BRIEFING NOTE

Centenary of the Black Bridge – North Seaton Viaduct

BLACK BRIDGE 100 • 1927–2027

FOR THE ATTENTION OF	The Leader of Northumberland County Council Councillor Glen Sanderson
PREPARED BY	Chris Smith, CEO ADM AUTOMATION LIMITED Visiting Professor at the University of Northumbria
DATE	August 2026
SUBJECT	Centenary of the Black Bridge – North Seaton Viaduct, September 2027
STATUS	For information and decision – proposed Council coordinating role

PURPOSE

To bring to the Leader's attention the significance of the centenary of the Black Bridge, (the North Seaton Railway Viaduct) in September 2027, and to suggest that Northumberland County Council consider taking a coordinating role in developing a wider programme of events around the anniversary.

The centenary presents an unusual opportunity to bring together Northumberland's industrial heritage, the regeneration of Ashington and the reopening of the passenger railway between Ashington and Newcastle. It has the potential to be considerably more than a local heritage anniversary.

THE BLACK BRIDGE

The North Seaton Viaduct, universally known locally as the Black Bridge, has been part of the landscape of Ashington and the Wansbeck for a century. Few realise that this is in fact the second rail crossing on the site: the present iron and steel structure replaced an earlier timber viaduct dating from 1858–59, whose plans were formally approved by the Admiralty, which at that time controlled all matters affecting navigation on tidal waters such as the Wansbeck estuary.

Construction of the current bridge began in 1925, with the final span installed in May 1927 and the structure officially inaugurated on 11 September 1927 for the Newbiggin to Bedlington passenger service, a date which gives September 2027 particular significance as the true centenary.

Constructed during the period when the Ashington coalfield was of national industrial importance, the bridge represents the engineering, railway and mining history which shaped modern Ashington. One

hundred years later, its significance has changed again: the same railway infrastructure which once served the coal industry is now carrying passenger trains once more on the reopened Northumberland Line, giving the bridge an unusually strong physical connection between Ashington's past and its future.

The centenary should be viewed in this context. It provides an opportunity to celebrate the achievements of previous generations while presenting a positive, contemporary image of Ashington and south-east Northumberland.

WOODHORN MUSEUM CENTENARY EXHIBITION

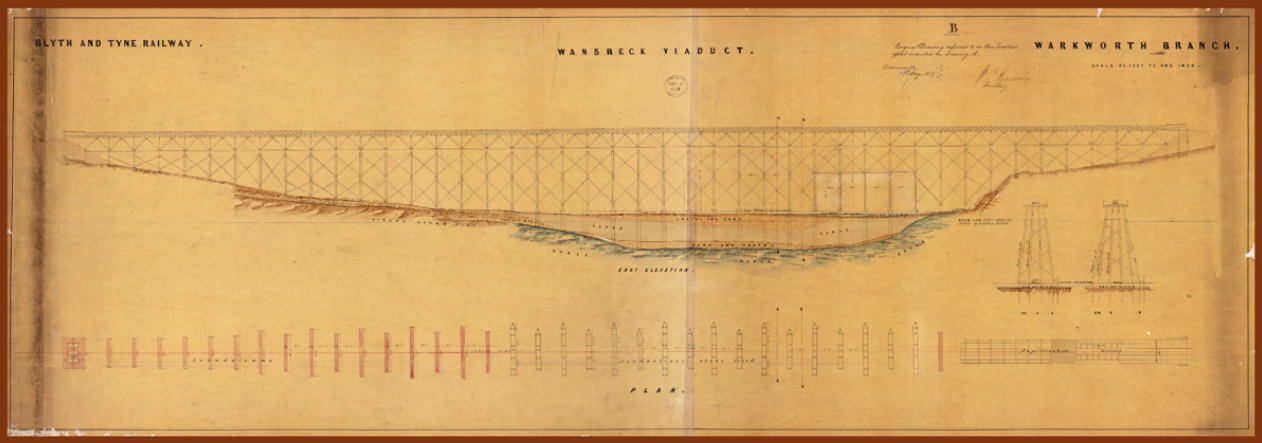
A major exhibition, Black Bridge 100, is being developed for Woodhorn Museum to coincide with the centenary. It will use the story of the bridge as a starting point from which to explore the development of Ashington, coal mining, railways, North-East engineering and the communities which grew around these industries, not as a conventional historical exhibition, but one built around state-of-the-art digital and Artificial Intelligence technology.



A feasibility study has confirmed that high-quality primary source material is already available and ready for production, including high-resolution scans of the original 1857 plans and 1920s construction photography. AI-based restoration has been tested and proven capable of enlarging

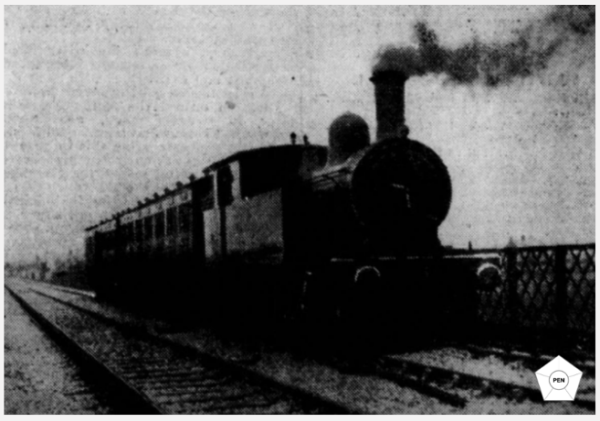
historic images to display sizes of up to 2m² while retaining remarkable clarity, revealing detail as fine as individual rivets and the faces of the workers who built the bridge in 1927. Prototype AI-narrated “digital avatars”, drawing on characters such as a miner in a colliery-house doorway, have also been developed to give visitors a human connection to the technical history.

Plans for the original North Seaton Viaduct



The plans for the original wooden viaduct were approved by the Admiralty on the 17th May 1859. In the 19th century the Admiralty controlled all matters affecting navigation, tidal waters, and coastal defence, and the River Wansbeck estuary was legally classed as navigable tidal water, even though it appears modest today.

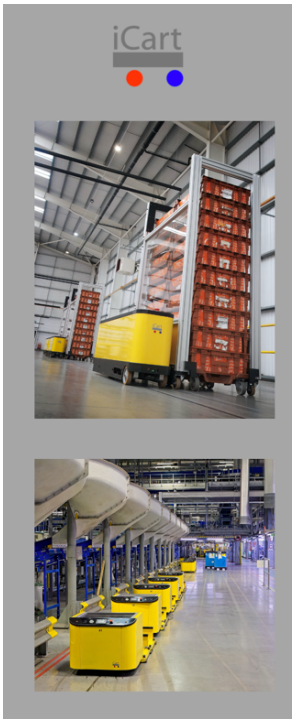
The exhibition itself is designed on a “zero-footprint” model: lightweight, backlit LED display panels and large-format video screens that require no permanent fixings and run from standard domestic power sockets. This keeps the exhibition genuinely portable. After Woodhorn it will visit the North East Institute of Mining and Mechanical Engineers in Newcastle.





Original newspaper image of the inaugural1927 Journey rebuilt using AI

The technology is being developed and implemented locally by Gateshead-based ADM Automation Ltd, which is supporting the initiative by funding the exhibition and using its in-house technical expertise. ADM is the creator and manufacturer of the iCart automated guided vehicle, already in use by organisations including Royal Mail, Tesla and Warburtons, and brings genuine North-East engineering credibility to the project. While ADM's core business is industrial automation, the company has a strong interest in demonstrating how AI and digital techniques can also be applied to local heritage, evidence that the engineering and technological innovation which characterised the North-East in the industrial era continues in the region today.



The project is also intended to involve education, local skills and the wider community, including universities, colleges, schools, museum professionals and local businesses, building in-house skills in modern presentation techniques and a base of experience in applying AI to museum and heritage work more widely. The Woodhorn exhibition can therefore form the anchor event for the centenary, but there is a clear opportunity for the anniversary to extend considerably beyond the museum.

A WIDER CENTENARY PROGRAMME

Northumberland County Council could consider leading or coordinating a wider programme under an identity such as BLACK BRIDGE 100 (1927–2027), bringing together the County Council, Woodhorn Museum, Ashington Town Council, Choppington Parish Council (who already have a project underway to add value to the South Bank of the Wansbeck), railway organisations, local businesses, schools, community organisations and other interested bodies. Possible activities are set out below.

Black Bridge Centenary Weekend

A major public weekend event could be considered in the Wansbeck Riverside Park area, bringing the celebration physically close to the bridge itself. Depending on feasibility, the programme might include live music, community activities, historical displays, the local rowing club, food and local traders, children's activities, guided walks and presentations about the bridge, railway and local history.

Centenary Train

Discussions could be opened with Northern and other Northumberland Line partners about recognising the anniversary, ranging from a visit by a historic steam train, branding a scheduled service as a Centenary Train, through onboard interpretation, commemorative tickets and station displays at Ashington and Newcastle, to a specially promoted journey across the bridge during the anniversary weekend. The symbolism would be particularly effective: a passenger railway closed to

local communities for generations is once again carrying passengers across a bridge built a century earlier for the industrial railway.

Lighting the Bridge

Subject to engineering, railway, heritage and environmental approvals, temporary architectural lighting of the Black Bridge during the centenary weekend could create a powerful visual centrepiece. A carefully designed temporary lighting installation would be preferable to any permanent intervention, making the structure highly visible without changing its historic character.

Fireworks or Alternative Spectacle

A professionally designed fireworks display with the bridge in the foreground could provide a memorable finale to the weekend, similar in spirit to the illustrative image below. However, its proximity to an operational railway, the listed bridge, and the surrounding landscape and wildlife means that early feasibility discussions with the appropriate authorities would be essential. Alternatives such as a coordinated light, projection or drone display should also be investigated in parallel, in case a conventional fireworks display proves impractical at this location.



Illustrative impression only – a fireworks display over the Black Bridge and River Wansbeck.

Schools and Young People

A county schools programme could encourage pupils to investigate the people who built the bridge, life in Ashington in 1927, and how they imagine the town in 2127. This provides an important link between commemoration and aspiration: the centenary should not simply ask young people to look backwards.

Heritage Trail and Guided Walks

Temporary or permanent interpretation could connect Ashington Station, the town, Woodhorn Museum, the mining landscape, the River Wansbeck and the Black Bridge, with digital interpretation allowing visitors to use their phones to see historic photographs and stories associated with locations along the route.

WIDER PROMOTION

The combination of a major historic railway structure, the centenary, the reopened Northumberland Line, Woodhorn Museum and the innovative use of AI gives the project a story capable of attracting regional and potentially national media attention. Promotion could involve tourism organisations, heritage and engineering bodies, railway organisations and regional media. The objective should be to make September 2027 a moment when people are encouraged to come to Ashington, rather than simply an anniversary acknowledged by those already living there.

THE OPPORTUNITY FOR ASHINGTON

The underlying message is particularly powerful. Ashington exists because previous generations embraced the technologies and industries of their time: coal, railways and major civil engineering created the town and connected it to the rest of Britain. A century later, the Black Bridge remains in use, passenger trains have returned to Ashington, and new technologies, including Artificial Intelligence, are being developed and applied by businesses and educational institutions in the North East.

Handled on an appropriate scale, the Black Bridge centenary could make an important contribution to civic pride, tourism and the wider regeneration of Ashington.

RECOMMENDATION

The Chairman is invited to:

01	Note the significance of the September 2027 centenary of the Black Bridge and the Woodhorn Museum exhibition being developed to mark it;
02	Agree in principle that Northumberland County Council should take a coordinating role in a wider BLACK BRIDGE 100 programme, working with Woodhorn Museum, Ashington Town Council, Choppington Parish Council, railway partners and the local community;
03	Support early feasibility and safety discussions on a Wansbeck Riverside Park weekend event, a Centenary Train, temporary bridge lighting and a fireworks or alternative spectacle display; and
04	Support a wider promotional effort to raise the profile of the centenary regionally and nationally, in order to bring visitors to Ashington rather than marking the anniversary locally alone.