

# Porterbrook Sustainability Report 2024

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# A message from Mary Grant, CEO

## Welcome to Porterbrook's 2024 sustainability report

With Britain's railway preparing for some of the biggest structural changes in a generation, I am pleased that the government recognises the role a high-quality rail network can play in decarbonising transport, whilst maximising socio-economic benefits.

This starts with replacing 2,500 life-expired trains in the next five years, many of which are diesel-powered. We stand ready to provide the private capital required to introduce new passenger and freight trains, building on the £3.5bn we've invested since 1994. Our £75m enhancements to the Long Marston Rail Innovation Centre will help support the testing and introduction of new, low-carbon alternatives into service.

Alongside new trains, a sustainable railway should make the most of existing assets. In 2024, we were proud to acquire and return 30 mid-life Class 379 trains to service, preventing them from being prematurely scrapped and saving c.32,700 tonnes in embodied CO<sub>2</sub>e.

Developing a skilled, diverse and engaged team continues to be a core focus. As the recently appointed Chair of the National Skills Academy for Rail, I know the importance of inspiring and embracing the next generation of talent the industry needs for the future. I am pleased that Porterbrook continued to play its part this year, including our £2.5m sponsorship of the National Railway Museum's Futures Gallery and as a founding partner of the upcoming Railway 200 celebrations.

As the business grows, we stand by our commitment to minimise environmental impacts. This includes cutting Scope 1 and 2 emissions by 46% before 2030 and achieving net zero by 2050.

We were proud to have been named Global Sector Leader for the last four years in the annual GRESB ESG assessment. Building on this achievement, and our £57m investment in low-carbon innovations over the last five years, we are resolute in our commitment to embedding the highest standards of ESG principles across the business.

**Thank you for your interest in Porterbrook's sustainability journey. I hope you find this report useful in understanding our approach, progress and goals for the future**

Mary Grant,  
CEO

A handwritten signature in black ink, appearing to read 'Mary Grant'.







# A year in review

49%

stake in Brodie Engineering acquired, expanding our operational footprint in Scotland and the supply chain

10%

Biodiversity Net Gain target set for Long Marston as part of enhancement works announced in 2024

32,700tCO<sub>2</sub>e

30 Class 379 electric trains prevented from being prematurely scrapped, saving c.32,700tCO<sub>2</sub>e in embodied carbon

150,000km

of tracks inspected by our trains

100%

GRESB score achieved for the third consecutive year, retaining a Global Sector Leader status for the fourth consecutive year







# A year in review



**£75m**

investment in Long Marston since 2021, including the track upgrade and electrification works announced in 2024



**480hrs**

spent volunteering in communities

**2,000+**

children reached through community engagement activities

**£250m**

new Green Private Placement secured to further invest in low carbon rolling stock



**£25m**

Porterbrook-funded upgrade of 28 Class 458/4 trains, which re-entered service at South Western Railway





# About us

Porterbrook is the UK’s leading rolling stock financier and asset management company. We’ve been at the heart of the rail network for over three decades with 4,000 vehicles in our diverse portfolio of passenger and freight trains

The Porterbrook Group of companies is wholly owned by five supportive long-term institutional investors, fully committed to the future of the UK rail sector. These include Alberta Investment Management Corporation (“AIMCo”), Allianz Capital Partners (“ACP”), a joint venture between Dalmore and Generation Capital, and EDF Invest.

Sustainability has been at the heart of Porterbrook’s approach for many years. Our talented engineers are leading some of the most exciting innovations taking place in the railway today. Over the past five years, we’ve invested more than £57m in the development of new traction technologies such as battery, hybrid and hydrogen powered trains.

Since the creation of a dedicated sustainability function in 2020, we have focused on systematically embedding ESG into decision-making. We are proud that the progress has been recognised in our GRESB score, which increased from 35 / 100 in 2016 to 100 / 100 for the third year running in 2024.



## At the heart of UK rail for three decades

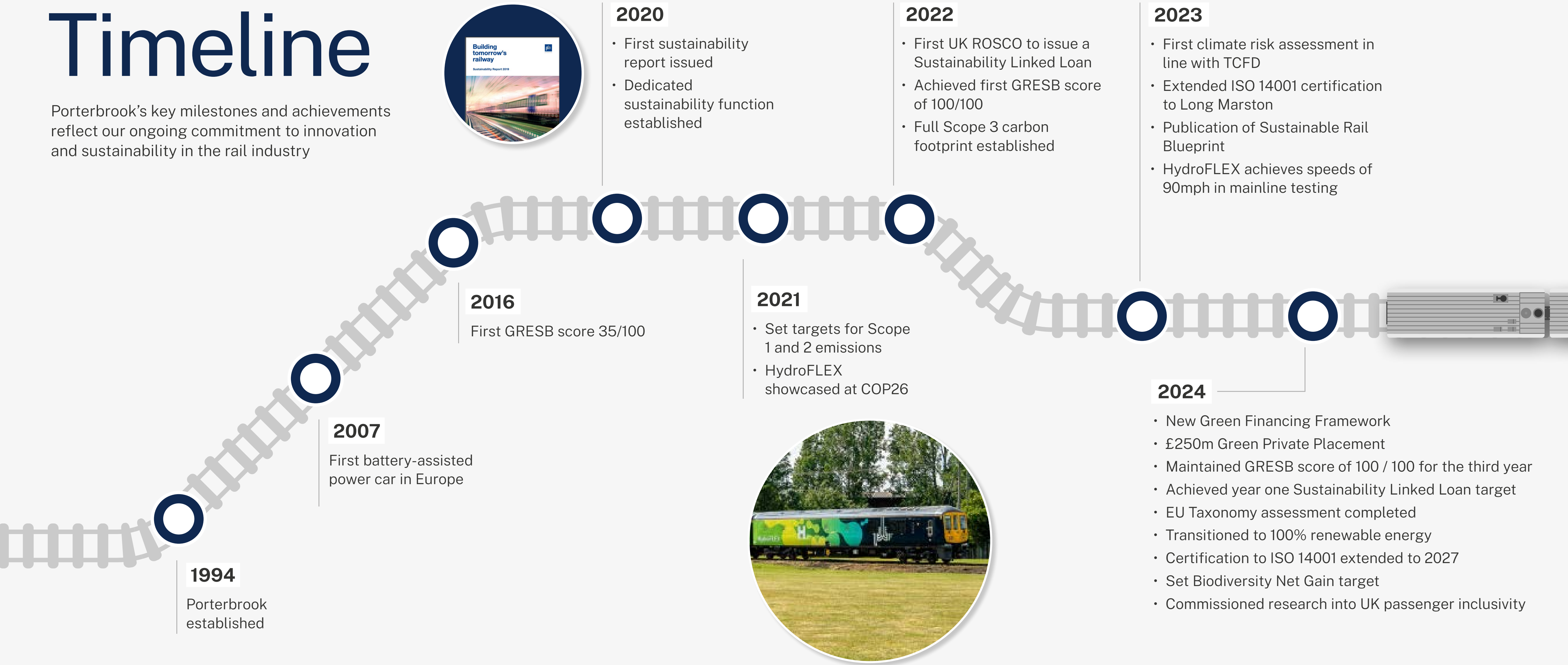






# Timeline

Porterbrook’s key milestones and achievements reflect our ongoing commitment to innovation and sustainability in the rail industry







# Sustainability framework and objectives

Porterbrook’s sustainability strategy has five overarching objectives. These reflect the issues that are most relevant to our stakeholders and to the business's long-term performance

We seek to align with frameworks including GRESB, the Rail Safety and Standards Board's (RSSB) Sustainable Rail Blueprint, as well as the United Nations’ Sustainable Development Goals.

## Delivery mechanisms

01. Investment strategy	We align capital deployment and financing strategies with ESG goals to future-proof our portfolio
02. Asset management	We proactively help our customers improve their environmental and social impact through asset management, procurement and innovation
03. Facilities and operations	We aim to go beyond compliance where possible, adopting internationally recognised best practice

## Our five sustainability objectives







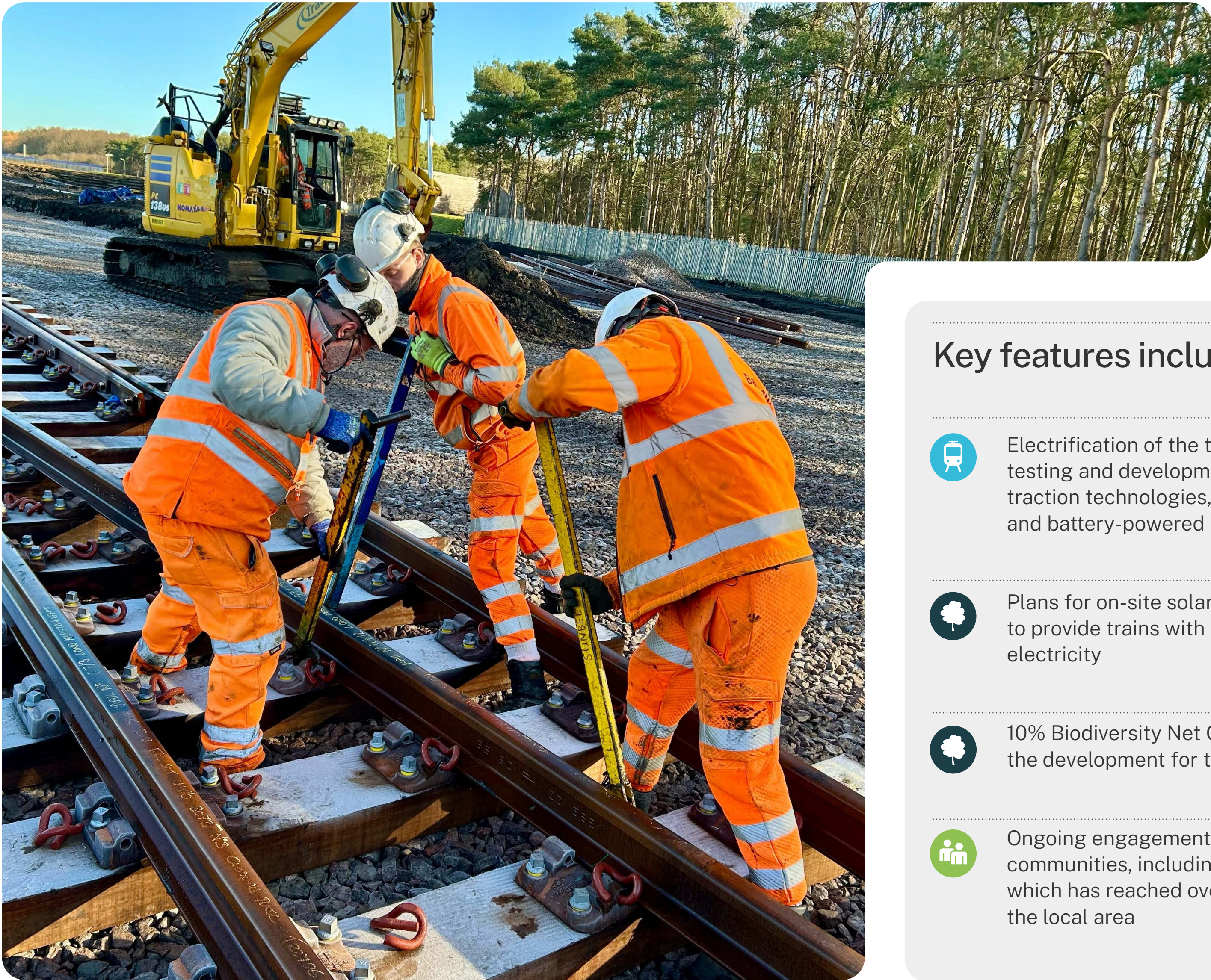
In focus:

# Embedding sustainability in Long Marston enhancements

Our Rail Innovation Centre in Warwickshire is an invaluable asset to test and trial new traction technologies, securely store rolling stock and deliver training in a live environment

In 2024, we confirmed plans to upgrade and electrify Long Marston's 3.5km test track. This new facility will enable the on-site testing and commissioning of new trains, ensuring they can be reliably delivered to passenger service.

From energy, biodiversity and climate resilience considerations, through to local stakeholder and community engagement, we have worked to put sustainability front and centre of the design, delivery and future use of upgraded facilities.



## Key features include:



Electrification of the track to facilitate the testing and development of sustainable traction technologies, including electric and battery-powered trains



Plans for on-site solar power generation to provide trains with 100% renewable electricity



10% Biodiversity Net Gain target as part of the development for the site



Ongoing engagement with local communities, including Primary Engineer which has reached over 1800 students in the local area





# 01

Playing our part  
in growing rail's  
modal share







# Despite a **1.4%** year-on-year reduction, domestic transport remained the UK's largest emitting sector in 2023, accounting for **29.1%**<sup>1</sup> of the country's greenhouse gas emissions

At Porterbrook, we believe that high-quality rail services are essential for reducing emissions in the transport sector. Research shows that national rail produces 68% less CO<sub>2</sub>e per passenger than an average diesel car and 77% less than flying<sup>2</sup>. A single freight train can remove up to 129 HGVs from the road<sup>3</sup>.

As a rolling stock owner, we are facilitating this transition by investing in new and upgraded trains, supporting the movement of more people and goods via rail.



## Our priorities

1

Mobilise private finance to fund **rail growth**, leveraging green financing

2

Help provide a **reliable, accessible** and **comfortable** service for rail users

3

Promote **rail** and **active travel** in our business and communities

1. Department for Energy Security and Net Zero (DESNZ), UK Greenhouse Gas Emissions, 2023 <https://assets.publishing.service.gov.uk/media/6604460f91a320001a82b0fd/uk-greenhouse-gas-emissions-provisional-figures-statistical-release-2023.pdf>

2. National Rail, Small Switch Big Difference Carbon Comparison Calculations, 2024 [https://assets.nationalrail.co.uk/e8xgegruud3g/7sP8mLcWZvxxV7YxmhJsw7/3ed-56cf57915f138f8d7fe5078420151/Small\\_switch\\_big\\_difference\\_-\\_Substantiations\\_and\\_calculations.pdf](https://assets.nationalrail.co.uk/e8xgegruud3g/7sP8mLcWZvxxV7YxmhJsw7/3ed-56cf57915f138f8d7fe5078420151/Small_switch_big_difference_-_Substantiations_and_calculations.pdf)

3. Rail Partners, Freight Expectations: How Rail Freight Can Support Britain's Economy and Environment, 2023 <https://railpartners.co.uk/images/documents/Rail%20Partners%20-%20Freight%20Expectations%20-%20How%20rail%20freight%20can%20support%20Britains%20economy%20and%20environment.pdf>





# Delivering growth through private investment

In a challenging fiscal environment, private investment is key to delivering the growth the railway needs

For 30 years, we've successfully invested over £3.5 billion of private capital from pension funds, insurance companies and other institutional investors into UK rail.

This approach keeps the majority of the nation's train fleet off the public sector balance sheet so that rail does not have to compete with other important public services for limited taxpayer funds.

In November 2024, we were pleased to announce the closing of a new £250m Private Placement, issued under Porterbrook's Green Financing Framework.

**The new debt instrument supports our ability to continue to invest in the future of UK rail, building on recent successes such as the order of 10 new tri-mode trains for London North Eastern Railway.**

## 32,700tCO<sub>2</sub>e

saved by extending the life of 30 class 379 Electrostars by 20 years<sup>4</sup>



## £66m

secured to redevelop Bletchley depot

## Supporting the wider rail ecosystem: Bletchley depot

In April 2024, we successfully bid to finance the £66 million redevelopment of Bletchley depot for West Midlands Trains' new electric Class 730 Avenra fleet.

The project will include new overhead line equipment, sidings for five and ten car trains, refurbishment of existing buildings and modern security systems. The transaction demonstrates how private finance can support essential infrastructure upgrades as well as new fleets.



## Making the most of existing assets

We're not only investing in new rolling stock; in 2024, we acquired and re-commissioned 30 off-lease Class 379 Electrostar trains that were at risk of being prematurely scrapped.

By refurbishing these assets instead of building new ones, we extended their use by another 20 years and

prevented an estimated 32,700 tCO<sub>2</sub>e<sup>4</sup> in embodied carbon associated with the manufacturing process.

The fleet returned to passenger service with Govia Thameslink Railway in early 2025.

4. Rail Safety and Standards Board (RSSB), Cutting Train Carbon from Cradle to Grave, 2023, University of Birmingham <https://blog.bham.ac.uk/bcrre/2023/09/01/cutting-train-carbon-from-cradle-to-grave/>





# Improving the passenger experience

Improving services for rail users is key to making trains their preferred mode of transport. We support the government's objectives of providing reliable, affordable, efficient, high-quality, accessible and safe services

We maintain these high standards throughout each asset's lifecycle, investing over £200 million in fleet upgrades in the last five years and working with academic institutions to explore ways to make our trains more accessible and inclusive for everyone.



## Transforming the Class 458/4 fleet

In December 2024, we completed a £25 million upgrade programme for the Class 458/4 fleet at Alstom's Widnes facility that included:

- Reconfiguring from five-car to four-car units
- Increasing top speed to 100mph
- Improving passenger comfort with new carpets, seats, tables, toilets and wireless charging

**Our 28 upgraded units will increase capacity on the South Western Railway's (SWR) London Waterloo to**

**Weybridge route, improving daily commutes for thousands of people and delivering substantial social value, with 80% of the £25 million investment going to UK suppliers.**

*"We're excited to welcome our newly refurbished Class 458 fleet back to the network. These upgraded trains provide a significantly enhanced customer experience, with improved seating and tables, new charging points, as well as space for two wheelchair users," Neil Drury, Engineering and Infrastructure Director at South Western Railway.*

## Making train travel more inclusive

Disability affects around 14 million<sup>5</sup> people in the UK. It is estimated that people with a disability take 38%<sup>6</sup> fewer trips than those without. In 2024, we initiated a research project with the universities of Cambridge and Birmingham to find ways to make train travel more inclusive.

This research will provide valuable insights into the perceived primary barriers, their relative magnitude and potential intervention measures for new fleets and future refurbishments.



# £25m

investment in **Class 458/4 upgrade**

# £200m+

in fleet upgrades in the past five years

5. Disabled Persons Transport Advisory Committee (DPTAC), DPTAC Reference Frame: Working Towards a Fully Accessible Railway, 2022 <https://www.gov.uk/government/publications/dptac-reference-frame-working-towards-a-fully-accessible-railway/dptac-reference-frame-working-towards-a-fully-accessible-railway>

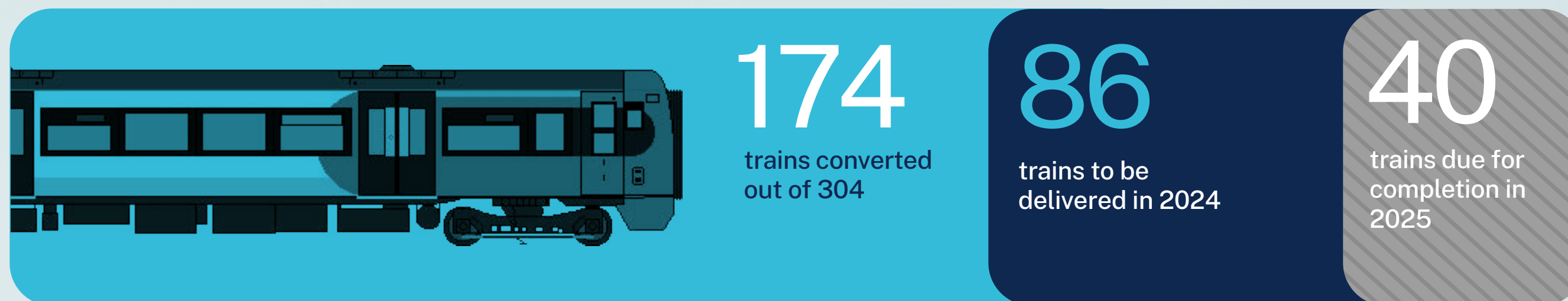
6. Labour Party, Getting Britain Moving, Labour's Plan to Fix Britain's Railways, 2024 <https://labour.org.uk/wp-content/uploads/2024/04/GETTING-BRITAIN-MOVING-Labours-Plan-to-Fix-Britains-Railways.pdf>





→ Our award-winning Electrostar project will see all 304 trains operated by GTR upgraded towards the end of 2025

2023



2024



## Progress as of end-2024:

🚆 £100m+

investment to upgrade our Electrostar fleet

🚆 264

trains converted out of 304

🚆 86

trains delivered on target in 2024

🚆 40

trains due for completion in 2025





# Unlocking rail freight growth

Only 7% of UK freight is transported by rail whilst 81%<sup>7</sup> is moved by road. There is significant work ahead to meet the government's target of growing rail freight by at least 75%<sup>8</sup> before 2050

We support this ambition and work alongside our freight customers to deliver the investment needed in new wagons and locomotives.

 **75%**

UK government has set a rail freight growth target of **at least 75% by 2050**<sup>8</sup>

## New wagons for GB Railfreight



In November, the final 25 box wagons manufactured by Greenbrier were delivered to GB Railfreight. Their delivery marks the completion of the deal announced earlier in the year for 50 new wagons, taking the number of new assets delivered since 2023 to 300.

**300**

new box and intermodal wagons delivered for GB Railfreight

## Upcycling redundant coal wagons with Freightliner



In December, we were pleased to announce a partnership between Freightliner, WH Davis and Porterbrook. This will see residual coal wagons repurposed to move aggregate, supporting the UK supply chain and driving sustainable innovation in the rail industry.

**76**

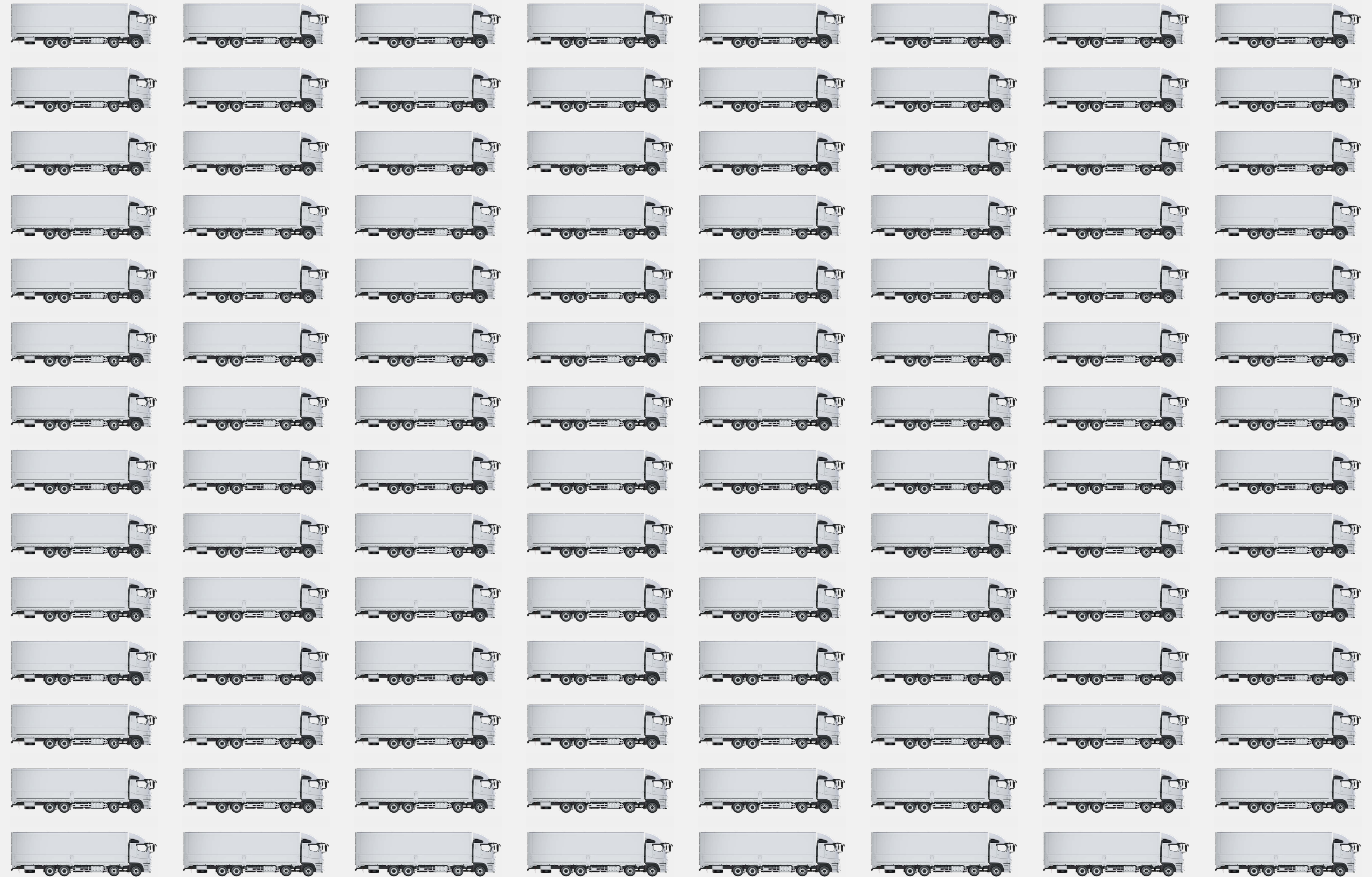
ex-coal wagons to be repurposed for Freightliner





A **single rail freight** service  
can remove up to:

**129** HGVs  
from  
the road







# 02

Adopting the highest  
standards of corporate  
governance and  
behaviours







# Companies with stronger governance are 43% more operationally efficient, generate 3.4x more cash flow and deliver **twice the shareholder returns** of their peers<sup>1</sup>

Where practical, we aim to go beyond compliance and adhere to internationally recognised best practice relevant to our business, ensuring that ESG-related risks and opportunities are effectively monitored and managed.



## Our priorities

**1**

Maintain a robust set of policies and procedures with strong risk controls and management oversight

**2**

Promote cyber security and data privacy

**3**

Always put safety first, by exercising due diligence in the supply of products for use on the operational railway

1. Grant Thornton, Corporate Governance Review, 2023 <https://www2.grantthornton.co.uk/rs/445-UIT-144/images/Corporate%20Governance%20Review%202023.pdf>





# ESG management and oversight

Porterbrook's commitment to sustainability is embedded throughout our organisational structure

Oversight of ESG, including climate-related risks and opportunities, starts at the top of the organisation. This ensures alignment with the Group's strategy and objectives, stakeholder expectations and regulatory requirements.



In 2024, we achieved:  
**0 ESG incidents**

demonstrating environmental, social and governance excellence



# Defining strategic priorities


Our materiality assessment helps us identify and prioritise the environment, social and governance issues that are most significant to our business and stakeholders

By focusing on material issues, we can ensure strategies, resources and reporting efforts are focused on areas that have the greatest impact on our long-term goals.

We conduct a formal materiality assessment every three years, with the next one due in 2025. Interim updates are undertaken to ensure our focus remains on the most important issues.

Our 2024 update placed an increased importance on biodiversity and habitat management, noise pollution and land contamination. These changes reflect the ongoing enhancement works at Long Marston (see further on page 28).

## Methodological approach




### Online survey

We conducted an online survey to understand how our stakeholders—including government bodies, local authorities, customers and interest groups—prioritise ESG issues in their relationship with Porterbrook.



### Interviews

Sustainability experts from Eracura Consulting Ltd held one-to-one interviews with key stakeholders to gain deeper insights into their ESG priorities and how Porterbrook can provide support.



### Internal impact analysis

We performed an internal review of ESG issues to assess their potential impact on Porterbrook’s performance and evaluate our level of influence over each.

Relevance to stakeholders

Major	N/A	<ul style="list-style-type: none"><li>Legal compliance</li><li>Climate change resilience</li><li>Accessible railway</li><li>Stakeholder engagement and sanctification</li><li>Cyber security</li></ul>	<ul style="list-style-type: none"><li>Operational safety</li><li>Air quality</li><li>Climate change mitigation</li></ul>
Significant	<ul style="list-style-type: none"><li>Supply chain sustainability</li><li>Independent review and challenge</li></ul>	<ul style="list-style-type: none"><li>Circular business practices</li><li>Equality, diversity and inclusion</li><li>Labour standards and working conditions</li><li>↑ Biodiversity and habitat management</li><li>↑ Land contamination</li><li>↑ Noise pollution</li></ul>	<ul style="list-style-type: none"><li>Ethics and integrity</li><li>Occupational health, safety and wellbeing</li></ul>
Moderate	<ul style="list-style-type: none"><li>Community development</li></ul>	<ul style="list-style-type: none"><li>Economic contribution and social value</li></ul>	<ul style="list-style-type: none"><li>Skills and talent</li><li>Robust management systems &amp; process</li></ul>
	Moderate	Significant	Major

## Relevance to Porterbrook

- Environment and innovation
- Social responsibility and economic contribution
- People
- Governance and leadership





# Health and safety

As a provider of rolling stock for the operational railway, we recognise our responsibility to all those people who may be affected by our business activities. With a growing portfolio of assets and the development of new, innovative products, safety remains our number one priority

Robust arrangements are in place to fulfill our obligations. We exercise due diligence in the supply of products, monitor safety performance in service and advise customers or suppliers of relevant safety issues when necessary.

In January 2025, we were pleased to confirm the appointment of Ian Prosser CBE as the new independent Chair of the Porterbrook Safety Committee. Having served as HM Chief Inspector of Railways for over 15 years, Ian will be responsible for reviewing the company's approach to maintaining a safety-focused culture across our entire asset portfolio, in line with the high standards required within the UK rail industry.



Work Safe Act Safe Home Safe



"I am delighted to have been asked to chair Porterbrook's Safety Committee. Under Mary Grant's leadership, the company has shown a real passion for improving standards. With a strong health and safety performance already in place, I believe we can now work together to reach even higher levels."

**Ian Prosser CBE**



# 104

supplier audits undertaken in 2024

## Our safety principles:



Select and manage competent suppliers who understand their safety obligations



Provide clear, unambiguous specifications and procedures



Implement effective management of ongoing activities



Ensure effective management of change



Carry out relevant audits with our supply chain and customers





# Climate-related risks and opportunities

We conduct regular assessments to evaluate the current and potential impacts of climate change on our business

The extensive assessment undertaken in 2023 continued to guide our approach in 2024. This incorporated climate-related risks and opportunities across two transition scenarios (policy, legal, technology and market changes) and two physical scenarios (acute and chronic climate events). These were analysed over three time horizons: 2030, 2040 and 2050.

## → Key findings

Higher emissions scenario<sup>2</sup>

We maintained a low net level of risk and opportunities across all future time horizons. The highest risk identified was ‘unsuccessful investment in low-carbon technologies,’ stemming from the lack of demand for hydrogen trains in this scenario.

### Lower emissions scenario<sup>3</sup>

We are well positioned to capitalise on opportunities for the transition to a low-carbon economy, including a policy-driven modal shift to rail, passenger and freight. Prudent life-end date assumptions mean we have no exposure to diesel-only assets beyond 2040.

Climate-related risks & opportunities	2030	2040	2050	2030	2040	2050
Policy driven modal shift in freight transport						
Financing of low emission rolling stock - Hydrogen						
Financing of low emission rolling stock - Electric						
Policy driven modal shift in passenger transport						
Access to more favourable financing						
Reduced access to capital						
Changing regulatory standards on diesel rolling stock						
Unsuccessful investment in low-carbon technologies						
Reduced asset reliability						

**Risks** (red) and **opportunities** (green) are rated as unchanged, low, moderate, high

2. SSP5-8.5 scenario selected for physical risks. Network for Greening the Financial System (NGFS) 'Current Policies' scenario used for transition risks

3. SSP1-2.6 scenario selected for physical risks. NGFS 'Net Zero by 2050' scenario used for transition risks.





# 03

Cultivating  
environmental  
sustainability







As an asset owner, our environmental impacts are primarily indirect and relate to the **4,000+** rail vehicles in our portfolio. For example, the energy used to power the trains leased to our customers accounted for **92%** of our carbon footprint in 2024

We actively engage with our customers, supply chain and industry partners to reduce these shared effects, whilst aspiring to be exemplary in the management of issues which fall within our direct control.

We maintain an ISO 14001:2015 certified Environmental Management System to identify, manage and continuously reduce our environmental impacts.



## Our priorities

1

Prioritise **investment** in greener passenger and freight rolling stock

2

Work with industry to embed **circularity** in new build designs and specifications

3

**Innovate** to reduce GHG emissions and air pollutants from existing rolling stock

4

Protect and enhance the **biodiversity** of our sites and prevent land and water contamination

5

Achieve **net zero** emissions for Scope 1 and 2 by 2050

6

Drive **sustainability** throughout the supply chain and asset life cycle





# Driving circularity throughout the asset life cycle

Trains are naturally resource efficient: an additional 4.6 million cars, equating to 5.5 million tonnes of material, would have been required to deliver the 60 billion passenger kilometres travelled on British trains in 2023/24<sup>1</sup>

A whole-life approach to asset management is key to maximising these benefits, helping to drive environmental performance from design to end-of-first life.

## Our circular approach

We implement circular economy principles across four key stages of our asset management:

### New trains

- We primarily target investment in zero emission and bi-mode trains, ensuring flexibility as the network is gradually electrified
- We engage with industry partners to improve the design of future trains with a particular focus on circularity, inclusivity and climate resilience
- Find out more about recent investments on page 11

### Maintenance and operations

- Porterbrook engineers support high vehicle utilisation rates by helping customers achieve maximum levels of asset availability and reliability
- We seek to further reduce the use of new materials by embedding circular economy principles into our own procurement policies

### Product development

- We continue to explore new technologies to improve the environmental performance of assets, investing £57m+ in green traction technologies in the past 5 years
- Find out more on tackling idling on page 25 and HydroFLEX on page 26.

### New life

- We aim to embed circular economy principles in the decommissioning of rolling stock assets
- In 2024, we achieved a 89% re-use and recycle rate

## Zero emissions

and bi-mode trains account for **69%** of our portfolio and **94%** of our rolling stock capital expenditure in the past three years

## 12x more

High utilisation rates mean that trains are up to 12 times more resource efficient than a typical UK car<sup>2</sup>

1. Department for Transport (DfT), DfT road traffic estimates and licencing statistics, 2023 Annual average of 22,800 passenger km per car, based on 334bn car passenger km in 2023, and 41.2m registered passenger cars in the UK.

2. Train: 140k passengers per annum over 35 years, with an average weight of 42t. Car: 200,000km over life with an occupancy rate of 1.6, and an average weight of 1.2t





# Reducing emissions from our diesel fleet

With only 39%<sup>3</sup> of the rail network currently electrified, the UK relies on 2,898 diesel trains to provide critical services each day

As the industry develops plans for the 10,000km of unelectrified tracks, we expect diesel trains to continue to play an important role until they are phased out.

In the interim, we proactively engage with our customers and industry partners to develop options to reduce GHG emissions, noise and air pollution associated with fuel use.

In the past five years, we have invested over £57m in traction innovation including hybridisation, exhaust after-treatment, engine powerpack upgrades and the use of low-carbon fuels.

 **£57m**

invested In the past 5 years in traction innovation

## Tackling avoidable idling

New RSSB research<sup>4</sup> identified that periods of prolonged, stationary engine use are responsible for up to 10% of the industry's annual fuel consumption – more than 38,000,000 litres.

Tackling the root cause of excessive idling could cut carbon emissions by 100,000 tonnes, NOx by 1,600 tonnes and PM2.5 by 200 tonnes each year.

To enable this, we've partnered with Instrumentel to develop a digital idling monitoring solution. The tool identifies and tracks avoidable engine use, helping train operators reduce excessive idling at hotspot locations such as stations and depots.

The tool will be rolled out across our diesel fleets in 2025.

Tackling avoidable idling could save the industry each year

**100,000**

tonnes of CO<sub>2</sub>e

**£20m**

in fuel costs

**1,600**

tonnes of NOx

**200**

tonnes of PM2.5

3. Office of Rail and Road (ORR), Rail infrastructure and assets, April 2023 to March 2024 <https://dataportal.orr.gov.uk/media/gcdkwb0v/infrastructure-and-assets-2023-24.pdf>

4. Rail Safety and Standards Board (RSSB), Idling Reduction Initiative – Stakeholder Workshop, November 2024. New RSSB research identified that periods of prolonged, stationary engine use are responsible for up to 10% of the industry's annual fuel consumption – more than 38,000,000 litres.





# Alternative traction technologies

Zero-emission, self-powered trains are needed to fully decarbonise the rail network where full or discontinuous electrification is not viable

The energy used for traction accounts for 35%<sup>5</sup> of the rail sector's overall carbon emissions, with the gradual electrification of rail tracks continuing to be the most effective option for the majority of the network.

Where overhead lines are economically or geographically not viable, zero tailpipe emissions alternatives such as battery and hydrogen have an important role to play.



## 2,900+

hydrogen-powered miles on the mainline to date

## HydroFLEX: rail decarbonisation supporting clean energy and growth

Our £13m investment in HydroFLEX, the UK's first heavy rail hydrogen train, aims to bring forward the safe and cost-effective deployment of zero-emission, self-powered traction.

Having completed extensive 90mph+ mainline testing throughout 2024, we are now working with government and industry partners to launch HydroFLEX into passenger service.

This next step will be crucial to validate the feasibility and economic viability of hydrogen-powered trains. A mainline service operation will enable the collection of valuable feedback from key stakeholders including passengers, drivers and depot staff, helping to determine the optimum whole-system design.

As the UK government puts hydrogen at the heart of its plans to grow the economy and deliver net zero, the railway can stimulate demand, whilst supporting the objective of installing 10GW of production capacity by 2030.



# £13m

invested by  
Porterbrook in  
HydroFLEX

# 0g of CO<sub>2</sub>e

emitted at the point of  
use, with water being  
the only byproduct





# Transitioning to net zero

We aim to cut scope 1 and 2 emissions by 46% before 2030<sup>6</sup>, and to achieve net zero by 2050

We are committed to reporting transparently. Following 4 consecutive years of reduction, Scope 1 and 2 emissions temporarily increased in 2024.

This was primarily due to bi-mode trains being stored at Long Marston, and regularly powered to maintain the vehicles in optimum condition.

As these return to passenger service, we expect to restore a downward trajectory for Scope 1 and 2 in line with our 2030 target. To further reduce our Scope 2 emissions, we are developing plans for renewable electricity generation across our sites.

 **32,714kWh**

**annual savings predicted** from switching to hybrid vehicles

## Other initiatives undertaken in 2024 have included:



Taking part in the UK's Energy Saving Opportunity Scheme, achieving a potential 32,714 kWh efficiency saving per year from switching to hybrid vehicles

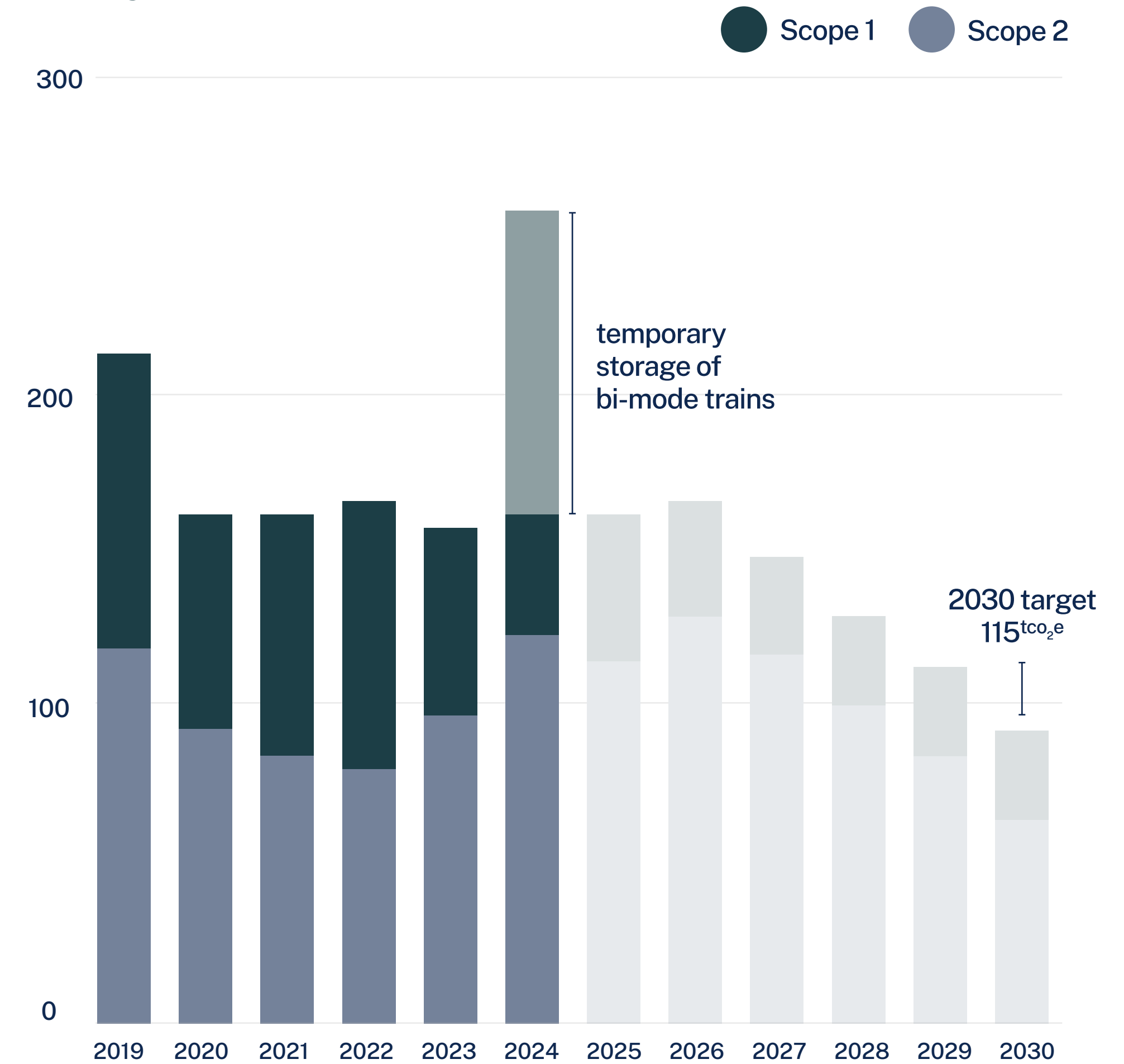


Extending the certification of our Environmental Management System to ISO14001:2015 across all sites until 2027



Rolling out employee energy awareness campaigns

We remain on track with our scope 1 and 2 reduction targets of **46% by 2030** and **net zero by 2050**







# Managing biodiversity at Long Marston

Long Marston is home to a variety of habitats and species. In June 2024, we were pleased to host Rail Live visitors on site ecology tours, alongside volunteers from Network Rail and the Tree Council

As part of the ongoing track upgrade, we completed a baseline assessment to better understand, protect and enhance on-site ecology. This aims to achieve a 10% Biodiversity Net Gain (BNG) by improving existing habitats and creating new ones.

Baseline conditions were assessed using the Statutory Biodiversity Metric, which quantified habitat, hedgerow and watercourse units. The assessment provided valuable insights into our ecological features and their locations on site.

Key measures to achieve our BNG target include enhancing grassland, woodland, hedgerows and ditches, alongside creating higher quality habitats and planting native trees. Implementation is supported by a Construction Environment Management Plan and a 30-year Habitat Management and Monitoring Plan.

## Key biodiversity units



**232** habitats



**27** water courses



**4** hedgerows



**0** irreplaceable habitats







# 04

## Improving climate resilience







# 2024 has been confirmed as the **hottest year on record**, reaching average global temperatures exceeding pre-industrial levels by **1.6 degrees**<sup>1</sup>

The impacts of climate change are being felt across the railway. In 2023/24, weather-related disruptions caused an estimated 3 years<sup>2</sup> worth of delays, nearly doubling the 1.6 years' worth of delays in 2014/15, less than a decade ago.

We work closely with industry partners to develop resilient assets, sites and supply chains, aiming to build long-term resilience and adaptative capacity.



## Our priorities

1

Ensure new rolling stock is fit for changing weather conditions

2

Enhance **climate resilience** of existing assets throughout their life cycle

3

Ensure our sites are fit for a changing climate

4

Leverage **digital infrastructure monitoring** to support broader railway adaptation efforts

1. Copernicus Climate Change Service (C3S), 2024 is the first year to exceed 1.5°C above pre-industrial level, 2024 <https://climate.copernicus.eu/copernicus-2024-first-year-exceed-15degc-above-pre-industrial-level>

2. Office of Rail and Road (ORR), Climate Change Adaptation at the Office of Rail and Road, 2024 <https://www.orr.gov.uk/sites/default/files/2024-11/climate-change-adaptation-report.pdf>





# Making the railway more resilient to extreme weather

Rising average temperatures<sup>3</sup>, combined with more frequent and severe weather events, are impacting the railway's ability to operate safely and on time

The primary impacts of extreme weather are felt across rail infrastructure through heavy precipitation, storms and heatwaves.

Network Rail's £2.8bn<sup>4</sup> investment over the next five years (2024-2029) will increase infrastructure resilience to extreme weather, mitigating the impacts of these events on performance and costly remedial work.

## £2.8bn

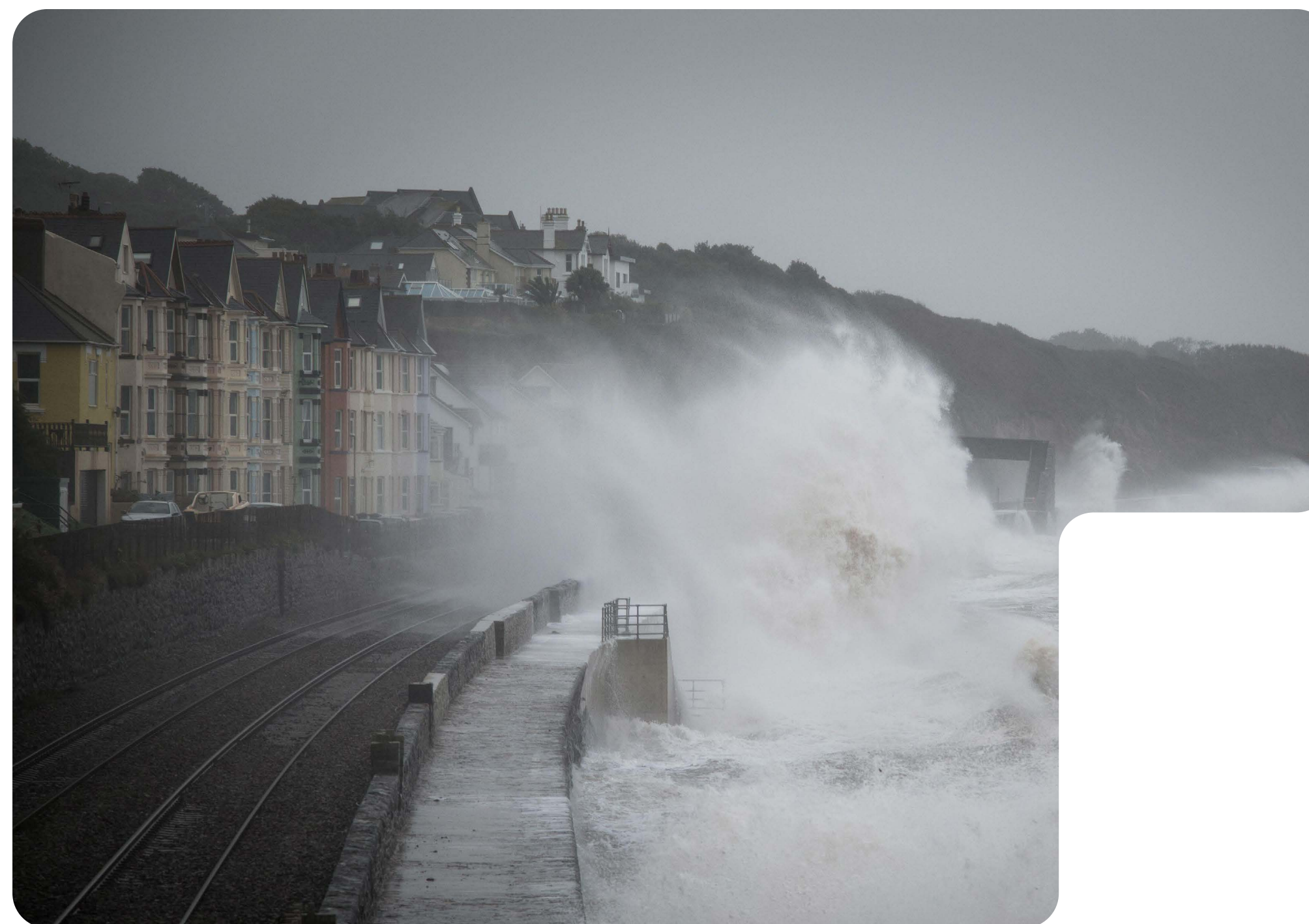
Network Rail's investment to **increase infrastructure resilience** to extreme weather between 2024-2029

## Industry-wide approach

Through the RSSB Climate Adaptation Working Group, we are supporting an industry-wide, system-level approach to climate resilience.

### Notable achievements in 2024 included:

- The adoption of common climate scenarios, a positive step towards unified and effective climate change adaptation across the rail sector
- An assessment of climate change adaptive capacity in UK rail at both an organisation and sector level



## Building a climate-resilient fleet

Whilst new trains are designed to withstand extreme weather conditions, older assets can be more vulnerable and see their reliability reduce as sub-systems are pushed beyond design limits.

### We address this through:

- Risk assessments considering future climate scenarios
- Innovations for improved resilience, such as smart HVAC<sup>5</sup> and protective films
- The integration of resilience considerations into core business processes

3. Climate Change Committee (CCC), Progress in Adapting to Climate Change, 2023 <https://www.theccc.org.uk/wp-content/uploads/2023/03/WEB-Progress-in-adapting-to-climate-change-2023-Report-to-Parliament.pdf>

4. Network Rail, Rail Improvement Plan, 2024 <https://www.networkrailmediacentre.co.uk/news/gbp-45bn-rail-improvement-plan-puts-climate-change-firmly-in-its-sights>

5. Heating, Ventilation, and Air Conditioning



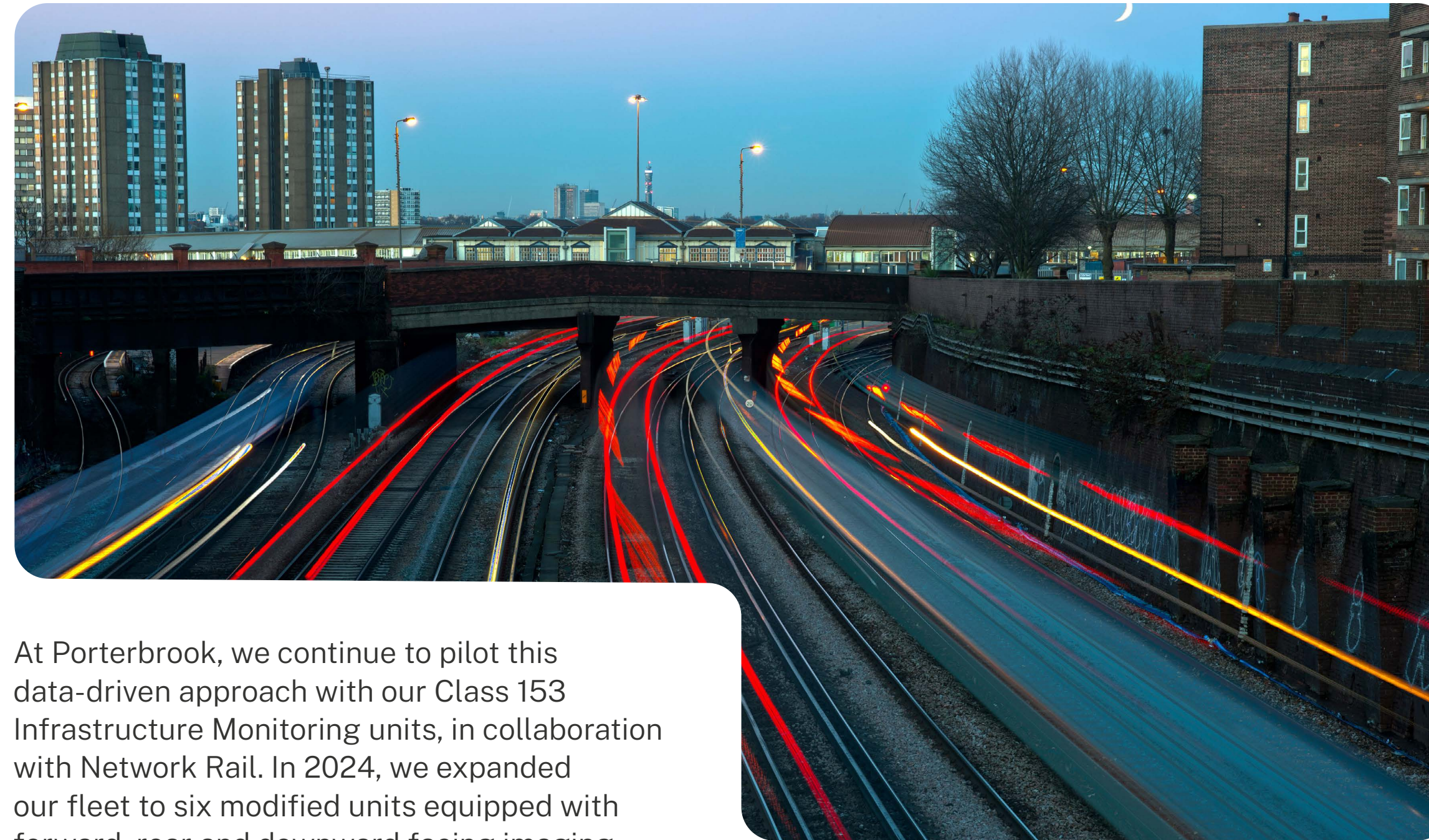


# Data and innovation supporting rail system resilience

As extreme weather puts additional pressure on the network, understanding the condition of rail infrastructure is key to maintaining the highest levels of safety and performance

However, monitoring the condition of more than 15,000km of railway is challenging and resource-intensive. Trains running on the network can help, providing Network Rail with valuable real-time data on rail tracks, overhead lines and other critical equipment.

This data enables the infrastructure manager to optimise maintenance interventions, deliver improved availability for train operators and better services for passengers.



At Porterbrook, we continue to pilot this data-driven approach with our Class 153 Infrastructure Monitoring units, in collaboration with Network Rail. In 2024, we expanded our fleet to six modified units equipped with forward, rear and downward facing imaging, thermal imaging, and sub-one-metre location accuracy.

Looking forward, we are exploring opportunities to use in-service trains to complement the dedicated measurement fleet.



## Key highlights include:



### 150,000km+

of tracks inspected by our infrastructure monitoring fleet in 2024



### Up to 50% reduction

in “boots-on-ballast” inspections with dedicated measurement trains



### 1.6 million km

travelled by our rolling stock every day





# 05

Investing in people  
and communities







# Diverse companies are 39%<sup>1</sup> more likely to outperform their peers financially and benefit from higher employee retention rates

At Porterbrook, we are committed to embedding diversity and inclusion whilst encouraging staff to develop as skilled professionals. Empowering employees is fundamental to building an attractive culture that retains the best talent.

Our teams are passionate about what they do and actively engage with younger generations to share their experience and inspire the talent needed for the future.



## Our priorities

1

Put **safety** first

2

**Build a high-performing**  
and diverse team

3

**Develop the skills**  
needed for tomorrow

4

**Invest** in our communities

1. McKinsey & Company, Why Diversity Matters Even More: The Case for Holistic Impact, 2023 <https://www.mckinsey.com/featured-insights/diversity-and-inclusion/diversity-matterseven-more-the-case-for-holistic-impact> Why diversity matters even more | McKinsey





# Building a high-performing and diverse team

Higher levels of diversity and inclusion can help build and retain high-performing teams

At Porterbrook, we are proud that **27% of our workforce is female**, higher than the industry average of 17.2%<sup>2</sup>. Whilst ethnic diversity has increased to 13%, it remains below the sector average of 14.4%<sup>3</sup> and can be further improved.

To promote and maintain an inclusive culture, every employee receives specific training as part of their induction. We also launched a dedicated hub in 2024 to provide our teams with additional resources and support.

 **29%**

**successful promotions** after completing the Aspiring Leader company programme to date

**27%**

**female workforce**,  
10% higher than  
industry average

**171**

**Total employees**

**30%**

of applications are **from female candidates**, 19% higher than the national STEM sector average<sup>4</sup>

**146**

**different job titles**

## Professional development

We empower employees to grow as skilled professionals by investing in their development. In 2024:

- **83%** of staff engaged in learning and development opportunities
- An average of **£1,400+** per employee was spent on training
- **50%** of roles were filled through internal promotions

To date, **85** employees have completed our Aspiring and Inspired Leader training programmes, providing them with the practical tools and knowledge needed to develop as effective managers.

## People accreditations

**INVESTORS IN PEOPLE**  
We invest in wellbeing Silver

**INVESTORS IN PEOPLE**  
We invest in people Gold

**disability**  
**confident**  
EMPLOYER

**DYING**  
**TO WORK**



EMPLOYER  
RECOGNITION  
SCHEME

SILVER AWARD

2. National Skills Academy for Rail (NSAR), Navigating the Skills Shortage: Annual Rail Workforce Survey, 2024 <https://www.nsar.co.uk/wp-content/uploads/2024/11/ONLINE-Annual-Workforce-Survey-2024-compressed.pdf>

3. National Skills Academy for Rail (NSAR), Findings of the Annual Rail Workforce Survey, 2024 <https://www.nsar.co.uk/2024/12/findings-of-the-nsar-rail-workforce-survey-2024/>

4. Science, Technology, Engineering and Mathematics (STEM) <https://www.stem.org.uk/>





# Developing skills for the future

The industry faces a dual challenge of a widening skills gap and an ageing workforce, with 90,000 workers<sup>5</sup> set to leave the sector by 2030

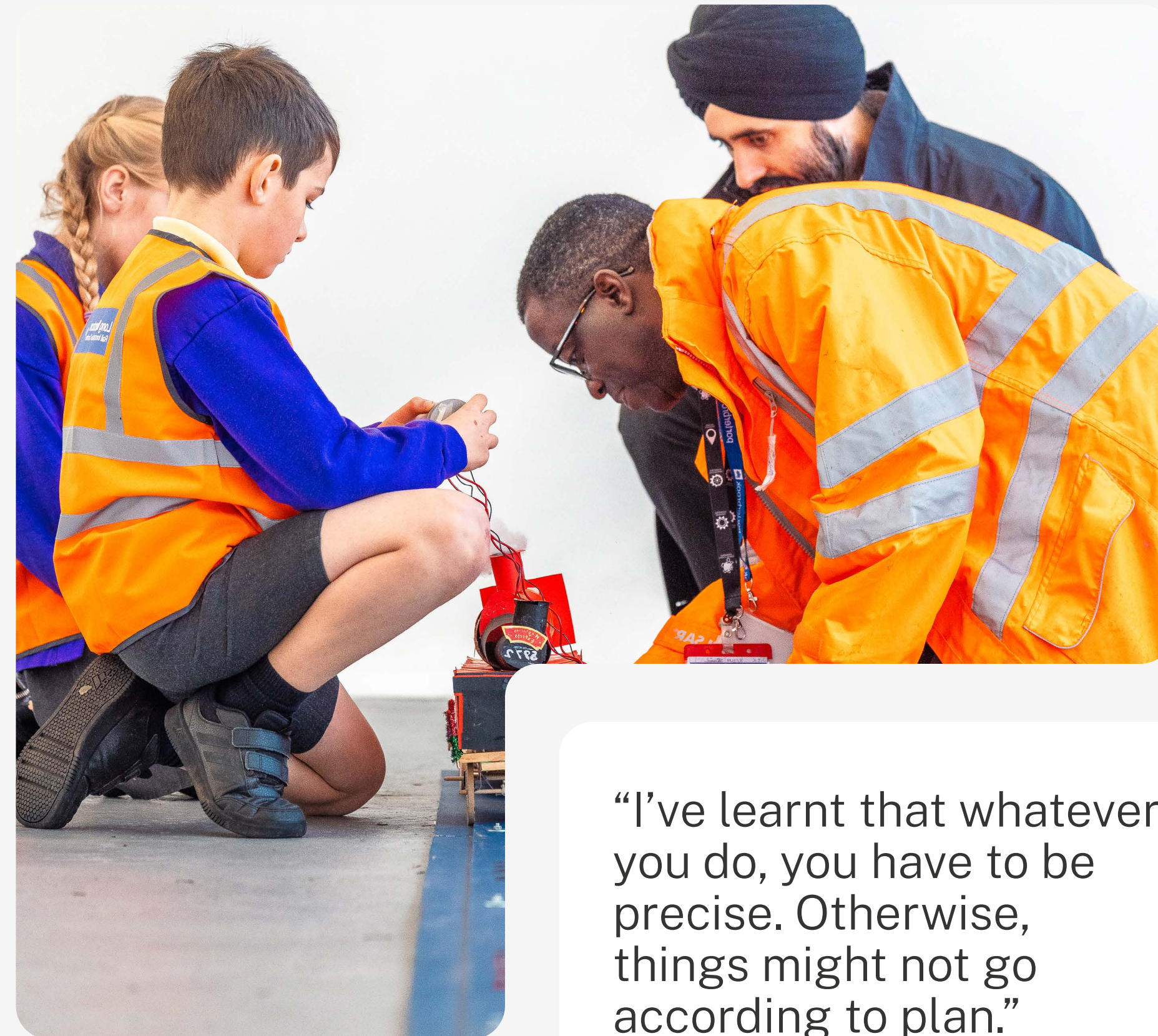
Through initiatives such as our £2.5m sponsorship of the National Railway Museum's Railway Futures Gallery, we're actively engaging with younger generations to promote careers in rail.

We're committed to providing hands-on experience and insight into the rail sector. In 2024, we:

- Hosted 13 work experience students across our three business locations
- Strengthened our partnerships with educational institutions, such as the Kedleston Group (Arc School, Warwickshire), the Holbrook School for Autism (Belper), and the Talent Foundry
- Supported career workshops by delivering tailored CV and interview support
- Expanded our involvement in the Primary Engineer programme

## Primary Engineer programme

Over the past two years, our involvement in the Primary Engineer programme has inspired 1,800 children aged 8-11 in the Warwickshire area to engage in Science, Technology, Engineering and Maths (STEM) subjects.

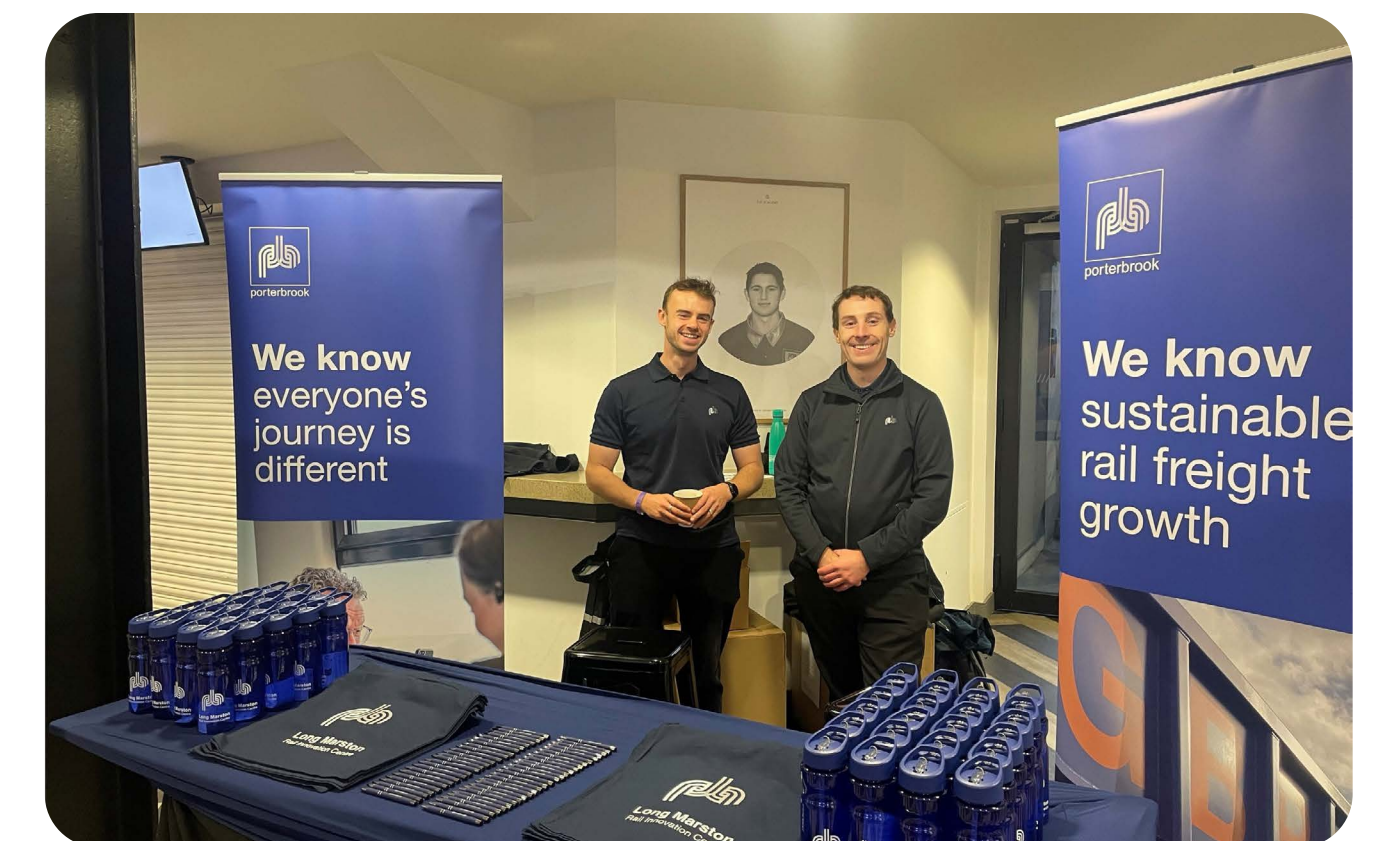
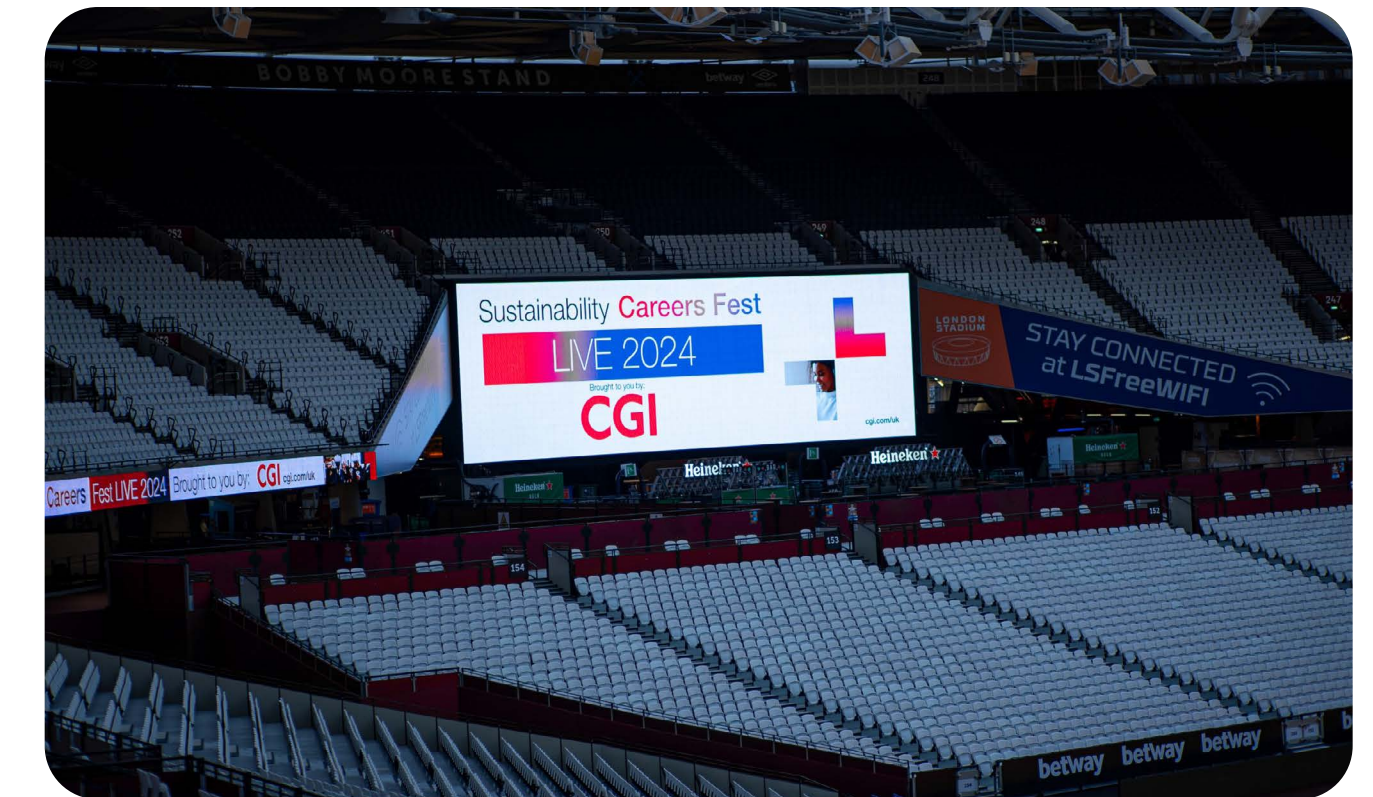


"I've learnt that whatever you do, you have to be precise. Otherwise, things might not go according to plan."

Primary Engineer pupil

## Sustainability Careers Festival

In December, Porterbrook took part in the UK's largest Sustainability Careers Festival at the London Stadium. The event attracted 1,800 students between the ages of 12 to 16, offering insights into sustainability careers and the skills needed across different sectors.



5. National Skills Academy for Rail (NSAR), Findings of the Annual Rail Workforce Survey, 2024 <https://www.nsar.co.uk/wp-content/uploads/2024/11/ONLINE-Annual-Workforce-Survey-2024-compressed.pdf>





# Community-focused social value

For us, social value means supporting initiatives which have a positive impact on communities, local economies, and the environment

We encourage employees to take two paid volunteering days each year to support causes they care about. In 2024, **46** team members completed volunteering days, giving a total of **64** days to communities.

This year, volunteers supported with vegetation clearance, path marking and other landscaping activities at Wingfield Station, near Alfreton in Derbyshire.

At Rail Live in June, we partnered with Stratford-upon-Avon's Escape Arts charity to showcase the 'Lost Railways' exhibition. This used historic and present-day photography to illustrate how much the railway has changed over the last 70 years.

 **£25,000**

donated through sponsorship for the **Railway Children charity**

# 480

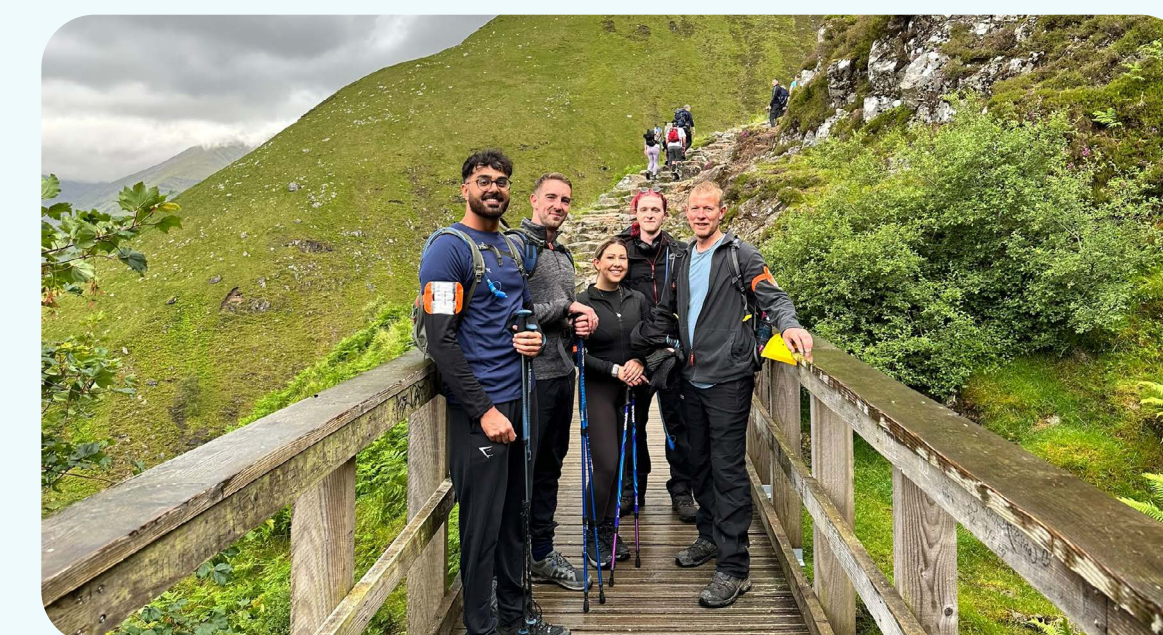
hours dedicated to **supporting communities**



## Supporting Railway Children

We continued to support the Railway Children charity through the Three Peaks by Rail event, donating **£25,000** through sponsorship and raising **£10,000** from Porterbrook employees.

This combined effort supports the charity's critical work in protecting vulnerable children on streets and transport networks across India, Tanzania and the UK.



# 46

team members **completed volunteering** days





# KPI summary

Metric	2022	2023	2024	Details
GRESB score	100	100	100	Score awarded by GRESB in the annual sustainability assessment
Energy consumption (MWh)	751	725	1,132	Includes energy consumption from company cars, red diesel, natural gas and purchased electricity
Scope 1 (tCO2e)	82	59	139	Increase due to the temporary storage of bi-mode trains at Long Marston
Scope 2 (tCO2e)	83	98	122	Emissions from purchased electricity (location based). Increase due to expanding operational use of new maintenance facility
Scope 3 (tCO2e)	563,125	604,581	642,098	Includes emissions from our rolling stock portfolio (Category 13: downstream leased assets)
End-of-life reuse and recycling rate (%)	N/A	88	89	Percentage of end-of-life rolling stock weight being re-used or recycled. First measured in 2023
Community investment (£)	534,240	611,811	573,224	
Volunteering hours	274	615	480	Number of hours used by staff for volunteering activities
Absentee rate (%)	1	1	1	Percentage of time lost to sickness
Training spend per employee (£)	654	1,210	1,438	Total training spend divided by number of employees at year end
Gender diversity (%)	29	29	27	Percentage of female employees
ESG-related incidents	0	0	0	ESG-related misconduct, penalties, incidents or accidents





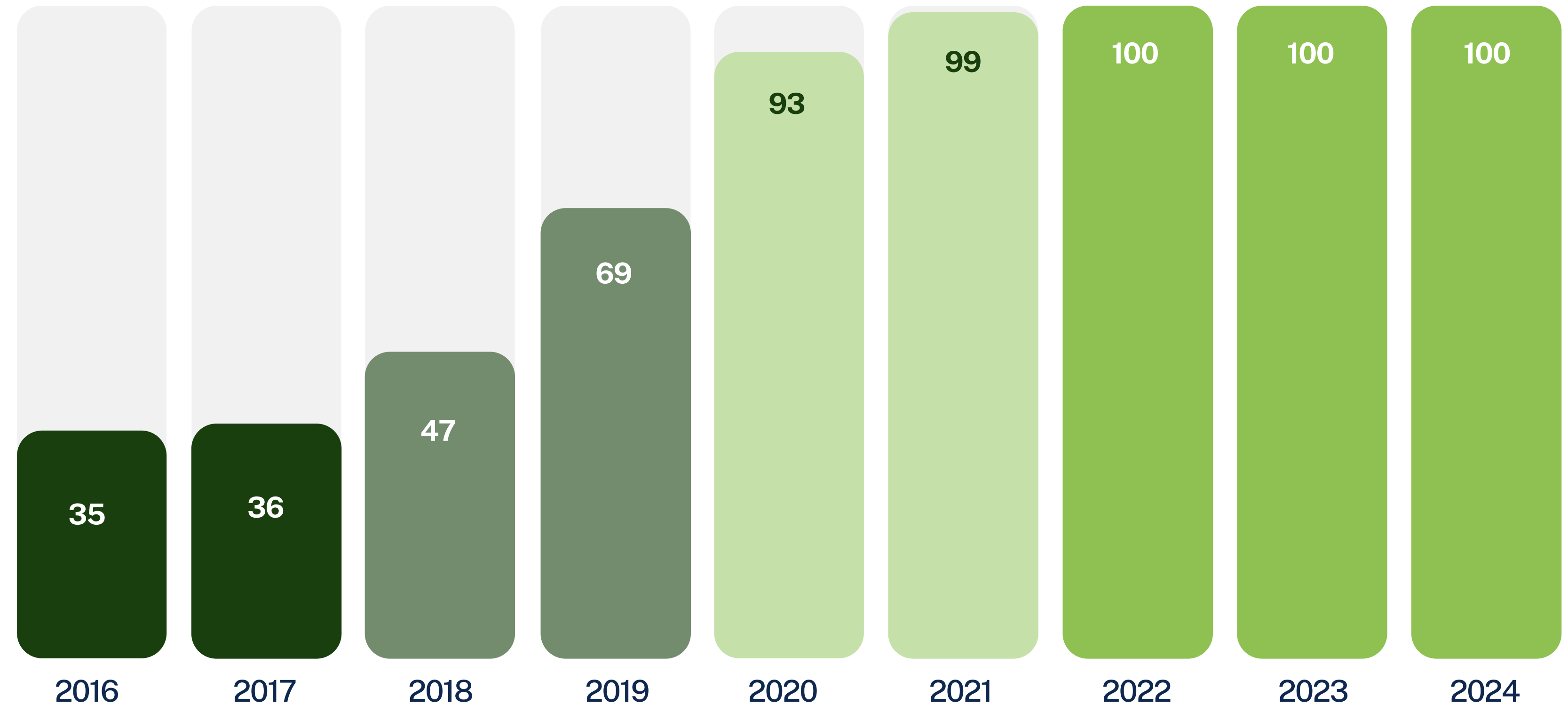
# Transport Sector Leader in global sustainability assessment

For a 4<sup>th</sup> consecutive year, Porterbrook has been named Sector Leader in the annual GRESB assessment. In 2024 we maintained a top score of 100/100 for the 3<sup>rd</sup> year and retained our five-star rating.

GRESB, now in its 15<sup>th</sup> year, assesses and benchmarks the ESG performance of assets worldwide, providing clarity and insights to financial markets on complex sustainability.

“GRESB Sector Leaders help set the pace for the industry, leading the way towards a more sustainable future. We are both proud of and encouraged by this year’s Sector Leaders for their dedication, leadership, and commitment to ESG principles and sustainability” said Sebastien Roussotte, CEO of GRESB.

The result reflects Porterbrook’s ongoing efforts to embed ESG principles across its activities and investments, covering key management and performance initiatives including climate risk and opportunities.



We are proud to have retained our Global Sector Leader status and five-star rating. This further demonstrates our commitment to continuously improve and review our ESG performance, while encouraging and supporting the railway to embrace a sustainable and resilient future.

**Mary Grant, Porterbrook CEO**





You can find out more about how Porterbrook manages sustainability by visiting our website: [Sustainability · Porterbrook](#)

We welcome feedback from our stakeholders. Should you have any comments, thoughts or ideas on how we might improve, please email to [sustainability@porterbrook.co.uk](mailto:sustainability@porterbrook.co.uk)