Coal Mining Risk Assessment – The Royal Oak PH, High Street, Dilhorne, Stoke-on-Trent, ST10 2PE

Sources of information:
Coal Authority Mining Report Ref 51000052489001 (attached)
GroundSure Screening Report
Coal Authority Datasets available under the Open Government Licence v3.0.

Issue	Hazard	Site Affected (Yes/No) (Detail – where appropriate)	Consequences (where appropriate)	Recommended Mitigation Measures (where appropriate)
1. Are there any recorded coal mine entries within the site or within 20m of the site boundary?	• Catastrophic collapse of mine entry leading to ground instability or voids at the ground surface. • Settlement of the ground surface above/adjacent to the mine entry. • Generation of crown holes at the ground surface. • Mines gas emissions	**No:** There are no recorded mine entries within or within 20m of the site.	N/A	N/A
2. Is the proposed development in the likely zone of influence of past deep underground mining?	• Ground subsidence. • Ground instability.	**Yes:** The site is in the influence from past deep underground mining at 110m and 260m, with the last date of working being 1957.	Ground subsidence associated with recorded deep underground coal mining can give rise to levels of damage to the built environment that may affect both serviceability and design life of a structure.	Ordinarily, ground movements arising from the reported past deep underground mining activities would be expected to have ceased by 1980s. Accordingly, past deep mining activities do not represent a risk to the development area; as such no mitigation measures are required.
3. Is the proposed development in the likely zone of influence of any present underground mine workings?	• Ground subsidence. • Ground instability, loss of ground, generation of crown holes.	**Active Mining:** There are no active underground mines in the locality. **Future Mining:** Not and area likely to be worked in the foreseeable future.	N/A	N/A

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Issue	Hazard	Site Affected (Yes/No) (Detail – where appropriate)	Consequences (where appropriate)	Recommended Mitigation Measures (where appropriate)
4. Is the proposed development within the likely zone of influence of recorded underground workings at shallow depth (depths of less than 30m)?	• Ground subsidence. • Ground instability, loss of ground, generation of crown holes.	**No:** There are no recorded shallow mine workings within influencing distance of the site.	N/A	N/A
5. Is there a possibility of unrecorded shallow mine workings and/or mine entries?	• Ground subsidence. • Ground instability, loss of ground, generation of crown holes. • Catastrophic collapse of mine entry leading to ground instability or voids at the ground surface. • Settlement of the ground surface above/adjacent to the mine entry. • Mine gas emissions	**Yes: U**nrecorded mine entries may exist on or within influencing distance of the development area.	Ground subsidence associated with past shallow underground mining and mine entries can result in severe localised ground instability and damage to the built environment, harm to human health, injury or death of construction workers using the site.	**Shallow Mine Workings:** The Coal Authority is not aware of any evidence of damage arising out of geological faults or other lines of weakness that have been affected by coal mining. **Mine Entries:** The potential exists for unrecorded mine entries to be located in the area. The Coal Authority is not aware of any evidence of damage arising out of geological faults or other lines of weakness that have been affected by coal mining.
6. Is there a record of mine gas emissions within the site boundary?	• Mixtures of noxious of explosive gases reaching the ground surface via superficial deposits, faulted/broken strata or poorly filled mine entries and entering structures, confined spaces etc, when an explosive or	**No:** The Coal Authority has no record of any gas emissions requiring action within the site.	N/A	N/A

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Issue	Hazard	Site Affected (Yes/No) (Detail – where appropriate)	Consequences (where appropriate)	Recommended Mitigation Measures (where appropriate)
	asphyxiating hazard may be generated.			
7. Is the proposed development in an area for which the Coal Authority is determining or has granted a licence to remove coal by underground methods?	• Ground subsidence. • Ground instability.	**No**	N/A	N/A
8. Are there known faults or other lines of weakness (eg. fissures) due to mining at the site?	• Ground subsidence. • Mixtures of noxious of explosive gases reaching the ground surface via faulted/broken strata and entering buildings, structures, confined spaces etc, when an explosive or asphyxiating hazard may be generated. • Stepped rockhead profiles where there has been subsidence across faults, impacting settlement. Of proposed structures.	**No:** The Coal Authority has no record of any line of weakness at the site.	N/A	N/A
9. Has the site been subject to remedial works by, or on behalf of, the Coal Authority under its surface hazard call out procedures?	• Indication of past and potential future subsidence issues on site.	**No.**	N/A	N/A

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Issue	Hazard	Site Affected (Yes/No) (Detail – where appropriate)	Consequences (where appropriate)	Recommended Mitigation Measures (where appropriate)
10. Is the proposed development within the boundary of a surface mining/opencast site from which minerals have been removed by surface mining/opencast methods?	• Potential of a ground gas source and/or migration pathway. Potential settlement problems.	**No.**	N/A	N/A
11. Is the proposed development within 200m of a surface mining/opencast site from which minerals are being removed?	• Development constraints associated with environment/noise/dust	**No.**	N/A	N/A

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Assessment of Cumulative Impact of Mining Issues:

This risk assessment has identified the principal risks to development at the site based on Coal Authority Mining Report information.

The recent adjacent development of 3no dwelling houses on the former car park land associated with the Public House was undertaken using strip / trench fill foundations with fabric reinforcement mesh to form the basis of wall construction at modest depth for Building regulations compliance and no other anomalies were exposed which presented any concern for that development. It is not expected that the proposed extension presents any additional hazard or that any foundation excavations present any further hazard for the development.

In the circumstances, it is considered that the development proposals will be low risk. It is recommended that new floor slabs and foundations incorporate reinforcement, in recognition of the residual low risk of ground instability.

Prior to carrying out any works which may intersect, disturb or enter any coal seams, coal mine workings or mine entries (within the ownership of the Coal Authority), the written permission of the Coal Authority shall be obtained (www.coal.gov.uk/services/permissions/index.cfm).

N/A = Not Applicable