

PLACE DIRECTORATE
South Yorkshire Mining Advisory Service



To: Highways & Engineering

FAO: Neil Lodge

My Ref: MAL.22.005

Your Ref: (River Dearne Long Route)

Date: 23rd December 2022

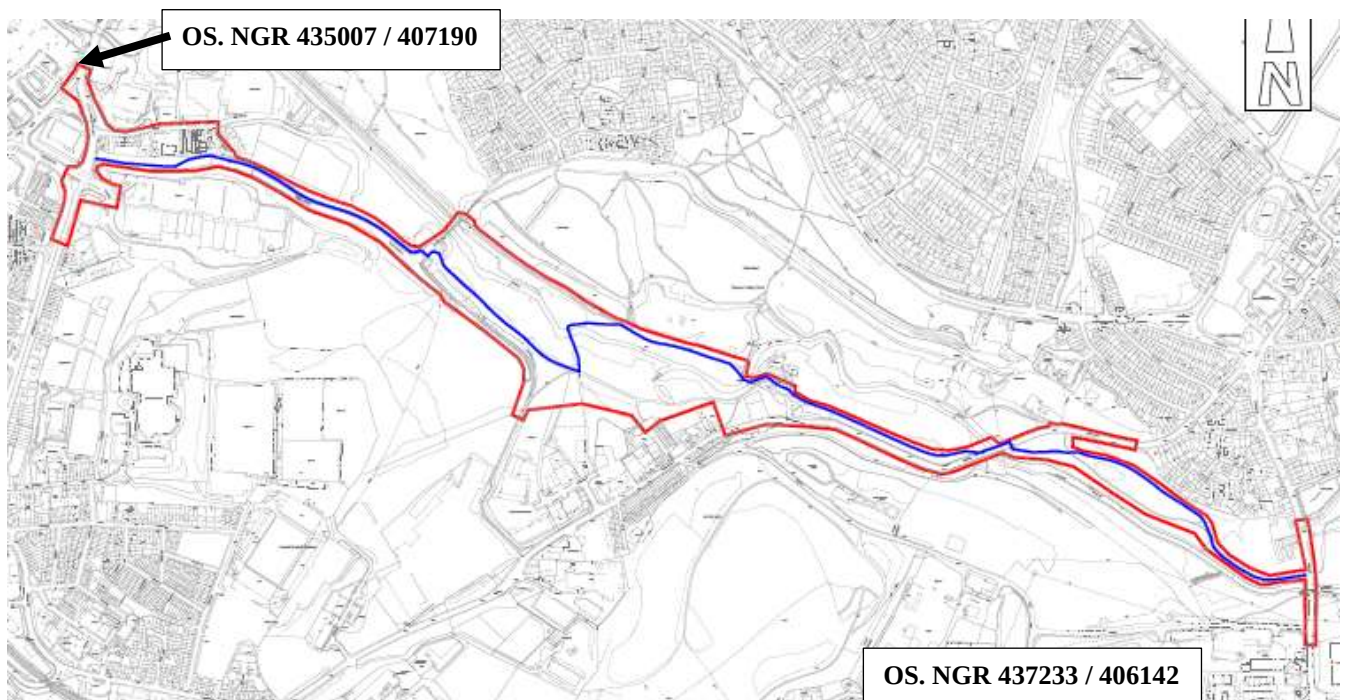
Enquiries to: Mr. M. Lyons

Ext: 2690

Subject: **PROPOSED ACTIVE TRAVEL SCHEME – RIVER DEARNE LONG ROUTE –
HARBOROUGH HILL ROAD TO GRANGE LANE, BARNSELY**

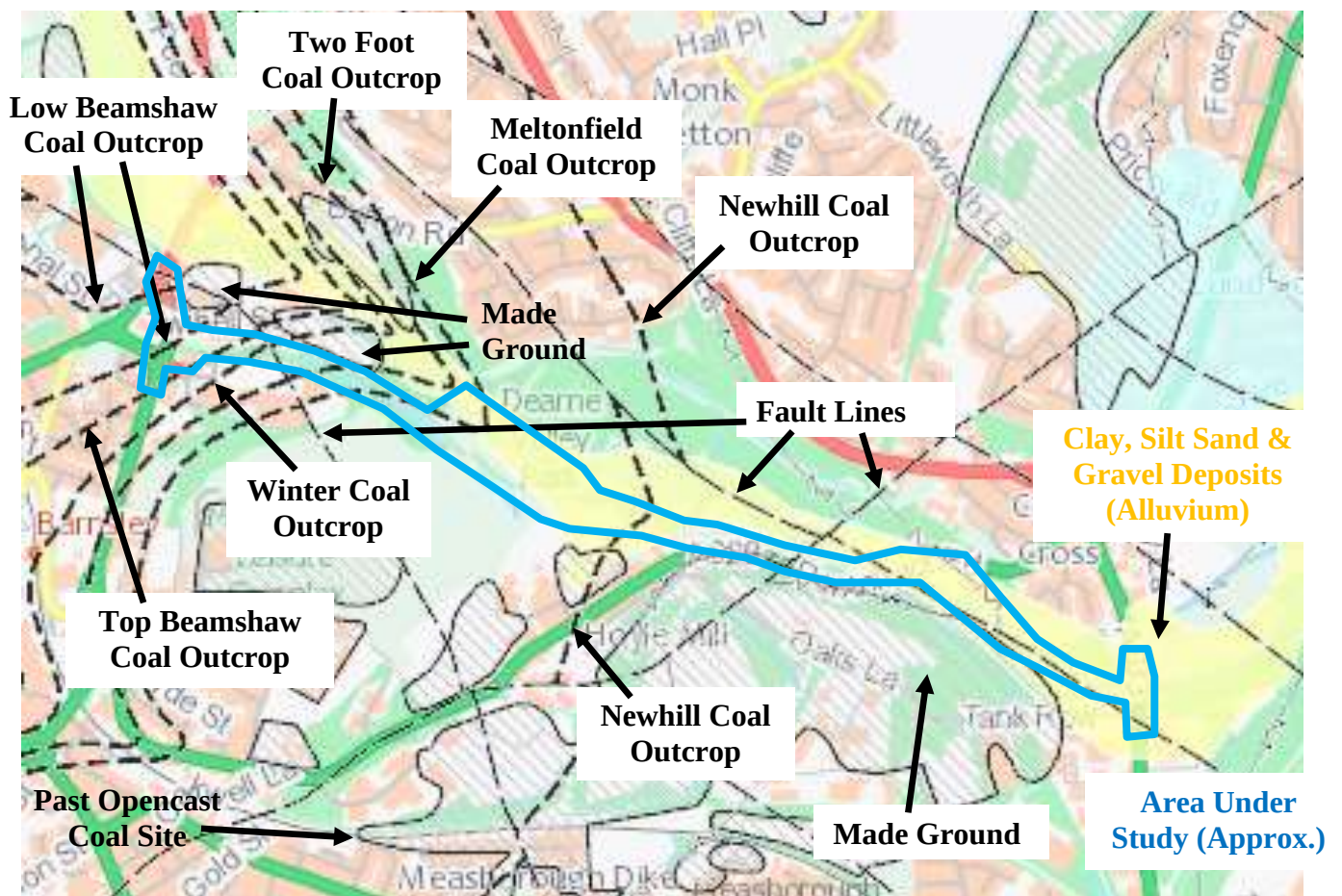
SITUATION

The area of land under consideration is illustrated in the following image, located between OS National Grid References: 435007/407190 and 437233/406142. The proposals are for: construction of shared pedestrian / cycle route and improvements to existing footway / carriageway links. This report provides a review of the mining and geological history of the site and an assessment for the potential for mining legacy risks. The report makes generalised recommendations for the likely investigative and/or remediation requirements within specific parts of the area. Further phase 1 studies of a more site-specific nature will be required when a more detailed scheme proposal is decided upon.



GEOLOGICAL
INFORMATION

Geological records indicate that the land is underlain by sandstones, shales and mudstones of the Middle Coal Measures; strata dipping generally in a north-easterly direction. The following image (Onshore BGS extract) illustrates the anticipated geology.



Areas of superficial alluvium (clay, silt sand and gravel) will be present as shown above. Geological faulting is conjectured as indicated and any sandstone bedrock may contain fissures that could have been opened out by the past deep coal mining in the area. Various areas of made ground exist as indicated.

Various coal seams are conjectured to outcrop through the western part of the scheme, with the Newhill seam conjectured centrally; details of which, listed stratigraphically from shallowest to deepest, are:

Newhill – up to 1.2m thickness (with various dirt bands);

Meltonfield – up to 1.0m thickness;

Two Foot - up to 0.7m thickness;

Winter (Abdy) - up to 1.4m thickness (inc. dirt band);

Top Beamshaw – up to 1.2m thickness (inc. dirt band);

Low Beamshaw – up to 0.6m thickness.

MINING

Shallow Underground Mining

Although no shallow coal mine workings are recorded in any of the coal seams beneath the scheme itself, there will be a moderate risk of unrecorded workings

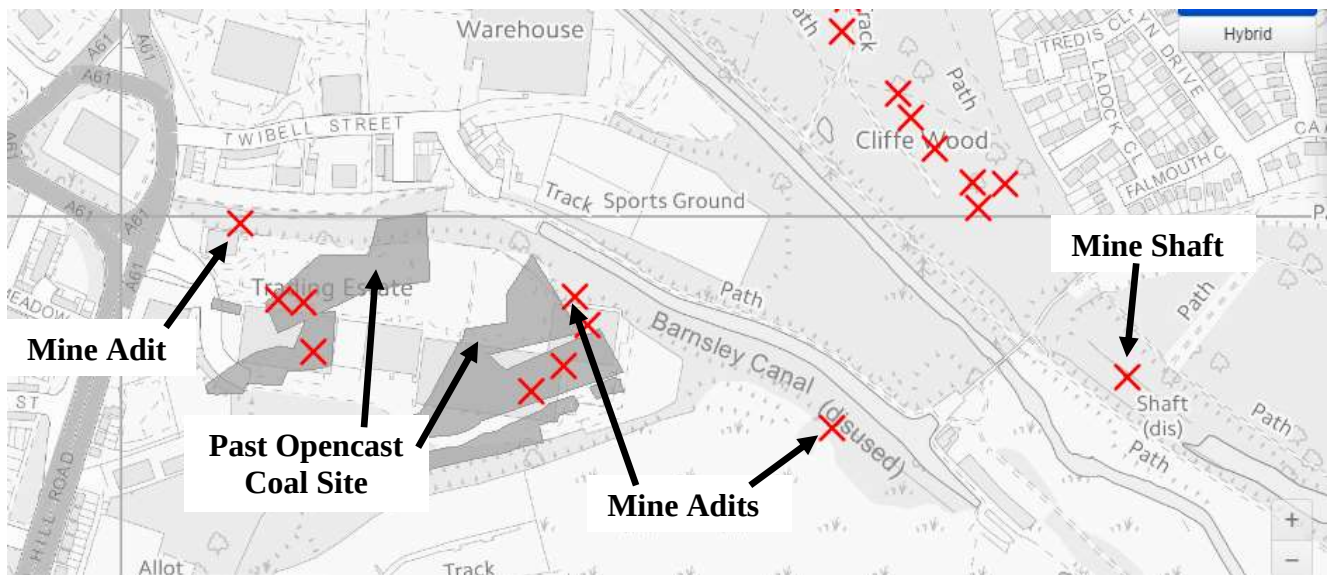
being encountered in all the above seams apart from the ‘Newhill’ and ‘Low Beamshaw’ seams which will present only a low risk.

Deep Underground Mining

Deep coal mining operations have taken place beneath the area in various coal seams, all settlement from which will be long complete. All deep coal mining has now ceased within the area and therefore it should remain stable for the foreseeable future.

Opencast

One former opencast site is shown within the site which worked the Newhill coal seam – as illustrated on the initial image above. Associated backfill material and former quarry high walls would be anticipated in that area.



Mine Entries

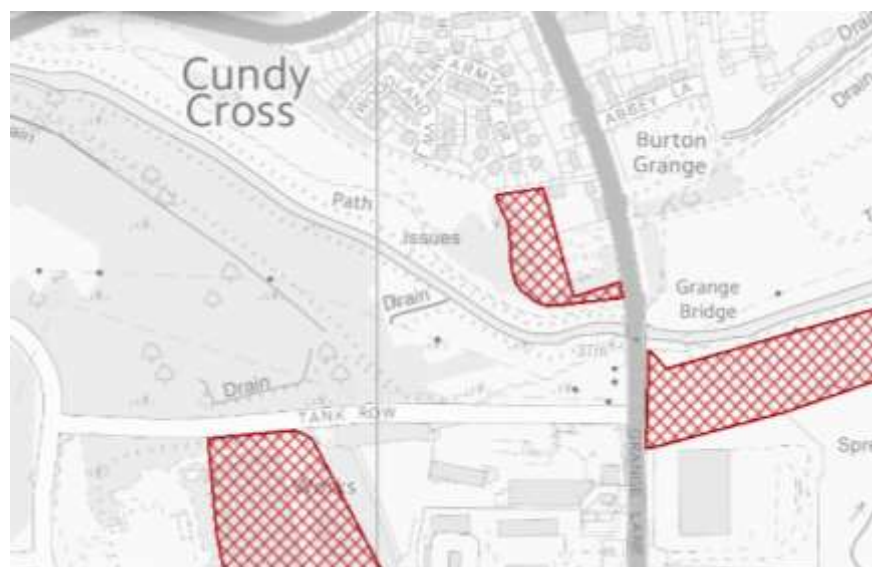
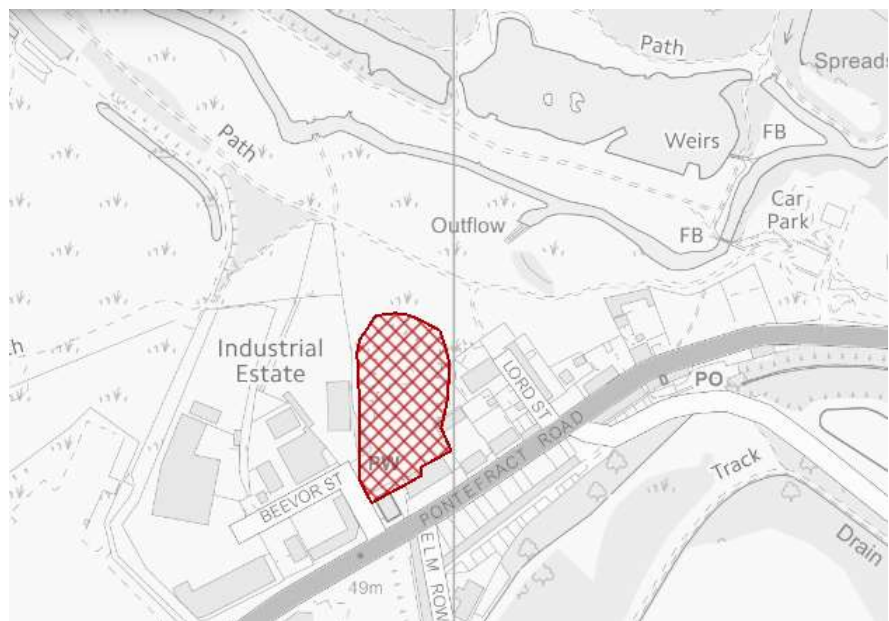
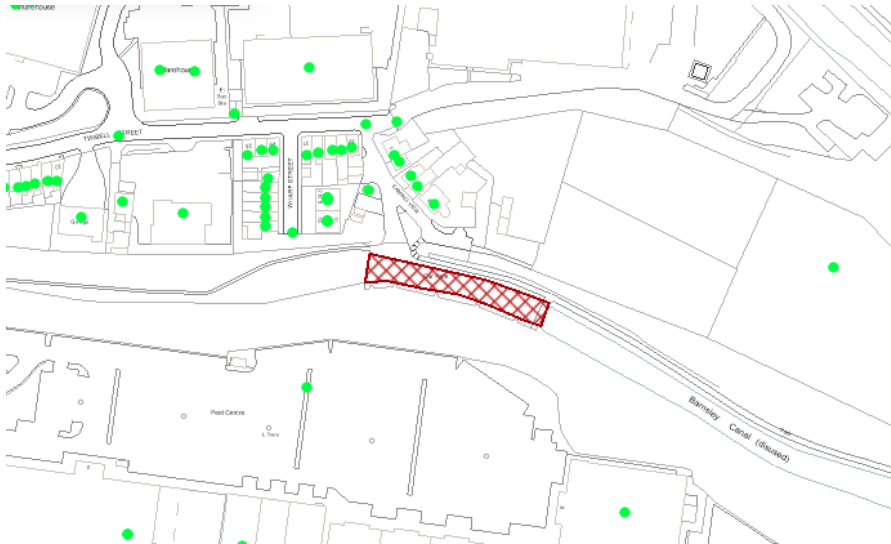
The only known disused mine entries in close proximity to the scheme are indicated on the above image. The disused mine adits travel beneath the land to the south-east and should therefore be of little effect to the scheme from a stability aspect. The disused mine shaft, known to have been treated, lies outside of the scheme area by around 20m or so.

FORMER LAND USES

The proposals largely follow the former ‘Barnsley Canal’ route and River Dearne. As such, various areas of cutting or indeed fill/embankment and colliery spoil material which may comprise old burnt shale for example, may be experienced throughout the western section.

LANDFILL

Various landfill sites are shown in close proximity to the scheme as shown on the images below:



Any parts of the scheme proposed to travel through these areas will require a more detailed analysis of the anticipated extent, content and nature of these sites, in conjunction with the local authorities contaminated land officer, to establish appropriate designs for safe development.

CONCLUSIONS

Although there will be a slight element of ‘probable’ shallow coal mining risks, it is not anticipated that the scale/nature of development will impose a duty to carry out intrusive investigations for stability. This position should be confirmed with SYMAS and/or the Coal Authority however, when more detailed proposed ground works/designs/locations are realised.

A watching brief should be maintained during future ground works in the areas of shallow coal for unrecorded mine entries that may impact the development. SYMAS and/or the Coal Authority should be notified immediately should any be suspected.

Development should adequately consider the likely nature of the material (colliery spoil/burnt shale) along the former canal route and areas of made ground (particularly near the former opencast coal site) for appropriate ground work/foundation designs. Safety measures would be required regarding fugitive gas risk in any deep excavations taking place. Similar considerations will be required for development adjacent/over the former landfill operation – the local authorities contaminated land officer should be consulted as such.

Future ground works may expose coal at the surface in the conjectured areas of outcrops which may require removal and blinding off to help prevent spontaneous combustion risks.

Watching briefs would be prudent for any signs of faulted/fissured sandstone bedrock and/or areas of alluvial material that may require appropriate treatment/design considerations.

When further work has been undertaken on route selection for the scheme SYMAS can be consulted again for more site-specific information as required e.g. opencast abandonment plan details, coal mining investigation specifications (if required) etc.

THIS REPORT IS BASED ON AND LIMITED TO THE RECORDS IN THE POSSESSION OF SYMAS AT THE TIME THE ENQUIRY IS ANSWERED.

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Report prepared by M. Lyons 23rd December 2022.

P. James
Principal Mining Engineer.