



# What Lies Beneath

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LOCATION: ENGLAND

**A**s we crouch in the tunnel, rigging ropes for the descent, the jangle of our karabiners and safety equipment is barely audible over the roar of water tumbling down the shaft at our feet. I hope our research is accurate and that the 50m of line now snaking down the waterfall is sufficient to reach Number Two Level, the key to the main part of the mine. Information on this place is scarce. Few people have been here in 140 years. After a final equipment check, and with excitement tingling in the pit of my stomach, I disconnect from the handline before committing my weight to the rope. Looking up at my fellow explorers with a nervous grin, I squeeze the handle of my descender and start down. It feels odd to have climbed so far above sea level only to crawl through a hole in the earth and descend deep underground. Inside these mountains lie many secrets.

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The landscape of the English Lake District is one of the most revered in the world. Its craggy fells and verdant valleys inspired the words of Wordsworth and Coleridge and the brushstrokes of Constable and Turner, cementing its role as the cornerstone of the English Romantic movement. The area provided respite for many from the grime of the Industrial Revolution, and during the Victorian era it birthed both the conservation movement and the National Trust.

In 2017 the Lake District National Park was awarded UNESCO World Heritage Status. The bid fell within the category of Cultural Landscape, defined as an environment representing 'the combined works of nature and man'. In addition to farming, there is another industry that has arguably made an even more significant contribution to both the fabric of the landscape and the communities within it.

There are over 1,400 abandoned mining sites in the Lake District and Cumbria. The visual impact of this ancient industry on the landscape is massive, in places far greater than that of farming, for it took 50kg of charcoal to produce 1kg of copper – a fact that helps

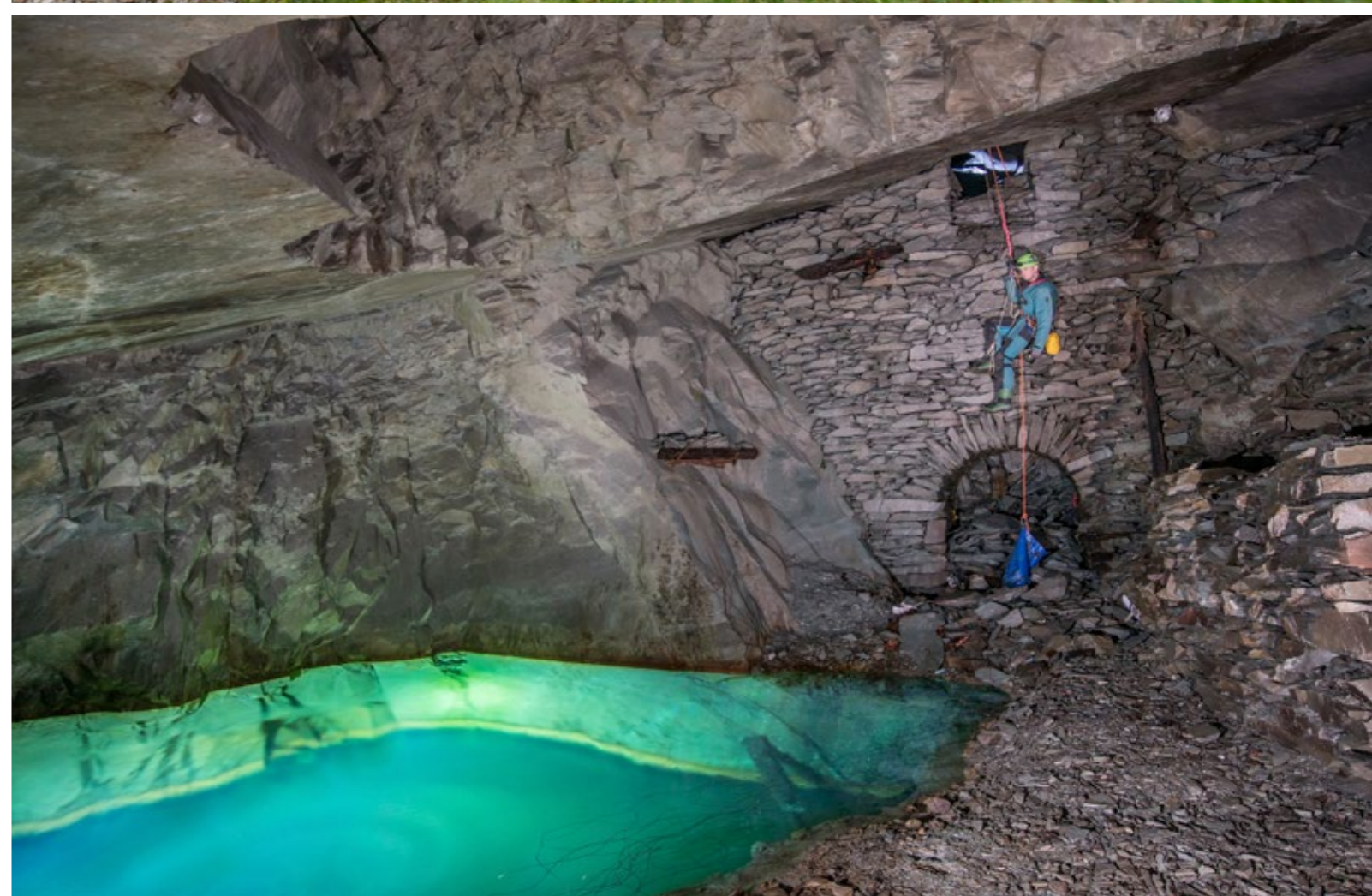
to explain the treeless fellsides we still see today. It is far from the 'natural' landscape that many perceive it to be.

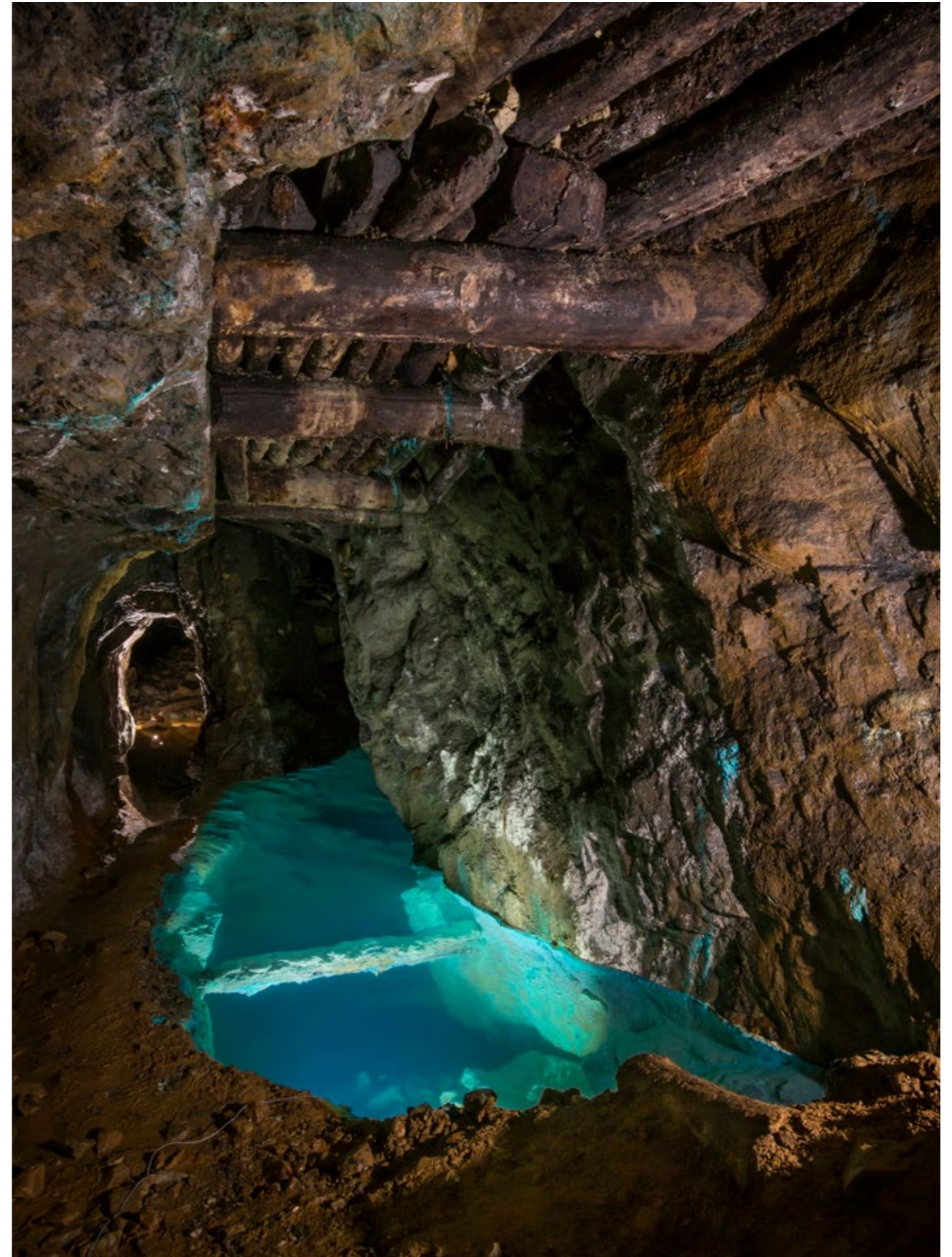
Many Lakeland towns and villages owe their existence to mining. Conistone and Keswick are just two examples of communities shaped by the minerals and metals that make up the hills surrounding them. Beneath the well-trodden fells lies a little-known network of underground spaces hewn, blasted, and carved by hand. Hundreds of miles of caverns and tunnels now lie abandoned: eerie and atmospheric monuments to the physical achievement of the miners that created them.

In 2019 the Lake District saw 20 million visitors. Thousands of people walk around and over these amazing sites every day, completely unaware of their presence. Just a few hundred metres from one of the highest and most-visited summits in England, the entire mountainside rings hollow with a vast cavern, formed by miners blasting several smaller slate workings together. It is the biggest single underground space in Cumbria – a truly spectacular sight. I have been in smaller cathedrals.

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*I gasp as freezing water hits the back of my neck – I have forgotten to pull my hood up. The shaft is only just wider than my shoulders and there is no escape from the icy shower. My world is the circle of light in front of me and careful foot placements on the glistening rock. After about 10m, the vibrations running down my spine from water hitting my helmet and shoulders begin to ease and I look around to find that the shaft has opened out into a huge void. I can't see where it ends. My head torch illuminates only my breath swirling into darkness, punctuated by twinkling water droplets. I follow their downward journey and can see the knotted end of the rope hanging about 2m above what appears to be solid ground. With rope stretch, I just make it, and on tiptoes there's just enough slack to untie the knot before the tension whips the end of the rope through the descender. 'Rope free!' I holler. ▶▶*





*As I begin to scabble around and over piles of debris I tread softly, wary of false floors sometimes held up by mere splinters of rotting timber. Looking around, I see signs of the men who hacked this space from the mountainside. A beautifully preserved wooden barrow sits alongside drill bits and a miner's shovel. Matt touches down as I am setting up my photography kit. His eyes widen in astonishment. Although an accomplished climber, this is his first proper mine. 'Bloody hell, mate – this is wild!'*

*Adam joins us as I finish taking photos and he spots a small opening in a pile of rubble. Gingerly we crawl through, taking care not to disturb the Jenga-like stack of blocks surrounding it. Beyond is a tunnel stretching off even deeper into the mountainside. Number Two Level. We start along it but Adam suddenly stops and points. At the edge of the tunnel, pressed cleanly into the mud, are miners' clog prints. They are nearly a century and a half old yet as fresh as the day they were made. A shiver runs down my spine as I think of the men who passed through here and the hard realities of an entire working life spent underground. Their presence seems so tangible yet the passage of time so great.*

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*The marks left by miners on the Lake District are indelible, not just physically but culturally – in the place names, language, and even food.*





Cumberland sausage originates from a recipe passed on by German miners, mainly from the Augsburg area, brought to Cumbria when Elizabeth I formed the Society of Mines Royal. They were known to be the most skilled miners in the world and their superior workmanship is evident in the few hand-chipped ‘coffin levels’ that survive, which provided just enough space for a man to walk by removing the minimum amount of material. Where they pass through compact rock, each precise adze blow is still clearly to be seen. Thanks to thorough record keeping, we even know the miners’ names, working hours, and how much they were paid.

Under the World Heritage inscription most mining sites of significance in the national park are listed as attributes of ‘Outstanding Universal Value’. Many are also Scheduled Ancient Monuments, some of international importance. One mine in the north of the national park contains some inconspicuous wooden rails that may be the earliest known wagon-way in Europe. Wooden hand tools found nearby have been dated to AD 1020-1200. Analysis of Roman lead and silver found during excavations in Carlisle shows that they were processing ore from the Alston area, and early copper workings at Coniston may also date to this period, though this is yet to be proven. The biggest problem with mining archaeology is that early workings are nearly always obliterated by later ones.

The earliest known working, though technically a quarry, is the Langdale ‘Axe Factory’. From 3500 to 2500 BC workers here were mass-producing axe heads from a vein of volcanic tuff hidden high in the steep crags. A third of Neolithic axe heads unearthed in Britain and Ireland can be attributed to this one location. Though found widely, many of the axe heads are unused, pointing to their significance as a symbol of high status. Whatever their role, this was evidently a Neolithic export industry with the Lake District at its centre.

On a fellside in Borrowdale, within sight of hill-walkers setting off to climb Scafell Pike, is the purest graphite deposit in the world. The stories surrounding its extraction are as colourful as they come, and people have written entire books about this one small mine alone. Its true beginnings are lost in time but local shepherds are often credited with discovering the ‘plumbago’. After a large tree was uprooted by a storm, shepherds used the waxy black substance to mark their sheep.

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*Keeping our feet to the very centre of the tunnel, we continue. There are twists, turns, and side passages chasing veins of galena (lead ore) through the mountain. Large piles of zinc ducting lie around, once used to channel clean air into the mine. We find a curious little two-legged stool and it’s easy to visualise the miners perched on it eating their bait (lunch). I imagine their topics of conversation would not be dissimilar to those of workmen today.*

**The level constricts to crawling height through loose, unstable ground, and as we inch forward we take immense care not to touch the rotten timbers above our heads**

*Eventually we exhaust all options. Every turn ends in either a collapse or a forehead (working face) and we begin to make our way back to where we started. The only way out is the way we came in. Just before we reach our rope, still dangling in place, we notice another gap in the rubble to explore – but quickly find ourselves at another forehead. Embedded firmly in the wall is a pickaxe head. The shaft has rotted away to nothing and only a stain on the wall belies its existence. I imagine a miner on his last shift, the force needed to embed the pick so firmly betraying the frustration felt at being made unemployed. ▶▶*

*The climb back up the rope is character building. Using mechanical devices to grip the rope, the 50m ascent, battered by the waterfall and laden down with all my camera equipment, is not easy. At least I remember to pull my hood up. After we pack the rope away it is 100m back to the entrance. The level constricts to crawling height through loose, unstable ground, and as we inch forward we take immense care not to touch the rotten timbers above our heads. Who knows how many tons of rock they are holding up? The exit itself is a narrow steel drum embedded in the scree at an upward angle of about 40°. Matt's feet disappear from in front of my face as he fights his way through it, accompanied by muffled curses. Surely they could have found a wider drum!*

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Cumbria Amenity Trust Mining History Society is a group of people actively involved in the exploration and preservation of these sites, and a committed, knowledgeable, slightly eccentric, and wonderfully British institution. In partnership with organisations such as the Lake District National Park Authority and the National Trust, they have been quietly surveying, digging, and stabilising important sites above and below ground since 1979.

CATMHS's exploits in the Coniston copper mines during the '80s are legendary among cavers and mine explorers alike. This enormous mine is a complex and unstable maze of stopes (vertical caverns) and tunnels reaching a depth of nearly 350m. Over the course of several years, CATMHS members overcame huge logistical challenges – and considerable risk – to explore and stabilise important areas of this vast mining jigsaw. Their accounts make for gripping reading, with members narrowly avoiding burial on several occasions. Their expeditions uncovered spectacular iridescent cascades of mineralisation and some amazing artefacts, including the mythical wooden plug installed by miners to contain Levers Water.

The North West Water Authority was understandably alarmed to hear that this plug, still holding

back three million gallons of water, actually existed. CATMHS guided two intrepid engineers to the site. They decided that, due to its inaccessible location, the best course of action would be to leave the plug well alone. In 1998 the plug attained minor celebrity status when someone tried to blow it up. Whether the explosive device found next to it was the work of misguided explorers thinking they were blasting through to another part of the mine, or a bizarre IRA plot to assassinate John Major on his visit to Coniston (as reported by The Sunday Times), we still do not know.

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*I reluctantly conclude that I'm stuck – the drum is narrower than my shoulders. With the arm that isn't wedged above my head, I'm able to unhook the karabiner on my harness caught on the lower lip of the drum and wriggle backwards into the tunnel to ponder my next move. It was a lot easier to get in, working with gravity rather than against it. I take off my equipment and harness and push it ahead of me. Squirring upward I struggle to gain purchase with my feet. Matt eventually takes pity on me and grabs my equipment before taking my hand and pulling hard. Suddenly he falls backward as I am birthed into the outside world. We lie on the ground giggling like schoolboys. Adam exits with somewhat better technique and we decide not to linger. No longer warmed by excitement and the still, fuggy air of the mine, we have suddenly found ourselves standing high on a wintry mountainside. It is almost dark, we are soaked to the skin, and sleet is falling.*

*After replacing the lid of the drum we carefully cover it with rocks, recreating exactly how we found it. We begin the long walk down to the cars and the pub, chattering away, filled with the satisfying glow of a true adventure. I pause and look back. The entrance is invisible. Marvelling at the secrets concealed beyond it, I muse that the Lakeland fells are riddled with history. Mining runs through the veins of the Lake District – far more rooted in this landscape, I believe, than even Wordsworth's daffodils.*

Mine exploration is inherently dangerous. CATMHS can be joined via [catmhs.org.uk](http://catmhs.org.uk) if you would like to explore underground in Cumbria. @tommcnallyphotography

