. Early results of the demonstration showing the degree to which tailings consolidation and dewatering are accelerated by adopting HDS are promising, with water recovery at over 80%, and dewatering continuing.

Mogalakwena will be piloting the first brownfield application of HDS, that is working at an active mining operation. A trial berm was constructed on-site in early 2022, providing critical data for the project. Work on the full Mogalakwena trial will start in Q1 2023 with the construction of a small pilot unit, to be followed by the placement of sand. Because Mogalakwena does not yet have an operational coarse particle recovery plant (expected in H1 2023), we have imported around 30,000 tonnes of sand for the pilot unit.

What we want to see at Mogalakwena is if using HDS technology produces a noticeable increase in the rate of tailings dewatering and consolidation. We expect this to be the case, and we will be monitoring the trial very closely to ensure we have data to support this.

The fact that Mogalakwena is a fully operational site presents the team with a range of new challenges, compared to the Chilean trials. The HDS team and site will have to interact with active employees and operations without any negative impacts, especially on safety.

On conclusion of the Mogalakwena trial, we believe the operation's new Blinkwater 2 TSF could be the world's first large-scale HDS facility. Although Blinkwater 2 has been designed as a conventional TSF, we are working to bring HDS principles into its operation.

Healthy environment continued

Managing mineral waste – TSFs continued

Two-year TSF site-characterisation project underway



Anglo American Platinum has embarked on a project at our managed TSFs to characterise, analyse and monitor their tailings and foundation soils for brittleness. The composition of tailings and foundations zones have an impact on TSF slope stability, so it is important that they are well-defined, and that we fully understand their shear strength.

This work is part of our commitment to conformance with GISTM. The majority of GISTM is covered by the group mineral residue facility technical standard. An element of GISTM not fully previously covered under the group standard for TSF design and management relates to slope stability of upstream-constructed TSFs, particularly the comprehensive material characterisation and understanding of the tailings, their foundation, and the phreatic zone. The phreatic surface is the water table in the tailings. This deep understanding will help us in developing defensive design strategies to prepare our TSFs for all eventualities, and to implement effective surveillance and management practices that adapt to new and updated information.

A high-level technical review of upstream-constructed TSFs indicated some gaps to full conformance. We have made it a priority to compile site and material engineering data to inform collapse failure mode risk, review and update design criteria and systematically improve surveillance programmes.

In phase 1, undertaken in 2022, we prioritised:

- Investigation analysis, which looks at soil composition through drill-testing within the tailings foundation
- The installation of vibrating wire piezometers, which measure pressure continually
- Laboratory testing of the foundation clay
- High-level stability assessments for existing and proposed future ultimate heights.

In phase 2, to be undertaken from 2023, we will:

- Conduct further investigation analyses
- Undertake sonic drilling within the tailings foundation soil horizons, install additional vibrating wire piezometers, shape arrays (a chain of rigid segments connected by flexible joints) and inclinometers (used to measure displacements in ground and in structures that lie below ground level)
- Evaluate and install fibre-optic cables to monitor deformation
- Perform detailed stability analysis for existing and proposed ultimate heights.

Through this programme, we will be on track to meet GISTM requirements.

Healthy environment continued

Mine closure and regeneration

Significant rehabilitation progress at Amandelbult

Amandelbult has made significant rehabilitation progress over the past two years: 31ha were rehabilitated in 2022, including Pit 36W; in 2021, three other pits extending over 53ha were rehabilitated.

Amandelbult also started reseedling of local vegetation species at the rehabilitated areas in 2022. The encroachment of alien invasive plants at the pits that were rehabilitated in 2019 and 2020 proved to be a challenge. An alien invasive plant eradication plan was also implemented in 2022 to remove the invasive plants. The rehabilitated areas are regularly monitored using remote-sensing methods and drones for parameters indicating the success or failure of rehabilitation such as topsoil erosion, alien invasive species and vegetation reproductivity amongst others to ensure alignment with the proposed post-mining land uses in the Amandelbult closure plan. This will enable Amandelbult to achieve self-sustainable ecosystems at the rehabilitated areas.



Pit 36E before backfilling



Pit 4&13A before backfilling



Pit 36E after backfilling and seeding



Pit 4&13A after backfilling and seeding

Healthy environment continued

Managing biodiversity

Lantana eradication project



Lantana camara, commonly known as lantana, is an alien invasive plant species in South Africa which landowners are legally and ethically obliged to control.

Originally from the American tropics, lantana is a very adaptable alien plant species. It can invade a variety of ecosystems and, because it has no natural enemies, it simply takes over and out-competes other indigenous vegetation for nutrients, sunlight and water. Once introduced, lantana spreads rapidly by birds that eat the berries.

Our Mooihoek-Groenfontein game farm has a large lantana infestation. In September 2022, we established a partnership between Mogalakwena Mine, the Armoede community and Impact Catalyst (see our sustainability report) [page 26](#) to address the issue.

This Mooihoek-Groenfontein project has been funded by the Industrial Development Corporation of South Africa, and employs 157 people. Of particular importance is the direct involvement of the Armoede community, to which ownership of Mooihoek farm was transferred in October 2021 as part of a resettlement agreement.

The process involves cutting the stems of each shrub at the base and treating the base with herbicide to minimise regrowth. All cut shrubs are taken to a central area where they are dried out and burnt.

In the project's first month, over 110,000 shrubs were removed and treated.

As the team progresses, they are closely monitoring the condition of the surrounding environment through fix-point photo monitoring and 100m transect monitoring. Fix photo monitoring involves recording the site's vegetation structure through before-and-after photographs. 100m transect monitoring involves recording the composition of grass species before the project starts and again once shrubs have been removed and good rains have fallen. The hope is that the composition of grass species will change considerably over time.

We are very pleased that a marked difference is already visible on the farm, and look forward to monitoring and reporting on this project's progress as it continues. The biodiversity and social benefits of this project are tangible, and at the same time, we are complying to relevant legislation, demonstrating the true value of ESG.

Healthy environment continued

Managing biodiversity continued

Tree relocation at Der Brochen



Der Brochen nursery propagating endemic tree species

The development of the Mareesburg TSF and the Der Brochen south shaft, together with their associated infrastructure, meant that a large number of protected trees and shrubs in the area had to be relocated, as per approved permits. The project area is within the Sekhukhune land centre of plant endemism and boasts exceptionally rich biodiversity and plant species that are unique to the region.

The Der Brochen tree relocation project involved assessing threatened and protected plant species, and identifying over 800 individual plants in the area of impact. A suitable area was then identified to the east and the great relocation project began.

Only trees that could be reasonably and safely accessed and removed were relocated. Large trees (above 5m) and plants in inaccessible areas were not. Instead, we addressed their loss through offsets in the Der Brochen nursery. The nursery used various propagation methods, including seed collection as well as shoot and root cuttings, to identify the optimal 'formula' for every protected or threatened plant. We even went so far as to propagate topsoil and endemic plants to support the threatened species in their new habitats.

The process taught us that there is very little documented information on propagating of some of the area's rarest trees. This encouraged us to intensify our monitoring and reporting methods, and to collaborate with and draw on the knowledge of local communities as well as external specialists. As a result, every step has been documented and detailed recommendations made on preparation, transplanting and aftercare, which will inform any steps we take in future.

The project has a large social component that emphasises job creation, mentorship and the transfer of institutional knowledge. From 2023, the project intends to implement a rehabilitation plan that will include training community members, and setting up agreements with other landowners and mines in the area to ensure its long-term sustainability.

Healthy environment continued

Managing biodiversity continued

Supporting anti-poaching and wildlife conservation in Kruger National Park



The Minister of Environment, Forestry and Fisheries, Barbara Creecy flying in a BatHawk surveillance aircraft

In November 2022, Anglo American Platinum donated four Bat Hawk surveillance aircraft to South African National Parks (SANParks) in support of anti-poaching efforts and wildlife conservation in the Kruger National Park. Valued at R3.8 million, the aircraft have excellent visibility in poor weather and their light undercarriage allows it to easily manoeuvre through bush terrain.

The Kruger National Park – over 2 million acres of land – faces myriad operational challenges related to snaring, poaching and poisoning. The four Bat Hawk aircraft are a low-cost alternative to helicopters and will aid significantly in conservation activities in the park. As custodians of the country's fauna and plant life, SANParks relies on partnerships with companies like Anglo American to look after the country's varied biodiversity in the face of economic and physical constraints.

The donation, in collaboration with SANParks, is another step in our objective of protecting the environment and its biodiversity. By collaborating with SANParks through cooperation and knowledge exchange, our collective mission of building a sustainable future becomes attainable.

Healthy environment continued

Water stewardship

Constructing new effluent water storage and treatment facilities for our Rustenburg operations

In working towards our sustainable mining plan water targets, and in line with our water management strategy – committing us to good water stewardship, seeking regional and operational water security, and achieving operational excellence – we have embarked on an ambitious effluent water-storage and treatment project. Once completed, the project – which sources effluent from the Rustenburg municipal wastewater treatment works – will provide 8ML/day of high-quality process water in phased stages (2023 to 2028) to our Rustenburg operations. This will replace the current use of potable water.

This R200 million project has been expedited as a priority given increasing water constraints from the local water utility, which presents a water-security risk to our operations.

The project will be developed in three phases:

- **Phase 1:** Construction of 12ML additional storage, together with a 3.6ML/d ultrafiltration membrane treatment module to supply the Rustenburg Base Metals Refinery reverse osmosis plant, reducing potable water use by about 2ML/d. Phase 1 will be complete and operating by early 2024.
- **Phase 2 and 3:** Will provide additional ultrafiltration and reverse osmosis treatment modules, increasing total capacity to 8ML/d.

Detailed design for the reservoir and ultrafiltration treatment module (including enabling works, pump stations and pipelines) is underway and will be complete in early 2023, followed by the tender process for construction. The first phase to be in operation by 2024, and operating at full capacity by 2028.

The key focus of our operations is to have a dependable and secure water supply while averting environmental discharges and pollution, and to be a responsible water steward in the communities where we operate. If we save water at our operations, it means there is more freshwater for our communities and the environment, making this an ideal project for investment.

Anglo American Platinum has preferred the use of treated effluent over potable water for more than 20 years and this project will take reuse to a higher level. The benefits include water security, and releasing potable water to the community, as well as creating an income stream for the municipality – with the benefit of ensuring the Rustenburg wastewater treatment works is well operated and maintained.

The Rustenburg local municipality (through the Rustenburg Water Services Trust – a municipal entity) receives around R30 million per annum from this arrangement, which is used to ensure that the wastewater treatment works is well operated and maintained. The reduced use of potable water, which is then available to the Rustenburg community, is also an advantage for the municipality.



Healthy environment continued

Water stewardship continued

Partnership to deliver an integrated potable and bulk raw-water solution



Launch of the Olifants Management Model attended by Anglo American Platinum's executive head of projects Prakashim Moodliar (right) and Senzo Mchunu, Minister of Department of Water and Sanitation

The Olifants Management Model (OMM) programme, which is aimed at the accelerated and cost-effective delivery of potable and bulk water to certain areas in the Northern and Eastern Limbs, was formally established in 2022. It was co-created by the Department of Water and Sanitation (DWS) and commercial users (mainly mining companies). Anglo American Platinum is a key role player and driver of the programme. The programme was born out of the Lebalelo Water User Association (LWUA), which was established by a number of mining companies to make available bulk raw water in 2002, both for their own and community use.

Our support for the programme is directly aligned with our objectives of ensuring cost-effective and secure water supply to our operations, to support community access to water, build regional and community resilience to climate change and facilitate community socio-economic development.

While DWS had conceptualised a plan to address the water needs of the middle Olifants River catchment areas in the early 2000s, this has been only partially implemented over the past two decades, despite rising social and industrial needs. The slow progress in delivery of water services has given rise to social unrest and asset destruction, including vandalism of water infrastructure and mining operations.

The estimated R25 billion 'source-to-tap' solution will deliver significant economic, social and environmental benefits, adding an estimated R2 billion to the collective average annual household income. These include:

- **Economic growth and job creation:** Bulk-water provisioning will enable the expansion of mining operations, leveraging private and public sector funding, optimally use existing dams and infrastructure, and create enabling infrastructure essential to industrialising the region. This could create 42,000 direct, indirect and induced jobs in Limpopo province.
- **Socio-economic development:** This will be achieved through the impact of localised infrastructure and operational spend, the development of a local and regional skills base, and the provision of clean water to around 380,000 people, which is critical for the wellbeing and socio-economic development of communities.
- **Water security:** The programme will accelerate delivery of potable water to water-stressed communities and has the potential to become a replicable model for deployment elsewhere in the country.

Following the programme study phase in 2022, and appointment of the primary consultant, construction of the Southern Extension Phase 2 started in 2022 and will continue to 2030.

Healthy environment continued

Managing air quality

Predictive environmental monitoring



One of the challenges associated with air quality monitoring is that, once the increase in emissions or impact is detected, events leading up to this have already occurred. These may relate to specific operational conditions and circumstances that can be exacerbated by atmospheric conditions, for example wind speed, direction and atmospheric pressure.

A pilot study on implementing predictive environmental monitoring to enable smarter air quality emissions control was completed at Waterval smelter complex during the year, with full implementation planned by the end of 2023. Critical pollutants monitored are aligned with our AELs, namely particulate matter, SO₂ and NO_x.

Predictive environmental monitoring is an Anglo American group environmental digital initiative that ensures environmental compliance at receptors through enhanced and integrated control performance and real-time monitoring. Through this process, we will be able to ensure and optimise air quality control management while meeting production guidance targets. Where necessary, we would be able to amend production schedules.

An important element of the project is to ensure communities and other stakeholders are proactively informed about any potential air quality issues. Information collected will also support the development of a dashboard that can be used to predict emissions and potential impacts on sensitive receptors, allowing process conditions to be adapted to eliminate or minimise the predicted impact.



Healthy environment continued

Managing air quality continued

Implementing air quality offset projects



A key area of focus in 2022 has been on the pilot implementation of air quality offset projects, which will be followed by full-scale implementation of selected projects in 2023 and continue to 2025.

While we are installing technology at our Waterval smelter complex and Mortimer smelter to meet the new minimum emissions standards (MES), aligned with our postponement granted by the Department of Forestry, Fisheries and Environment (DFFE) to 31 March 2025, we are implementing air quality offset projects at some of our neighbouring communities. These projects aim to identify and address sources of air pollution generated by community-related actions and which impact on the air quality in their households and ambient air in that community. Typical examples include wood burning, burning of waste, or dust generated from dirt roads that generate emissions in the form of gases and particulate matter.

Following baseline studies that were undertaken for the Mortimer and Waterval smelters in 2020 to identify areas with poor air quality, a number of air quality offset interventions were identified and developed in 2021. The piloting of these interventions took place in 2022 and included the provision of LPG stoves, solar water geysers, rocket stoves, Wonderbags, road sweeping and waste management to determine the viability of implementing these interventions at full scale.

On the outcome of the piloting undertaken in 2022, interventions for implementation in 2023 to 2025 have been identified. These are being reviewed for final approval and implementation commencing in 2023.

Thriving communities

Developing communities

How Anglo American Platinum and Mr Price are jump-starting youth employment



Anglo American Platinum has entered into a partnership with one of South Africa's biggest fashion and homeware retailers, the Mr Price Group, through its foundation's JumpStart Retail Frontline Programme.

The Mr Price Foundation is a registered non-profit organisation that focuses on youth education and skills development by creating employment opportunities. The foundation's track record and drive on job creation are characteristics it shares with Anglo American Platinum.

The partnership, which began in 2022, is scheduled to run in three phases until November 2023. We will invest R10.8 million during this period, aiming to create permanent employment for 1,890 people (largely youth), out of 3,150 programme participants.

The timing of the phases is determined by historical demands from employer partners in these locations. The pilot phase began in Centurion, Gauteng in October 2022, and the second phase started in Midrand and Johannesburg in February 2023. Phase three will start in July 2023, in Polokwane and Pretoria.

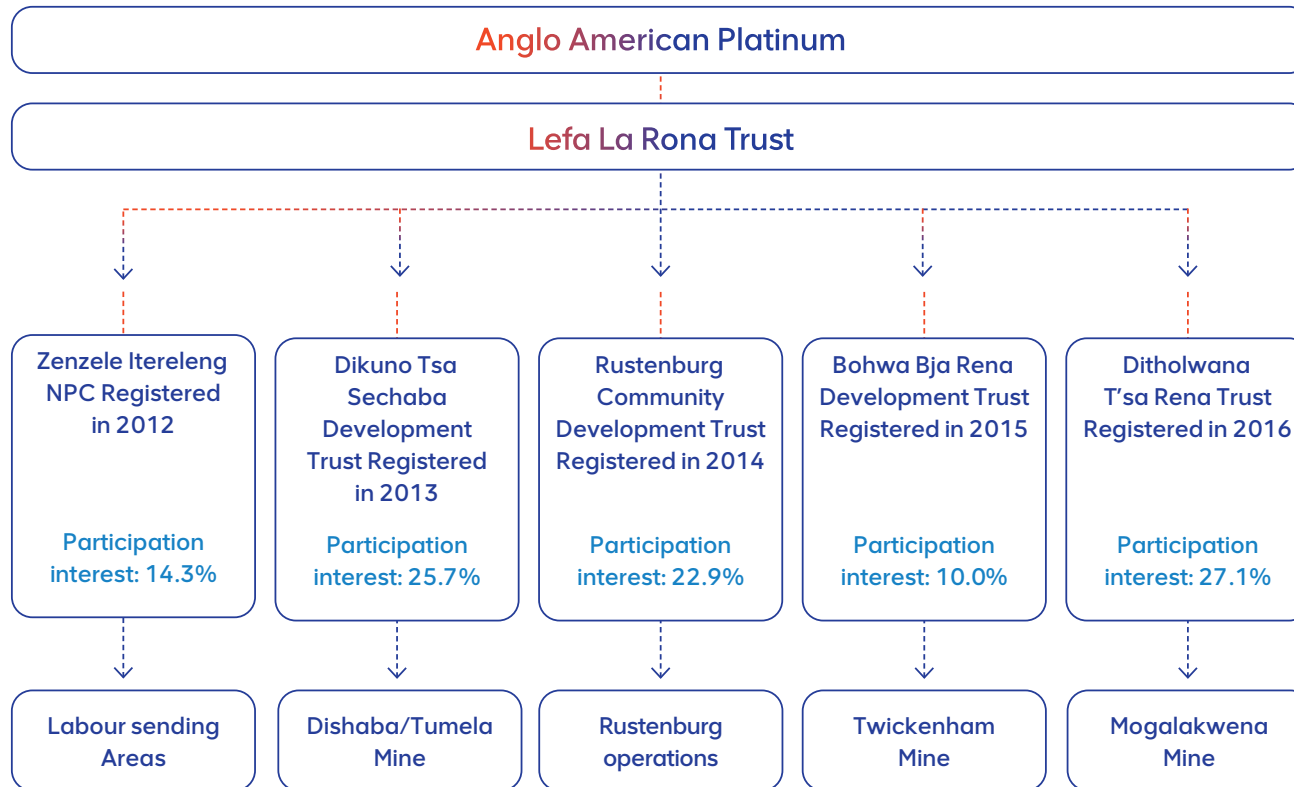
For Anglo American Platinum host communities, the programme widens job opportunities for residents beyond mining. In 2023, the focus will shift to the Limpopo province and specifically around stores that are aligned with our host communities. In terms of recruitment into the programme in 2022 and 2023, for other stores that fall outside of our host communities, focus will be on recruiting youths that come from host community municipalities as our first priority. This has been agreed to with our partner, the Mr Price Foundation.





Thriving communities continued

Alchemy Trusts directly benefit communities



The trusts were designed in consultation with local working groups. The structure and governance of each trust is carefully customised to serve local community dynamics and development requirements. The local trusts and non-profit company plan all development under their jurisdiction in consultation and collaboration with other local and regional development players.

The trusts and non-profit company have administrators who are responsible for the day-to-day administration of the operations of the trusts or non-profit company. These administrators are appointed by trustees or directors, as the case may be, after the respective boards have satisfied themselves that the proposed appointee has the requisite attributes, experience and qualifications to properly discharge their duties.

From time to time, the boards appoint members of the project development and implementation unit. This unit is responsible for:

- Defining development plans
- Formulating the short and long-term development vision as directed by the board from time to time, in respect of beneficiaries and benefit areas, guided by the results of the situational analyses
- Identifying potential projects in keeping with the short and long-term plans and developing supporting policies.

The unit is responsible for ensuring plans are integrated with the wider integrated development plan process of local government and other development players in the benefit areas.

Thriving communities continued

Enabling economic empowerment continued

Alchemy Trusts directly benefit communities

2022 Alchemy projects

Dikuno Tsa Sechaba Trust

- Installed a wi-fi network that connects 54 public areas (schools, clinics, community halls and others). This connectivity will give communities access to development tools and other resources in sectors such as education, health and commerce
- Installed an ICT centre at Northam comprehensive primary school to promote computer literacy skills among learners, educators and community members (youth groups/formations, women groups/forums and others). Computer literacy will also be a base for learners to identify an interest and potential to move into specialised career streams of information technology such as software development
- Handed over classrooms and an administration block at Sedibelo Secondary School
- Handed over two bridges to the Sefikile community giving community members access to health facilities and schools during rainy seasons
- Initiated a poultry farming initiative with the Sebilong Women Forum, of which, phase 1 key deliverables included the construction of a layer house. Training was also offered to beneficiaries on egg farming fundamental principles and governance.

Zenzele Itereleng Non-profit Company

- Handed over a children and women's centre in Chibuto district, south-west Mozambique, for 140 widows, 50 orphaned children, 20 other children and 17 unemployed youth
- Installed community wi-fi, a community development platform that provides a wide range of development services and resources across the community In Taung, North West
- Started two programmes that support early childhood development in the Eastern Cape.

Ditholwana T'sa Rena Trust

- Built four grade R classes and ablution facilities at Madikoti Putsoa Primary School
- Built three ECD centers in Danisani, Ga-Chokwe & Rauwele
- Built four grade R classes and ablution facilities at Madikoti Putsoa Primary School: Sandsloot village
- Implemented 2022 Matric enrichment programme for Mmantutule Secondary School: Mesopotamia
- Built access bridge to allow learners access to schooling facilities: Mesopotamia/Ga Chaba village
- Implemented a philanthropic food security initiative, from which, vulnerable community members from selected Mapela and Mokopane communities received Christmas food parcels.

Bohwa Bja Rena Development Trust

- Handed over an administration block at Ntwampe Primary School and one Block of three Grade R classrooms, and ablution facilities and an administration block at Makgopa Primary School.

Rustenburg Community Development Trust

- Renovated ablution facilities for Bobuantshwa Primary School, Phokeng. The school also received a water purification system, JoJo tanks and a borehole was sunk and fitted
- Handed over Mphe Bana early childhood development centre in Tlapa village
- Handed over Mphepele early learning centre in Lesung village
- Revamped the Tshelang Ka Lethabo and Tshwaraganang early childhood development centres in Seritube and Sunrise Park respectively.





Thriving communities continued

Enabling economic empowerment continued

New welfare centre changing residents' lives in Mozambique



Zenzele Itereleng NPC in collaboration with its strategic partners Lefa La Rona Trust and Anglo American Platinum launched the Chibuto Women and Children's Centre in Gaza province, south-west Mozambique, in July 2022. The much-needed welfare centre was built and furnished by Zenzele Itereleng, in partnership with Associação Cross Moçambique.

Zenzele Itereleng is a non-profit company established in 2012 as part of our economic empowerment ownership development scheme, Alchemy. The independent non-profit company's purpose is to fund and implement projects in the Eastern Cape, North West, Lesotho and Mozambique labour-sending areas.

Although the South African mining industry's reliance on migrant labour has reduced significantly in recent years, we remain committed to making a real difference in geographical areas like Mozambique, where we historically recruited many employees.

The R3 million Chibuto Centre provides 140 widows, 50 orphaned children, 20 other children and 17 unemployed youth with meals and training as well as vocational services including sewing, hairdressing, a savings group and preschool services.

The centre's administration is managed by Associação Cross Moçambique (Association Cross Mozambique) with Zenzele Itereleng's support.

Thriving communities continued

Enabling economic empowerment continued

Tlhabane Health Centre gets a major revamp

Inadequate healthcare infrastructure is a major obstacle to community health and wellbeing.

Practitioners at Tlhabane Health Centre in the North West battled to deliver services to residents as a result of deteriorating infrastructure: a leaking roof, old and broken windows, damaged tiles, and crumbling external wall bricks.

To help improve the facility's ability to serve its community, Rustenburg Community Development Trust refurbished the building's administrative block.

The project, which started in April 2022, was handed over to Bojanala district's department of health in November.

The renovation is part of the trust's initiative to restore facilities in Kanana, Mfidikwe and other areas in Rustenburg, and improve the quality of their healthcare services.





Thriving communities continued

Enabling economic empowerment continued

Zimele supports Bahlaping Mash Trading



Bahlaping Mash Trading is a 100% black, youth and female-owned engineering firm based in Mogalakwena, Limpopo. It has provided construction, civil, electrical and mechanical consulting services since it was launched in 2019.

As the business has grown, however, it has been beset by challenges. The staff's accounting skills have proven inadequate, and the lack of a formal accounting system and succession plan have further hindered its development.

To overcome these difficulties, Bahlaping's director, Sharon Mashishi, joined Zimele's supplier development programme. Through Zimele, she and her accountants were coached, and guided on choosing the right accounting software. These initiatives were carried out in close partnership with SAICA Enterprise Development.

Bahlaping has since secured a three-year joint-venture contract for pit-reticulation services at our Mogalakwena Mine. This contract has helped the company grow considerably. It now employs 63 people from the local community, and provides additional products and services, including trusses, reflective poles and transport services. Bahlaping has also recorded a 56% increase in net profit since Sharon participated in Zimele's programme.

Thriving communities continued

Cooperative resettlement and access to land

New crèche and hall for relocated community at Motlhotlo



Crèche and community hall at Motlhotlo

Anglo American Platinum has built a crèche and community centre for families that have been resettled in extension 14 in Mokopane, from Motlhotlo.

The expansion of Mogalakwena necessitated the movement from land north west of the mining pit.

An important aspect of our resettlements is ensuring we invest in improving the quality of life and livelihoods of resettled communities. For the extension 14 residents, the crèche and community centre will primarily serve the 61 relocated families, but will also be open to neighbouring families.

The R12 million facilities will be handed over in early 2023 and officially named by the community. The crèche has five classrooms, a kitchen, administration office, play area, sick bay and eight ablution facilities.

The residents who did not have access to a crèche in Motlhotlo will now have their own early childhood development centre, where about 13 employment positions will be created in teaching, cleaning and garden services.

Extension 14's community hall will be rented out for weddings, funerals and any other activities to generate revenue for the relocated families. Residents will also benefit from employment and procurement opportunities that will be created as part of maintaining the property. The other objective of building the hall was to ensure the community had a structure that could be used for meetings and any other event hosted by one of their own.

These post-resettlement projects were in addition to replacing infrastructure owned by the community.

Thriving communities continued

Constructive labour relations

Anglo American Platinum's third ESOP – Thobo to share benefits with 20,000 employees



Pleasingly, we were ready to establish a new employee share-ownership plan or ESOP — our third plan — immediately after the second ESOP expired in 2022. The scheme is called Thobo which is a Setswana word that means we can all harvest the fruits of success.

The new ESOP, implemented on 1 September 2022 after consultations with our unions, is uniquely structured and incorporates lessons from the strengths and weaknesses of previous ESOP structures.

The new ESOP comprises a 'free share' component as well as an 'evergreen' component. Applicable to employees not covered by any other share incentive scheme, this means the ESOP will not expire but remain in place to benefit employees in perpetuity. Qualifying employees will be allocated:

- Anglo American Platinum shares worth R8,000 each year for the life-of-mine scheme.
- The evergreen component, comprising 2% of the shares of Rustenburg Platinum Mines (RPM) will be held in a number of ESOP trusts in perpetuity on behalf of qualifying employees. Employees will receive dividends declared by RPM for their allocated shares as long as they are employed at Anglo American Platinum.

Our previous ESOP, which expired on 31 August 2022, awarded qualifying employees a total quantum benefit of R25,000 spread over five years and comprising R8,000 in shares and R17,000 in cash.





PLATINUM

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