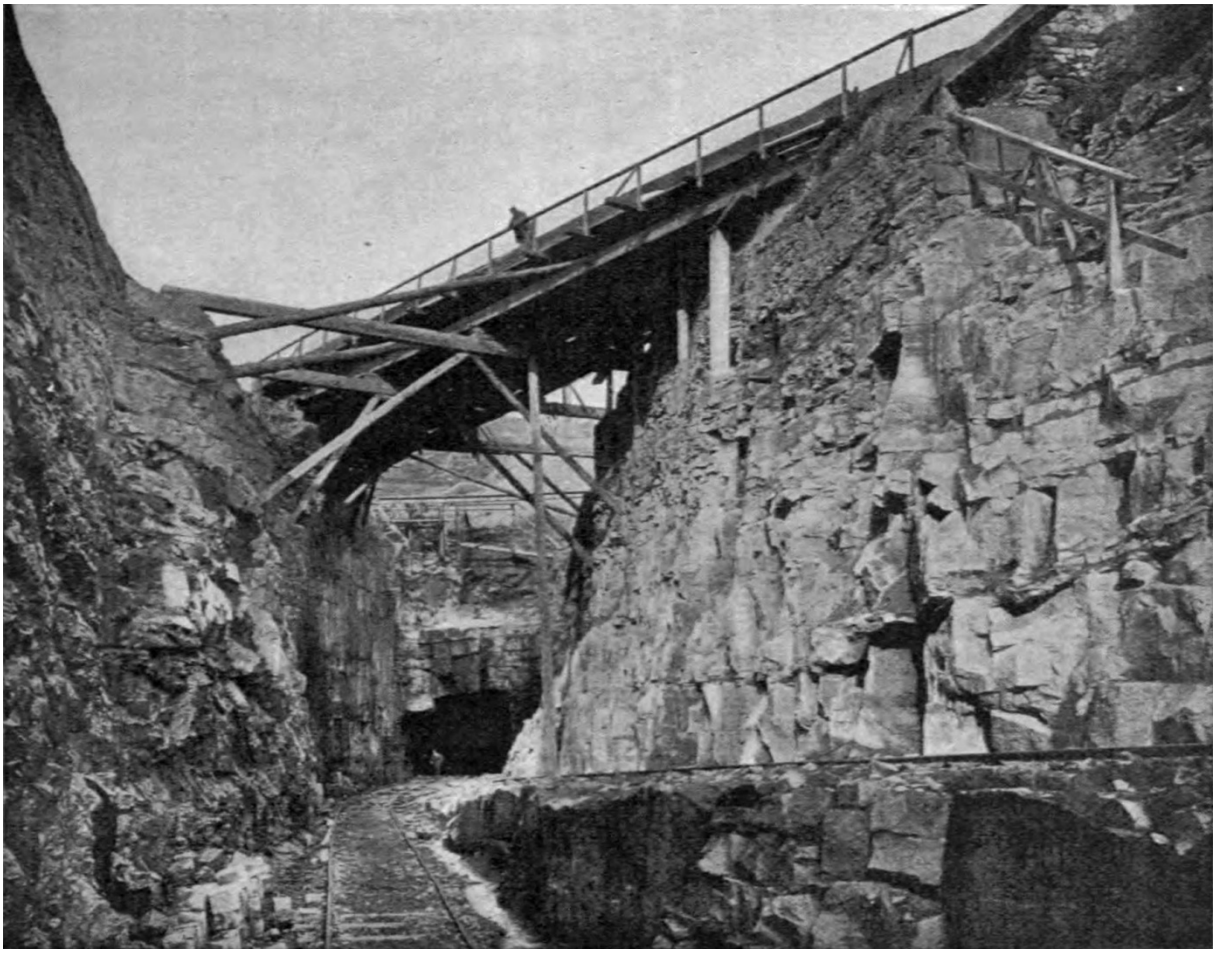
26 July 2025

Background to the Minister’s decision to abandon Queensbury Tunnel

Queensbury Tunnel was driven between 1874 and 1878 to form part of a strategic north-south railway that avoided the congested lines around Leeds and Bradford. At 1.4 miles in length, it was one of the biggest single engineering projects ever undertaken in this part of West Yorkshire. As well as 14 horses, around 600 navvies were employed on the tunnel’s construction, ten of whom lost their lives in accidents involving falls down shafts, explosions, collapses of rock and a crushing event. The men worked in conditions that are unimaginable in the 21st century - eight hours a day, six days a week. Completion took twice as long as expected due to the huge amounts of ground water that inundated the workings.



https://youtu.be/cTGwyiGKOOA

The structure had an unremarkable operational life, but parts of it suffered defects from ground movement, water ingress and adjacent coal mine workings, requiring periodic programmes of repair. In periods of cold weather, huge icicles could form which would be collected in the tender of the first train through on a morning.

The line through the tunnel was closed in 1956, a decision partly attributed to high maintenance costs. The tracks were lifted in 1963.

In redundancy, the structure became a childhood playground and many locals have memories of adventures therein. On a snowy day in February 1960, 12-year-olds Trudy Bradburne and Kathy Daveney headed into the tunnel with four school friends and a torch that soon lost power. They emerged at the other end more than two hours later - wet and frightened - taking sanctuary in a nearby farmhouse where they drank soup and watched ‘Rawhide’ whilst awaiting collection by their worried parents.

https://youtu.be/ggNOgdMFlbo

Through much of the 1970s, the tunnel hosted an observatory which was used by scientists from Cambridge University to measure surface waves from earthquakes and tidal strains. The recording equipment was housed in a hut near the tunnel’s midpoint which members of the Department of Geophysics sometimes slept in. Access involved driving through the tunnel in a van, dodging rubble that had been tipped down the ventilation shafts when they were capped.

https://youtu.be/eYu-mimJXpM

In 1967, the impressive rock cutting at the tunnel’s south end was sold to Halifax Corporation for waste tipping purposes. Over the years that followed, the cutting was slowly backfilled, blocking the drainage and effectively creating a dam that held water in the tunnel as it flowed southwards down the 1 in 100 gradient. At times, the south portal is completely under water, with the flood extending back to the tunnel’s midpoint.

The condition of the structure continued to deteriorate and its then-custodian, British Railways Board (Residuary), decided to pursue an abandonment scheme in 2009, involving “partial infill of critical elements”. This work would effectively be funded by seeking £5.2M in damages from the landowner adjacent to the south portal, who BRB(R) blamed for water damage to the tunnel despite having only recently acquired the property.

A Tory government quango cull in 2013 saw BRB(R)'s legacy structure management responsibilities transferred to the Highways Agency (now National Highways), despite the state-owned roads company having no experience of looking after historic railway structures. It was a reluctant custodian and soon began to pursue a destructive agenda whereby bridges were infilled or demolished simply to reduce liabilities, without any consideration of heritage value, landscape impacts, community aspirations or repurposing potential. Queensbury Tunnel was top of the hit list.

The legal case was settled in 2015 when the Secretary of State and landowner signed a ten-year lease which allowed National Highways to install a pumping station to deal with the floodwater, thus allowing unrestricted access for inspection and maintenance purposes. The company's only meaningful obligation was to pay the landowner £50 per year in rent, "whether formally demanded or not".

Queensbury Tunnel is a big, complex asset that passes 400 feet below the village after which it is named. Five ventilation shafts and two abandoned construction shafts connect to the surface, four of which are close to dwellings. The associated risks can be managed appropriately by experienced, knowledgeable engineers with modest budgets; poor engineers are daunted by these risks and, if they have access to inflated budgets, are often inclined to pursue works that are disproportionate. If those engineers are also willing to exaggerate and misrepresent evidence, they can sometimes persuade purse-string holders to spend money that would deliver better value elsewhere.

There is a collection of overlooked communities in west Bradford and north Halifax, with poor connections between them and many of their inhabitants suffering deprivation and negative health outcomes. The millions of pounds that were going to be spent putting Queensbury Tunnel out of use could instead be invested in a repurposing scheme that would bring social, economic and tourism benefits. A group of locals set out to achieve that goal in 2013, albeit with little realistic prospect of success, given the challenges.

But unexpectedly, the campaigners began to gain traction with their positive and ambitious vision of an active travel network - with the tunnel as its key connector and centrepiece - linking Bradford and Keighley to Halifax. Evidence from schemes elsewhere demonstrate that safe, attractive walking and cycling infrastructure can bring considerable economic benefits to an area, as well as making communities feel valued, driving improvements in physical and mental health, and promoting modal shift.

The proposed network's northern leg to Keighley would enter Brontë Country via a series of viaducts and shorter tunnels, potentially rivalling the Peak District's Monsal Trail as a leisure and tourist attraction. The Bradford-Halifax (Calderdale) route would join two of the county's biggest conurbations and provide a realistic alternative to commuting via congested roads, the tunnel overcoming the substantial topographical barrier that separates the two districts.

Stakeholders were taking notice, with Ministers, MPs and councillors arriving to have their photos taken at the north portal. But what would it cost to rehabilitate a structure that had seen no meaningful maintenance for 60+ years? Bizarrely, the government asked National Highways to provide a costing and its consultants, Jacobs, did what was expected of them - developing a repair scheme with an unsustainable price-tag of £35.4M (equivalent of £48.7M today), whilst abandonment was priced at an attractive £2.7M. The aspiration of repurposing was blown out of the water and supportive stakeholders scattered.

The Jacobs scheme involved the spraying of concrete throughout much of the tunnel's length, as a result of which its historic fabric - and associated benefits - would have been lost. To help recover the situation, campaigners asked an experienced tunnel engineer - working with a specialist contractor - to take an alternative approach largely using traditional, sympathetic repair methods, the cost of which came in at £2.8M.

Bradford Council subsequently secured funding to commission AECOM, a civil engineering consultancy, to complete a two-week programme of investigations in the tunnel which provided considerable insight into its construction and condition. Based on this, the firm agreed that the tunnel engineer's approach was appropriate and put forward a similar repair proposal costed at £6.9M (equivalent to £9M today), less than 20% of Jacobs' figure, although it only partly addressed defects in a short section of the tunnel presenting the highest level of risk.

AECOM's reassuring conclusions brought the Council back on board and an Advocacy Document was submitted to government, seeking funds for the Bradford-Halifax Greenway.

National Highways was undeterred and made plans to begin a programme of preparatory works for its abandonment scheme. These were intended to take four months and cost £550K. However, the company had never paid the £50 annual rent on the pumping station, so the landowner forfeited the lease and switched off the equipment - as he was entitled to do - causing the tunnel to flood. Delivery of the works had to be completely replanned.

A planning application for the main abandonment scheme was submitted to Bradford Council in spring 2019.

At the height of the Covid pandemic, when active travel use was booming, Transport Secretary Grant Shapps intervened to save Queensbury Tunnel from abandonment, recognising its value as a transport asset. By this time, plans were emerging for a West Yorkshire Mass Transit system, with the tunnel identified as a possible route for a future extension into Calderdale.

Shapps told National Highways to ensure that its ongoing works did not prejudice any repurposing opportunities. He also made £1M available to fund a feasibility study into the proposed active travel network, which was carried out by Sustrans, and a technical report into the works needed to bring the tunnel back into service - a task that was again given to Jacobs, National Highways' consultants.

Shapps subsequently paused National Highways' entire infilling and demolition programme - including several 'emergency' schemes - following widespread concerns over its impact on heritage, ecology, landscape and emerging transport schemes, including jeopardising multiple proposed greenways, extensions to heritage railways and reopenings under consideration as part of the government's 'Restoring Your Railway Fund'.

The preparatory works for Queensbury Tunnel's abandonment were eventually completed in October 2021, three years after they started. The taxpayer was hit with a bill of £7.2M. Now, the highest risk section of tunnel is partly stabilised; however, there are also two substantial blockages within the tunnel, although neither is considered permanent. One of these resulted from the infilling of a ventilation shaft (below right), completed unlawfully using misapplied emergency permitted development rights, National Highways having ignored a Planning Contravention Notice issued by Bradford Council.

Richard Marshall, National Highways' former Director for the Historical Railways Estate, said "Our work strengthened the tunnel to prevent further uncontrolled collapses, ensuring that any future plans for the re-use of the structure can be realised."

With the threat of abandonment thought to have receded, the campaign fell largely silent for a couple of years whilst the outcome of the feasibility study was awaited. The documents were eventually released in spring 2025.

As expected, Jacobs took the same disproportionate approach as it did in 2016, specifying full-profile sprayed concrete at almost every location where a defect was recorded - no matter how minor - together with a number of other unnecessary interventions. This resulted in a costing of £26.4M, a hugely inflated sum but notably £22M less than Jacobs' inflation-adjusted 2016 figure of £48.7M.

AECOM's 2018 figure of £9M (inflation-adjusted) predated the spending of £7.2M on strengthening works. In all likelihood, if the proportionate and sympathetic AECOM specification was updated to take account of works already undertaken, the likely cost of completing the identified repairs would be £5-10M.

Notwithstanding the negative impact of Jacobs' costing, Sustrans' feasibility study found that an ambitious 27.6-mile active travel network incorporating Queensbury Tunnel would deliver £3 in social, economic and tourism benefits for every £1 invested in delivery. Government metrics regard such a benefit:cost ratio as "high value for money". If the Jacobs' tunnel repair cost was replaced with a figure of £10M, the benefits would exceed £4 for every £1 spent.

Largely for comparison purposes, Sustrans also developed a route that bypassed the tunnel, passing instead over the hill through Queensbury village. Labelled the 'Alpine route', this would be twice as long as the tunnel alignment, involve around 150m of climbing and include several on-road sections, such as through the busy junction of the A644/A647. Sustrans describes this option as "highly comprised", with a poor user experience and no heritage benefits. It would not be safe for use by families. Unrecorded mine workings at its southern end impose uncertainties around cost and deliverability.

It is clear from the report that Queensbury Tunnel provides the only safe and attractive means of connecting Bradford District and Calderdale for active travel purposes, and doing so would bring considerable benefits to the district and wider West Yorkshire economy. But the current financial climate meant that Bradford Council was unable to commit funding to the project and, in the absence of any from central government, there is no prospect of progress being made in the short term. However, it was the campaigners' hope that the 2018-21 works would at least allow the tunnel to be secured for future use when fortunes upturn.

Then National Highways intervened again. On 14 May 2025, Lilian Greenwood MP, the Minister for the Future of Roads, received advice from officials which led her to decide that a further £7.5M of taxpayers' money should be spent putting Queensbury Tunnel permanently beyond use, subject to planning permission being granted. In a letter to the campaigners, she asserted that this would "ensure best value for the public purse" and that the Alpine route would deliver "the same or similar active travel benefits" as the tunnel.

At a meeting with stakeholders on 22 July 2025, National Highways made clear that it had no current concerns about properties on the surface and regarded the risk level presented by the shafts to be low. However, a new defect had been recorded in the northern half of the tunnel (between the abandoned Nos.5 & 6 Shafts) which, apparently, the company's examiners would not walk past in order to inspect No.4 Shaft and confirm that there had been no change in its condition. The shaft's support structure had been strengthened with steel-reinforced sprayed concrete in 2020.

Depending on the nature of the new defect, it's likely that safe access beneath it could be secured through a modest repair. At worst, a reinforced sprayed-concrete solution could be achieved for less than 1% of the money committed to abandonment.

In the three days after the stakeholder meeting, campaigners crowd-funded £6.5K which will be used to instruct solicitors who will seek documentation from the Department for Transport and undertake an assessment of whether there are grounds to seek a Judicial Review of the Minister's decision.

National Highways says it will be "meeting with [Bradford Council] planners again to discuss our [planning] application" for the tunnel's abandonment which remains undetermined, having attracted more than 8,000 public objections.

The potential abandonment of Queensbury Tunnel is not the function of intolerable risk; as things stand, the structure presents no meaningful threat to public safety and there's nothing to suggest that any substantive change to that reality is likely. It is simply that National Highways prioritises its own narrow self-interests - specifically, a reduction in liabilities - above the aspirations of people who want to rehabilitate this extraordinary historical asset for long-term community gain.

In making the case to government, the company has perpetuated exaggeration and misrepresentation, forcing a Minister into a corner from which there was no escape. This is not how effective government decision-making should work.

If National Highways gets its way, £14.7M of taxpayers' money will have been spent on Queensbury Tunnel over the past seven years without the public seeing one penny in benefit. In the context of our current economic predicament, it would represent appalling waste. Given to charities or voluntary organisations, such a sum could transform lives.

The tunnel presents a unique opportunity to demonstrate ambition when it comes to the provision of active travel infrastructure and start to make good on the hollow-sounding commitment to invest in overlooked communities across the north.