

GREENSIDE SMASHES ALL-TIME PRODUCTION RECORDS



“When we first started this journey, our guys thought it would be impossible to achieve this. All doubt was removed when they shattered the mine’s all-time daily production record.”

Mine General Manager

Better than benchmark

Solutions and improvements in selected focus areas, at negligible cost and in just a short space of time, increased production volumes from an **average of 14,500 to 18,000 tonnes a day**.

The mine’s five Continuous Miner sections cut a historic 27,000 tonnes of safe coal over a period of 24 hours. The colliery **exceeded global Continuous Mining industry benchmarks by 10%**.

Despite significantly higher output, operations have continued scratch-free at that stage for 70 days, proving that safety and high productivity levels go hand in hand. The improvements became the ‘new normal’ at Greenside.

Greenside’s success has been aided by introducing a programme that employs the theory of constraints to identify bottlenecks across the production value chain. Identifying these performance-limiting bottlenecks helped managers select focus areas before teams comprising employees working across all levels and disciplines took up the 100-Day Challenges to make improvements.

Solutions for employees, by employees

100-Day Teams are comprised of individuals who are close to the front lines of their organisations. They are in the best position to develop solutions for the problem. Leaders create enabling conditions by letting the project implementers also plan it, they are not just consulted, but actually “own” the goals, solutions, and results. And ownership does not come without genuine voice, choice and self-determination.



GREENSIDE SMASHES ALL-TIME PRODUCTION RECORDS continued



“The TOC 100-Day Challenges sought not only to generate improvements but to deliver self-sustaining results by bringing about real changes in the way people work. The first cycle of five 100-Day Challenges showed what is possible and provided the confidence and energy to propel other sections to join the transformation effort. The results can be seen in hard numbers and shifts in relationships, roles and mindsets.” - **Mine Manager**

1

Cutting sequence & Shift transportation

This team implemented a shaft transportation system to increase time spent at the face. It also adjusted the continuous miner (CM) cutting sequence to improve shuttle car away times by an average of six seconds. In addition, operators will be provided with skids so that they can keep personal items and consumables with them. This means more time spent cutting and less replenishing stocks.

2

Enhance underground Road conditions

Apart from grading and compacting the underground road network, team members took a look at the one thing that affects roads most – waste water. They introduced drainage and pumping infrastructure, with the result being a major reduction in failed wheel bearings and machine downtime related to adverse conditions. Going forward, roads will be cared for in line with a strict maintenance schedule.

3

Reduce Cable damage and downtime

Cable damage is expensive and incurs significant downtime. The team yielded significant results with its two-pronged approach: equipment changes and awareness among operators of the financial implications. They introduced high-powered lighting systems to improve visibility, shorter cable lengths, heavy-duty cable couplers and a device to help reposition heavy cables, all of which have led to a meaningful reduction in cable-related events and costs.

4

Streamline order process of consumables

The resources team resolved many of the administrative issues that influence the time it takes for teams to access the items they need for efficient production. And there is a lot more to come. Projects to be completed involve the pre-ordering of fast-moving items, the relocation of stores to the shaft complex and the introduction of large oil storage vessels to replace drums.

5

Reduce conveyor belt downtime

Besides improving maintenance on the mine's underground conveyor network, the belt team identified and addressed the root causes of common failures. They also introduced a new monitoring software tool and cut down belt spillages caused by overloading.

