



WOODSMITH MINE, NORTH YORKSHIRE, UK

CASE STUDY

Custom Alimak "double deck" elevator installed in Polyhalite mine

Access anytime, anywhere

ALIMAK

WOODSMITH MINE, NORTH YORKSHIRE, UK

Custom Alimak "double deck" elevator installed in Polyhalite mine

A custom Alimak industrial elevator has been installed in the WoodSmith polyhalite mine in the North York Moors, UK. The mine extracts mineral from polyhalite, which is found deep underground and used as an agricultural fertiliser. The mineral is extracted 1,600 m below ground and transported up to 370 m below ground where it is loaded onto a 37 km conveyor belt to be transported to the handling facility.

ALIMAK INDUSTRIAL ELEVATOR

A solution was needed to transport up to 18 mine workers from ground level to 370 m below ground as efficiently as possible. The shaft size was incredibly limited, allowing a maximum elevator width of only 1.56 m.

Alimak's design engineers developed a custom "double deck" rack and pinion elevator, which comprised of two elevator cars, interconnected one above the other. Each elevator measured 1.56 m wide x 1.04 m long x 2.17 m high, with each car able to hold a maximum of nine passengers.

SUSTAINABILITY

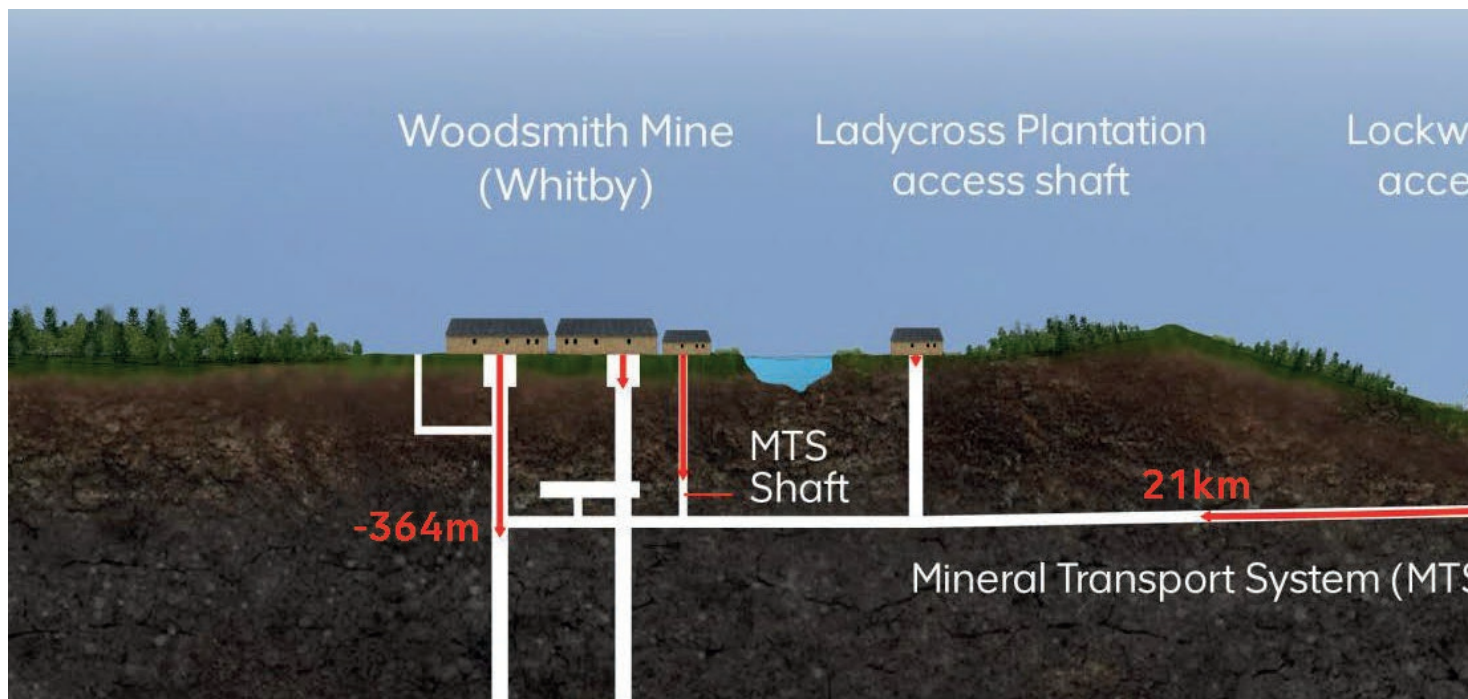
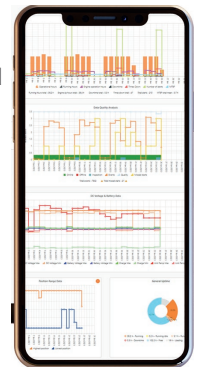
As sustainability was important to our customer (the mine infrastructure was designed to minimise any

environmental impact), Alimak was the perfect choice due to its industrial elevators being manufactured in its EcoVadis gold-rated Swedish factory which is powered using 100% renewable energy.

MY ALIMAK

My Alimak is a customised web-based portal, developed by Alimak Group to enhance the safe and efficient use of Alimak products.

Using the My Alimak portal, Strabag AG can view operational data and statistics relating to their elevators, which allows them to manage their assets more efficiently.

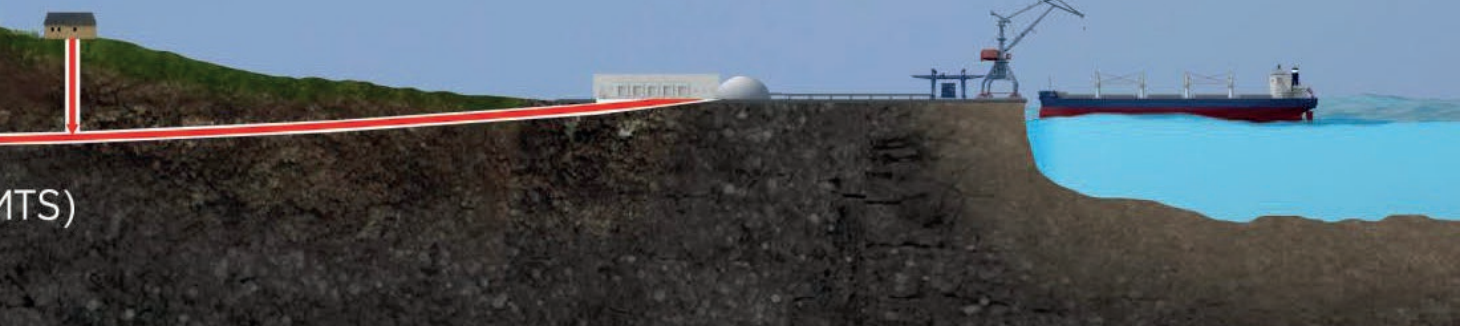




Wood Beck
Access shaft

Materials Handling Facility
(Wilton)

Port Facility
(Redcar Bulk Terminal)



(MTS)

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PROJECT CHALLENGES

The elevator shaft was steel lined, which presented a significant challenge in finding the safest way to install the mast connections. The usual option of welding was not possible.

Alimak worked with Hilti to develop a new solution, which involved the use of friction welded studs, which were fired into the elevator shaft using a spring-loaded gun.

MADE FOR INDUSTRIAL USE

Alimak industrial elevators are available with extruded aluminium or stainless steel cars, ensuring long service life in even the toughest environments. The drive unit is located on top of the car, which climbs on a self-supporting mast, requiring no supporting elevator shaft or separate machine room.

The mast is made of galvanised steel. The erection of the elevator mast takes place from the car itself. If installed early in the construction process, the elevator can often be used in the actual construction of the building on which it will then remain as a permanent elevator.



The custom "double deck" being installed into the shaft.

ELEVATOR DETAILS

Location:	Woodsmith Mine, N. Yorkshire, UK
Industry type:	Mining
Application:	Underground mine shaft
Elevator model:	2 x Custom Alimak SE 900 FC
Capacity:	900 kg per elevator car
Elevator car size (W x L x H):	1.56 m x 1.04 m x 2.17 m
Lifting height:	370 m
No. of landings:	3

www.alimak.com

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