

Technical Note

Project: Sovereign Industrial Estate, Huyton, Liverpool

Client: Davos Property Developments Ltd

Date: 02/02/2024

Planning Objection in Relation to Mine Shaft ref: 345389-011

1. Introduction

Following the submission of a planning application (ref 23/02782/FUL), Knowsley Council issued a Planning Consultation Response, dated 21st December 2023 noting an objection to the proposals. The proposed development relates to the *“erection of 1no. retail unit (use class e(a) with external display area and car parking and servicing arrangements. partial demolition, reconfiguration and refurbishment of existing employment building to create 2no. industrial/ warehouse buildings with ancillary offices (use classes e(g)(iii), b2 and b8) with servicing and car parking; retention and amendment of existing site accesses along with internal estate roads; 2no. substations; landscaping; and associated works”*.

The proposed development is located at Sovereign Industrial Park, Wilson Road, Huyton, Knowsley.

Part of the objection relates to the Preliminary Risk Assessment submitted by Fairhurst in October 2023, which contained a Coal Mining Risk assessment prepared by JWH Ross. This Coal Mining Risk Assessment (ref 156463/GL/J/R1) noted that there was a risk to the development from potential shallow unrecorded mineworkings and that intrusive investigation would be required in order to ascertain the past mining situation beneath the site. The report also highlighted the presence of several mine shafts, which were noted to have been treated in the past in Coal Authority Consultants Coal Mining Report, ref 51003368666001, dated 24th July 2023. The report recommended that while the shafts have been treated, consideration should be given to undertaking excavations be undertaken to expose the shaft caps and inspect their current condition, dimensions and orientation. The report also recommended that no structural development should be located within the potential zone of influence of the shafts.

A Statutory Consultation Response from the Coal Authority dated 20th December 2023 who highlighted a substantive concern relating to the proposals, specifically in relation to mine shaft reference 345389-011. Figure 1 below is an extract of the recommendations from the Coal Authority consultation response.

This Technical Note aims to outline the understood position and zone of influence of shaft 345389-011 along with the options considered in order to satisfy the planning conditions and mitigate the instability risk presented by the shaft.

It should be noted that this Technical Note deals only with Shaft 345389-011 and should not be misconstrued as implying any conclusions as to the ground stability of the site in relation to possible shallow mineworkings, which we understand have still to be investigated.

The Coal Authority Recommendation to the LPA

The Coal Authority's information has revealed that there is a significant risk to the development from a recorded mine entry (shaft).

The applicant should therefore be advised of the Coal Authority's view as technical expert in the field of coal mining legacy and land instability. Furthermore, they should be required to carry out intrusive site investigations. In the instance that the mine entry is disproven from being within the site, further work in the form of amended plans should then be submitted illustrating the conjectured (worst-case scenarios) location of the mine entry and its respective zone of influence. Any remedial/mitigation measures should then be proposed as part of the revised report, as necessary, to address any issues of land instability.

The Coal Authority considers that this issue goes to the heart of whether planning permission should be granted; it is not an issue therefore that would be appropriate for the imposition of conditions in this case.

The Coal Authority would be very pleased to receive for further consultation and comment any additional information prepared and submitted by the applicant.

On account of the above, the Coal Authority **objects** to this planning application.

Figure 1- Extract from Coal Authority Consultation Response

2. Shaft Position and Zone of Influence

According to the Coal Authority Consultants Coal Mining Report, ref 51003368666001, dated 24th July 2023, the national grid coordinated for the shaft are 345845 389425. There is no known treatment recorded for the shaft. According to the Coal Authority interactive viewer, the shaft has been allocated a departure of 10 metres, inferring that there may be limited source plan information informing the position.

In order to understand the potential zone of influence of the shaft, the position has been plotted on appended Drawing No 156463/9003 in accordance with the coordinates provided in the abovementioned Consultants Mining Report. The potential zone of influence was plotted taking account of the assigned departure radius of 10 metres and the potential radius of instability. In this instance the superficial deposits are anticipated to be in the order of 3m deep, allowing for a collapse spread of 45° this results in a total potential zone of instability of 13 metres from the plotted shaft position in line with guidance in CIRIA C758D, Abandoned Mine Workings Manual, 2019.

This potential zone of instability is shown on Drawing No. 156463/9003 along with the proposed development as submitted as part of the planning application. It will be observed that the zone encroaches into the garden centre.

3. Considerations and Options

In order to mitigate the potential risk to the development, three potential courses of action were considered.

- Avoidance – move all development, including the outdoor space, outwith the influencing zone.
- Locate and treat - probe drill the area in an attempt to located the shaft, followed by treatment in the form of grouting and/or capping.
- Reinforcement – use of ground reinforcement such as geogrids in the outdoor area of the garden centre spanning the potential zone of instability.

After consideration of the above options, it was decided to move the development from the potential zone of influence of the shaft. Figure 2 below shows an extract from Drawing No. 13579-AEW-XX-XX-DR-A-0503-P08 showing the potential zone of instability and the revised development proposal showing that the built development, including the outdoor area of the gardens centre, which has been altered in order to avoid any future ground instability related to the recorded position of the shaft.

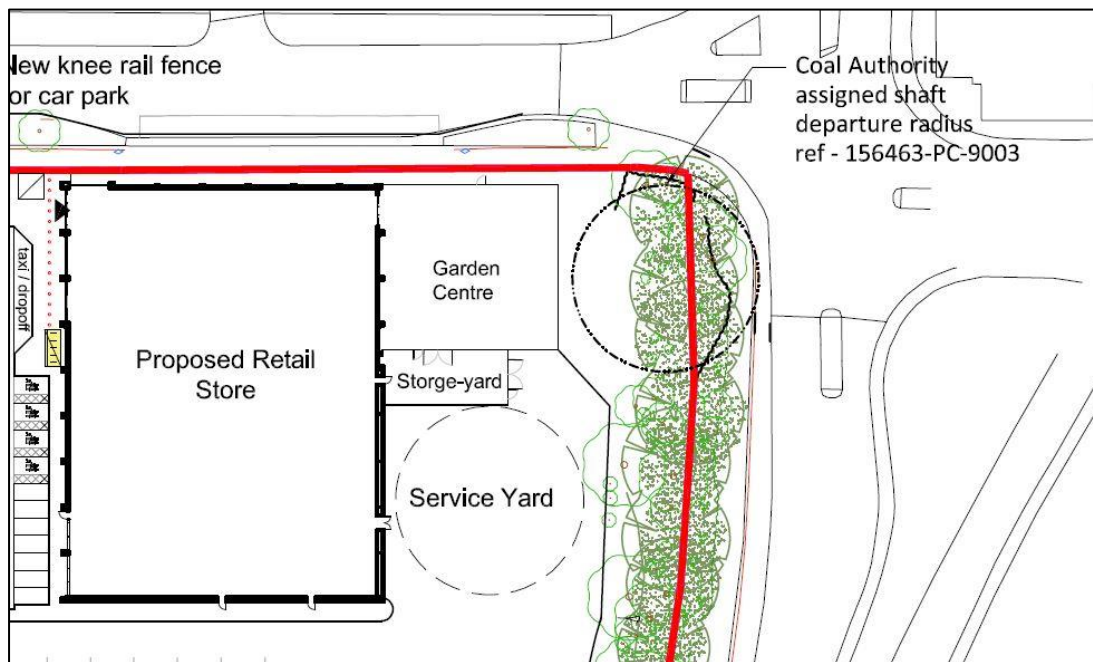


Figure 2- Extract from 13579-AEW-XX-XX-DR-A-0503-P08

4. Concluding Remarks

Taking cognisance of the objections to the planning application relating to Shaft ref 345389-011 and after undertaking a plotting exercise to illustrate the potential zone of instability attributable thereto, consideration was given to potential actions in order to mitigate the risk to the development.

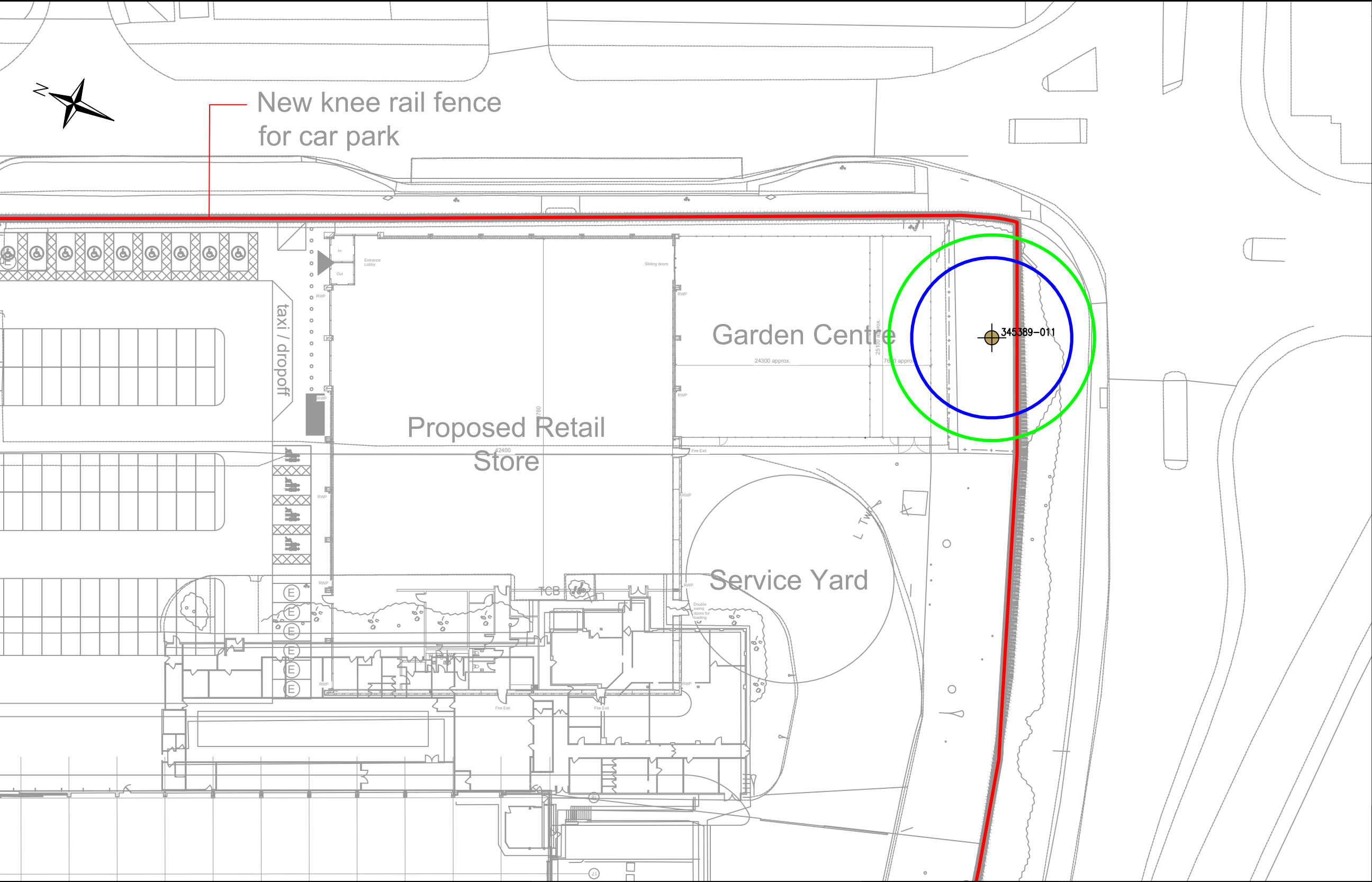
It was decided to reconfigure the proposals in order to move any built development including the garden centre and service yard to avoid any interaction with the zone of instability.

We would add that even where mine entries have been located and treated, we would recommend that any built development takes cognisance of the potential zone of influence and should not be positioned within the zone.

Issue & Approval Schedule	Issue 1 FINAL	Name	Signature	Date
	Prepared by	Stuart Tennant Senior Mining Engineer	Signed copy held on file	02/02/2024
	Checked by	Alan Blair Partner	Signed copy held on file	02/02/2024
	Approved by	Alan Blair Partner	Signed copy held on file	02/02/2024

Appendix A

Drawing No. 156463/9003 – Mine Shaft Indicative Zone of Influence



Do not scale from this drawing.

LEGEND:

SITE BOUNDARY

APPROXIMATE COAL AUTHORITY SHAFT LOCATION

COAL AUTHORITY ASSIGNED DEPARTURE RADIUS

APPROXIMATE ZONE OF INSTABILITY

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Rev.	Date	Description	Drawn	Checked	Approved

NOTES:

1. PROPOSED DEVELOPMENT PLAN DERIVED FROM AEW ARCHITECTS DRAWING, PROPOSED SITE PLAN REF, 13579-AEW-XX-XX-DR-A-0503 REV P05 DATED 16/10/23.

2. SHAFT LOCATION DERIVED FROM COAL AUTHORITY CONSULTANTS COAL MINING REPORT, REF. 51003368666001 DATED 24th JULY 2023.

Client:
DAVOS PROPERTY DEVELOPMENTS LTD

Project Title:
HOME BARGAINS, HUYTON

Drawing Title:
MINE SHAFT INDICATIVE ZONE OF INFLUENCE PLAN

JWHROSS

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Tel: 0141 285 8700

Scale at A3:
1:500

Status:
For Information

Drawn:
CMCC

Checked:
ST

Approved:
ARB

Date:
23/01/24

Date:
23/01/24

Date:
23/01/24

Drawing No.:
156463/9003

Revision:
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