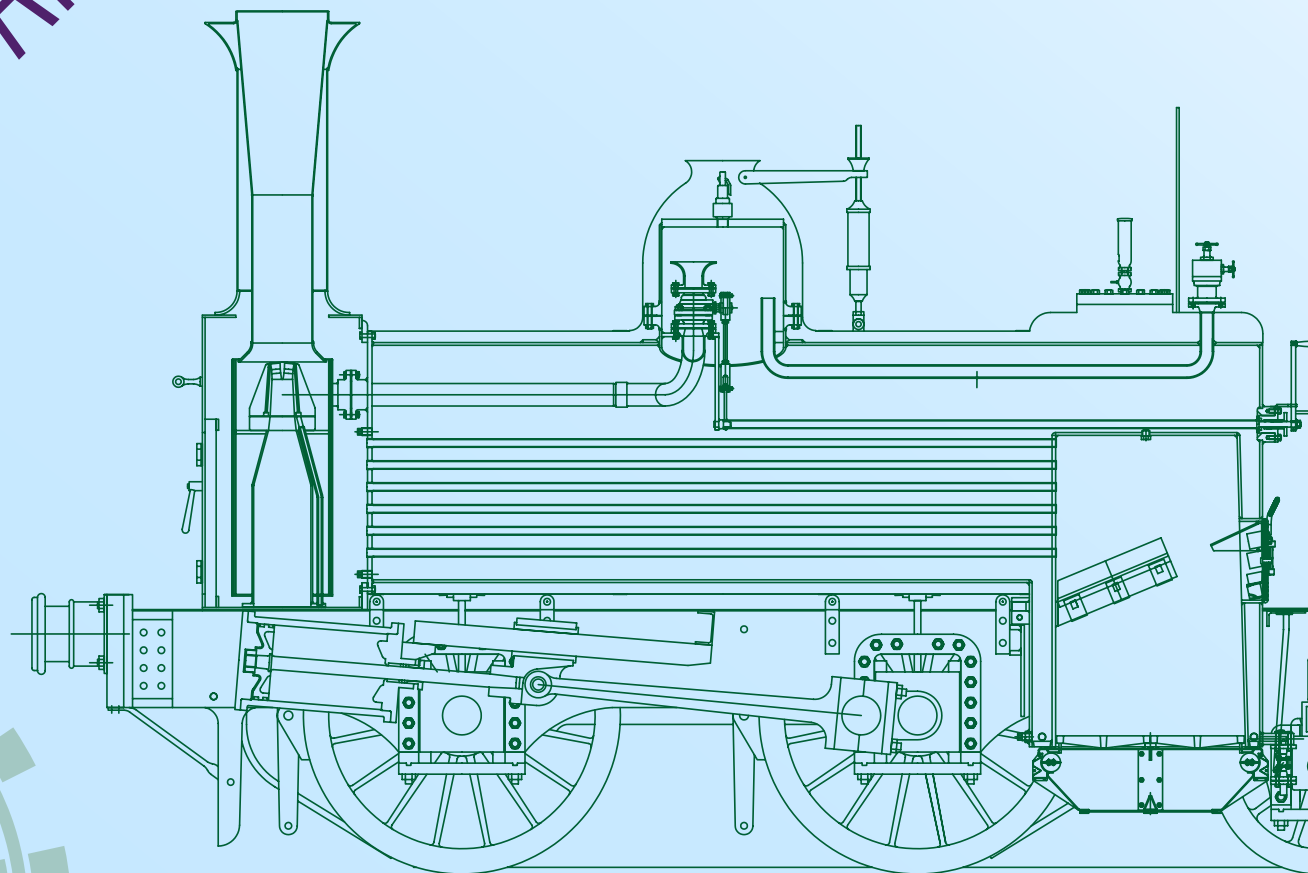




ELSECAR FORGING AHEAD

INNOVATION.
CREATIVITY.
HERITAGE.
PRIDE.

A Vision for the
Elsecar Ironworks
and Heritage
Railway



ELSECAR

FORGING AHEAD



To receive our newsletter and receive information about special consultation events and tours in the New Year, please visit:
elsecar-heritage.com/forging-ahead

INNOVATION. CREATIVITY. HERITAGE. PRIDE.

We're proud to reveal a vision for the future of the Elsecar Ironworks.

Based on extensive consultation, we're determined to transform this remarkable historic site, previously the home of Elsecar Heritage Railway, into something which is unique, sustainable, and will thrive long into the future.

This will include a new heritage railway destination, a rail college, advanced engineering workshops, performance arena, public spaces, a 'cultural canteen' café-restaurant and more.

It will be an appropriate and stunning addition to Elsecar. It will attract visitors, investment and jobs to our region, and provide skills and qualifications for our young people and volunteers.

It will help Elsecar provide high-quality and life-changing experiences for our communities, and attract visitors from all across the UK and beyond. It is a vital part of our vision for Barnsley 2030 and our new Cultural Strategy, and a legacy of our Heritage Action Zone partnership with Historic England.

We have already secured funding for the core Heritage Centre site and its event space from the Cultural Development Fund. By early 2025, that investment will mean transformed public spaces and buildings, including a new event space, new workspaces for businesses, new museum galleries and more.

The redevelopment of the Ironworks site and heritage railway will not happen straight away. We need to secure funding and it will take time to deliver. This vision is the starting point for something special for Elsecar.

Cllr Sir Steve Houghton CBE
Leader, Barnsley Council



ELSECAR

then and now

It is an extremely exciting time for Elsecar and the surrounding area. The village's heritage is now recognised to be internationally important and Elsecar has a proud history that can inspire the future.

Built for the aristocrats of Wentworth Woodhouse, Elsecar was a thriving centre of industry and innovation.

Its heritage is now understood and protected. Thanks to our recent Heritage Action Zone with Historic England, the village's heritage is protected by extended conservation areas, new Scheduled Ancient Monuments and most of its historic buildings are now listed, many at Grade II*. The mighty steam engine at the New Colliery, the oldest in place anywhere in the world, has been rescued and restored.

A record number of people now visit Elsecar. It's one of South Yorkshire's favourite places. The heritage centre is home to dozens of independent businesses. Its events programme goes from strength to strength. The village's award-winning park, green spaces and historic canal provide special days out and treasured memories.

Very exciting plans are being developed for the future and what Elsecar can mean for the communities of Barnsley and South Yorkshire. Those plans have already been shaped by hundreds of local people, visitors and partners who have shared their ideas and thoughts.



ELSECAR IRONWORKS then and now

The Ironworks has
now been designated
a Scheduled Ancient
Monument.

All its buildings are now
Grade II* listed, except the
replica train station built in
the 1990s on the site of the
furnace sheds.

Forgotten and hidden for over a century, the remains of the once-famous Elsecar Ironworks are amongst the best-preserved and most important industrial heritage sites in Europe.

In the 1990s, the significance of the site was not understood. A replica train station was built, but in a way that we now know wasn't appropriate for the historic site. Volunteers went on to operate the heritage railway with dedication and passion for many years, but it ultimately proved unsustainable and the lease to the land was handed back to the council during the COVID pandemic.

Since then, engineers, architects, archaeologists and other specialists have worked hard to identify how a new heritage railway can be established in a way that is appropriate, sustainable, and meets the hopes and expectations of local communities and visitors, on a site recently designated a Scheduled Ancient Monument.





“ You hear the roar of the machinery, the whirring of the great rolling wheels, the sharp hiss of the steam which rises in dense clouds, the thunder of the giant hammers as they tenderly handle or fiercely crush the mass of yielding metal, and you see the tall chimneys and the broad-based cupolas and the intense blaze of the furnaces

The Elsecar Ironworks as would have looked in 1880, including its Furnace Sheds, from the Elsecar 1880 digital reconstruction (Barnsley Museums – Dextra Visual)

ELSECAR

A Celebration of Innovation

Elsecar and South Yorkshire has a proud tradition of innovation and invention, which we will showcase and celebrate as part of the proposed development.



Elsecar was created to be a village at the **forefront of the industrial revolution** and technological innovation.



For decades, its two ironworks and collieries developed and adopted **cutting-edge technology**. There was intense discussion and debate about the **latest inventions and techniques**, all put into practice by the heat of the furnace and deep underground.



Elsecar's collieries were at the cutting edge of industrial technology. Earl Fitzwilliam's Mines Superintendent, Benjamin Biram, led the world in **colliery innovation**, with several **breakthrough inventions** to his credit.



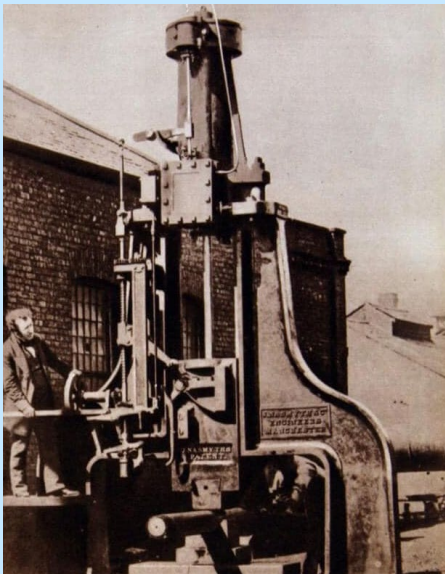
We are immensely proud to look after the 1795 Great Engine, **the world's oldest steam engine still in situ**, anywhere in the world. That engine was rescued and restored in during 2011 to 2014.



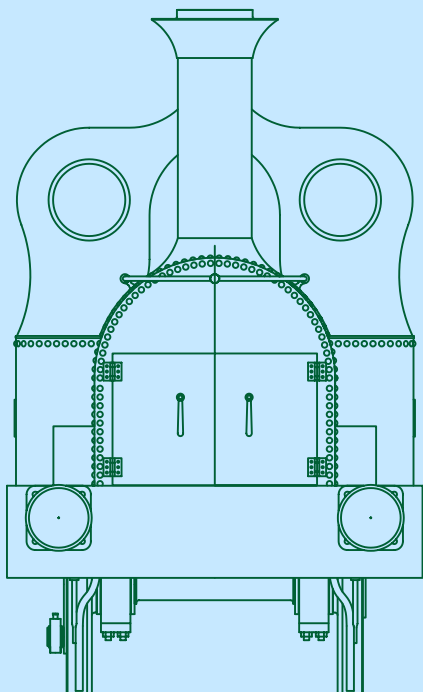
Our two ironworks were responsible for astonishing achievements, including **mighty bridges and engines**, sent all around the world and marvelled at by royalty.



The village has **proud associations with makers, inventors and innovators**, from bridge-builders like John Rennie and the Brunels to engineers such as James Nasmyth, who worked with Earl Fitzwilliam to fit out the New Yard Workshops with the latest technological advances.



A PROUD Railway Heritage



Horse drawn tramways once linked our collieries, iron mines and ironworks, to each other and to our canal basin. As the new railway age took hold, a standard gauge railway was driven through to Elsecar in 1850, to transport the village's iron and coal across the UK, to the east coast and around the world.

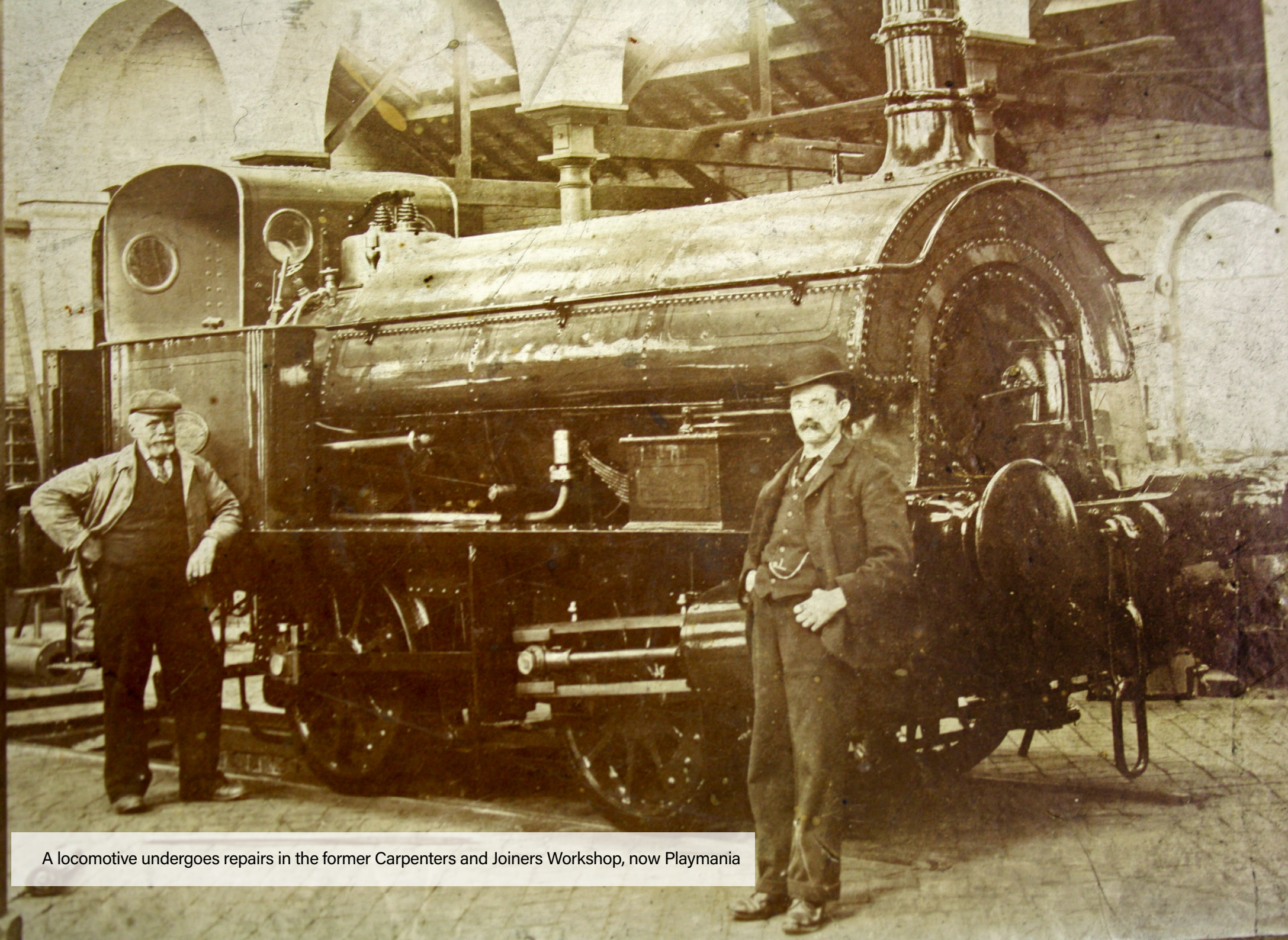
An impressive private railway station was then built in the New Yard for Earl Fitzwilliam in 1860. Special guests including Royalty used the station, a unique example of railway architecture and now home to a children's nursery.

The line linked collieries, ironworks and other industrial sites along the Elsecar Valley, now rich in heritage, stories and post-industrial habitats. The line was reinstated to Hemingfield in the 1990s, on which dedicated and skilled railway volunteers ran historic trains for over 20 years.

The valley includes our original Georgian Canal, its towpath is now the Trans Pennine Trail, recently widened and transformed, and the historic railway line alongside.



Earl Fitzwilliam's Private Railway Station at The New Yard



A locomotive undergoes repairs in the former Carpenters and Joiners Workshop, now Playmania

The vision

“An appropriate and stunning addition to Elsecar, which will attract visitors, investment and jobs to our region, and provide skills and qualifications for our young people and volunteers. It will provide high-quality and life-changing experiences for our communities and attract visitors from across the UK and beyond.



New buildings inspired by the original ironworks furnace sheds (Concept & Visual: Wignall & Moore)

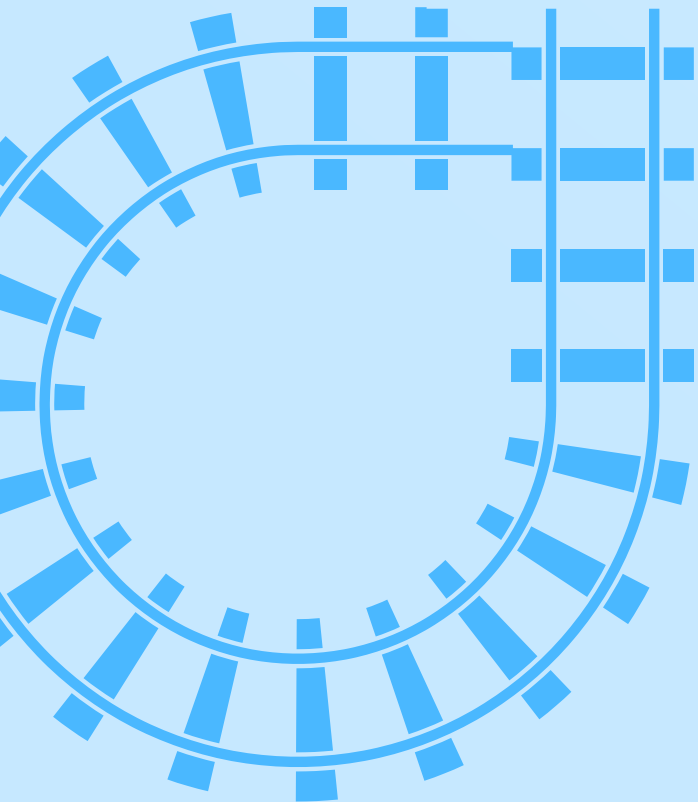
A new vision for the ELSECAR IRONWORKS



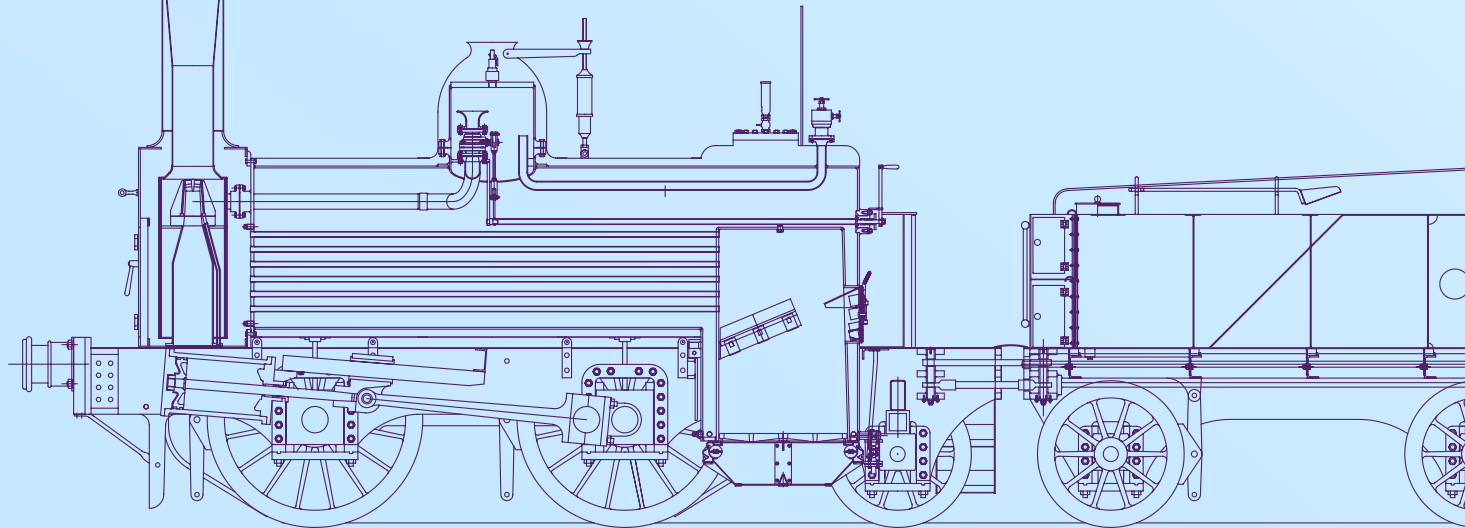
Our new vision for the former Elsecar Ironworks, the site of the Elsecar Heritage Railway, includes the following:

- A **major new heritage railway attraction**, celebrating early Victorian engineering, Yorkshire innovation, and a remarkable track route, sharing stories of its industrial use and its aristocratic and Royal passengers
- **New rail college**, with a new partnership and technology test track, that will see students qualified in railway engineering and engineering companies innovating on a new test track
- **Advanced engineering workshops**, to provide new spaces for innovation, create jobs and act as a public showcase of Yorkshire innovation to 750,000+ visitors each year
- Spectacular reconstructed 1849 'Fitzwilliam' **sustainably fuelled locomotive**, already designed using advanced engineering by specialist engineers
- Focus on **sustainability and innovation** throughout the site, including heat pumps, PV panels and the potential to use mine water
- **Major outdoor performance and event area**, set against the spectacular, restored and illuminated archaeology of the Elsecar Ironworks Blast Wall

A new vision for the ELSECAR IRONWORKS

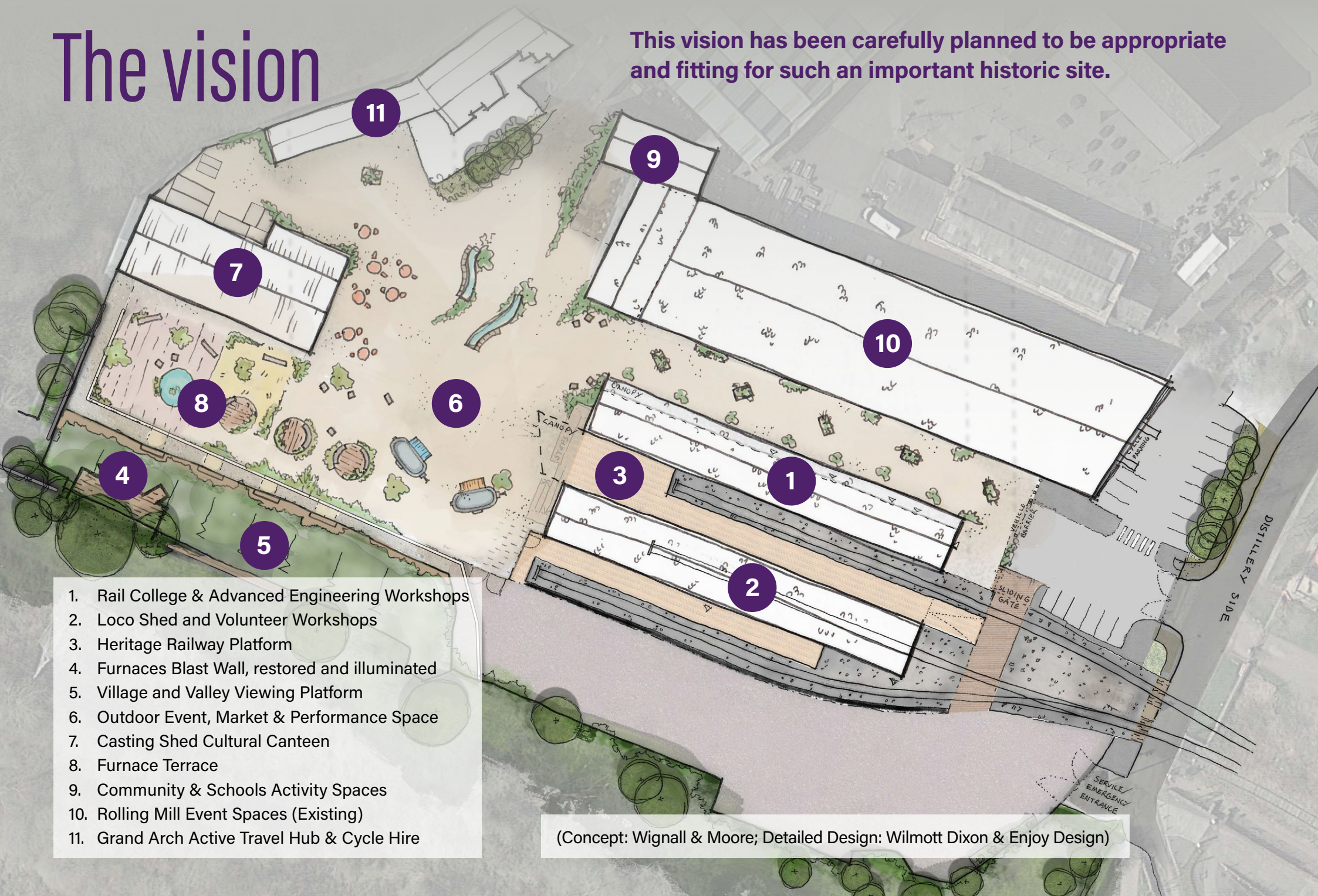


- The ironworks casting shed will be restored and transformed into a new **'cultural canteen'** with creative performance space, café-restaurant and visitor facilities to support the new development.
- **Active Travel and Cycle Hire Hub**, with facilities for walkers and cyclists to explore the valley and Trans Pennine Trail
- **Viewing platform** high above the furnaces, from which to look over the village and historic valley
- **A new station halt is planned at Elsecar Low Colliery**, now renamed Hemingfield Colliery and a Scheduled Ancient Monument in community ownership.



The vision

This vision has been carefully planned to be appropriate and fitting for such an important historic site.



1. Rail College & Advanced Engineering Workshops
2. Loco Shed and Volunteer Workshops
3. Heritage Railway Platform
4. Furnaces Blast Wall, restored and illuminated
5. Village and Valley Viewing Platform
6. Outdoor Event, Market & Performance Space
7. Casting Shed Cultural Canteen
8. Furnace Terrace
9. Community & Schools Activity Spaces
10. Rolling Mill Event Spaces (Existing)
11. Grand Arch Active Travel Hub & Cycle Hire

(Concept: Wignall & Moore; Detailed Design: Wilmott Dixon & Enjoy Design)

The ELSECAR IRONWORKS

Scheduled Ancient Monument



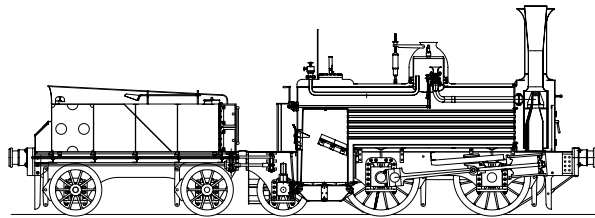
An appropriate development for a very special place.

- Spectacular new buildings are **inspired by the Victorian furnace sheds that stood here**, as part of Earl Fitzwilliam's carefully planned industrial village.
- They have been **carefully designed to complement the built heritage of the site**, in close partnership with Historic England as part of our Heritage Action Zone legacy
- The whole ironworks will **become understandable as one the world's most complete historic industrial complexes**
- All the sites will be open to the public, creating **quality places for communities to spend time and experiences to remember**, day and night
- Public art, historic ironwork installations and high-tech interventions will share **stories of Yorkshire's historic innovators, at the heart of one its great ironworks**
- New **station halts and stopping points along the historic valley** will allow visitors to explore its astonishing sites and natural habitats.
- Historic ironwork from the 1990s replica train station will be used at appropriate locations **to celebrate railway and ironmaking heritage**
- Extensive archaeological digs have revealed **the remains of the old furnace building floors, and columns and evidenced there is no earlier archaeology below.**
- Extensive bore-holing has provided the information about **ground conditions and underground coal workings** required by architects and structural engineers to successfully design the scheme.
- **Laser scanning has created a record of the village's mighty blast wall** so a restoration and conservation programme can be designed.

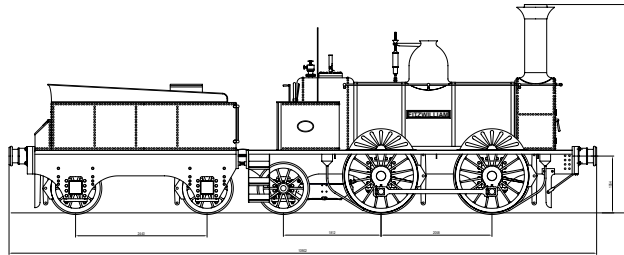


The Casting Shed, a 'cultural canteen' created in the Grade II* listed ironworks casting shed (Concept and Visual: Wignall & Moore)

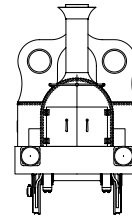
Summary loco key dimensions and features			
Locomotive and Tender Weights		Imperial Units	SI Units
working order			
Locomotive and tender gross weight in full		30.73 Tons	31.19 tonnes
Locomotive gross weight		21.43 Tons	21.79 tonnes
Locomotive adhesive weight		17.95 Tons	8.25 tonnes
Tender gross weight		9.25 Tons	8.40 tonnes
Water capacity		1,031 Gals	4660 litres
Coal capacity		0.99 Tons	1.00 tonnes
Tractive effort			
Max. continuous tractive effort		9039 lbs	4371 kg
Adhesion factor		4.17	
Boiler			
Working pressure (saturated steam)		180 psig	124 N/m ²
Firebox heating surface		56.3 sq ft	5.26 m ²
Tube heating surface		801.3 sq ft	86.68 m ²
Total heating surface		857.6 sq ft	91.94 m ²
Grate area		8.55 sq ft	0.79 m ²
Drafting			
4 - Nozzle Locomot system fitted with			
Kortina and means to cut airway			
Cylinders and Valves			
2 x inside cylinders (bars x stroke)		24.6 x 20.0 in	312 x 508 mm
2 x Balanced slide valves			
Valve gear Stephenson link motion			
Maximum full gear cut-off		75 %	
Wheels			
Wheel arrangement 0-4-2			
Driving wheel dia		4.5 ft	1371.6 mm
Trailing wheel dia		3.3 ft	994.4 mm
Tender wheel dia		3.3 ft	994.4 mm
Ashpan and grate			
2 x Safety valve clapper			
2 x Sliding bottom discharge ash doors			
Reel valve and cast iron toe bars			



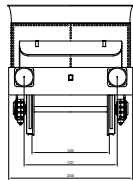
LONGITUDINAL SECTION THRO'
LOCOMOTIVE AND TENDER



SIDE ELEV. OF LOCOMOTIVE
AND TENDER

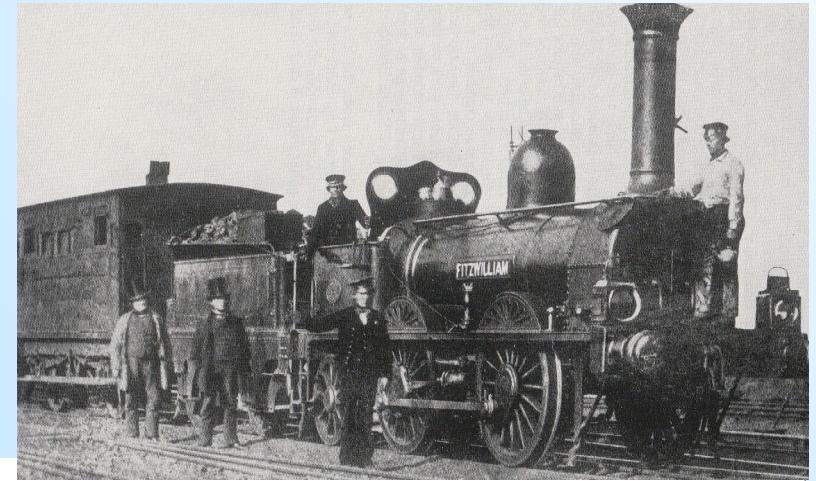


END ELEV. OF
LOCO.



END ELEV.
OF TENDER

Notes



The 1849 Fitzwilliam locomotive, to be reconstructed using advanced technology and to be powered by sustainable fuel.

Together with historic guest locomotives and carriages, including a reconstructed carriage from the National Railway Museum, it will provide a spectacular sight and visitor experience travelling along the Elsecar Valley.

Concept, design and illustration thanks to Geraint Coles, John Scot, Ian Gaylor, Mike Nelson and Jonathan Clay

What it will **MEAN**



This development
will be a further
**major step in what
Elsecar means for
our region and for
the UK**

It will reinforce and further
Elsecar's position, working in
close partnership with local
partners, as **being one
of the North's favourite
visitor destinations**

Estimated **200 jobs
supported** and **40
new jobs created**

**More visitors to
Elsecar and our
region**, balanced
through the week
and all throughout
the year

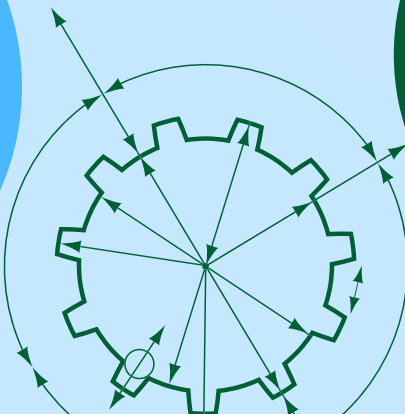
**Meaningful
experiences for
families and our
communities**, creating
safe places to have fun,
be inspired, learn, play
and explore

Elsecar visitors
to spend up to
**over £24 million
annually**

New
development
to mean **£7.4m+
annual impact
for our economy**

Opportunities and
training for **150+
volunteers
each year**

**A major boost to
South Yorkshire
tourism**, linking
railway, industrial
heritage and wider
tourism across the
UK and Europe



More than **400 young
people trained and
qualified** in trackwork
engineering each year

**A celebration of
an innovation and
engineering heritage**
that South Yorkshire can
and should be proud of,
and be inspired by, now
and into the future



Taking this VISION forward



- **Local residents and visitors will be invited to consultation events and special hard-hat tours of the historic site** from the New Year, to explore its archaeology and discuss its future
- **Volunteers will be at the centre of this project** as we go forward, contributing to research, design, archaeology, artwork and creative installations, events and activities, and much more, including the future operation of the heritage railway.
- A new **Community Stakeholder Group** is being established, that will meet regularly and be closely involved in this and other major projects at Elsecar over coming years.
- **Engineers and archaeologists will continue to examine and appraise historic structures** to establish the best way to save and conserve them for the future.
- We'll continue to **work with partners across Yorkshire and the UK to continue to maximise the impact** for our region.
- Careful planning is taking place to encourage **active travel** and **use of public transport** to the village, improve **car parking infrastructure** and ensure the popularity of the village does not impact negatively on local residents.



This project is a long-term plan. We need to secure funding and it will take time and major work to change and transform the site.

Now we have established an achievable vision for the site, we are confident of securing that funding to make it a reality.



Next STEPS

»» We'll work in partnership locally, regionally and nationally to celebrate this rich heritage and create unique unforgettable experiences for our visitors and communities.

»» A reconstructed 1830s rail carriage from the National Railway Museum and 1820s railway bridge nameplate from the National Coal Mining Museum will be put on display in 2024-5



»» Engineering companies and apprentices from our region will start to plan building the grand 1849 Fitzwilliam locomotive, designs for which have been completed using sustainable fuels.



»» Special events, activities and behind-the-scene tours in the New Year, at first for local residents, will discuss how this vision can be taken forward.





To receive our newsletter and
receive information about special
consultation events and tours in the
New Year, please visit

**[elsecar-heritage.com/
forging-ahead](http://elsecar-heritage.com/forging-ahead)**

