

UK potash project moves to construction

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Peter Kenyon, *TunnelTalk*

With US\$1.15 billion Phase I funding in place, and an official Woodsmith Mine naming ceremony taking place earlier this week (24 February), construction work begins on development of the multi-billion York Potash mining project in the north of England.

Project owner Sirius Minerals, which will excavate a 37km long tunnel to transport the high-grade potash (polyhalite) from a new mine head at Dove's Nest near Whitby in Yorkshire onwards to the coast at Redcar as an essential part of the mine development (Fig 1), now has in place all the necessary finance and permissions to:

- sink and line a 1,594m x 6.75m i.d. production shaft with a hoisting capacity of 13.4 million tonne/year,
- sink and line a 1,565m x 6.75m i.d. service shaft,
- excavate by drill+blast a 360m-deep TBM access shaft and associated launch cavern at the mine head, and
- construct the portal structure at the opposite end of the transport tunnel alignment.



Work begins on the new Woodsmith Mine

TBM assembly and excavation of the 37km x 4.3m i.d. transport tunnel will commence in early 2019 as part of Phase II of the construction programme, which includes:

- construction of the port facility and processing plant in Redcar;
- tunnel fitout, ventilation and conveyor system installation;
- construction of the raised conveyor infrastructure between the end of the tunnel and the processing plant.

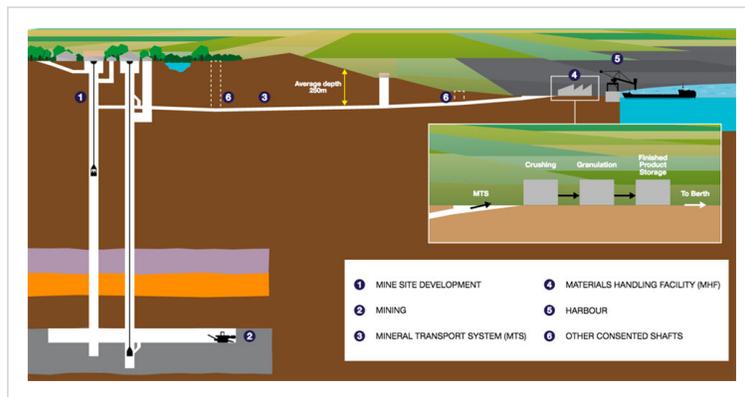


Fig 1. Design of the new mine development project

transportation system (MTS) to match the 100 years or more of the expected polyhalite deposit extraction.

Site preparations and a program of mandated road improvements associated with the project are already under way and a drill rig has been mobilised to site to assist with final geotechnical surveys prior to shaft sinking. According to the company's latest construction schedule, tunnelling contractor Hochtief/Murphy will begin excavation of the 360m deep

Final tunnel design by Arup calls for the use of three TBMs, rather than the original five, and excavation of a single intermediate shaft rather than the three originally envisaged. Permissions are in place however, for the excavation of two extra ventilation shafts should they be needed if polyhalite production volumes are increased in the future.

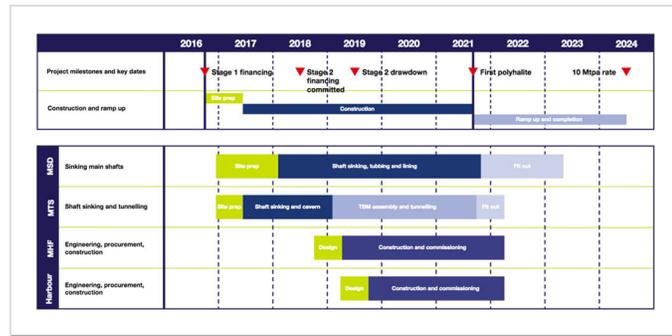
A segmental lining installed behind the TBMs as they progress through competent Redcar Mudstone will extend the design life of the mineral

TBM launch shaft and cavern in summer this year (2017), with the work scheduled for completion by the beginning of 2019.

Milestone funding for Phase I of the project, which was critical to moving into the construction phase, was finalised late last year (2016), and took three forms:

Finalisation of the equity-based funding deal, and the subsequent heavy dilution of the share capital, saw the Sirius Minerals share price stumble from a speculative peak of 51p in the Summer of 2016 to 16p in December. It has since recovered to 18p and has remained in a tight trading range of 17.75p to 19p.

Funding for Phase II construction of the project is yet to be finalised, with Sirius announcing to investors that it does not expect to issue further equity to raise the US\$2.6 billion needed to complete the balance of works and move to production. A group of six banks and financial institutions have signed up as mandated lead arrangers of the senior debt that will be used to finance Phase II construction, but the details and terms will not be known until the middle of 2018, ahead of the money being drawn down from mid-2019. The six institutions have indicated they will fund up to US\$700 million themselves, leaving a final US\$1.9 billion yet to be sourced.



Plan of attack for three TBMs



Construction schedule for the new mine project

In a bid to stabilise the share price ahead of a planned move later this year (2017) out of the largely unregulated AIM market of the London Stock Exchange and into the FTSE 250, Sirius Minerals has committed to providing comprehensive progress updates each quarter, in addition to major updates as they occur. The first of these will be issued at the end of this month on 27 March 2017.

Official guest at the naming ceremony of the new mine as the Woodsmith Mine last Friday (24 February) was Andrew Percy MP, UK Minister for the Northern Powerhouse, an initiative intended to improve employment and infrastructure opportunities in the north of England.

"Today marks an important step for the Sirius Minerals North Yorkshire mining project, which is a real vote of confidence in the economic potential of the Northern Powerhouse," said Percy. "The Woodsmith Mine has the potential to create more than 1,000 jobs and generate billions in exports for the region, so I am excited to see it progress."

References

- Royalty funding deal for UK potash mine – *TunnelTalk*, October 2016
- Financing milestone for Sirius potash project – *TunnelTalk*, September 2016
- UK potash mega-project design changes – *TunnelTalk*, August 2016
- Civils awarded for UK potash mine mega-project – *TunnelTalk*, June 2016

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