

Queensbury Tunnel

What you should know about Highways England's abandonment scheme

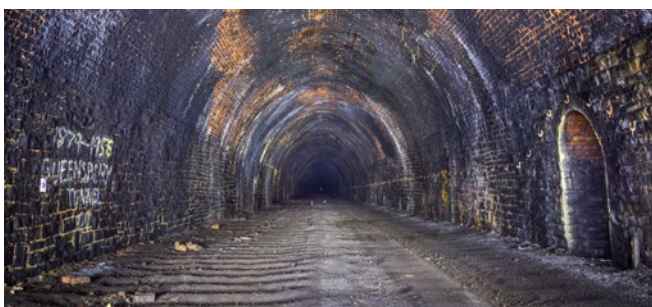
As you may know, the disused railway tunnel under Queensbury, West Yorkshire, has been the subject of publicity and debate over recent months due to conflicting visions of its future.

The Queensbury Tunnel Society (QTS), Bradford Council and Calderdale Council would like to see it reopened as part of a greenway linking Bradford and Halifax. However Highways England's Historical Railways Estate (HRE), which looks after the tunnel on behalf of the Department for Transport, intends to seal and partly infill it. This is known as abandonment, although HRE now refers to it as "safety works". On-site preparations got underway in October and a planning application for the main works has now been submitted for Bradford Council's approval.

What's the current condition of the tunnel?

Queensbury Tunnel closed to rail traffic in 1956 and has seen very little maintenance since, although it is still inspected annually. Reports indicate that 80% of the tunnel is in 'Fair' condition, reflecting the low-level deterioration that inevitably occurs with the passage of time.

The other 20% is in 'Poor' condition, mostly beneath Moor Close Road, Burnett Drive, Ambleton Way and Edale Grove, south of its midpoint. Here, the lining has partially collapsed in two places and adjacent sections are showing signs of distress. Further north, below Albert Road and Mossy Bank Close, the arch is distorting and cracks are appearing. Elsewhere, small areas are bulging, particularly to the north of No.4 shaft.



⚠️ Queensbury Tunnel could be transformed into an asset that delivers social, economic and tourism benefits.

Queensbury Tunnel has five ventilation shafts which also remain in 'Fair' condition. No major defects are recorded in the lengths of tunnel lining that support them, although one of the sidewalls is bulging close to No.2 shaft.

Two other shafts were abandoned during construction - before reaching their planned depth - and are now flooded. They could be filled-in without affecting the tunnel. There is some uncertainty about their condition as they are not subject to full inspections.

Why does HRE want to abandon the tunnel?

HRE is managing Queensbury Tunnel on the basis of a "worst scenario" whereby one of the partial collapses causes a shaft to fail, undermining adjacent properties. However, the partial collapses are more than 110 metres from the nearest shaft.

When asked by local Councillors, HRE was unable to provide **any** evidence to suggest that this scenario is anything more than a theoretical risk. No attempt has been made to quantify its likelihood or timescale. This kind of event could only occur gradually over many years; masonry structures are not prone to sudden catastrophic failure. Nothing about the condition of the shafts or their support structures suggests any cause for concern in the short term.

It is the view of the Queensbury Tunnel Society that HRE has misrepresented the risks associated with the tunnel in order to justify its abandonment scheme. Despite the partial collapses and low-level deterioration, the threat to the community remains practically non-existent and is not meaningfully increasing.

⏪ Most of Queensbury Tunnel remains in 'Fair' condition despite it being redundant for more than 60 years.

What impact would the works have on Queensbury?

The works are expected to last about eleven months. Worksites would be set up inside the tunnel and at locations close to each shaft during the infilling operations. Nos. 3-6 shafts are within residential areas where short-term disruption would be inevitable.

A considerable amount of construction traffic would come into and through Queensbury. HRE has estimated almost 1,300 movements of heavy goods vehicles, as well as thousands of vans bringing plant, equipment and members of the workforce to site.

As HRE recently lost its access rights at the southern end of the tunnel, traffic associated with internal works would have to use Station Road to reach the northern entrance, further damaging the road surface which is already very poor.

Which parts of the tunnel would be filled in?

Abandonment has to last forever so you might assume HRE would infill the whole tunnel, as that would obviously be the safest option. Unfortunately it can't afford to do that - it was costed at £21.2 million in 2016.

“ Would you prefer to live above a tunnel that’s been sealed up and left to collapse, or one that’s been repaired and is subject to an ongoing programme of inspection and maintenance? ”

In fact they are only proposing to infill short sections at both ends and beneath each of the shafts. The partial collapses would **not** be repaired and there would be no infilling in areas where future collapses are most likely.

Less than 15% of Queensbury Tunnel would be infilled, representing about 300 metres of its 2,287-metre (1.4 miles) length.



What about the rest of the tunnel?

The other 85% of Queensbury Tunnel would be left to collapse over time. Most likely to do so in the long term is the section below Moor Close Road, Burnett Drive, Ambleton Way and Edale Grove. Here, the tunnel is at a typical depth of 350 feet (107 metres).

Mining convention suggests that the maximum distance a void would migrate upwards following a collapse is ten times the height of the tunnel: 210 feet (64 metres). It therefore seems extremely unlikely that any ground settlement would result.

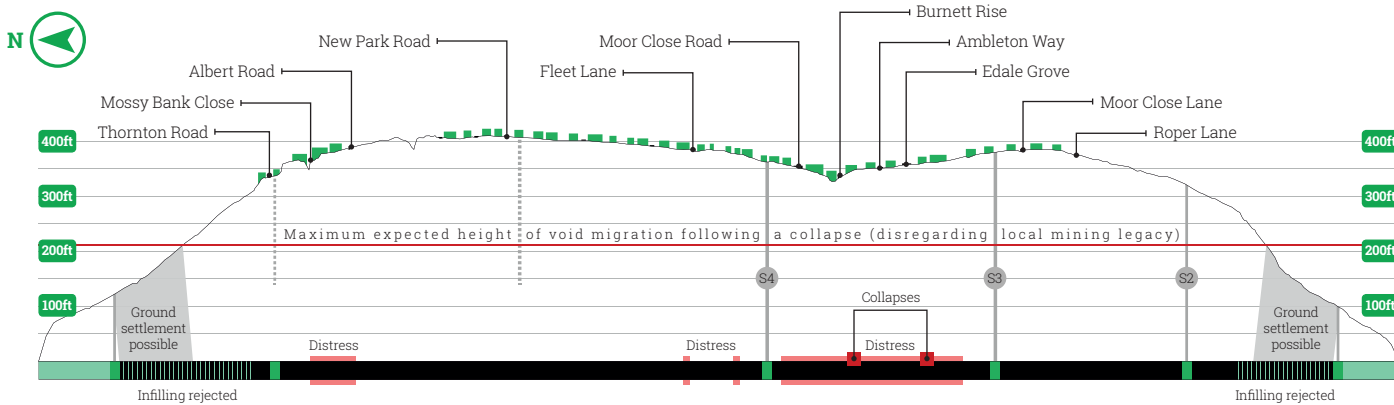
However, there are questions as to whether HRE has properly assessed the implications of a collapse interacting with Queensbury’s extensive mining legacy. Several local pits closed before it became law to create plans of abandoned mine workings. As recently as 2016, houses have been affected by subsidence caused by unrecorded workings at depths of **more than** ten times the height of the seam.

There are around 440 dwellings within Queensbury Tunnel’s ‘zone of influence’, as defined by HRE’s consulting engineers. Is it acceptable for a Government-owned company to wash its hands of the tunnel in a way that leaves uncertainty for the owners of those properties? What’s needed is a scheme everyone can have confidence in. The reason HRE is not infilling the vulnerable central section of the tunnel is because of cost.

Will the tunnel flood?

Since the infilling of the southern approach cutting started in the 1970s, Queensbury Tunnel has suffered from extensive flooding. However the situation was resolved in 2016 when HRE installed a pumping station on land secured under a lease.

An overview of Queensbury Tunnel showing those parts that will be infilled (green) and those that will not (black). Red (distress) indicates the areas most likely to collapse in the long term.





80% FAIR CONDITION

This main phase of abandonment works is costed at £3 million, on top of £2 million currently being spent preparing for it.

HRE is having to accept greater levels of risk in order to overcome budget constraints. As a consequence, the risk to which the community will be exposed also increases,

calling into question HRE press statements in which it claims that "the safety of the community is paramount".

Ask yourself this: would you prefer to live above a tunnel that's been sealed up and left to collapse, or one that's been repaired and is subject to an ongoing programme of inspection and maintenance? HRE is choosing to manage Queensbury Tunnel with its eyes closed and fingers crossed - a strategy which many engineers would find uncomfortable given the circumstances. We know from history that cutting corners to save money sometimes comes at a high price.

This is what abandonment has been costed at over the years:

Date	North infill	South infill	Shaft support	Cost
2016	Infill entire tunnel		Not specified	£21.2M ¹
2016	Infill collapsed section		Not specified	£16.2M ¹
2017	360m ²	270m ²	Not specified	£8.5M ³
2018	130m	120m	Mass concrete	~£7M ⁴
2009	150m	150m	Mass concrete	£5.1M ⁵
2019	130m	120m	Aggregate	~£5M ⁶

1 Excludes cost of infilling the shafts
 2 Length of infill needed to reduce the risk of ground settlement "to an acceptable level" in the event of a collapse, according to HRE's ground investigation report
 3 Cost estimated by consultants commissioned by Bradford Council
 4 Cost developed by HRE's contractor
 5 Cost of abandonment before the partial collapses occurred
 6 Abandonment scheme currently proposed by HRE

After abandonment, it was originally intended that the tunnel would continue to be dewatered, but, for three years, HRE failed to pay the £50 annual rent stipulated in the lease, resulting in forfeiture and the pumps being switched off.

The plan now is to let the tunnel flood and potentially fill with around 80,000m³ of water. It is likely that this would prompt changes in the local groundwater regime.

Are the abandonment plans safe?

All we know for certain is that, as submitted, HRE's plans are a compromise version of a compromise version of how abandonment would look if they could afford it.

In 2017, a ground investigation report recommended that at least 270 metres of the tunnel should be infilled at the south (Halifax) end and 360 metres at the north (Bradford) end. This was in order to reduce the risk of ground settlement "to an acceptable level" in the event of the tunnel collapsing. Consultants working for Bradford Council agreed with this approach and estimated the cost of an abandonment scheme based on it at £8.5 million.

The ventilation shafts represent the cause of greatest concern to HRE. Its intention has always been to pour mass concrete structures (known as 'plugs') below each of the shafts to provide long-term support. Based on this specification, HRE's contractor costed the abandonment works at around £7 million.

The final plans have now been submitted for Bradford Council's approval. They reveal that only around 125 metres of the tunnel would be infilled at both ends, whilst the concrete shaft plugs have been replaced with a granular material retained by ballast-filled steel baskets, offering less compressive strength and a shorter lifespan.



What's the alternative?

Repairing Queensbury Tunnel would probably cost **less** than a **robust** abandonment scheme and offer welcome reassurance to those who live above it.

If the tunnel was then reopened as a sustainable transport corridor, it would become a nationally significant landmark on our developing network of shared paths, forming part of an outstanding route connecting Bradford and Halifax, with a spur to Keighley along the trackbed of the former Great Northern Railway.

Unlike abandonment - which involves an entirely wasteful use of public money - a reborn Queensbury Tunnel would repay our investment over time through social and economic benefits. It would inspire, offer adventure and act as a community hub.

Transforming the tunnel from a historic liability into a strategically valuable asset is the only option that makes any sense. Please help us secure it for future generations. This is an opportunity that will never be repeated.

What can you do?

The Queensbury Tunnel Society opposes Highways England's planning application. We believe HRE should not be allowed to:

- ▶ let the tunnel collapse beneath 440 dwellings
- ▶ use inferior materials to support the shafts
- ▶ manage the tunnel without any ability to inspect or maintain it
- ▶ implement a scheme driven largely by budget constraints
- ▶ risk flooding and/or changes to the groundwater regime due to the absence of water management arrangements
- ▶ spend a significant sum of taxpayer's money destroying a potentially useful structure.

Why not check out HRE's plans for yourself? They can be viewed or downloaded via the Planning portal on Bradford Council's website www.tiny.cc/TunnelPlans. The reference number is 19/02242/MAF.

If you share our concerns, please make your voice heard by objecting to the plans and commenting on them.

PHOTO: DAVID ENYORI



On what grounds can you object?

To have the greatest impact, objections and comments need to be based on valid planning issues, although **any** comment is better than nothing! **Your** objection needs to be in **your** words, but we can offer some pointers.



In addition to the technical issues set out in this leaflet, we believe abandonment conflicts with the objectives and policies set out in Bradford's Local Development Plan in terms of the protection/reuse of heritage assets and the provision of walking/cycling infrastructure. The Plan was put in place to inform decision-making around planning and development.



If you wanted to quote from the Plan in your comment, we have distilled relevant extracts onto this page on our website - www.queensburytunnel.org.uk/abandonment/localplan.shtml. We've also included some key policies in the green box (right).

The loudest possible message would come from people objecting and commenting in large numbers. We hope you'll help us bring this fantastic Victorian feat back into useful service.

It's now or never for Queensbury Tunnel.



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Extracts from Bradford's Local Development Plan

4.4 Sub Area Policies: South Pennine Towns and Villages

Sub Area Policy PNI: South Pennine Towns and Villages

E Transport

- 4 Improve public transport, cycling and walking access as appropriate between the South Pennine Towns and Villages, the Regional City of Bradford and neighbouring Principal Town of Halifax.

5.2 Transport and Movement

Policy TR1: Travel Reduction and Modal Shift

The Council through planning and development decisions and transport policies will aim to reduce the demand for travel, encourage and facilitate the use of sustainable travel modes, limit traffic growth, reduce congestion and improve journey time reliability. These will include:

- E Identify, protect and develop appropriate facilities and high quality infrastructure for active travel modes (walking, cycling and horse riding). Including identified strategic routes and networks as well as local routes and links where opportunities arise, linking into national and regional routes...

Policy TR3: Public Transport, Cycling and Walking

The Council through planning and development decisions and transport policies will safeguard and improve public transport, walking and cycling infrastructure and services through the following measures:

- E To protect sites and routes for heavy rail, light rail transport, bus priority, walking and cycling as identified in the Allocations DPD and Action Area Plan DPDs and the Local Infrastructure Plan.

Policy TR4: Transport and Tourism

The Council through planning and development decisions and transport policies will support sustainable access to tourist destinations, heritage and cultural assets and leisure uses, through the following measures:

- D Acknowledge the contribution of, and support the maintenance and development of, 'transport based' leisure attractions including but not exclusively heritage railways, waterways, towpaths, cycle and walking trails and bridleways along with the leisure coach market. Protect opportunities for the development of such facilities e.g. disused railway lines, especially where these can contribute to high quality local routes.

5.4 Planning for Places - Environment

Policy EN3: Historic Environment

The Council, through planning and development decisions, will work with partners to proactively preserve, protect and enhance the character, appearance, archaeological and historic value and significance of the District's designated and undesignated heritage assets and their settings.

This will be achieved through the following mechanisms:

- H Encourage heritage-led regeneration initiatives especially in those areas where the historic environment has been identified as being most at risk or where it can help to facilitate the re-use or adaptation of heritage assets.