

Mr Peter Dimberline
Chartered Architect & Planning Agent
2 Tipsey Court
Barnsley
South Yorkshire S71 3PQ

09th June 2025

Our Ref: 24319

**Response to Coal Authority Comments Regarding Site at Highstone Lane,
Ward Green, Barnsley**

1. General:

A planning application has been submitted for a single residential dwelling at the above site. As part of the process, a Phase 1 CMRA desk study and Phase 2 drilling programme and coal mining risk assessment report (CMRA) were undertaken to identify and clarify mining legacy issues relating to the site. The Mining Remediation Authority/Coal Authority (MRA) currently objects to the development and has responded to the Mineral Planning Authority (MPA) detailing its objections. Mr Peter Dimberline, Planning Agent on behalf of Mr Michael Hague, has asked Silkstone Environmental Ltd (SEL) to respond to these comments.

Broadly speaking, SEL agree with most of the comments. However, the issues highlighted by the MRA would normally be addressed by Phase 3 (drilling and grouting) treatment works, which SEL recommend in the Phase 2 CMRA report dated 31st March 2025.

It is SEL's understanding that the mining legacy issues highlighted by both SEL and the MRA can be conditionalised as part of a planning approval, which would give the client the comfort of knowing that undertaking the appropriate Phase 3 works would normally lead to planning approval, once completed and approved by the MRA.

2. The role of Phase 1 & Phase 2 CMRAs:

When a development site is located within a MRA "*Development High Risk Area*," it is standard practice to undertake a Phase 1 Coal Mining Risk Assessment to identify mining legacy issues relating to a site. In this case, the Phase 1 CMRA identified two factors:

- Shallow underground mine workings in the Abdy seam.
- Recorded mine entries (shafts and adits) on or within 20m of the site.

If it can be proven that mine workings lie at a depth where the workings would not affect a development, or shaft filling records can prove mine entries are adequately sealed, then this risk can be mitigated. As there was no documentary evidence to confirm the precise depth of the mine workings nor shaft/adit sealing details, SEL recommended Phase 2 site investigations to clarify the risk.

The role of Phase 2 site investigation is to clarify a mining risk previously identified in a Phase 1 desk study and either mitigate it or to recommend further investigations. Phase 2 rotary drilling and machine excavated trial pitting were undertaken under a MRA licence (No.29438) during March 2025 and are summarised in Figures 1 and 2. Site investigation proved the following:

- “Pillar and stall” type mine workings were present in the Abdy coal seam at shallow depths (1.20m to 2.70m, to top of seam). SEL reported that it was “*unable to mitigate the risk without further remedial work, Section 6.1.*”
- Trial pitting was undertaken to identify the locations of shafts that directly affected the site development. SEL reported that “*the risk from adits 434404-05, 434404-13, 434404-14 and 434404-16 cannot be mitigated without further works, Section 6.1.*”

SEL’s Phase 2 CMRA report identifies the need for Phase 3 site investigations. These should be undertaken in accordance with CIRIA Report C758D ‘*Abandoned mine workings manual*’ (2019) and in conjunction with the MRA.

3. Shallow mine workings in the Abdy seam:

With respect to the shallow mine workings in the Abdy seam, Phase 2 investigations proved that the stability ratios between the surface and the Abdy seam were substantially less than 10:1, which indicates building on these workings would be unstable without treatment.

SEL have recommended drilling and grouting to prove and stabilise the workings. Boreholes would initially be drilled on a 6.00m centred base grid to 1m below the coal seam/workings and grouted. Where grout uptake is high, the grid would be augmented by extra drilling/grouting at intermediary locations until the workings are sealed (3.00m spacing and 1.50m spacing if grout uptake continues to be high).

Further details regarding the drilling and grouting operations will be provided in the Phase 3 treatment works, which to date have not been authorised. All works should be carried out under a MRA permit, in consultation with the MRA.

4. Mine entries 434404-13 and 434404-14:

With respect to adit 434404-13, (located beneath the proposed building), trial pit 02 proved coal at a depth of 1.2m. The adit was not found. Phase 3 operations will need to prove the location, depth and direction of the adit and seal it as part of the stabilisation works. Further details regarding the drilling and grouting of the site will be provided in the Phase 3 treatment works, which to date have not been authorised. All works should be carried out under a MRA permit, in consultation with the MRA.

With respect to adit 434404-14, which is located at the south eastern margin of the site, trial pit 01 proved the adit 1.15m thick and backfilled with gravelly clay. As the risk has not been discounted, Phase 3 operations will need to mitigate the risk in a similar manner to that described above.

5. Mine entries 434404-18 and shaft 434404-19:

The plotted position of these two mine entries are located off the site on land not owned by the client. Mitigating the risk of these mine entries is discussed below.

6. Mitigating the risk from mine entries with respect to the proposed development:

The client proposes to build a dwelling with associated facilities, as shown in Figures 3 and 4. With respect to mitigating the mining legacy risk, the MRA identifies some sites are exempt by nature of their development. SEL believes the proposed development consists of three areas:

- North western area: SEL understand that this area will form the garden of the property. As such, the development will entail minimal groundworks and no substantial foundations. SEL consider it is reasonable to assess this area as exempt, provided the development is undertaken as currently envisaged.
- Central area: consists of the new property and includes an area of terracing immediately west of the property. SEL considers that this area will require drilling and grouting to stabilise this part of the development. Grouting should be limited to an area 5.00m beyond the footprint of the proposed property (including the terrace), where it is feasible to do so.
- South eastern area: SEL understand this area comprises the access drive to the property and will include the construction of a small wall. The MRA on line guidelines for planning applications consider fences, walls and gates to be exempt due to the minimal disturbance of ground. With respect to the drive, SEL understand that due to the nature of the topography, there will be a small amount of surface scraping to ameliorate the access and will comprise a sealed surface/resin. The MRA do not define mitigation requirements for access drives to domestic houses in their guidelines. SEL recommend the client provides the MRA with development details in this area so they can provide guidance prior to Phase 3 works commencing.

It should be noted that gas monitoring equipment has been installed into the coal/old workings at three borehole locations to record the potential presence of mine gases in accordance with CIRIA guidance C665. Gas levels will be monitored for six visits over a period of three months (as a minimum) and a report assessing gas risk on site will be prepared on completion of the monitoring. SEL have recommended the “*grouting of some of the adits, should mine gas monitoring prove a potential hazard.*”

7. Conclusions:

- a) The Phase 2 CMRA drilling identified the need for Phase 3 remediation works to mitigate shallow mine workings in the Abdy coal seam, recorded mine entry 434404-13 and potentially mine entry 434404-14.
- b) SEL recommend the client seek a quotation for the drilling and grouting of the site, which will provide further information for the MRA to consider prior to the works commencing.
- c) With respect to the proposed access drive, the client should provide details of the proposed works in this area and the MRA should inform the client if these works represent minimal groundworks requiring no further action, or significant groundworks that require stabilising.
- d) The Phase 3 works can be conditionalised as part of a planning approval for the site.

Prepared by:

Alan John Ashburn BSc (Hons) MSc CGeol
Senior Geologist
Silkstone Environmental Ltd.

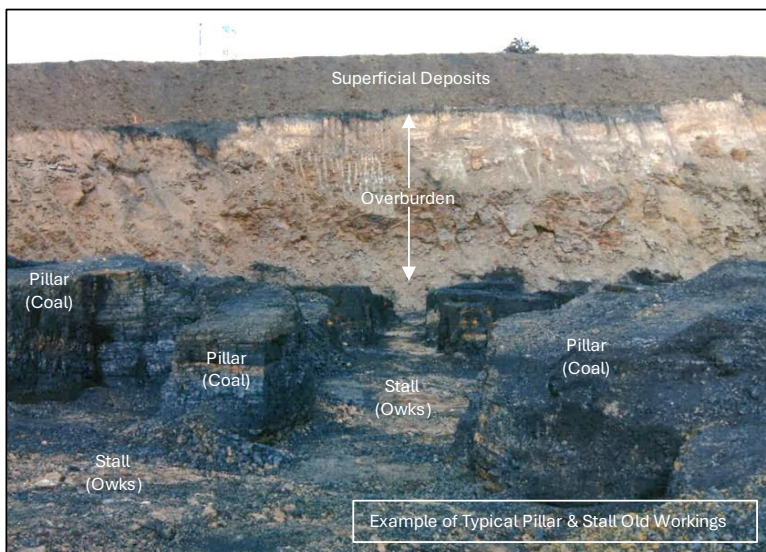
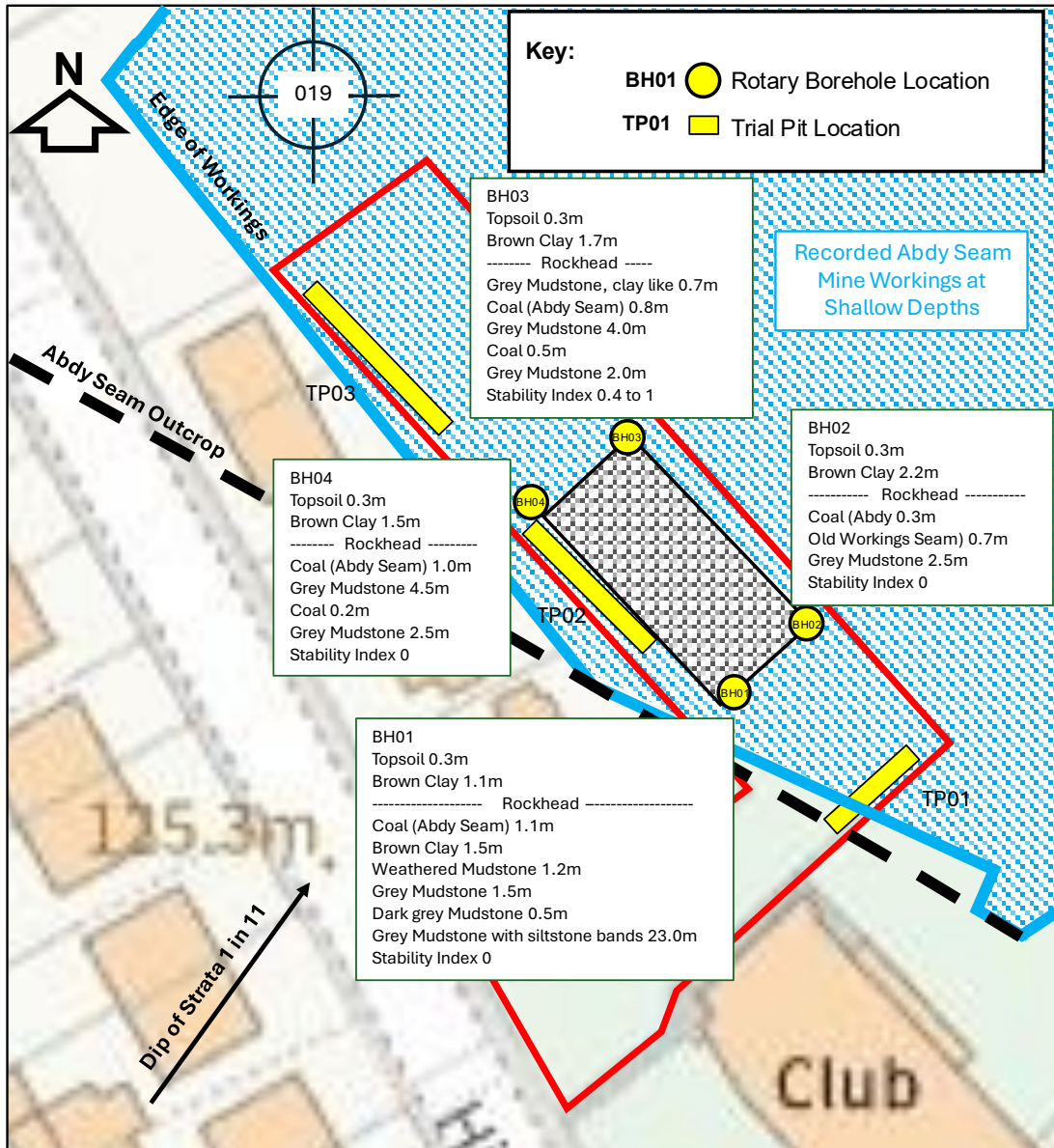
Reviewed by:

Nick Pickard BSc CEnv MRICS
Chartered Environmental Surveyor
Silkstone Environmental Ltd.

Certified by:

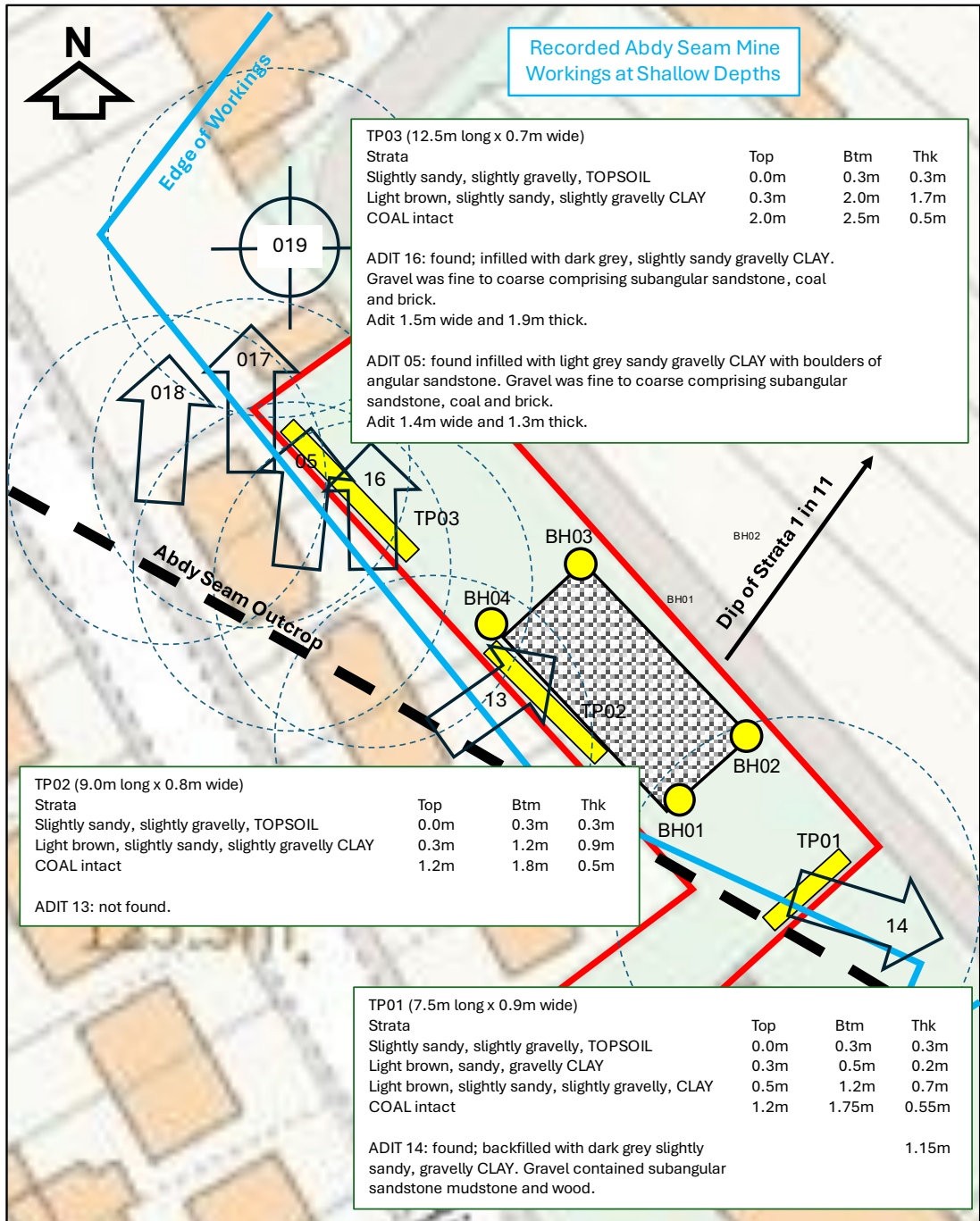
Mark Barrett BSc (Hons) MSc CEng MIMM MIQ
Managing Director
Silkstone Environmental Ltd.

FIGURES



**Ref No. 24319
 Highstone Lane,
 Worsbrough,
 Barnsley,
 S70 6SD**

**Figure 1:
 INTERPRETATION OF
 ROTARY DRILLING
 (NGR 434830,404550)**



Key:

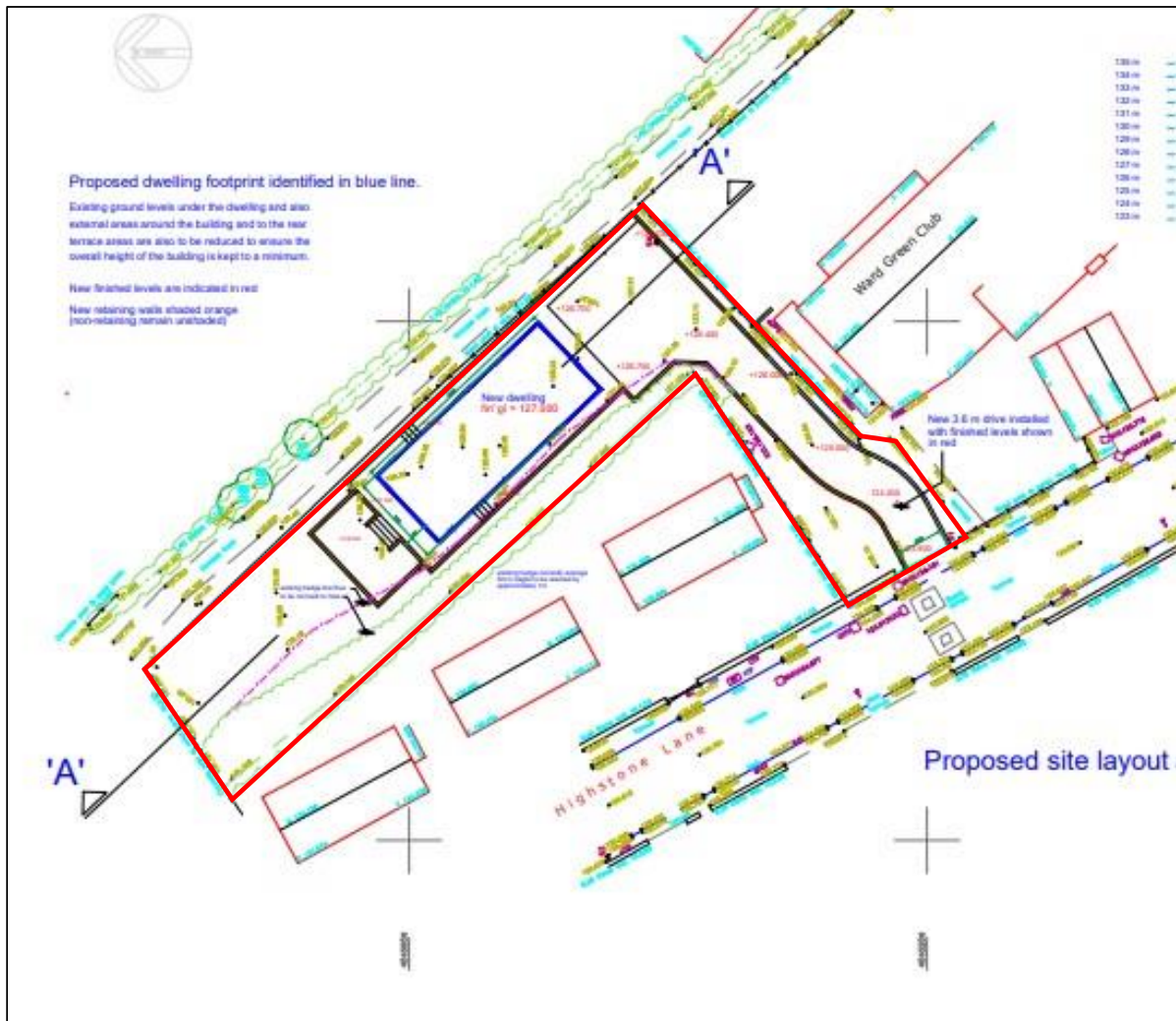
- BH01 Rotary Borehole Location
- TP01 Trial Pit Location

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Figure 2:

INTERPRETATION OF TRIAL PITS

(NGR 434830,404550)



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It is proposed to construct a low rise detached dwelling incorporating an access drive and parking provision, with gardens and a terrace to the rear.

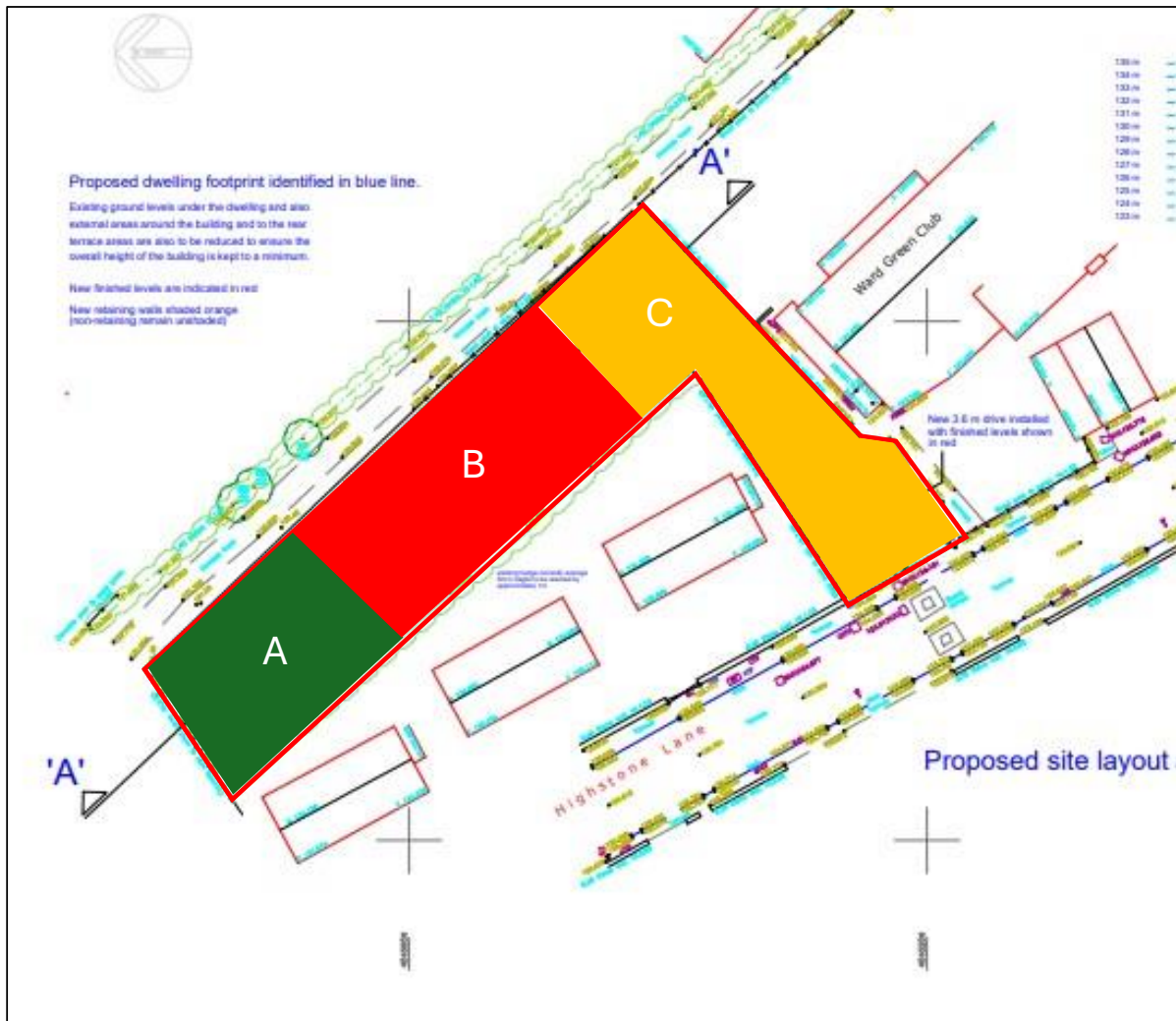
The FFL of the dwelling will be at approximately 127.0m AOD, necessitating retention of the adjacent ground by between 1 and 2m height.

Planning permission was submitted to Barnsley Metropolitan Borough Council for the development of 1 no. detached dwelling in September 2023 (still under consideration).

Figure 3:

PROPOSED SITE LAYOUT

(NGR 434830,404550)



Area A: Garden area . No significant groundworks, no foundations.

Area B: New property and terrace area. Significant groundworks/foundations required. Drilling/grouting recommended to a minimum of 5m beyond property, where possible.

Area C: Access drive including retaining wall. Small amount of surface scraping required due to nature of topography.

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Figure 4:

RISK AREAS

(NGR 434830,404550)