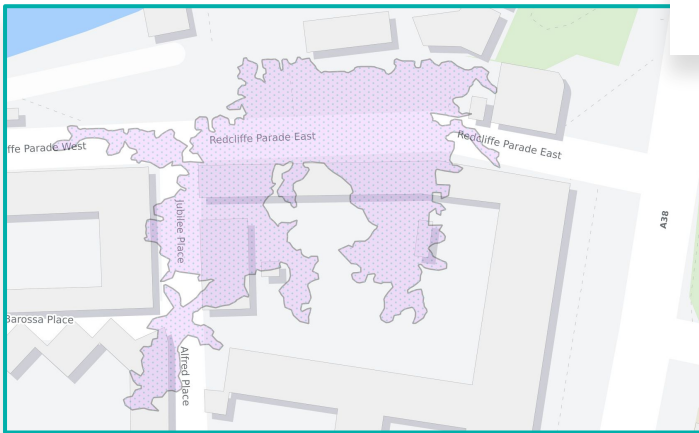


Mining case study

Property address

Redcliffe Sandstone Caves, Bristol



Did you know...

- 170,652 properties within Bristol potentially at risk of non-coal mining activity
- 47 sinkhole records
- 243 BritPit records (surface and underground mineral workings)
- 35 recorded natural cavities (excluding sinkholes).
- More properties are at risk from non-coal mining activity than they are from former coal activity

The Issue

The Redcliffe Caves may slip under the radar for those considering potential risk from historic mining legacy. The caves lie directly beneath a densely populated residential area with a mix of Georgian, Victorian and modern houses, together with some commercial properties, including a large hotel. Therefore understanding their impact at property level and how future climate change may affect the character of the red sandstone below them will be vital.

Historic Ordnance Survey mapping provides little to no insight into the caves existence, leaving the location and extent of the workings to be clarified through detailed research from our Mining Consultancy Team.

The Significance

Known locally as the Redcliffe Caves, these cavernous subterranean features are actually prime examples of underground quarrying. Situated to the west of St Mary Redcliffe Church, they are a complex plexus of tunnels and galleries dug to exploit the local sandstone.

Mining case study

Property address

Redcliffe Sandstone Caves, Bristol

The Significance (continued)

The red ochre sandstone was used heavily in local glass and pottery production. When ground into a fine sand, it makes for a cost efficient solution for dark green glass, whilst it's also used for a variety of innovative glazes with ceramics.

The caves are still owned by a local glass works today, but their discovery and subsequent exploration has a limited history. There are various conflicting references throughout history, from circa 1186 right up until 1868 that paint a picture of the quarries and their possible uses. In the mid-1700s, documentary evidence suggests Spanish & French prisoners of war were held captive here. Thereafter, they were used as a storage facility for the glass works who then operated the mines. In 1868, the tunnels were broken into by rail workers excavating a rail tunnel spanning the extent of the workings.

A variety of myths and legends surround the quarries. One relates to potential smuggling, due perhaps to their proximity to water. While there is no evidence to support the theory, one can imagine illegal contraband being taken from ships docked in the harbour and scuttled away in the caves below.

One thing we know for sure is that these 'caves' are most certainly man-made and not a naturally occurring feature. Archaeological investigation has observed pick marks on the walls and ceilings, whilst geological exploration identifies an absence of comparable naturally occurring sandstone caves in the area. The demand from local industry for this rich ochre red sandstone heavily points to them being quarries.

The Solution

When assessing historic mining activity it is crucial to have a comprehensive understanding of mineral extraction in any given area. A superior level of in-depth research is warranted to obtain a fuller appreciation of what lies beneath the surface.

Using our in-house Historic Land Use Data, alongside a comprehensive suite of historic ordnance survey mapping, paper geological plans and detailed surveys of the caves themselves, we are able to hone in on the true risk of these features. With our Mining Consultancy Team conducting their own research into the mines and backed up by cartographic and additional documentary evidence, we can gain a clearer understanding of what is going on below and report on those risks accordingly.

In short: more data, more research and more understanding allows us to confidently PASS a higher percentage of properties in the area than ever before.