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SPECIALISTS IN: MINING SEARCHES, PROPERTY INSPECTIONS, MINING INVESTIGATIONS, CONCRETE (MUNDIC) TESTS & SOIL CONTAMINATION SURVEYS  
VAT REGISTRATION NO: 591 1098 37

Your Ref: DM/3  
Our Ref: **TSB/EXAMPLE/1000**

Date

(Client)

Dear Sirs

### **MINING SEARCH: BATH STONE, FULLER'S EARTH, METALLIFEROUS MINERALS**

**Re: Glen View, Williamstowe, Bath**  
**NG Ref: ST 7640 6220**

Further to a request from NLIS Searchflow, dated 6<sup>th</sup> April, we have carried out a Mining Search on the above property and are able to report as follows:-

#### **Introduction**

This desk-top search, which is based on maps, plans and records, is an assessment of the risk of subsidence to the property associated with historic extractive mining for Bath Stone, Fuller's Earth or metallic minerals. The information included in the report is compiled from multiple sources and represented factually. No additional or subjective interpretations have been made by Cornwall Consultants Ltd.

#### **Mining Activity**

The property is situated in an area where considerable historic opencast and shallow underground mining activity for the extraction of limestone (Bath Stone) has taken place. It lies within the western boundary of the former Firs Mine. This mine and the Byfield Mine to the west are part of the Combe Down Mines. It is believed that significant mining activity in this area ceased about 1880, although some minor activity continued until about 1920.

The Bath Stone deposits in the locality occur in planar beds or stratigraphic units. In the vicinity of the property this is a Jurassic Age limestone rock referred to by the stratigraphic term of Combe Down Oolite. The worked limestone deposits within the Combe Down Oolite may be in the order of 3 to 10 metres thick. Generally these stratigraphic units are either horizontal or very shallow dipping.

The deposits were exploited either by tunnels (adits) driven along their plane from surface outcrop or from former opencast quarries or by means of inclined or vertical shafts. The underground mining of these deposits was by means of an extractive technique known as 'room and pillar'. Such workings require a minimum thickness of competent overlying strata to prevent surface subsidence.

There are few abandoned mine plans or records depicting the layout of the underground workings of these mines and those that are available are poor and do not show the full extent of the underground workings and support pillars.

In 1994 Bath City Council produced a report in which the workings of the Byfield and Firs Mine had been surveyed. This report together with information shown on the early Ordnance Survey maps (1888 and 1905) shows surveyed underground workings to extend beneath the property. The roof of these workings appears to lie at a depth of approximately 6 metres in the vicinity of the property. The workings beneath the property are dated from before 1850.

According to the 1994 report, a “High Hazard Area” (associated with areas of collapse margins) lies beneath the property. The 1994 report shows some surveyed pillars within the old workings beneath the property, however, their present condition and stability is not known.

In December 2002 a report on a proposed stabilisation programme for Combe Down Mines was produced for Bath and Northeast Somerset Council. This report indicates a capped shaft situated within the southern garden of the property. This subsequent stabilisation program has now been completed.

### **Other Mining Activity**

Fuller’s Earth has been extracted to the south of Bath and the nearest of these workings lies over 800 metres southwest of the property. No metalliferous mining activity has been carried out within the area of Bath.

### **Discussions**

With regard to the surveyed shallow underground Bath Stone workings beneath the property, mining related subsidence in the Bath area is usually caused by the collapse of the collars of old shafts; or the collapse of old shallow workings brought close to the surface; or where there is insufficient bedrock cover; or the subsidence of overlying strata due to collapse of pillars within old mine workings; or by the slumping of backfilled material into any of the aforementioned features.

Strata overlying collapsing mine workings is prone to ‘sagging’ and the creation of voids which migrate upwards. Such affects cause surface lowering or subsidence or the formation of significant depressions known as ‘crown holes’. It should be noted that surface lowering may extend beyond the boundaries of surveyed underground workings. The backfill within any former quarry may also present a risk of subsidence damage due to differential settlement.

The 2002 report includes details of proposals for a stabilisation programme of the Combe Down Mines. The stabilisation scheme is now complete.

### **Conclusions**

The documentary evidence indicates that the property is situated above an area of shallow underground workings of the Firs Mine in the Combe Down Oolite and is located in a ‘High Hazard Area’ regarding mining related subsidence. However, the Combe Down Stone Mines stabilisation program is now complete. Bath & North East Somerset Council are now issuing ‘Completion Statements’ to property owners as formal confirmation of the removal of the blight.

We recommend pursuing enquiries with the Combe Down Stone Mines Project Team of Bath and Northeast Somerset Council (Tel: 01225 477200; email: [stone\\_mines@bathnes.gov.uk](mailto:stone_mines@bathnes.gov.uk); 10 Palace Yard Mews, Bath BA1 2NH) who may be able to provide further information in this regard.

We are not aware of any plans to explore for, or exploit, Bath Stone, Fuller's Earth or metallic minerals in the locality and do not consider this a likely event.

### **Limitations**

This Mining Search has been carried out with reference to the extensive collection of abandoned mine plans, maps, records and archives in our possession and from this material we have endeavoured to provide as accurate a report as possible. However, taking into account that such records may not be wholly complete or accurate, we cannot accept liability for any inaccuracies or omissions there may be with respect to those records. The information included in the report is compiled from multiple sources and represented factually. No additional or subjective interpretations have been made by Cornwall Consultants Ltd. A property situated in a mining or mineralised area may be at risk from elevated levels of metallic elements within the soil, however this Mining Search does not include any assessment of the contamination risk to the subject property. This report and any mining features described are applicable to the subject property only, the location or boundaries of which have been indicated by the client. We cannot be liable for any erroneous or omitted information with respect to the property as portrayed on the plan supplied to us for the purpose of this Mining Search. The report must not be relied upon for neighbouring properties, as any adjacent mining features may have been omitted for clarity. This report is confidential to the client, client's solicitor and/or mortgage lender or those acting through a conveyance service provider (as per the quoted reference number) and may not be reproduced or further distributed without our permission. We shall be under no liability whatsoever to any person who has not been party to the commissioning and fee paid for this report. We have not visited the property as part of this Mining Search.

We trust this report provides the information you require. Please contact us if you have any queries or if we can be of any further assistance.

Yours faithfully  
for **Cornwall Consultants Limited**

**Mr T S Bennett**, BSc CEng MIMMM ACSM  
Mining Engineer