Sent: 22 May 2026 10:56

Subject: 2025/91370 Land at Gynn Lane, Honley - Geotechnical Assessment

1. Introduction

My name is Richard Barson and I am a geotechnical engineer with 25 years of experience, currently working under secondment for Kirklees Council Highways. I was requested by Kirklees Council Planning to provide an independent assessment of the mining risks associated with the proposed development. Please note I have visited the site on two occasions, on the 20th March and the 5th May 2026, to meet the residents and examine the site arrangements.

2. Mine Adits

There are two recorded adits beneath the site area comprising:

- The northern adit (referred to as the N-S adit by Lithos); and
- The western adit (referred to as the E-W adit by Lithos).

The northern adit (Coal Authority ref: 414412-011) is present at shallow depths on the northern boundary of the site, orientated approximately north to south. The northern adit connects to mine workings in the Soft Bed Coal within the central part of the site area. Because the adit is at shallow depths, the Lithos Geoenvironmental Appraisal report states (Section 13.2.3) that it is proposed to treat the northern adit as part of the drilling and grouting of the Soft Bed Coal mine workings within the central part of the site area.

The western adit (Coal Authority ref: 414412-010) is present at increased depths on the western boundary of the site, orientated approximately south-east to north-west. The western adit connects to mine workings in the former Woodroyd Colliery, approximately 250m north-east of the site. The adit portal appears to be within the rear garden of 16B The Maltings therefore, the total length of the western adit is approximately 450m. Due to the length of the western adit it is likely this was used for ventilation and drainage rather than for extracting coal to the surface. There is no evidence that the western adit connects to the northern adit and/or to the near-surface mine workings within the Soft Bed Coal present within the central part of the site area.

The Lithos Geoenvironmental Appraisal report states (Section 13.2.3) that it is unclear whether the western adit poses a risk to surface stability and therefore further drilling using a revised methodology or reinforced foundations will be required. Drilling of the western adit by Lithos in 2024 caused significant flooding of the adjacent site (see below) therefore, I do not recommend any further ground investigation is carried out in the location of the western adit. Lithos estimate the competent rock cover above the western adit to be between approximately 9 to 19 times the height of the adit void. A significant proportion of this rock cover will be relatively strong sandstone (Soft Bed Flags) therefore, I assess the western adit to have sufficient rock cover to not require any treatment works. However, because the risk of future settlement to the proposed buildings cannot be entirely ruled out reinforced foundations are required along the line of the western adit as recommended by Lithos (Section 13.2.6 and Drawing 4749/12).

3. Flooding from the western adit

Drainage from the western adit outfalls into a private drainage system in the rear gardens of numbers 16B, 18, 18A, 18B and 18C The Maltings, Gynn Lane. This private drainage system then outfalls into the Ludhill Dike culvert in the rear garden of 28 Gynn Lane. Unfortunately, there was some flooding in August 2024 caused by the Lithos ground investigation works on the development site. On the 2nd August 2024, Lithos borehole PH18f was drilled using air flush through the western adit at between 17.10m and 18.30m depth. According to the Lithos report, upon drilling borehole PH18f ochreous mine water was flushed out of the hole and caused flooding of properties 18B and 18C The Maltings, Gynn Lane.

Properties 18B and 18C were flooded again sometime later by ochreous water rising out of the drains in the rear gardens, like the initial flooding incident. At the time of the flooding a drainage contractor attended the site, the private drains were unblocked by high pressure water jetting and the standing water drained away.

Initially it was suggested that the second flooding event may be linked to excavations carried out by Haigh Huddleston on the development site. Haigh Huddleston had recently excavated a relatively shallow trench approximately 47m long, to establish if any drainage connections were present along the western boundary of the site above the old mill pond. However, there is no connection between the trench excavation by Haigh Huddleston and the western adit, as they are separated by approximately 15m of intact bedrock. Therefore, it is not possible that the trench excavation could have disturbed the western adit. It is possible that debris from the trench excavation could in a severe storm be washed into Ludhill Dike but that would not cause the observed flooding in 18B and 18C.

It seems likely that the second flooding event was caused by a blockage in the private drainage system close to its outfall to Ludhill Dike culvert, i.e. in the rear garden of 18C The Maltings, Gynn Lane and/or in the rear garden of 28 Gynn Lane. I suspect that some debris from the western adit was dislodged and washed into the private drainage system during the 2024 Lithos ground investigation. Although the Lithos Geoenvironmental Appraisal report (Section 8.7.10) states the gardens were cleaned following the flooding, the drainage system should also have been checked for any debris/blockages and then cleaned out if necessary.

4. Mine Shafts

There is a coal mine shaft (Coal Authority ref: 414412-009) shown within the site area, close to the western adit portal (Coal Authority ref: 414412-010), which has caused some confusion. Lithos carried out a topsoil strip of an area approximately 400m^2 in the location of this mine shaft but no evidence was found. Lithos concluded that the mine shaft lies within the area of woodland adjacent to the site boundary.

I do not see any evidence of, or reason for any mine shafts in this particular location. This location of the recorded mine shaft is stratigraphically below the outcrop of the Soft Bed Coal and therefore, there are no coal seams of economic importance below this location. Therefore, there would be no reason to sink a shaft. Although it is possible that a vertical shaft connects with the western adit, this would be outside of the development site on adjacent private land.

I consider the mine shaft shown on the Coal Authority mining report (Coal Authority ID: 414412-009) is an erroneous feature caused by the Coal Authority double counting mine entries. I suspect the mine shaft is simply the western adit portal counted twice in slightly different locations from different maps/datasets. It is a fairly common occurrence in my experience.

5. Shallow mine workings

Mine workings are present at shallow depths in the Soft Bed Coal in the central part of the site area, estimated by Lithos to be approximately 15% of the total site area. Lithos are proposing to treat the mine workings and the northern adit by drilling and grouting on a 3m grid.

Regarding the proposed drilling and grouting, in my opinion this should have no impact on flood risk with respect to the private drainage system to the rear of 16B to 18C The Maltings, Gynn Lane. Any potential mine waters will be displaced north directly into Ludhill Dike, not into the western adit. The western adit is below the level of the mine-workings in the Soft Bed Coal so there is no direct connection. The mine workings in the Soft Bed Coal are likely to be very old (probably 16th and 17th Century or earlier) whereas the western adit is associated with the Woodroyd Colliery which is recorded to have operated between 1855 and 1862.

6. Residual flood risk

The private drainage system to the rear of 16B to 18C The Maltings, Gynn Lane is sub-optimal. We have provided feedback for drainage improvements to the residents with a view to reducing the overall flood risk in the locality.

7. Conclusions

a) The proposed drilling and grouting treatment works to the shallow coal mine workings and northern adit are appropriate and should not increase flood risk in the locality.
b) A drilling and grouting specification should be prepared for the site detailing these proposed treatment works.
c) I do not recommend any further ground investigation is carried out in the location of the western adit due to the flood risk to the neighbouring properties. However, because the risk of future settlement to the proposed buildings cannot be entirely ruled out reinforced foundations are required along the line of the western adit as recommended by Lithos.
d) I consider the mine shaft shown on the Coal Authority mining report close to the adit portal (Coal Authority ID: 414412-009) is an erroneous feature caused by the Coal Authority double counting mine entries.

I trust this is all in order but if you have any queries please do not hesitate to contact me.

Best regards,

Richard Barson
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