

# ACTION

## MINE ENTRY INTERPRETIVE REPORT

**PASSED**

<b>Mine Entries</b>	A mine entry is recorded within 20 metres of the Site boundary.	<b>ADVISORY</b>
<b>Surface/ Shallow Mine Workings</b>	Evidence to suggest shallow (less than 30 metres) underground mine workings exist in the vicinity of the Site.	<b>ADVISORY</b>
<b>Deep Mine Workings</b>	Evidence to suggest deep (over 30 metres) underground mine workings exist within the vicinity of the property.	<b>PASSED</b>
<b>Planning Permissions</b>	There are no recorded mineral planning permissions for the future extraction of mineral resources within 1000 metres of the Site.	<b>PASSED</b>

**Report on:**

**Sample**

**Date:**

**01/05/2019**

**Our Ref:**

**Sample**

**Client Ref:**

**Sample**

### Professional Opinion

Within the scope of this assessment, mining activity is considered unlikely to impact the value or security of the Site for normal lending purposes. Mining features have been identified within the influence of the Site, resulting in a susceptibility to past, present and/or future ground movement and prudent enquiries may be undertaken to provide further assurances, relating to the stability of the Site.

### Further Actions

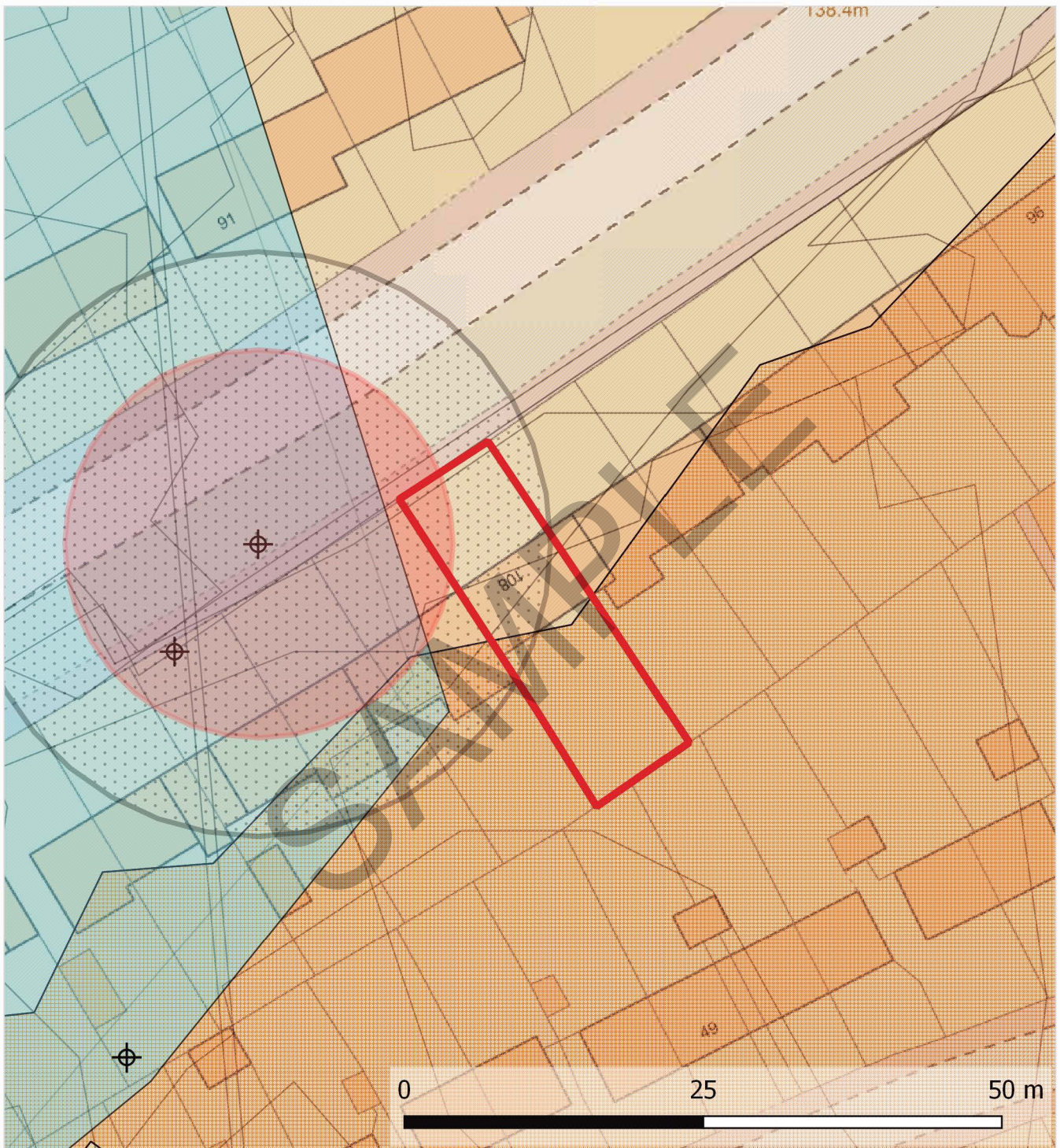
Terrafirma recommend that an appropriate RICS Survey Level-Two HomeBuyer report (e.g. Survey & Valuation) is acquired for the property in question to assess, amongst other important considerations, the structural condition of the property.

Contact the report author directly at: 0330 900 7500

TerraSearch® Action is a comprehensive 'Con29m-Compliant' mining hazard review, which aims to quantify the risk of mining-related subsidence or collapse to the site from historical, present and planned mineral extraction.

The report blends supporting information, site-specific and expert interpretation with full hazard data to professionally conclude the risk. Detailed recommendations are also provided based on the level of mining risk identified. The report is accepted by all major UK lenders and Terrafirma's terms & conditions provide liability cover of £10m per report. All TerraSearch® reports adhere to The Search Code, monitored by the Property Code Compliance Board.

## Mining Hazard Map



Site Address

Sample

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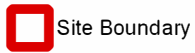
understand the ground

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## Hazard Map Key



Site Boundary



Recorded "sinkholes"

### Subsidence Risk Zones



Zone of Influence



Affected Areas

### **Coal Mining Hazard Features**



Underground Workings



Shallow Underground Workings



Coal Seam Outcrop



Mine Gas



Unlicensed Opencast

### Probable Underground Workings



Considerable



Moderate



Shallow

### Mine Entry



Adit



Shaft

### Geological Disturbance



Breakline



Fissure



Geological Disturbance - Fault

### Subsidence Claims



01 - Awaiting



02 - Rejected



03 - Admitted



05 - Settled



06 - Withdrawn

### Coal Mining Related Hazard sites



03 - Admitted



05 - Settled

### Licence Area (Present/Future)



Underground

### Licence Area (Past/Present/Future)



Opencast

## Conclusions and Expert Interpretation

### Ongoing Current Use:

**PASSED**

#### **Mining Context & Geological Conditions**

The Site is situated within an area that has been historically worked for coal by underground mining techniques, with recorded extraction in the local area dating back to at least 1861 and continuing into the 20<sup>th</sup> Century. In addition, the Site is situated within an area that has been historically worked for limestone and ironstone; there is no evidence to suggest that limestone was extracted beneath or within the immediate vicinity of the Site, however, ironstone was extracted beneath the Site at a depth of 100 metres. According to historical mapping, the building within the Site boundary had been built by 1970.

The local bedrock geology is comprised of mudstone, siltstone and sandstone of the Pennine Middle Coal Measures Formation. There are no recorded superficial deposits, however, there is a cover of artificial 'Made Ground'. The depth of surface deposits beneath the Site is documented to be up to 8 metres by the British Geological Survey.

#### **Subsidence Risk Analysis**

A mine shaft is recorded 12.4 metres west of the Site boundary. It has an assumed diameter of 2 metres and extends to an unknown depth. Available records indicate that the mine entry has not been treated. Its 'Zone of Influence' has been calculated based on the depth of surface deposits and the mine entry diameter. According to the calculation, if in its documented position the potential influence area of the mine entry, in the statistically unlikely event it collapses or becomes unstable in future, could affect the ground stability of the north-western part of the Site grounds/gardens, however, the ground stability beneath the footprint of the existing building should not be affected.

The mine entry is recorded from a historical source and its precise location has therefore not been confirmed. A potential error radius of 8 metres has therefore been applied to its location. Taking this potential deviation into account, the existing building could be within the influence of the mine entry. This is illustrated as 'Affected Areas' on the Mining Hazard Map.

The Site is underlain by historical shallow underground coal workings, that date to at least 1879, associated with the 'Brooch' seam. The coal seam is recorded to be 1.07 metres thick. Workings within this seam are calculated to occur at a depth of approximately 28-30 metres beneath the Site. As a general principle, where the ratio of competent cover rock thickness to worked seam thickness is less than 10:1 the surface is considered more likely to be susceptible to ground movement. This is because movement within the workings can more easily propagate to the surface. As the exact thickness of workings beneath the Site is unknown, it is assumed to equate to the seam thickness. In this instance, the ratio of competent rock cover to seam thickness is considered sufficient to hinder the upward migration of voids. Therefore, there is a reduced likelihood that these workings would cause subsidence issues for the Site if they became unstable in future.

Unrecorded shallow coal mine workings are suspected to occur beneath/in the immediate vicinity of the Site. If unrecorded workings are present at shallow depths beneath the Site, movement within the workings could cause ground instability at the surface.

#### **Conclusions**

Shaft collapse is statistically unlikely. The shaft is unlikely to affect the ground stability of the existing dwelling if it becomes unstable in future. However, the existing dwelling could be within the influence area of the shaft if the

shaft is located further east/south-east of its documented position.

Historical shallow underground workings are recorded and suspected beneath the Site. The known workings are calculated to occur at a sufficient depth so as to reduce the likelihood of upward void migration, however, the presence of unrecorded workings at shallower depths cannot be entirely discounted. Where present at very shallow depths, movement within coal workings can cause ground stability issues at the surface.

## Professional Recommendations

The identified mining features are unlikely to impact the value or security of the site for normal lending purposes; however, it is recommended that the prudent purchaser undertakes further assurances to safeguard their investment regarding the stability of the site.

Terrafirma recommend that an appropriate RICS Survey Level-Two HomeBuyer report (e.g. Survey & Valuation) is acquired for the property in question to assess, amongst other important considerations, the structural condition of the property. This report will highlight any subsidence-related defects, which may relate to ground instability, while also noting any serious or dangerous issues that may require attention. For further information about the suite of RICS HomeBuyer and Building Surveys, please visit this [www.ricsfirms.com/articles/which-rics-survey-is-best-for-your-needs/](http://www.ricsfirms.com/articles/which-rics-survey-is-best-for-your-needs/), or to find a local Building Surveyor, please visit [www.ricsfirms.com/](http://www.ricsfirms.com/).

Should such a survey have already been undertaken as part of the property purchase, an additional Building Survey report may not be necessary. If a Building Survey has already been undertaken and reports a condition rating 1, indicating minimal historical or current ground movement, no further action is considered necessary. However, should the Building Survey mention condition ratings 3 (& 2 where appropriate) in relation to subsidence or issues relating to ground instability, then we recommend that you seek further expert advice. Sections of notable relevance in relation to ground instability from mineral extraction are: E1, 2, 4, 8 & 9; F1-5; H1-3 and J1-4. Alternatively, one may email the obtained Building Survey to Terrafirma and a member of our expert team of geologists and mining engineers can provide a review of the survey report.

In the event subsidence has previously occurred or occurs in the future, it is recommended Terrafirma are contacted immediately for further information on practical and appropriate next steps, including how to claim damages from the Coal Authority. Terrafirma can be contacted by emailing: [info@terrafirmasearch.co.uk](mailto:info@terrafirmasearch.co.uk) or by calling: 0330 900 7500 should you require any additional information.

In the event of any future damage, the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994) apply, and the Coal Authority / Licensee has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land and/or property in connection with lawful coal-mining operations. Typically, these actions will not need to involve either your insurance company or mortgage lender and therefore the end user(s) should not incur any costs or liability.

In addition to the above, it should also be noted that the Coal Authority offer a Public Safety and Subsidence Department that provides a 24-hour 7 day a week call out service (Tel: 01623 646 333) to take remedial action in respect of hazards associated with the movement or collapse of any coal mineshaft or entrances to coal mines and from other coal mining related surface hazards. Further information can be found on their website: [www.groundstability.com](http://www.groundstability.com).

**Considering Future Development:**

The Site is located within a **High Development Risk Zone**, as defined by the Coal Authority, due to the presence of a mine entry within 20 metres and the presence of recorded and suspected shallow mining beneath/in the vicinity of the Site. Future disturbance of the ground or changes to the load setting could trigger ground instability and therefore, prior to any site works or future development activity it is recommended that you seek professional advice from a qualified mining geologist/engineer. Please contact Terrafirma directly if you require further information.

SAMPLE

## Report Limitations

This TerraSearch® Action report has been carried out with reference to Terrafirma's bespoke GIS and an extensive collection of abandoned mine plans, maps, records and archives in our possession. The report does not consider natural ground stability hazards, such as subsidence (other than mining-related), landslip or coastal erosion.

From this material, we have endeavoured to provide as accurate a report as possible. It should be realised that totally unrecorded or unindicated workings can exist between known workings and therefore Terrafirma cannot be held responsible for any settlement or subsidence problems as a result of a Site being affected by unrecorded mining features or natural ground cavities.

It is a 'remote' investigation and reviews only information provided by the client and from the databases of publicly available information that have been chosen to enable a desk based environmental assessment of the Site. The report does not include a Site Investigation, nor does Terrafirma make specific information requests of the regulatory authorities for any relevant information they may hold.

This report is concerned solely with the Site searched and should not be used in connection with adjacent properties as only relevant known mining features have been mentioned and any known features that could potentially have a direct influence upon the target Site. Other features which may be present in the general area may have been omitted for clarity.

The report is based upon the Site boundaries as shown on the supplied location plan. This report is confidential to the client, the client's legal advisor and the client's Mortgage lender, as defined in the TerraSearch® terms & conditions, and as such may be used by them for conveyancing or related purposes. We have no liability toward any person or organisation not party to commissioning this report. This report or any part of it is not permitted to be reproduced, copied, altered or in any other way distributed by any other person or organisation.

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This report meets the principles and requirements of the Property Codes Compliance Board Compliance Note CN02J in respect of Coal Mining Searches.

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- promotes the best practice and quality standards within the industry for the benefit of consumers and property professionals
- enables consumers and property professionals to have confidence in firms which subscribe to the code, their products and services.

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Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs or to the PCCB.

### TPOs Contact Details:

The Property Ombudsman scheme, Milford House, 43-55 Milford Street, Salisbury, Wiltshire SP1 2BP, Tel: 01722 333306, Fax: 01722 332296, Email: [admin@tpos.co.uk](mailto:admin@tpos.co.uk), Web site: [www.tpos.co.uk](http://www.tpos.co.uk).

You can get more information about the PCCB from [www.propertycodes.org.uk](http://www.propertycodes.org.uk) or from our website at [www.terrafirmasearch.co.uk](http://www.terrafirmasearch.co.uk).

## Complaints Procedure

If you want to make a complaint directly to Terrafirma, we will:

- Acknowledge it within 5 working days of receipt.
- Normally deal with it fully and provide a final response, in writing, within 20 working days of receipt.
- Keep you informed by letter, telephone or e-mail, as you prefer, if we need more time.
- Provide a final response, in writing, at the latest within 40 working days of receipt.
- Liaise, at your request, with anyone acting formally on your behalf.

Complaints should be sent to: **Senior Executive, Terrafirma** - Address: 2440 The Quadrant, Aztec West Business Park, Almondsbury, Bristol, BS32 4AQ; Email: [info@terrafirmasearch.co.uk](mailto:info@terrafirmasearch.co.uk); Telephone: 0330 900 7500.

If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: [admin@tpos.co.uk](mailto:admin@tpos.co.uk). We will co-operate fully with the Ombudsman during an investigation and comply with his final decision.

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