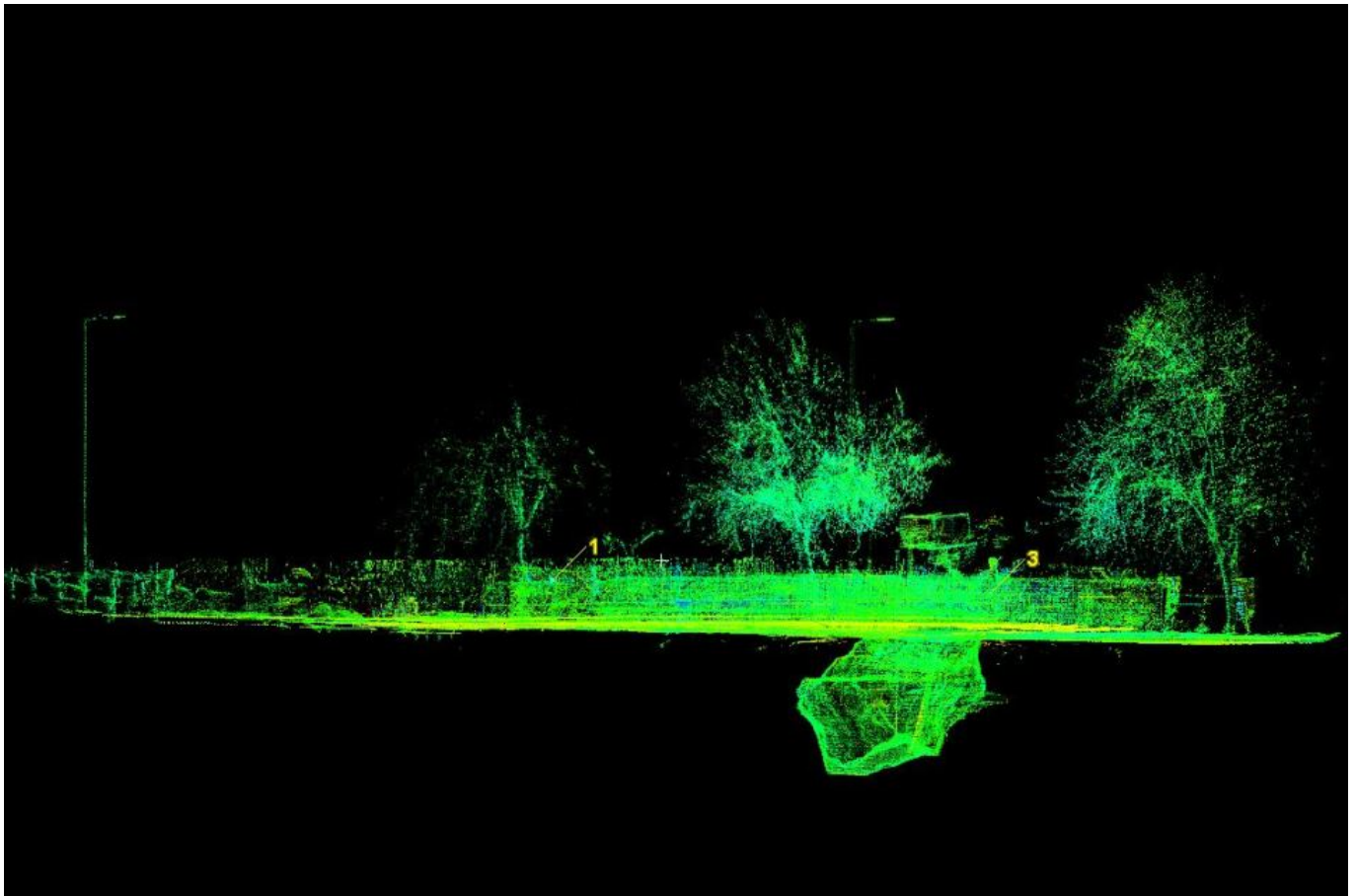


News story: Laser technology used in works to secure mine shaft

Works are now complete to secure an unrecorded mine shaft, which caused a ground collapse at Kilbowie Road, Clydebank.

The collapse was caused by a mine shaft that was not detailed in historical mining records, but we believe that it was used to extract coal, limestone and iron ore over 100 years ago.

While only a 6 metre diameter hole was initially visible at the surface, investigations using laser scanning technology identified this led to a 200 cubic metre void on top of the unrecorded mine shaft, which went down a further 56 metres.



Laser scan showing the void beneath Kilbowie Road

The depth of the mine shaft is the equivalent to the height of 14 double decker buses stacked on top of one another.

Our team of experts designed a solution to safely:

- fill the shaft with 140 tonnes of stone and inject 217 tonnes of pressurised grout
- construct a reinforced concrete cap

This repair was further complicated by exposed utility services in the void that needed to be protected during the works. A fractured foul water sewer and storm water drain within the ground collapse also made the repair more complex, with water needing to be pumped over 150 metres around the void during the works.



The Coal Authority's works at Kilbowie Road, Clydebank

Tim Marples, Head of Public Safety and Subsidence, said:

"Our team has now completed works to secure the mine shaft and we've handed over the site to West Dunbartonshire Council who are leading on the road reinstatement works.

"It's been a complex repair project, but our team's been operating 7 days a week to ensure it was completed as quickly as possible.

"We'd like to thank residents for their patience while our works have taken place."

A West Dunbartonshire Council spokesperson said:

"Following the completion of the Coal Authority's repairs, work will begin to fill the void above the shaft, reinstate services, commence the road reconstruction and resurface the road.

"This phase of the repairs was anticipated to take up to 16 weeks, however, we hope to have completed this work by the end of June.

"If residents have any specific queries we would encourage them to email roads@west-dunbarton.gov.uk so that we can help."

Notice: Alwalton Lock: 150 metres downstream

When: until further notice.

What's happening: shoal approximately 150 metres downstream of Alwalton Lock.

Notice: Houghton Lock

When: 10 April 2017

What's happening: Houghton Lock will be closed due to essential repairs taking place.

Notice: Islip footbridge

When: 8 May 2017 for approximately 6 weeks.

What's happening: replacement of Islip footbridge.

Guidance: Bats: mitigation class licence to allow low impact work on bat roosts (CL21)

Updated: Replaced application forms for annexes A, B, and C or D with updated

versions.

The bat 'low impact' licence (CL21) is a mitigation class licence that allows a registered ecological consultant to interfere with certain bats and their roosts. There are 4 annexes to this licence that specify:

- which species and roost type you can interfere with
- areas in England where you can carry out work

Use the guide to find out:

- the criteria you must meet to become a registered consultant
- what the licence allows you to do
- which licence annex is right for you
- how to apply and which form to use

Use the relevant application form for the annex you choose.

Filling in your form

Read the guidance for the internet browser you're using.

Using Internet Explorer

Open the relevant form to download it and save it to your computer.

You must save your changes as you fill in the form. If you do not do this, you risk losing your work. We do not recommend using a tablet or mobile device.

If you need Adobe Reader to complete the form, it's free to download. [Download the latest version of Adobe Reader](#). Contact Natural England batlowimpactcl@naturalengland.org.uk if you have problems.

Using Chrome

Do not try to open the form. Instead, right click on the link to the form by using the right button on your mouse or mouse pad.

Click on 'Save link as' to save the form to your computer.

You must save your changes as you fill in the form. If you do not do this, you risk losing your work. We do not recommend using a tablet or mobile device.

If you experience any problems using Chrome, you may request that forms are sent to you by email. Contact Natural England batlowimpactcl@naturalengland.org.uk.