Network Rail Limited

Annual report and accounts

2023

Network Rail Limited's

Annual Report and Accounts 2023

Presented to Parliament

by The Secretary of State for Transport

by Command of His Majesty

July 2023

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CONTENTS

ANNUAL REPORT AND ACCOUNTS 2023

STRATEGIC REPORT

CORPORATE GOVERNANCE

FINANCIAL STATEMENTS

Commentary in this Annual Report and Accounts is also designed to satisfy the Annual Return requirements as defined within our network licence.The Annual Return data tables are available on our website at: **https://www.networkrail.co.uk/who-we-are/publications-and-resources/regulatory-and-licensing/annual-return/**

INTRODUCTION BY OUR CHAIR

PETER, THE LORD HENDY OF RICHMOND HILL, CBE

chair, 13 July 2023

Over the past year we experienced industrial disputes on the railway of a scale not seen for a generation. But we also saw some powerful reminders of how rail connects people when it matters most.

As an industry we can be enormously proud of our role in making the Birmingham 2022 Commonwealth Games a huge success. Through meticulous planning, and with the help of 300 brilliant volunteers, two million people passed through Birmingham New Street station during 12 days of amazing sporting action.

Last summer rail also played a vital role in bringing the country together to celebrate Her Late Majesty Queen Elizabeth II's Platinum Jubilee. And it was with great sadness that just three months later

we delivered hundreds of extra services as the country mourned her death. Thousands of colleagues were on hand to receive millions of passengers wishing to pay their respects, and all our managed stations in London opened 24 hours a day to provide shelter and keep people safe as they waited for their train home.

The exceptional expertise and commitment shown by colleagues during these major events gives me confidence that we can remain optimistic and ambitious for the future of our railway, despite the many challenges we continue to face.

Key to realising this future is continued progress on essential industry reform needed to bring about a simpler, better railway for everyone. I was therefore delighted at the Bradshaw lecture in February 2023 to hear the Secretary of State for Transport, Mark Harper, renew the Government's commitment to creating Great British Railways, bringing track and train, and cost and revenue, together, driving better service for passengers and freight, reducing costs and increasing revenue, enabling us to truly realise rail's crucial role in driving economic growth, jobs, housing and social cohesion, and sustainability.

Of course, we must also do our utmost to deliver on these priorities within the industry structure we have right now. This year we have continued work to deliver major projects such as the multi-billion-pound TransPennine Route Upgrade which is on track to provide faster and more frequent journeys between Manchester, Huddersfield, Leeds and York, as well as welcoming into service the Elizabeth line. Such continued investment underlines the Government's confidence in our railway to deliver real improvements to economic growth and the quality of life for millions of people across Britain.

Rail continues to stand out as an attractive option for large-scale infrastructure investment as one of the lowest-carbon, greenest ways to travel, contributing just 1.4 per cent to total UK transport emissions. This year we have moved forward in delivering a comprehensive range of initiatives aimed at achieving net zero emissions by 2050, which is the foundation of our Environmental Sustainability Strategy. This includes further electrification of key lines and our drive to be powered by renewable energy.

Demonstrating rail's green credentials is a vital part of attracting passengers onto rail after the pandemic, but can only be built on top of a relentless focus on meeting our passengers' and freight customers' needs and on value for money. This means delivering a safe and reliable service as we strive to improve customer experience, while driving down costs and securing better value wherever possible.

It has been a difficult year with sustained industrial action and extreme weather events causing service disruption. Thank you to our colleagues, contractors and suppliers for responding to these challenges with their customary dedication and skill. Our executive leadership team, led by Andrew Haines, has worked really hard to deliver the best possible service for passengers and freight customers, whilst managing during, and settling, the industrial action; thank you to them too. There is always room for improvement, but I passionately believe we can look forward to a bright future for rail.

A MESSAGE FROM OUR CHIEF EXECUTIVE

ANDREW HAINES, OBE

chief executive, 13 July 2023

For our railway the last year will be remembered for one issue almost exclusively, strikes.

The period of industrial action at Network Rail was deeply bruising, not only for our relationships with colleagues, but for our passengers and freight customers right across Britain. It therefore feels appropriate to focus on this subject in my foreword as I believe 2022/2023 will be seen as a defining moment in setting the course for the future success of Britain's railway.

As we emerged from the pandemic, industry costs were rising, revenue had stalled at roughly 75 per cent of pre-pandemic levels and the railway could no longer rely so heavily on government handouts.

Reform was therefore essential. Modernising and stripping out old-fashioned working practices were key to building a more efficient and safer railway and to help fund a fair pay deal for our people.

We entered into negotiations with our trade unions optimistically, hoping to reach a settlement that recognised the vital change needed in our industry and that would help our colleagues in managing the cost of living crisis.

I deeply regret the strike action that followed, and the harm it inflicted on our passengers and freight customers, on our industry as a whole, and on colleagues and teams right across the business.

However, I am proud of the agreement we ultimately reached. That agreement not only gives a fair pay deal that recognises the enormous contribution colleagues make, but is also affordable and supported by vital and long-lasting changes to our business which will make us more productive, more customer-focused and safer too.

That we were able to agree this deal was in no small part down to the extraordinary resilience of thousands of colleagues who went the extra mile to prevent a total shutdown of the rail network.

Thousands of contingent managers across England, Scotland and Wales stepped up and were trained to safely and competently operate signal boxes and to provide support in our managed stations. We kept key routes open, connecting major towns and cities and ensuring that critical freight routes could continue to flow. This relentless focus on continuity has undoubtedly strengthened the resilience of our national rail network for years to come.

I should also acknowledge the consistent support provided by our shareholder, the DfT, throughout this period.

Strike action hit our industry finances hard and knocked passenger confidence, but I passionately believe our perseverance and determination to agree the right deal has set up the railway for a brighter future.

Now, a new chapter lies ahead and it is our shared responsibility to heal from this period of industrial action to build a stronger, more resilient and safer business. At all levels across Network Rail, we are working to strengthen relationships and build better engagement with colleagues. This will be one of Network Rail's most important journeys yet, and I am excited to get going.

The Government's decision to commit significant funding for rail for CP7 represents a vote of confidence in rail's future. Nonetheless, we expect the coming five year period to be more challenging as a result of inflation pressures and the imperative to keep investing to maintain asset condition.

While last year certainly had its challenges, we should also celebrate some outstanding achievements by Network Rail colleagues. Delivering the Elizabeth line alongside Transport for London, the Commonwealth Games in Birmingham and our response following the death of Her Late Majesty Queen Elizabeth II are each moments we can be proud of. As I look towards the future, I know there will be many other stand out moments where colleagues across the railway rise to meet such enormous challenges.

22/23 SIGNIFICANT EVENTS

ELIZABETH LINE OPENING

In May 2022 in one of her last public engagements, Her Late Majesty Queen Elizabeth II officially opened the Elizabeth line. Following £19bn of investment, including Network Rail as a major delivery partner, the tunnels under London were opened to passengers for the first time. Queues to board the first trains stretched around the corner. The enthusiasm for the service has continued with more than 100 million people having now used the service. In May 2023 the final stage was opened, enabling passengers to get directly from Reading and Heathrow Airport in the west, through central London to Stratford, Shenfield and Abbey Wood in the east.

COMMONWEALTH GAMES 2022

To support the success of the Birmingham 2022 Commonwealth Games, colleagues in Network Rail's Central route coordinated an industry plan to build excitement and keep passengers moving safely and reliably during the Games. This involved years of planning with all parts of the business, train operators and wider industry partners to improve train performance, provide operational resilience and support moving a high volume of passengers on the rail network. Over 12 days of sporting action, more than two million people passed through Birmingham New Street station, helped by more than 300 railway volunteers.

EXTREME WEATHER

During the summer, Britain had some of its highest temperatures ever recorded, over 40 degrees Celsius. This weather put a huge amount of pressure on our infrastructure, staff, and passengers. With extreme weather events becoming more frequent as our climate continues to change, we need to make our railway as resilient as possible. That's why we launched a new extreme weather resilience task force, spearheaded by leading global experts, to tackle the effects of hot weather on the railway. This task force will investigate and make recommendations on how we can develop our approach to resilience during extreme weather.

INDUSTRIAL ACTION

2022/23 was a challenging year for the rail industry as it faced the biggest industrial action in recent history, in a dispute over pay and modernisation. The industrial action saw contingent staff and teams work together, over 11 months, to deliver a service for our passengers and freight users. Following a referendum in March 2023 the dispute between Network Rail and the RMT was resolved and we are now working on the implementation of new working practices relating to productivity.

NATIONAL WINDRUSH MONUMENT

Members of the Windrush generation and their Royal Highnesses the Duke and Duchess of Cambridge unveiled the National Windrush monument. The monument's location, London Waterloo station, was chosen due to its significance in the Windrush story as thousands of people who arrived from the Caribbean passed through the station on their way to start their new lives across the country.

HER LATE MAJESTY QUEEN ELIZABETH II'S FUNERAL

The rail industry came together to help people travel to commemorative events, pay their respects and celebrate the extraordinary life of Her Late Majesty Queen Elizabeth II. We worked closely with all train operators to run extra services through the day and into the night and opened our managed stations 24 hours a day to provide shelter so people could safely wait for their trains to get home. This was the biggest public transport operation since the London 2012 Olympic and Paralympic Games.

OUR YEAR IN NUMBERS

The numbers below are important to show our financial and non-financial performance. We report numbers for both 2021/22 and 2022/23. 2021/22 was affected by the coronavirus pandemic.

Revenue in the year

2022/2023	2021/2022
£10,014m	£9,553m

Operating costs (before depreciation and amortisation)

2022/2023	2021/22
£4,941m	£4,645m

Operating profit

2022/2023	2021/2022
£2,974m	£2,959m

Loss/profit before tax

2022/2023	2021/2022
-£1,140m	£324m

We achieved operating profits of c£3bn both this year and last. However, this year we made a loss before tax of £1.1bn (2021/22: profit £0.3bn) The decrease was due to the additional indexation uplift of £1.4bn when valuing the legacy RPI-linked debt. The non-cash increase in the indexation uplift is due to inflation being much higher compared with last year.

Net debt

2022/2023	2021/2022
£59.1bn	£56.1bn

Capital expenditure

2022/2023	2021/2022
£6,491m	£6,139m

Environmental sustainability

2022/2023	2021/2022
24.2 %	18.1 %

Percentage reduction in greenhouse gas emissions against our 2018/19 baseline. Numbers do not include traction carbon reduction, which is not part of Network Rail's direct emissions.

Passenger km travelled (bn)

2022/2023	2021/2022
53.3km	39.1km

Passenger trains on time On Time Measure

2022/2023	2021/2022
68.2 %	73.0 %

The percentage of recorded station stops called at early, on time, or less than one minute late

Freight moved Net tonne kilometres

2022/2023	2021/2022
15.7bn	16.9bn

Freight trains on time Freight Delivery Metric

2022/2023	2021/2022
86.0 %	93.5 %

Lost time injury frequency rate

2022/2023	2021/2022
0.245	0.273

Time lost to injuries and fatalities among Network Rail staff and contractors. A lower figure represents a better performance.

Network Rail's employee engagement index

May 2023 full survey	September 2021 full survey
49 %	57 %

Number of Network Rail employees

2022/2023	2021/2022
40,237	42,181

NETWORK RAIL'S STORY

VISION, VALUES, STRATEGY, PERFORMANCE

Network Rail exists to get people and goods where they need to be and to support our country's economic prosperity. We do this by running a safe, reliable and efficient railway that serves our customers and communities. To be successful, we need to be a company that is on the side of passengers and freight users. This is why we developed our vision of Putting Passengers First.

OUR VISION

PUTTING PASSENGERS FIRST

Our regions make sure that their services and decisions meet the needs of the passengers, customers and communities they serve.

OUR VALUES

Our values – how we behave – allow us to deliver our vision. We empower our people to always be safe, care about the railway, its users and each other, and put teamwork at the heart of all that we do. This means that we Put Passengers First.

STRATEGIC PRIORITIES

The key elements of Putting Passengers First are grouped under our six strategic priorities:

- **Safety**
- **Train Service Delivery**
- **Efficiencies**
- **Sustainable Growth**
- **Customers and Communities**
- **People**

PERFORMANCE

Our scorecard allows us to measure how well we're doing against our strategic priorities.

The linkages between our vision, values, strategic priorities and performance are explained more in About Network Rail on page 15.

ABOUT NETWORK RAIL

Who we are and what we do

We own, operate and develop railway infrastructure in England, Scotland and Wales. This covers approximately 20,000 miles of track; 30,000 bridges, tunnels and viaducts; and thousands of signals, level crossings and stations. Our rail network spans the country, providing a service for passengers and freight users that underpins daily life and economic growth. We also manage 20 of the busiest train stations and we're responsible for timetabling.

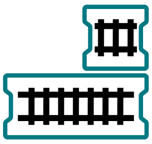
The rail network consists of five high-speed main lines (the West Coast, East Coast, Midland, Great Western and Great Eastern), which radiate from London to the rest of the country, augmented by regional rail lines and dense commuter networks within the major cities. High Speed 1 (the line from London St Pancras to the Channel Tunnel) is operationally separate from the rest of the network.

Our purpose is to get people and goods to where they need to be, and in turn to support the UK's economic prosperity. Our role is to run a safe, reliable and efficient railway, serving our customers and communities. We oversee the running of the railway as an entire system and work closely with train operators to deliver train services as safely, reliably and punctually as possible. We lead the industry's planning for the future of the railway, and we're committed to a sustainability agenda.

We own land throughout the island of Great Britain, the vast majority of which is used for operational purposes. Where possible, we make land no longer required for operational purposes available for housing development. In addition, we consider ourselves to be Britain's biggest neighbour and we take care to be considerate to our lineside neighbours.

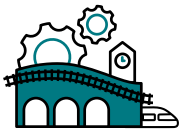
NUMBER OF PASSENGER JOURNEYS

2022/23	2021/22
1,446m	990m

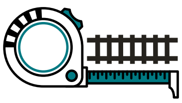


AMOUNT OF FREIGHT
(bn net tonne kilometres)

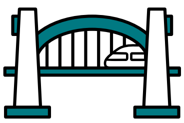
2022/23	2021/22
15.7bn provisional	16.9bn



Over
2,500
stations, the 20 largest are managed by Network Rail



20,000
miles of track



30,000
bridges, tunnels and viaducts

Our funding

Network Rail Limited is a company limited by guarantee. It does not have share capital and therefore does not issue shares. As such, we don't pay dividends to shareholders. Our profits are re-invested into improving the railway network and providing a better service for passengers and freight users.

Network Rail is also a public sector arm's length body. While we don't have shareholders, the Secretary of State for Transport is our sole 'member'. Our framework agreement with the Department for Transport sets out how we'll work together in terms of corporate governance and financial management.

The Office of Rail and Road (ORR), our independent regulator, then fixes the amount we can charge train operating companies for using the railway network. The amount charged to train operating companies is reduced by grants received from the UK and Scottish Governments.

Income

Our income is a mix of grants from the UK and Scottish Governments; payments from train and freight operators that use the railway; and a small amount of income from our real estate portfolio, e.g., rental income from shops at stations. We also work closely with organisations willing to pay for projects that benefit them, our passengers and our freight users.

Funding cycles

We work in five-year funding cycles called Control Periods (CP). The UK and Scottish Governments let us know what they need from the railway network in each CP and how much they can afford to pay for it. The 2022/23 financial year is the fourth and penultimate year of CP6, which runs from 1 April 2019 to 31 March 2024. It is our responsibility to deliver a railway which is efficient, reliable and safe. We must deliver reliable train performance daily and we're held to account for this throughout the CPs.

Our vision - Putting Passengers First

We're continuing to implement our vision to be a company that's on the side of passengers and freight users. We want to be considered efficient, dependable and a company people are proud to work for. We've embedded a customer service mindset across our business to support this vision.

We developed our Putting Passengers First vision to address feedback received from customers, stakeholders and employees in 2018. It accords with our intention to deliver a more sustainable, efficient and joined-up railway. We identified six strategic priorities for delivering our vision and we describe these below. They're a vital consideration in the stakeholder actions we take.

Our strategic priorities

To help us deliver our Putting Passengers First vision, we've identified six strategic priorities. Our key performance indicators (KPIs) are based on these strategic priorities. See How we performed on page 22 for more information on our performance against these KPIs.

Safety

Our safety vision is **Everyone Home Safe Every Day**. Safely running the country's railway is of paramount importance to us. Our safety vision applies to passengers; other members of the public (for example, those living and working near the railway); our employees; and our contractors. Safety is a vital factor in the decisions we make during our works on the railway. We regularly measure our safety performance to help us to continually improve and work towards achieving our safety vision.

Our KPIs:

Passenger Safety (Train Accident Risk Reduction) (TARR)

Measures achievement of the key milestones and metrics to reduce train accident risk. TARR is made up of milestone targets and volume targets, both of which have different achievement weightings.

Workforce Fatalities and Weighted injuries (FWI)

An index representing workforce safety, using fatalities and non-fatal injuries per hour worked. A lower FWI represents better performance.

Personal Accountability for Safety (PAFS)

A measure of how much we are improving our culture and behaviours to help keep ourselves and our colleagues safe. The measure assesses the combined reduction in (i) Breaches of Life Saving Rules, and (ii) High Potential events.

Train service delivery

We understand that passengers want a punctual and reliable train service. We're focussed on reducing delays and disruption for passengers and freight users by seeking to stop faults occurring. Improving both how we work and the technology we use to quickly find and fix faults means that we can return service levels to normal as promptly as possible.

Our KPIs:

On time

The percentage of Recorded Station Stops called at on time (early or <1min late).

Passenger satisfaction

Reported as a mean score of passenger journey satisfaction on a scale of 1-10 (1 poor – 10 excellent).

Freight cancellations

The number of Network Rail and Other Operator-caused cancellations, as a percentage of freight trains run.

Efficiency

The delivery of an affordable and efficient railway is a key priority. A substantial proportion of our funding comes from taxpayers. We understand our responsibility to spend this money wisely and to work as efficiently as possible to deliver value to our customers. The greater our efficiency, the more money we have to invest in providing an improved service for passengers.

We're continuing to use the latest technology and practices to speed up our work safely, both on and off the track. Completing improvement work more quickly means we're saving money and causing less delay and disruption for passengers and freight users.

Efficiency continued

Our KPIs:

Financial performance measure (FPM)

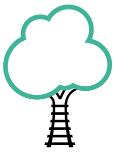
An assessment of how Network Rail has performed compared to the financial targets set out in the CP6 Business Plan. The measure is an aggregation of the three individual FPM measures from prior years (P&L, Renewals and Enhancements).

Enhancement Milestones and Accelerations

An index measure consisting of
(i) the per cent of milestones completed ahead of time or on time,
(ii) cost saved through application of SPEED principles, and
(iii) time saved through application of SPEED principles.

Effective Volumes

A measure of how much additional life our renewals activities add to our assets, which provides a medium-term view of sustainability. Calculated as a weighted aggregation of renewals volumes, where the weighting distinguishes between activity types and their different impacts on asset life.



Sustainable growth

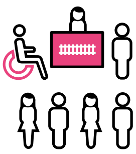
It remains the case that one of our priorities is to work to improve the railway infrastructure where there is a strong business case to do so.

We reported on our Environmental Sustainability Strategy 2020-2050 in 2021/22. It commits us to delivering a low emission railway (we've set ourselves a reduction in carbon emissions target to be met by the end of the current Control Period); a reliable railway service that's resilient to climate change, with improved biodiversity of plants and wildlife; and minimal waste and sustainable use of materials. See the Environmental Sustainability section on page 82.

Our KPIs:

Environmental Sustainability Index

An index representing performance against four key environmental measures:
(i) per cent of waste recycled,
(ii) per cent of waste diverted from landfill,
(iii) per cent reduction in carbon emission, and
(iv) per cent reduction in non-traction energy usage.



Customers and communities

We're continuing to improve the service we provide to our customers and communities by listening to what they need and responding appropriately. We've set ambitious targets to assist in terms of Putting Passengers First and being a more collaborative partner. We've also prepared detailed plans for various train station improvement works.

As reported last year, we're working closely with lineside neighbours - the people and businesses who live and work next to the railway - and looking to minimise the impact our track works may have on them. We've also continued to reduce the time it takes us to respond to any complaints we receive. We met our ambitious target for 2022/23.

Our KPIs:

Complaints Handling

An index calculated from
(i) the number of complaints,
(ii) the average age of open service requests,
(iii) quality assurance score for complaints handling, and post contact customer survey score.

People

We're reliant on our people to ensure that we can implement our vision to put passengers first. Our corporate values accord with our customer service mindset and our Putting Passengers First vision.

Our customer service mindset applies to Network Rail colleagues, irrespective of the part of the business they work in, and to other stakeholders. We have consistent communications with Network Rail employees to ensure that they are all aware of our vision and to encourage them to think about how best they can serve users of the railway.

We empower our people to always be safe, to care about the railway, its users and each other, and to put teamwork at the heart of all we do. Our corporate behaviours include accountability, challenge, collaboration and customer focus.

We recognise the importance of having a diverse workforce and of providing an environment in which everyone can feel content, achieve their best, and, we hope, feel proud to work for us. We're very supportive of mental health initiatives and have set a target to reduce work-related mental health absences.

We strive to ensure our people feel safe without the fear of discrimination. A diverse and content workforce will, we believe, reflect the diversity of our passengers and of the communities we serve and operate in. We believe this will enable us to understand and address what our stakeholders need from us.

Our KPIs:

Employee engagement
An index representing the proportion of employees surveyed who responded favourably to key questions on engagement.

Our operating model – how we're organised

See page 21 for an infographic showing our operating model on a page.

We're organised into five geographical regions, each with its own managing director who is a member of the Executive Leadership Team: see the map on page 33. Those regions are sub-divided into a total of 15 routes. As a result of our devolution programme, many decisions that were previously taken centrally, now take place at region or route level. The people making the decisions are closer to their passengers and freight users and have a better understanding of what they need. This enables us to deliver any changes more effectively.

Regions

The five regions lead on local resourcing strategy and planning activities, bringing together engineering capability and management of our assets: these include track, bridges, signals, cuttings, etc. The regions are accountable for improving the railway network within their geographies, and are responsible for aspects of longer-term planning, including timetables and project business case development.

For more information on each region, please see their individual reports:

Eastern on page **34**
North West & Central on page **40**
Scotland's Railway on page **46**
Southern on page **52**
Wales & Western on page **58**

Routes and Route Services

Routes are responsible for the daily running of the railway, thereby bringing decision-making closer to passengers. The responsibilities of our routes include maintenance and renewal work, for example carrying out repairs to our assets over the short to medium-term.

Our Route Services directorate supports our routes, regions and functions. This is accomplished by providing network operations, freight, telecoms and technical expertise, and a number of different customer-focussed services to regional customers and other parts of our business.

Route Services includes, among other teams: commercial and procurement; supply chain operations; business services; IT services; asset information services; and engineering services. The team oversees the delivery of national programmes and initiatives. It focuses on the provision of services for the benefit of passengers and also freight customers. Its work complements our Putting Passengers First vision.

Network-wide directorates

System Operator

This takes a whole-system view of the railway and provides industry leadership in the development of long-term network strategies and advice to funders. Its work integrates the railway service we hope to deliver and the production of the railway timetable.

Technical Authority

This directorate has network-wide accountability - in accordance with our Licence to Operate and Safety Authorisation - for setting and monitoring compliance with the policy, strategy and control frameworks relating to the following:

- safety
- engineering
- asset management
- security
- environment and sustainability.

Core professional functions

CFO directorate

This is made up of eight functions:

- Group Finance
- Property
- Legal and Corporate Services, including Corporate Commercial Services
- Audit and Risk
- Planning and Regulation
- Corporate Finance and Business development
- the Rail Investment Centre of Excellence.

These functions drive effective financial management and deliver the company's legal reporting and compliance requirements with our independent regulator - the ORR - and with third parties. They also lead the development and delivery of the network strategy and our business plan.

In addition, the CFO directorate provides professional leadership and assurance on capital delivery affordability and holds the business to account for delivering sustainable efficiencies.

Human Resources (HR)

This function leads the development and delivery of our people strategy and policies across the business. It works with the regions and functions, according to need and demand, to provide professional HR leadership and services. The team also delivers strategic transformation initiatives.

In this reporting period our HR function has played a key role in industrial relations, workforce engagement and in the implementation of workforce reforms. We explain further in the Corporate Governance report, page 118 (see the 'Modernising Network Rail' sub-heading on page 119) and in the How we Engage with Stakeholders report, page 109.

Communications

The Corporate Communications function is responsible for ensuring Network Rail presents a consistent narrative which places our customers at the heart of everything we do. It operates a business partnering approach with national functions and services; our devolved organisations have their own communications teams.

Measuring our progress

We assess how well we're doing in delivering our vision through our scorecard measures. Our progress measurements align with the strategic priorities described above. See the 'How we performed 2022/23' report on pages 22 to 27 for more information on our scorecard and the ways we measure progress.

OPERATING MODEL

In 2022/23 we continued to emerge from the unprecedented impact of the pandemic. We also faced the challenge of prolonged industrial action, during which our focus was on delivering a safe and reliable service for our passengers including key workers and freight users. Our operating model enabled us to serve and meet the changing needs of passengers and freight users and quickly respond to external changes.

We continue our journey to being more customer-focussed and service driven. Putting passengers first is our priority, with our efforts concentrated on delivering a more sustainable, efficient, joined-up railway that is on the side of passengers and freight users. Our operating model reflects that we all work directly for the benefit of passengers and freight users, or we work to support those that do.

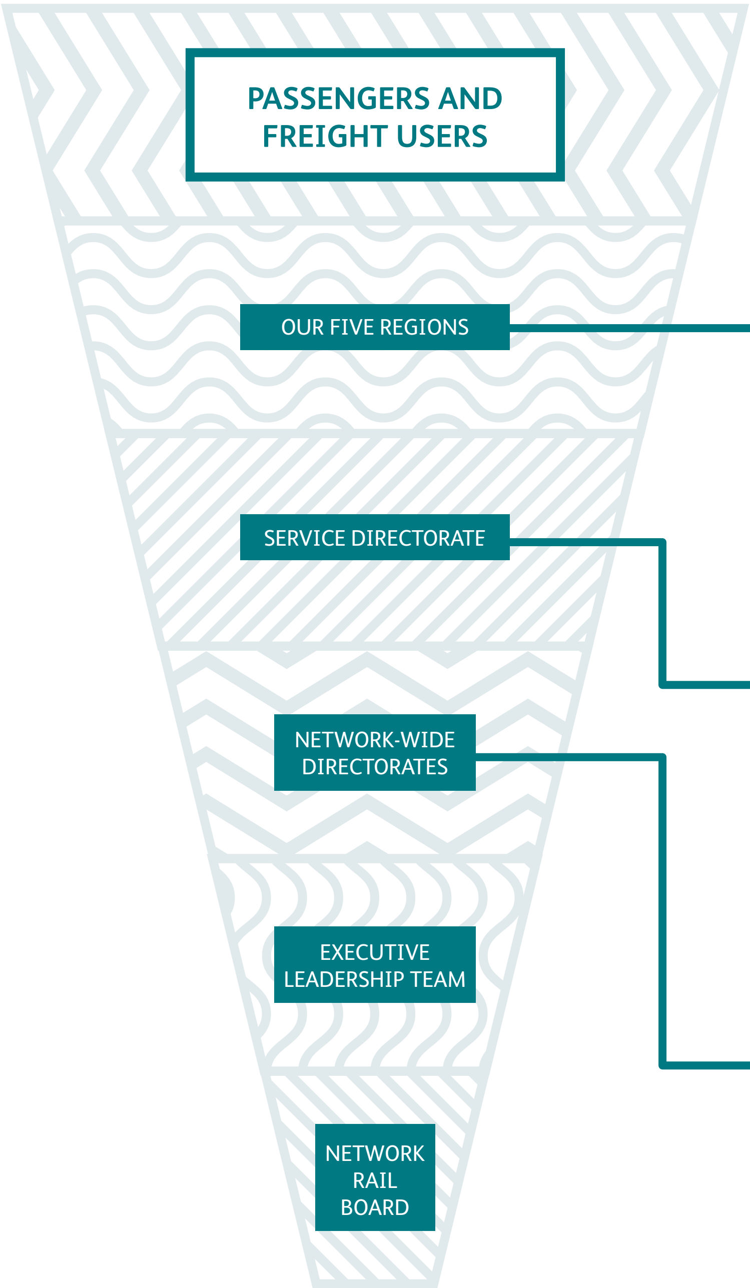
Our funding comes from:

- UK Government
- Transport Scotland
- Charging train operators to use our track
- Income from our property assets.

We are held to account by:

- The Office of Rail and Road - our economic and safety regulator
- UK Government: Department for Transport, HM Treasury
- Transport Scotland.

Our key stakeholders include (in no particular order): lineside neighbours, national and local government, our supply chain, train and freight operating companies, trade unions, Transport Focus, Rail Accident Investigation Branch, British Transport Police, industry partners.



Eastern; **North West & Central**; **Scotland's Railway**; **Southern**; **Wales & Western** - make sure services and decisions will meet the needs of their passengers, customers and communities.

These regions are sub-divided into 15 routes, whose focus is on running services and maintaining the railway infrastructure.

Route Services - leads network operations and strategy, and provides essential operational and business services.

System Operator - brings together timetables, network and industry strategies and plans.

Technical Authority - provides technical leadership and specialist expertise.

Finance, HR, Communications - provides financial management and professional support to our regions and functions.

HOW WE PERFORMED
2022/23

The National and Regional scorecard targets are shown in the centre circle. The figure below is the actual performance achieved. The achievement figure above the circle shows where actual performance sits within a taper range. Against each of our metrics we have a lower taper (our lowest permitted level of performance), a target (what we aim to achieve throughout the year) and an upper taper (the level at which we are considered to be outperforming).

Where we achieve anything below our lower taper, we get an achievement score of zero. Performing to target will get us an achievement score of 100 per cent. Outperformance (above target) means we're achieving above 100 per cent up to a maximum of 200 per cent.

Our national scorecard outturn for financial year 2022/23 was 20.4 per cent.

Safety

Passenger safety - train accident risk reduction (TARR)

	National	Eastern	North West & Central	Scotland's Railway	Southern	Wales & Western
Achievement	0%	20%	0%	80%	200%	100%
Target	95%	95%	95%	95%	95%	95%
Actual	86%	91%	75%	94%	100%	95%

Workforce fatalities and weighted injuries (FWI)

	National	Eastern	North West & Central	Scotland's Railway	Southern	Wales & Western
Achievement	0%	188%	0%	0%	0%	0%
Target	0.054	0.056	0.049	0.070	0.067	0.045
Actual	0.074	0.047	0.069	0.165	0.151	0.074

Personal accountability for safety (PAFS)

	National	Eastern	North West & Central	Scotland's Railway	Southern	Wales & Western
Achievement	0%	200%	0%	200%	0%	30%
Target	820	300	141	41	112	117
Actual	945	246	218	29	180	147

Passenger safety- train accident risk reduction (TARR): This measures achievement of the key risk reduction activities planned in the year, this includes vegetation, drainage and fencing management and other activities that monitor our infrastructure. The TARR metric is made up of milestones and volumes, all of which have individual achievement weightings and targets. A higher figure represents a better performance against target.

The target was to achieve 95 per cent over the year. We completed the year at 86.3 per cent, falling short of our targets for train-borne monitoring, which helps us detect track defects, generally due to having some fleet reliability issues which are we looking to improve next year and Road Vehicle Incursion (RVI) site management, which are sites which have high risk of vehicle intrusion across a third-party boundary onto the railway infrastructure. We continue to work with the highways authority to deliver interventions to mitigate this. We continue to outperform in our maintenance interventions that support our risk reduction.

Workforce fatalities and weighted injuries (FWI): This is a measure of workforce safety. This includes Network Rail employees, contractors and our supply chain. It is an index measure based on how many injuries or fatalities our people suffer while at work. Each incident is weighted depending on the severity and the measure is calculated per million hours worked. A lower figure represents a better performance against target.

We missed our target of 0.054 and felt the tragic loss of two of our contractor colleagues in Southern and Scotland. We remain committed to safety in all aspects of our work and continue to make further improvements. This year we recorded the fewest number of specified and non-specified injuries. We continue to embed our safety framework aimed at improving safety across our workforce and network and promoting safety culture.

Personal accountability for safety (PAFS): This is a measure of how well we're improving our culture and behaviours to help keep ourselves and our colleagues safe, as with FWI, this includes Network Rail employees, contractors and our supply chain. The measure assesses the combined reduction in breaches of Life Saving Rules (these are rules that are in place to keep us safe) and high potential events. In this metric a lower number is better as it means there have been fewer breaches and incidents.

Our performance in this area continues to improve. This is predominantly driven by a reduction in Life Saving Rule breaches due to a reduction in speeding offences. The roll out of the In Cab Safety System (ICSS), now in 97 per cent of the Network Rail vehicle fleet having realised the benefit in driver awareness and monitoring improvements.

Train service delivery

On time

	National	Eastern	North West & Central	Scotland's Railway	Southern	Wales & Western
Achievement	23%	44%	16%	57%	0%	0%
Target	73%	76%	70%	72%	74%	71%
Actual	68%	71%	63%	69%	68%	62%

Passenger satisfaction

	National	Eastern	North West & Central	Scotland's Railway	Southern	Wales & Western
Achievement	0%	14%	0%	0%	0%	0%
Target	7.94	7.91	8.01	8.11	7.86	7.93
Actual	7.72	7.73	7.73	7.99	7.64	7.74

Train service delivery

National	Eastern	North West & Central	Scotland's Railway	Southern	Wales & Western
Freight cancellations					
Achievement 0%	Achievement 0%	Achievement 0%	Achievement 0%	Achievement 0%	Achievement 0%
Target 1.17%	Target 1.22%	Target 1.08%	Target 1.58%	Target 1.40%	Target 1.10%
7.62%	7.63%	6.53%	6.95%	7.69%	9.40%

On Time: This measure is the percentage of recorded station stops called at early, on time, or less than one minute late. This measure is a mixture of various levers of performance including passenger numbers, timetable, dwell times, asset failure rates, extreme weather conditions and seasonal weather such as autumn leaf fall approximately 60 per cent are owned by Network Rail e.g., infrastructure failures, the remaining 40 per cent is owned by operators e.g., fleet failures.

We finished the year behind target (73.1 per cent) achieving 67.8 per cent of trains On Time. This has been a challenging year for the rail industry. We felt the effects of severe weather affecting our infrastructure, the extreme heat in the summer months meant that we enforced blanket speed restrictions in some areas. The very hot and dry weather affected our track, this included shrinkage of clay subsoils, with the soil moisture index lower than in summer 2018 and led to the imposition of track related speed restrictions, which although are reducing, are still in place in some areas of our network. Other factors have included the availability of train crew, track incidents and growth in passenger numbers affecting station dwell times. Regions have performance recovery plans in place for next year and are working with industry partners to establish a National Performance recovery programme.

Passenger satisfaction: This measure is reported as a mean score of passenger journey satisfaction on a scale of 1 to 10 (1 being poor, and 10 excellent). It's based on outputs from the 'wavelength' surveys: 'Overall, how satisfied were you with this particular journey on a scale of 1-10?' Passenger journey satisfaction finished the year with a score of 7.72 against a target of 7.94. Drivers for satisfaction continue to be, declining train performance, severe weather events that cause delays, and specifics such as not being able to get a seat. Given the strong correlation between On Time and Passenger Satisfaction, our scores are often reflective of any changes in performance. We have undertaken a study around the drivers for satisfaction in order to identify trends and areas of improvement. Some of our other initiatives aimed at enhancing the customer experience include; free toilet access in our managed stations, access to free water and a focus on accessibility to improve passenger experience.

Freight cancellations: This is the number of Network Rail and other operator caused cancellations, as a percentage of freight trains run. A lower figure represents a better performance against target.

The target was to maintain the level of freight cancellations at last year's strong performance. Industrial action had the most significant impact with 71 per cent of all freight cancellations (over 10,000 trains). This year also saw one of the hottest summer periods resulting in a large number of cancellations. Of all cancellations 8 per cent related to severe weather events. We ended the year at 7.62 per cent, worse than our overall target of 1.17 per cent (2021/22 outturn of 1.65). We're working with our regions and Freight Operating Companies (FOCs) to understand how we can improve our performance going forward.

Efficiency

	National	Eastern	North West & Central	Scotland's Railway	Southern	Wales & Western
Financial performance measure (FPM):						
Achievement	0%	0%	0%	0%	0%	0%
Target	£0m	£0m	£0m	£0m	£0m	£0m
	£-865m	-£286m	-£224m	-£98m	-£162m	-£219m
Enhancement milestones and acceleration						
Achievement	60%	112%	140%	52%	100%	111%
Target	100%	100%	100%	50%	100%	100%
	60%	112%	140%	26%	157%	111%
Effective volumes						
Achievement	13%	163%	0%	0%	120%	0%
Target	100%	100%	100%	100%	100%	100%
	91%	113%	89%	69%	104%	81%

Financial performance measure (FPM): This measure is an assessment of Network Rail's delivery against the previous year's business plan (2022/23). The measure is an aggregation of the three individual FPM measures (profit and loss, renewals, and enhancements).

We finished the year significantly behind our target for FPM by £865m. We've been impacted by a number of factors this financial year including industrial action, train performance and our rising renewals costs (work we do to operate and maintain our network).

Enhancement milestones and acceleration: This measure has two components. The first component is the number of milestones on enhancement projects completed ahead of plan or to plan, as a percentage of all milestones planned for delivery in the year. For reasons outside of our control, we had to move four of our original 25 milestones, out of 2022/23. We have delivered 17 of our 21 milestones either ahead of or in accordance with our planned delivery dates. These milestones are designed to enhance and improve the network. We continue towards achieving the milestones that are overdue.

The second component is acceleration, which relates to tracking cost and scheduling efficiencies in our projects. Acceleration is managed under project SPEED (Swift, Pragmatic and Efficient Enhancement Delivery) which has two core principles at its heart – to reduce the time and cost of project delivery. We are currently performing well with this initiative.

Effective volumes: This is a measure of how much additional life our track renewal activities add to our assets, which provides a medium-term view of sustainability. It's calculated as a weighted aggregation of renewals volumes, where the weighting distinguishes between activity types and their different impacts on asset life.

We have achieved circa 91 per cent of the volumes of our budgeted renewals work. Whilst additional works were delivered, particularly on Track Switches and Crossings, Bridges and Earthworks, this did not offset the impact of disrupted delivery (including impact of Industrial Action) on Track (Plain Line) and Signalling works. The under delivery of these works is replanned for recovery early in the future year.

Sustainable growth

Environmental sustainability index

	National	Eastern	North West & Central	Scotland's Railway	Southern	Wales & Western
Achievement	121%	156%	61%	116%	59%	157%
Target	100%	100%	100%	100%	100%	100%
	121%	156%	61%	116%	59%	157%

Environmental sustainability index: This is an index representing performance against four key environmental measures: percentage of waste recycled, percentage of waste diverted from landfill, percentage reduction in carbon emissions and percentage reduction in non-traction energy usage.

We're taking great strides in meeting out targets in this area. We've achieved 120.5 per cent of our target. We have had some data issues from energy suppliers which we've been trying hard to resolve to ensure our numbers are more robust and accurately reflect our position. We continue to work closely with our regions to achieve our targets. We are continuously employing sustainable solutions when undertaking new building works and looking for ways to improve our existing practices to meet our carbon and energy targets.

Customers and communities

Complaints handling

	National	Eastern	North West & Central	Scotland's Railway	Southern	Wales & Western
Achievement	96%	114%	0%	102%	140%	127%
Target	100%	100%	100%	100%	100%	100%
	96%	114%	31%	102%	140%	127%

Complaints handling: This measure is calculated from four separate elements: the number of complaints received, the average age of all open cases, the average score of our customer surveys and the average score of our internal case monitoring, relating to Network Rail's activities and not train services.

We achieved 96.4 per cent against our target of 100 per cent. Our customer contact levels are increasing following a return in services post Covid-19. The top complaint types we receive relate to noisy engineering work, no advance notice and driving/vehicle issues. We continue to seek ways to improve our relationship with our lineside neighbours and customers to address concerns raised and are aiming to launch a new digital notification service to help keep our communities informed.

People

	National	Eastern	North West & Central	Scotland's Railway	Southern	Wales & Western
Employee engagement						
Achievement 0% Target	57%	57%	57%	68%	60%	54%
	49%	51%	48%	57%	46%	46%

Employee engagement index: This is a measure representing the proportion of employees surveyed who responded favourably to key questions on engagement. It is calculated using the 'say, stay, strive' methodology, which measures if employees are speaking positively about the organisation, have a desire to be a member of the organisation and are motivated to exert extra effort that contributes to the organisation's success.

The full Your Voice survey in April - May 2023 provided an engagement score of 49 per cent. Encouragingly 60 per cent of our colleagues took part, which means a large proportion of colleagues provided valuable feedback. We have introduced some new initiatives to support our workforce these include; new employee focused policies launched – Carers policy and hybrid working policy, family focus employee network embedded with a view to create a workplace where all employees feel supported on their journey through family life.

Regional Performance

Each region is responsible for their own scorecard and performance. The individual region sections in this document will provide more detailed information on how they performed. Below is a high level summary of scorecard outturn:

Eastern: Scorecard performance was at 62 per cent. We have outperformed on our safety metrics, with fewer Personal Accountability for Safety (PAF) breaches and lower Fatalities and Weighted Injuries (FWI). We have also had strong performance against our Environment Sustainability Index and Effective Volumes targets.

North West & Central: Scorecard performance was at 43.8 per cent. We completed all our enhancement milestones and delivered for our customers through the customer scorecards; particularly, the implementation of joint safety initiatives.

Scotland's Railway: Scorecard performance was 62.7 per cent for the year. We've performed well in our personal accountability for safety, complaints handling and environmental sustainability index measures. Industrial action had an adverse impact on our financial position and freight.

Southern: Scorecard performance was at 50.3 per cent. We performed well in relation to our customer measures particularly complaints handling and in other areas including Train Accident Risk Reduction (TARR), and effective volumes. We've outperformed our targets in relation to our enhancement milestones.

Wales and Western: Scorecard performance was at 47.4 per cent. We've met our targets in relation to Train Accident Risk Reduction (TARR), enhancement milestones and environmental sustainability index. We also performed well in relation to our complaints handling measure.

CHIEF FINANCIAL OFFICER'S REVIEW 2022/23

JEREMY WESTLAKE

chief financial officer, 13 July 2023

Jeremy Westlake

The year ended 31 March 2023 was the penultimate financial year of Network Rail's five-year control period, covering the period from 1 April 2019 – 31 March 2024. This review will look back over the last year which has seen Network Rail impacted by a series of strikes by employees, severe weather events and changes in rail usage as we emerge from the pandemic.

Government continues to support our industry and our direct customers, the passenger and freight operating companies, have continued to pay amounts owed to Network Rail as they fall due.

The resolution of the industrial dispute, in March 2023, was vital to help the industry regain the trust and confidence of our customers and in doing so improve revenues and reduce the railway's reliance on taxpayers' subsidies.

Network Rail has reported a significant loss this year as a result of the impact of high inflation on the valuation of our RPI-linked bonds. These revaluations have no impact on our in-year cashflows. Cash generated from operations remains strong and every penny of these cashflows has been used to fund our railway investment programme.

Network Rail remains focussed on reducing its ongoing cost base and is on course to meet its five-year target of £4bn planned efficiencies.

Our original £3.5bn five-year efficiency programme was increased to £4bn as we sought to improve the level of efficiencies we are achieving from our 2019 cost base. We are on course to achieve the revised £4bn target and have delivered a further £0.9bn this year through productivity improvements, securing more efficient track access to conduct work, and through leveraging modern technologies. This means that over £2.9bn of the £4bn target has been achieved in the first four years of this Control Period, in line with our plans. So, despite many challenges this Control Period, we continue to deliver our plans and meet our challenging targets.

Key financial highlights

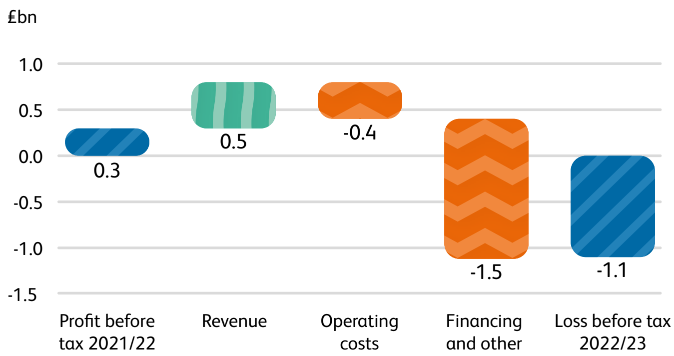
(The financial statements start on page 183)

- Revenue increased to £10.0bn from £9.6bn. Increases in regulated charges to train and freight operators, retail income from shop units at stations and revenue grants from governments were offset by less train performance regime income, mainly as a result of compensation paid to train and freight operators for cancelled services due to industrial action, and the impact of severe hot weather in summer 2022
- operating costs increased from £6.6bn to £7.0bn as a result of inflationary pressures
- operating profit was £3.0bn, the same as in 2021/22
- loss before tax was £1.1bn (2021/22: profit £0.3bn). The decrease relates to increases in the value of Retail Price Index (RPI)-linked bonds previously issued to fund the railway
- investment was £6.5bn compared with £6.1bn in 2021/22
- net debt increased to £59.1bn from £56.1bn due to increases in the valuation of RPI-linked bonds.

Financial summary

This review will focus on financial performance in 2022/23. Despite falling behind our Financial Performance Measure (see below) by £574m we achieved operating profits of £3bn both this year and last. However, this year we made a loss before tax of £1.1bn (2021/22: profit £0.3bn) The decrease was due to the additional indexation uplift of £1.4bn when valuing the legacy RPI-linked debt. The non-cash increase in the indexation uplift is due to inflation being much higher compared with last year. Revenue was £0.5bn higher than last year and operating costs showed net increases of £0.4bn, through inflationary pressures and additional depreciation.

Profit movement (£bn)



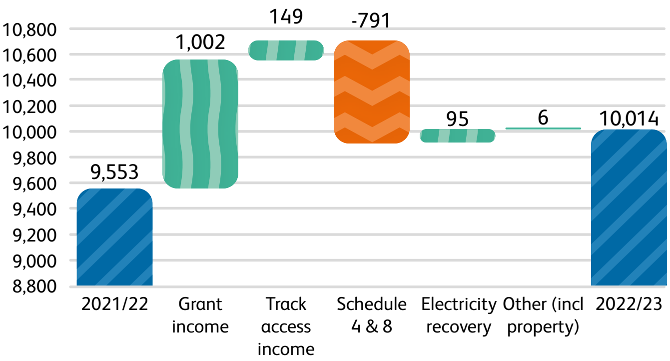
The graph above shows how profit moved from this year to last showing a £0.5bn increase in income, an increase in operating costs of £0.4bn and Financing and other costs increasing by £1.5bn. The result being profit before tax fell from £0.3bn to a loss of £1.1bn.

Revenue

Revenue increased in the year to £10,014m (2021/22: £9,553m), an increase of £461m. Grants increased by £1,002m as we required more grant funding to meet operating and finance costs. For further details, see Grants recognition policy on page 190. Track Access Charges increased by £149m largely due to RPI indexation of agreements. However, passenger franchise revenue was reduced by Schedule 4 and 8 performance and access regime income decreasing in the year by £791m. Train performance declined largely as a result of industrial action, weather events and increased traffic as the timetable returned to more normal levels.

Our other income increased by £6m as a result of the recovery in retail income from shopping units at stations as we emerge from the pandemic, being offset by freight revenue reductions as a result of the impact on performance of strikes, weather-events and increased traffic. Network Rail passes through the electricity costs for the railway network, and this amounted to an additional £95m this year.

Revenue movement (£m)



The graph above shows how revenue changed year-on-year. This shows an increase in Grant income of £1,002m, an increase in track access charges of £149m, a fall in Schedule 4 and 8 incomes of £791m, an increase in electricity recovery of £95m and an increase on other income (including property) of £6m. As a result, revenue increased from £9,553m last year to £10,014m this year.

Operating costs

Net operating costs this year were £7,040m. This increased by £446m from last year's expenditure of £6,594m, net of efficiencies. The year-on-year movement was largely driven by higher energy costs of £115m including electricity costs for the railway network of £95m, £149m on external maintenance costs including, strengthening and delivering core maintenance, as well as cost inflation on plant materials and utilities, and Digital Railway costs incurred in freight and train operator assets; staff costs reduced by £144m (see below). There was also a reduction in the cost of Network Rail teams used to deliver capital projects by £121m. In addition depreciation (net of grant amortisation) increased by £150m reflecting increased investment in the railway.

Employee costs

Staff costs reduced by £144m, around five per cent. This was because of the reduction in headcount, from initiatives such as modernising management, offset by pay settlements in the year.

Tax

We have significant brought forward tax losses (£2.3bn), not recognised as a tax asset in the accounts (see note 9 to the financial statements). As we made a loss this year no corporation tax is payable. We are also due a refund for tax paid in 2021. The tax credit of £504m (2022: charge of £925m) comprises of a corporation tax £50m credit (2022: £10m charge) and a deferred tax credit of £454m (2022: charge of £915m.)

Financing costs

Finance costs for the year were £4,198m. This is higher than last year's charge of £2,844m, largely because of the impact of much higher inflation, increasing the value of RPI-linked bonds and higher prevailing interest rates.

Investment

This year we delivered £6.5bn of railway investment (2021/22: £6.1bn) in the form of renewals and enhancements. Enhancements that will increase the capacity of the network have amounted to £2.4bn (2021/22 £2.2bn). This included £1.8bn of DfT-funded schemes, £0.2bn funded by Transport Scotland and £0.5bn of other grant-funded projects.

Major schemes included TransPennine improvements, East West Rail, Midland Main Line improvements, East Coast Main Line improvements and in Scotland, improvements relating to the Inverness to Aberdeen and Edinburgh to Glasgow lines.

All of these schemes will improve connectivity, reduce Great Britain's carbon footprint and drive economic development. For example, the TransPennine Route Upgrade will improve journey times, enhance the reliability of this busy part of the network and enable a reduction in greenhouse gas emissions in the region.

We have also invested £4.0bn (2021/22: £3.9bn) on renewals this year. This included £1.1bn of track renewals, which delivered 830km of new track and replaced nearly 300 switches and crossings. In addition, £0.9bn was spent on signalling renewals, £0.7bn on structures, including around 13,000 square meters of bridges, £0.4bn on electrification assets, £0.3bn on buildings and property including improving stations for passengers, and £0.6bn on other renewals including telecoms, IT, plant and equipment, drainage, intelligent infrastructure and faster electrical isolation equipment. In the year, we delivered 91 per cent of our seven key renewal volumes (2021/22: 104 per cent).

Financial performance measures and efficiency

Financial performance measures and Efficiency are two methods of measuring how Network Rail has delivered better value for money for our customers and funders. Our key performance indicator, the financial performance measure (FPM), measures our performance against the regulatory determination and our in-year targets. This means our baselines for FPM already include the targeted efficiency savings for the Control Period. FPM also includes revenue whereas efficiency (originally £3.5bn) focuses on our running costs.

Meanwhile Efficiency, as required to meet the £4.0bn target, is measured against the like-for-like costs at the end of the previous Control Period. Efficiency reporting is focussed on the day-to-day costs of running the railway (operating expenditure, maintenance and renewals) while the financial performance measure assessment also includes turnover and enhancements. We are constantly working to reduce the cost of the work that we deliver.

Overall, FPM finished £865m behind our plan (2021/22: £41m ahead of targets). This £865m result was the net position as we underperformed on the profit and loss target by £574m, the renewals target by £271m and the target on the enhancement programme by £20m.

Profit and loss FPM was behind target primarily due to higher train delay costs as a result of industrial action and extreme hot weather in summer 2022, partially offset by savings on controllable operating costs from various efficiency initiatives throughout the organisation.

Renewals' underperformance of £271m on expenditure of £4.0bn was due to lost productivity as a knock-on impact of the strikes, some sites being more complex than expected and requiring additional resources to deliver works.

The £20m underperformance in enhancements is due to deliverability complexities and design changes offset by various initiatives such as better contracting strategies.

Looking at our five-year efficiency programme for operations, maintenance and renewals, we built on the first three years, with further savings of £949m, meeting our target in the fourth year of the Control Period, adding to over £1.9bn achieved by the start of this financial year. So, it is now costing more than £2.9bn less, on a like-for-like basis, to run the railway in this Control Period than the prevailing cost base in 2018/19. Key elements of this programme are commercial savings, early supplier engagement benefits, improved access, industry reform, and productivity related gains from modern technologies.

Enhancement efficiencies also remain on target to deliver £2.6bn in cost reductions, making our delivery around 19 per cent cheaper across the control period than prevailing rates in 2019.

Financial framework

The railway network that we own and have a licence to operate is included in the accounts at a value that represents what a third-party purchaser would pay for it. This valuation uses an income approach. The basis of this valuation is set out in note 10 to the accounts and comes from an assessment of the cash flows that are forecast to arise from the asset.

Cash flows arise from the asset as it amortises. The starting point for this valuation is the regulatory asset base (RAB).

Subject to certain criteria established by the ORR, each year capital expenditure is added to the RAB, and amortisation is deducted. ORR uses amortisation to calculate the regulatory income requirement and our charges to customers or grants from governments.

The impact on the RAB of index inflation at £8.2bn, partially offset by the rate at which the RAB amortises faster than depreciation of £1.8bn and an adjustment for the difference between the market cost of capital and regulatory return of £1.7bn, resulted in the valuation of the railway network increasing by £4.8bn (2021/22: increase £1.8bn). After considering the changes in valuation, depreciation, additions and disposals, the year-end valuation of the railway network was £82,733m (2021/22: £75,890m).

An alternative valuation method for the railway network, depreciated replacement cost (DRC), is used in DfT Group accounts. Applying a DRC valuation to the railway network results in a higher carrying value than Network Rail's income-based valuation, as it reflects the replacement cost for the entire network.

This includes significant elements funded before the RAB was introduced, such as earthworks, long-life structures, and operational land. Together, they comprise much of the value for DRC purposes and are essential to the operation of the railway network.

This cost-based approach therefore exceeds the monetary returns receivable by the holder of the railway network licence. The DRC approach is used in Network Rail's accounts solely to derive the weighted average asset life of the railway network which is used to calculate the depreciation charge.

Financing arrangements

Since becoming a public sector body in September 2014, Network Rail has borrowed directly from Government and no longer issues debt on the capital markets. Investments are funded by grant and from cash generated from operations, and fresh borrowing is used only for refinancing maturing loans. The regulatory settlement for CP6 provides strong security for future income and the DfT loan agreement provides a robust loan refinancing platform for all of Network Rail's debt portfolio. We have not undertaken any new net borrowing during this control period and do not expect to do so in the next year. Instead, our activities are funded by grants from DfT, Transport Scotland, and revenue from train and freight operators.

We have a loan facility with DfT for £32.3bn, which is used to refinance maturing government and external debt in the period 2019-2024. During the year ended 31 March 2023, we borrowed £2.7bn using the DfT loan facility to refinance maturing borrowing with DfT of £2.7bn. RPI-linked bonds increased in line with the RPI index. As a result, net debt rose from £56.1bn to £59.1bn.

Grant agreements with Department for Transport and Transport Scotland

Separate grants are in place between Network Rail Infrastructure Limited and DfT/TS. These grants are:

- with DfT: network grant; enhancements grant; GBRTT grant; British Transport Police grant; financing costs grant for DfT interest; financing costs grant for external interest (bonds and swaps); and corporation tax grant
- with TS: network grant and enhancements grant.

Risk management: interest rates and currency

We manage our interest and foreign exchange risk by using derivative financial instruments (hedges). All these arrangements were entered into prior to us becoming an arm's length public body and will reduce over time as our external debt is retired.

We measure our hedges for accounting purposes at their market value as required by International Financial Reporting Standards. A market value is determined by comparing the original value of the hedges against the current market rate. We do not intend to trade these hedges but use them to minimise our financial risks.

If the hedges are economically effective (i.e., they offset changes in the cost of existing and/or future loans), their value at any point in time should not be a key focus when assessing our financial position. By qualifying to use hedge accounting rules, we match gains or losses in the market value of hedges to fluctuations in the hedged item (i.e., Bonds). The gains on debt and derivative valuations taken through the income statement were £92m (2021/22: £157m). This gain represents the reduction of the fair value of interest rate derivatives liabilities as swaps mature.

Pensions

Network Rail is party to two defined benefit pension schemes. Costs are shared with pension scheme members on a 60:40 basis. Pensions are measured differently for IFRS than for actuarial funding reports. IFRS is more conservative, and discounts expected future liabilities to a present value, using a 'risk-free' borrowing rate, and compares this with current asset valuation. Our accounting deficit as at 31 March 2023 decreased to £215m (2021/22: £2,259m) as changes in financial assumptions were augmented by gains on assets. On a funding basis, the schemes have seen the value of their assets increase in the year and they are still fully funded, meaning that the value of pensions assets is expected to grow to meet pension obligations as they fall due. Both Network Rail and members continue to contribute to the schemes.

Post balance sheet events

Since the year-end there have been no post-balance sheet events.

Summary

Network Rail will continue delivering the efficiency plans that have helped us to shrink the cost base over the last four years by around £2.9bn. Our achievements so far mean that we are on target to meet our £4bn five-year stretch target. Given the huge challenges faced by the rail industry over the last four years this is a credible performance and shows evidence that a focus on delivering value-for-money is embedded in our way of doing business.

This has put Network Rail on a firmer footing as we look forward to our next five-year control period (CP7).

Government has committed increased funding in CP7. Nevertheless we expect that five year period to be more challenging due to inflation and the need to keep investing to maintain asset condition.

Our strategic business plans are in place for CP7, showing how we set out to deliver the railway the country needs whilst achieving further efficiencies. In doing so making effective use of the funds committed by governments in Westminster and Holyrood.

The railway continues to show it can adapt in a world that has changed significantly since we embarked on this control period in 2019.

NETWORK RAIL REGIONS AND ROUTES

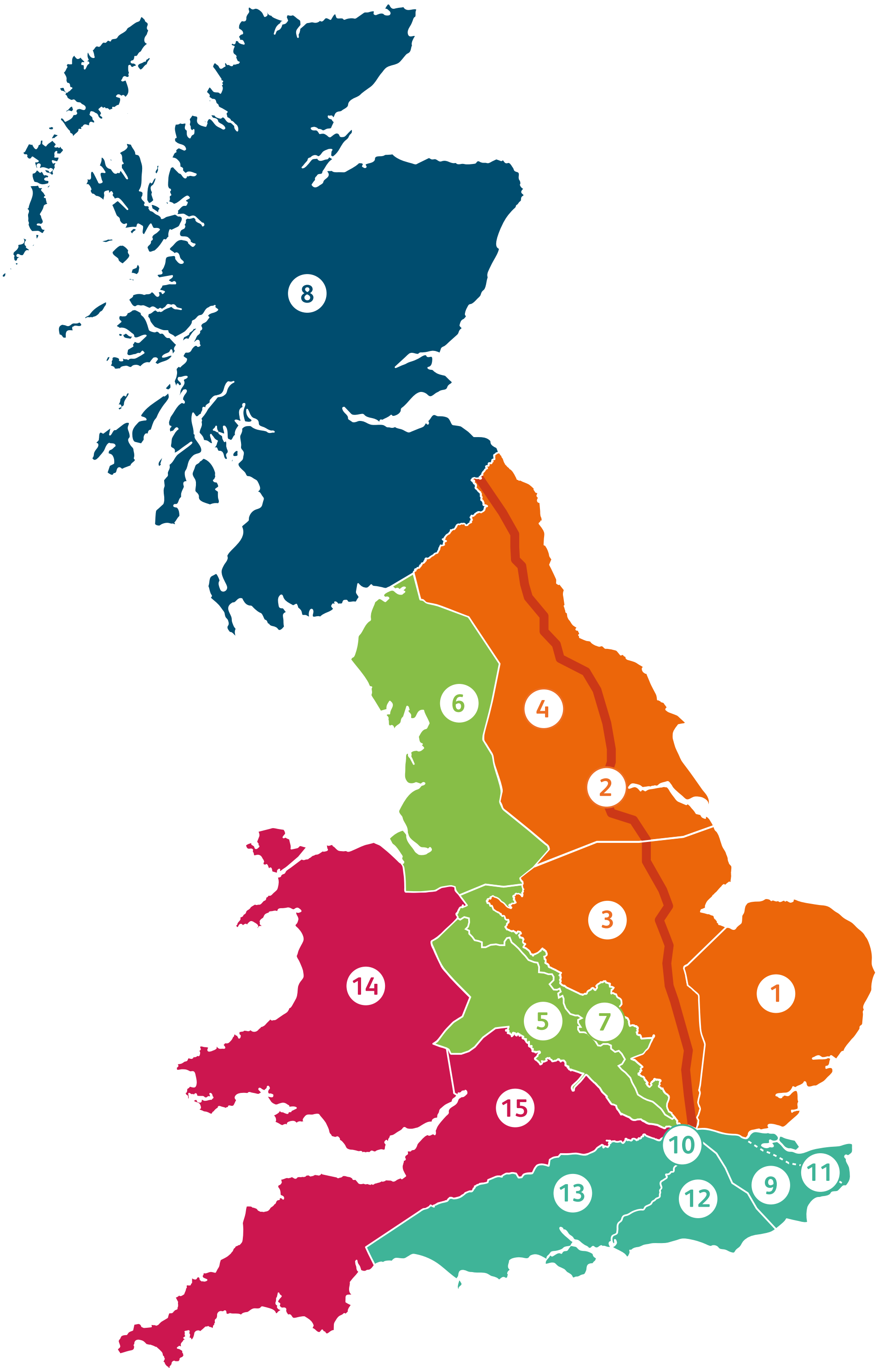
Eastern
1 Anglia Route
2 East Coast Route
3 East Midlands Route
4 North & East Route

North West & Central
5 Central Route
6 North West Route
7 West Coast South Route

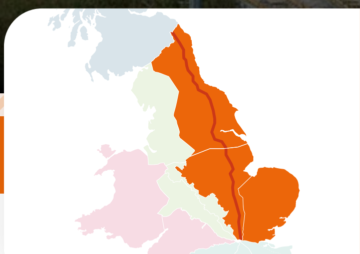
Scotland's Railway
8 Scotland Route

Southern
9 Kent Route
10 Managed Stations
11 Network Rail High Speed
12 Sussex Route
13 Wessex Route

Wales & Western
14 Wales & Borders Route
15 Western Route



EASTERN



Rob McIntosh
managing director, Eastern
13 July 2023

Eastern is formed of four devolved routes: East Coast, North & East, East Midlands and Anglia. Collectively, they span approximately one-third of the network, covering a broad stretch of England from the Essex coast to the Scottish border, serving key population centres including London, Leeds, Newcastle, Cambridge, Derby, Norwich and Sheffield. The region is a diverse mix of commuter routes, as well as long-distance high-speed services on the East Coast Main Line connecting Scotland and England's capital cities. Eastern is also the backbone of the UK freight rail network, connecting UK cities to major ports at Felixstowe, Immingham, Harwich, Tilbury, and London Gateway.

Safety

2022/23 has seen positive progress on our safety performance, demonstrated by 50 per cent improvement in our headline performance indicator the Fatalities Weighted Index (FWI) now at the lowest historic level recorded of 0.047, and a 15 per cent reduction in breaches of our life saving rules. However, there's still much more work to do to make it inevitable that everyone goes home safe and well every day. Significant changes made this year to enable this journey include:

- enhanced leadership support to those investigating accidents and events, including the creation of a review panel to look at every high potential (HiPo) safety event
- helping those looking after specific health, safety, and environmental risks to better understand findings of assurance activities like our inspections and audit regimes that are used to plan improvements and direct further assurance
- using the opportunities presented by greater devolution to harness local risk assessments and safety plans to empower those most directly in control of such risks to better control them
- further embedding our regional campaign aligned to the Track Worker Safety Task Force to eliminate the practise of working on the track whilst relying solely on a person to spot and warn of an approaching train.

These build on work completed last year to improve cultural and organisational maturity through a regionally coordinated culture change framework and adoption of the Risk Management Maturity Model (RM3) which was developed by the Office of Rail and Road (ORR) in collaboration with the rail industry.

We continue to deliver on our promise to look after the health and wellbeing of our people and successfully meeting our target of 30 per cent of all managers undertaking mental health awareness training in the year has been a challenge due to the impacts of industrial action. This work should help us going forward to take more proactive steps to spot and treat signs of ill health before a person takes time off.

In relation to passenger safety, we've delivered 91 per cent (vs target of 95 per cent) of our initiatives aimed at Train Accident Risk Reduction (TARR) plans this year. In doing so we have attained a decrease in our lead indicator of public safety, the Public Train Accident Precursor Model, of 0.1 FWI (now standing at 0.63). By working with our railway partners to manage the risk they share with us we have maintained a downward trend in train accident High Potential (HiPo) events compared with last year.

We are proactively responding to the recommendations emerging from the Carmont tragedy (2020) and subsequent investigation. A key aspect of this is a step change in our activities and resources to support greater levels of drainage inspection and maintenance across our region and ensure effective exchange of information between key parties.

More generally, we continue to engage with our lineside neighbours and wider community to reduce the risk of trespass, suicide, vandalism, and level crossing misuse. 2022/23 witnessed a noticeable increase in cable theft which is not just an issue for train performance and finances but a significant public safety concern.

Train service delivery

2022/23 has been a difficult year for our railway where we have strived to deliver for our passengers amidst a period of considerable and, in some cases, unprecedented challenges. At the start of the year we challenged ourselves to maintain the On Time performance achieved in 2021/22, setting a target of 75.6 per cent. The outturn achieved at the end of the year has failed this target coming in at 70.6 per cent with only East Midlands Railway and Greater Anglia bettering targets for On Time and cancellations in the year. All lead operators serving the region have seen their On Time moving annual averages (MAA) fall from the start of the year, and although Eastern continues to have the highest On Time MAA nationally - with Anglia route continuing to deliver the highest On Time performance across all routes on the network - this is recognised as an unsatisfactory performance outcome. To compound this, the ORR have escalated a concern to us around declining passenger and freight regulatory performance measures – both of which sit below the regulatory floor set. In 2022/23 too many areas of our performance simply did not meet the standards our passengers and users deserve. However, we have robust performance improvement plans in place for all of our routes, which will be a primary focus for us and operators in 2023/24.

The volume of train services operated across Eastern remains below pre-Covid levels and has been impacted throughout the year by industrial action affecting many operators as well as Network Rail. In some circumstances this has led to an increase in unplanned cancellations due to causes such as train crew availability, and in other periods full strike action led to significantly reduced train services over prolonged periods.

The performance and resilience of our network's infrastructure - as measured by the number of asset and equipment failures creating train delays known as Service Affecting Failures (SAFs) - has been mixed in 2022/23 with almost all non-track asset categories bettering their targets, such as our signalling and electrification equipment. Track faults (including where we have imposed temporary speed restrictions) have come in over target by 21 per cent and are adrift from the levels achieved in 2021/22.

The extreme hot weather experienced in summer 2022 generated a high volume of delays and cancellations, as speed restrictions and unprecedented main route closures (e.g., The East Coast Main Line in July 2022) impacted the train service across the region. The longer-term effects of a hot, dry summer have been visible as incidents linked to earthworks and track condition have impacted performance in the following months, especially in areas of certain soil types such as those found in parts of the southeast of the region. Our commitment to offering a safe, reliable service throughout the seasons demands increased resilience to warmer and wetter winters, hotter and drier summers, and more frequent and intense weather events. Significant progress has been made on improving our weather resilience plans, taking advantage of lessons learned in 2022, and we are confident of an improved performance across the network in 2023.

The impact of external incidents such as trespassing, cable theft, and vandalism has continued to be the leading cause of train service delay on North & East and East Coast routes, and we remain committed to working with industry partners and stakeholders to prevent and limit the impact of such events. Equally, the knock-on effects of industrial action leading to a lack of driver availability and missed shifts with on track plant/machines have also exacerbated the situation for passengers.

Through our Control Period 7 (CP7) planning process we are looking to arrest the decline in performance that we have seen since the end of the pandemic and deliver consistent high performance over the next six years.

Efficiencies

Eastern region has committed to £1bn of efficiencies across our Operating, Maintenance and Renewals (OM&R) funding through CP6 by adopting new technology, ways of working, optimising access strategies, and modernisation amongst other initiatives. The region has exceeded the planned efficiency trajectory for 2022/23 by £15m, in delivering £279m of efficiencies this year. A key area of focus has been developing our CP7 efficiency aspirations with internal stakeholders as well as firming up the confidence in our plans for CP6 year 5 against a backdrop of considerable financial risk.

We've also made progress against our enhancements efficiencies programme which delivered £332m in 2022/23 and is now planning to achieve £1.4bn of efficiencies across CP6. One key enabler of this is Project SPEED (Swift, Pragmatic, and Efficient Enhancement Delivery) which seeks to apply lean principles to cut the cost and duration of capital delivery projects.

This year we've invested £3.4bn to operate, maintain, renew, and enhance our network, which was in line with the annual budget. However, our revenue (£0.4bn) was significantly below budget by £0.2bn. This was dominated by Schedule 4 & 8 compensation which has been impacted by prolonged industrial action and a challenging year for train performance.

Overall, Eastern delivered 113 per cent of the renewals key volumes annual budget, with considerable outperformance achieved across earthworks, structures, and track switches and crossings (S&C), standing at 232 per cent, 128 per cent and 121 per cent respectively. Key projects delivered this year include complex work on the Royal Border Bridge in Northumberland and digital signalling implementation around London. Our most notable key volume metric failing to hit target was in overhead line equipment renewals, in which we only achieved 73 per cent of target levels in the year.

Our focus for year five of the control period will be driving workforce reform plans to fruition and managing our challenging fiscal targets in the face of considerable cost inflation and shortfalls in turnover sustained in 2022/23. Collaboration with the wider industry to develop cross industry efficiencies and maturing our plans for CP7 will be key to supporting this and our financial sustainability.

Sustainable growth

Over the past year we've continued delivering significant enhancements, with several major interventions providing a better network for our customers. The next phase of the

electrification of the Midland Main Line is now underway between Kettering to Wigston.

The TransPennine Route upgrade has delivered some significant milestones this year. This includes the approval of the largest Transport and Works Act Order (TWAO) Network Rail has ever promoted, giving powers to complete the work between Huddersfield to Westtown (Dewsbury), increasing capacity as well as significant station and track work to achieve higher line speeds, longer platforms, and electrification. Additionally, the programme has completed two major blockades at Morley, moving and rebuilding an accessible footbridge making way for new track alignment, and at Stalybridge to remodel the track to give greater operational flexibility and higher line speeds.

Our East Coast Digital Programme (ECDP) has secured over £1bn of new investment and is now well into the delivery phase that will see digital train operations start in 2023. Wood Green, New Barnet, and Northern City lines have completed which provides a vital step towards operating passenger trains with digital signalling between Finsbury Park and Moorgate later this year. Multiple digital upgrades to vehicles are underway across the passenger, freight, on track machine, and heritage and charter sectors and over 150 cover drivers have been recruited to support conversion to a digital railway.

In our Anglia route, the Barking-Riverside extension successfully entered into service in July 2022 which extends the North London Line to an exciting new development generating growth and housing in the area. Working collaboratively with operator Greater Anglia, we have completed the necessary infrastructure to enable the full delivery of new rolling stock revolutionising passenger experience on the route. Works have also commenced on two flagship schemes to deliver a new station at Cambridge South and at Beaulieu Park in Essex which will become the first railway station to be built on the Great Eastern Main Line for over 100 years.

Our teams continued to deliver station improvements, including a new footbridge at St Albans which is helping to ease congestion on Thameslink's busiest train station north of London. Luton Airport Parkway Direct Air to Rail Transit (DART) was formally opened to the public in March 2023, in addition to an accessibility upgrade at Northallerton, offering step-free access to the station's platforms. At Finsbury Park station, we have installed two new lifts, allowing step-free access from the street to the National Rail platforms for the first time.

Our business development activity continues to grow; we've attracted £324m of new third-party investment to the railway this year, which takes our total to over £860m in the last four years.

Customers and communities

In 2021/22 we made significant improvements to the service we provide our neighbours and stakeholders. We're pleased to report these have been maintained throughout this year.

We currently have around 330 active enquiry cases which is comparable to levels we had at the end of last year, and one we feel is a manageable caseload. This means we can continue to respond to our neighbours promptly with active requests currently tracking at an average of 24 days against a target of 25.

We've engaged political stakeholders across the region, meeting 144 MPs and 163 senior stakeholders. Additionally, we sent over 400 proactive updates to these groups about our work throughout the year. We've responded to 300 pieces of correspondence from MPs, taking an average of seven days, and 196 pieces of other senior stakeholder correspondence replying in an average of just five days.

Our managed stations responded to the death of Her Late Majesty Queen Elizabeth II, ensuring extra staff were on hand to guide and support passengers. We developed enhanced customer messaging, including digital and physical posters in stations to support those who wished to pay their respects. Body worn cameras were introduced at Liverpool Street station this year as part of the 'Be Kind' campaign for passengers to recognise the team as 'real' people. The take up of this among staff has been successful - currently at 90 per cent - and is being monitored with a view to consider wider expansion across our managed stations.

Looking forward, we're working with cross-industry partners to improve how we communicate with passengers during disruption to normal service. This will include a new app to give customers access to an on-line dashboard via a QR code; providing real-time train information, including arrivals, departures, onward travel options, and station facilities.

People

Our people strategy is focused on attracting, developing, and retaining the best people and is delivered through four pillars – leadership capability, talent and succession, strategic workforce planning, and industrial relations. Underpinning the four pillars is diversity and inclusion, which is at the core of everything we do.

Our diversity amongst under-represented groups continues to improve. In 2022/23, the proportion of female employees increased by 1 per cent to 15.65 per cent and those from Black, Asian, and minority ethnic groups by 0.5 per cent to 7.8 per cent. Our new Diversity & Inclusion programme was implemented in late 2022 and focuses on reasonable adjustments, improving workplaces, non-inclusive behaviours, learning to improve, and improving recruitment process. Actions in these areas will improve engagement, performance, safety, and attract and retain people from all backgrounds.

We need the right number of people, with the right skills, when we need them, to allow us to deliver our strategic plans. Route strategic workforce planning has been embedded in the last 12 months to mitigate demographic risk and address local business challenges. Our new capital projects and programmes strategic workforce planning programme was implemented to identify and address long-term future workforce demand and skills shortages in Eastern and its supply chain. The programme is increasing the size of our future talent pipeline through apprenticeships and other early careers roles, developing a more pro-active approach to recruitment and attraction and sees Eastern take a lead in facilitating the build of supply chain capability using the Industry Wide Apprenticeships (IWAs) initiative. Apprenticeship starts increased from one per cent of headcount in 2021/22 to over three per cent in 2022/23 and we're committed to increase this further, aiming for new starts equal to five per cent of headcount in 2023/24,

One of our biggest challenges is to improve leadership capability. Capability assessment and personal development planning aims to unlock the potential of our leaders, ensuring they have the right skills and behaviours to embed safety, performance, and cultural transformation across our business. All 1,200 line managers will have been assessed and have a development plan in place by June 2023. A bespoke leadership development programme, developed by our four routes, will be critical to ensuring that maintenance front-line managers have the skills and capability to deliver and realise the benefits of maintenance modernisation during 2023/24. Longer-term, our focus will be defining what we mean by 'great leadership' and how we continue to raise the bar.

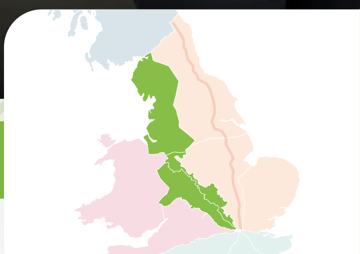
Year ahead 2023/24

Looking ahead to next year, our focus as ever will be on sustaining and improving the safety of our railway for users and our people. However, we also look forward to embedding key workforce reforms to our business including implementing the maintenance reform practices that have been developed and consulted extensively in the last year. At the same time, we recognise we must take urgent steps to arrest the recent decline in train performance trends for our customers and work with operators and the ORR to communicate and enact our plans to address this.

CASE STUDY

Safety has always been our number one priority, that's why in last year's annual report we stated we would focus on our safety culture and performance in 2022/23. Last year saw some great strides forward in embedding track worker safety practices, and this year has also shown encouraging regional safety statistics. Highlights include our Fatality Weighted Index (FWI) where we've finished the year at 0.047 compared to 0.094 at the end of last year. Our record of high potential (HiPo) events this year is 8 versus 11 in 2021/22 marking a 27 per cent improvement. Similarly with our lead workforce indicator, our Life Saving Rules breaches, we recorded 166 instances versus 207 in the same period in 2021/22, again over a quarter less. This was in part achieved via technological tools such as our in-vehicle fleet telematics systems to help drive down speed limit breaches, but also complemented by the persistence of safety culture campaigns and awareness in the last 12 months.

NORTH WEST & CENTRAL



Tim Shoveller
managing director, North West & Central
13 July 2023

North West & Central (NW&C) is the 'Backbone of Britain' – the busy mixed-use West Coast Main Line is the economic spine linking London, Birmingham, Liverpool, and Manchester. We work with our Train and Freight Operating Company partners to connect workers with jobs, goods to market, and people to their loved ones. Every week we move food, consumer goods, building materials, and fuel around the country. We serve long-distance business travellers, commuters, and visitors to world-beating destinations.

Safety

Safety, health, and wellbeing performance is measured across three areas: workforce, passenger, and public. Our performance is tracked via a mixture of lagging indicators including the Fatalities and Weighted Index (FWI), personal accountability for safety and sickness absence, and leading indicators including safety conversations, on-site protection levels, and awareness events. Broadly, the performance of lagging measures deteriorated over the year, whilst our leading, proactive measures improved.

Passenger safety is primarily measured using station accidents and the Train Accident Risk Reduction (TARR) indicator. Station accidents reduced slightly this year with our teams responding well to the change in passenger usage to more leisure travel. We continued to improve station safety this year, with a focus on accident data, education, awareness, and process improvements. TARR volumes and milestones were challenging, leading to mixed performance. We met or exceeded our targets for fencing, vegetation management, high risk scour sites, signal over-run assessments (a process that assesses the risk, consequences, and controls of trains passing signals at danger), and professional competencies. However, we fell short in completing drainage surveys due to the impact of industrial action, the removal of hazardous trees and reducing track geometry repeat twist faults and rail vehicle incursion sites.

Public safety over the year was mixed. We have worked to address level crossing risk by installing miniature warning lights at passive level crossings (crossings without warnings or protection when a train is approaching) and by closing a level crossing at Cofton. However, safety risk at level crossings rose slightly due to near misses, user error, and deliberate misuse. Further installations of warning lights at high-risk passive crossings will address these issues.

Workforce accidents increased with more than half of our specified injuries from slips, trips, and falls, whilst the remainder involved third-party road vehicles. The Track Worker Safety programme successfully improved workforce safety on site, with fewer unassisted lookout protections, the closure of the ORR's improvement notice, and continued implementation of technology to protect our workforce. Our personal accountability for safety measure was averse, primarily because of speeding in road vehicles and near misses with trains involving track workers. We'll continue to develop the programme and deploy greater use of automatic protection methods on site, alongside implementation of the In Cab Safety System (ICSS) to improve road safety.

Record numbers of colleagues have engaged with health assessment programmes this year, enabling Network Rail to design better wellbeing interventions and provide healthier working environments. We'll build on this success in the upcoming year, with the construction of four purpose-built Occupational Health Centres across our region, providing more accessible and professional health and wellbeing support.

Train service delivery

This year, we challenged ourselves to sustain the high levels of train performance achieved in 2021/22. Our hot weather preparedness and resilience plans worked well and we delivered on our approach to keep the network open, keep trains moving, and keep people safe throughout the periods of extreme heat this summer. We also worked hard to keep services running during industrial action.

Our preparations for the Commonwealth Games and the period of official mourning for Her Late Majesty Queen Elizabeth II delivered a positive passenger experience at our stations and a reliable train service. To support the success of the Birmingham 2022 Commonwealth Games, we coordinated an industry plan to keep passengers moving safely and reliably during the Games. This involved years of planning with train operators and wider industry partners to improve train performance, provide operational resilience, and support moving a high volume of passengers on the rail network. Over 12 days of sporting action, more than 2 million people passed through Birmingham New Street station, helped by more than 300 railway volunteers.

However, train performance this year hasn't been good enough and fell well below our ambitious targets. Industrial action, the impact of hot weather on tracks, train crew, fleet performance, fatalities, and trespass have been the biggest contributors to below target performance. In addition, the reliability of our track deteriorated through rail defects driving an increase in the number of failures that impact passenger and freight services. The proportion of NW&C On Time failures with an identified responsible type caused by Network Rail in the year was 50.0 per cent, a reduction of 1.4 percentage points on the previous year. By contrast failures caused by train and freight operating companies increased to 50.0 per cent from 48.6 per cent, with the swing likely due to ongoing traincrew issues.

To address these issues, improvement initiatives are in place including joint industry seasonal preparations, delivery of a passenger-focused December 2022 timetable, and the recovery of the train crew and fleet position through a whole industry working group. We held the first Industry Performance Summit on 10 March 2023 to target declining performance and to focus on improving the service we offer our passengers and freight customers.

The reliability of our assets has not met our stretching targets. The number of service-affecting failures (SAF) increased by 6.6 per cent compared to last year. The main contribution was from track in Central and West Coast South, where ground shrinkage due to hot dry weather resulted in temporary speed restrictions to reduce the risk of derailment. We implemented targeted asset reliability interventions later in the year to address performance issues. This included our Track Insight tool, enabling us to take better decisions around risk and asset condition. Recognising the asset condition challenges on our Central Route, we launched Project Greenlight to identify and prioritise improvements. These have driven a marked reduction in temporary speed restrictions, which combined with additional focus on trespass and vandalism, has improved performance over the latter part of the year.

Freight performance is lower than the same time last year driven by industrial action, combined with several serious external events including a burst water main and cable theft. Areas such as Peak Forest, Kingsbury, and Wembley yard have been identified as high-risk sites and form part of targeted improvement plans for freight performance.

Efficiencies

Our financial performance was negatively impacted by reduced levels of train performance and industrial action, resulting in higher compensation payments due to delay and disruption to operators.

Slow mobilisation in the first half of this year and the impact of industrial action caused slippage on some schemes, which resulted in below-target expenditure on renewing our network. This position improved as the year progressed with successful blockades taken to deliver key projects.

Over 2022/23 we delivered £179m of efficiencies across operating expenditure and capital expenditure, in-line with our target for the year. This has been largely driven by £37m of savings from our workforce reform programme: in particular, £12m from Management Modernisation. Over CP6, we've increased the internal delivery capability of our works delivery team, yielding £27m in efficiencies this year.

In February we launched our new Intelligent Client Operating Model (ICOM) in our Capital Delivery team, changing how we manage our projects to make us more efficient, increase productivity and deliver better value for money.

Our NW&C Regional Industry Board has championed whole industry collaboration across many areas, including efficiency. A recent focus has been to develop broader engagement of the efficiency agenda across all partners to drive better outcomes for passengers and freight users.

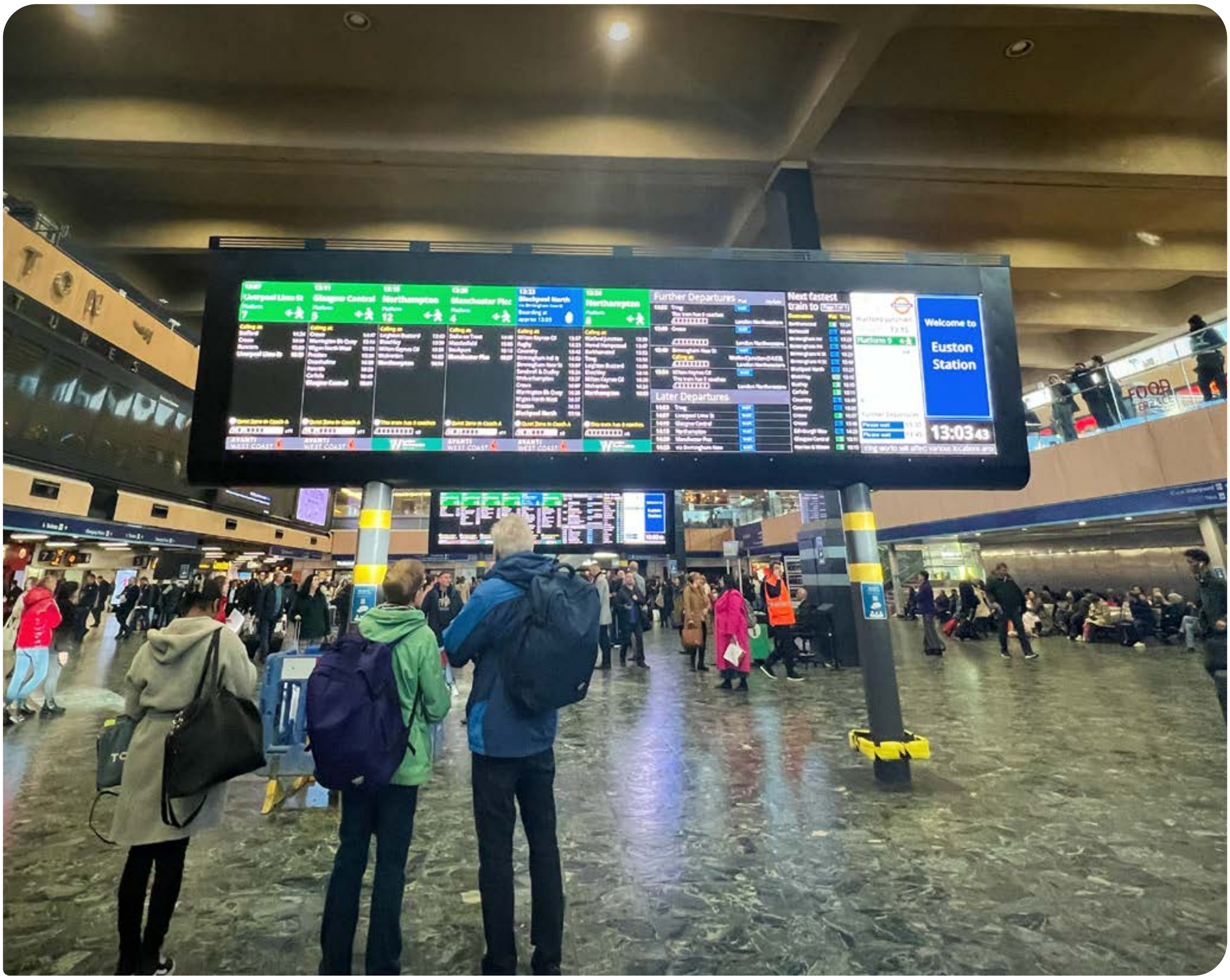
For 2023/24 we're forecasting a saving of £186m. A significant amount of savings has already been enabled, or we have a high confidence of delivery. The biggest focus will be £25m savings to be realised as part of our maintenance modernisation programme.

Sustainable growth

We achieved all of our enhancements milestones. Completion of resignalling at Birmingham New Street in December 2022 was a significant milestone and the culmination of a once-in-a-generation overhaul of the station's signalling equipment. We now operate one of the most modern signalling systems anywhere in Britain, providing a safe, reliable, and high performing railway for decades to come. New track formation was completed for East West Rail and we've started laying track between Bletchley and Bicester. In addition, works progressed at various interfaces with HS2, including installation of a major new underbridge on the Stechford - Aston line.

In 2022/23 we introduced a SPEED (Swift, Pragmatic, and Efficient Enhancement Delivery) measure on our scorecard, which assessed the efficiencies against four enhancement projects on the region.

The sustainability of our infrastructure is a key factor to support sustainable growth. Delivery of renewals is monitored using the Effective Renewals measure. During 2022/23 we delivered approximately 89 per cent of the budgeted renewals, close to the national average. The renewals targets were delivered for signalling and overhead



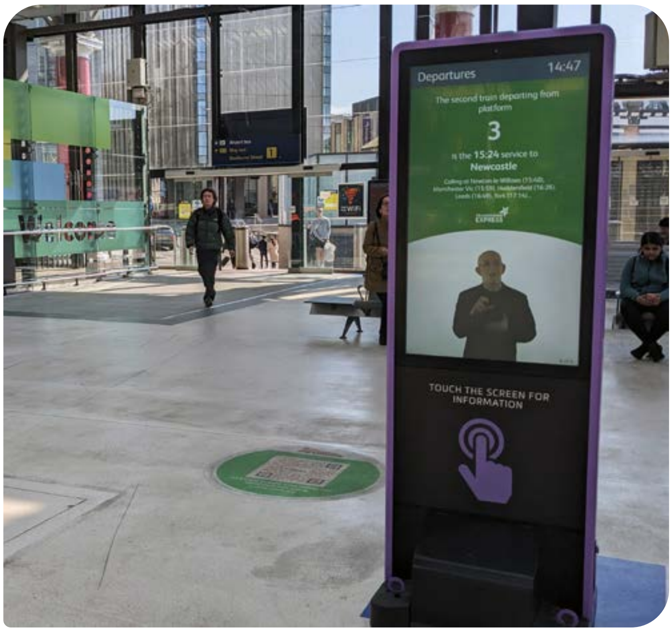
line, while there were shortfalls for track, earthworks, and under-bridges.

We continue to implement our structures examination strategy to address the root causes associated with resources, competency, and standards.

Customers and communities

We know that customers want punctual, reliable train services, and our passenger satisfaction score was below target this year, aligning to train performance levels. With passengers returning to our network, we provided an improved service offering at our managed stations, with several initiatives completed this year or due to be completed in 2023. These included improved lounges, additional seating, and installation of high-definition information screens at London Euston station. We've also sought to improve air quality and lighting at Birmingham New Street through the addition of LED lights and trialling a new air filtration system, and we'll install the popular Commonwealth Games 'Raging Bull' at the station in the summer, to greet the station's 800,000 weekly footfall of passengers and pedestrians.

Accessibility is vital to delivering an inclusive railway. We've improved wayfinding design in Birmingham New Street and introduced an app to revolutionise how customers access and navigate our Managed Stations. Lifts, ramps, and accessible toilets continue to be installed at several stations, many delivered by Merseyrail and Northern Rail



with considerable support from the Liverpool City Region and Transport for Greater Manchester. We have continued with our programme of tactile paving installations as part of the national rollout. Our Liverpool and Manchester station teams have been great examples of training our people to be inclusive, with a focus on Deaf Awareness and British Sign Language as well as receiving specialist training from the Royal National Institute for the Blind.

We experienced an increase in the number of customer complaints and the average open age of complaints, in part, due to more people using the network. We successfully rebuilt our customer teams to manage complaints more effectively, providing a high-quality response in a timely manner.

Our partnership with Shelter at Manchester Piccadilly and Birmingham New Street has supported some of the most vulnerable people in society, getting them back on track with help to access health care and housing. We've also supported 56 apprenticeships in our region.

Stakeholder engagement continued to support delivery of outcomes that are important for our stakeholders – from infrastructure project delivery, to joint train performance plans, to community schemes at stations. As we continue to work ever more closely as a whole industry, we've established closer ways of working with our train and freight operators to align our business plans to support better outcomes for passengers and freight users.

Our environmental performance is tracked through our Environmental Sustainability Index (ESI) in three key areas: waste management, non-traction energy use, and carbon emissions. There have been challenges in the way that energy data is managed which has impacted our overall ESI score. We made progress in developing projects at our maintenance delivery units to reduce energy usage and we introduced trial zero emission vehicles to our road fleet to reduce diesel use and carbon emissions. Environmental incidents are also tracked and have seen a downward trend as the year progressed. We have continued to mature our approach to improving biodiversity, phasing in habitat management plans such as on our vegetation works associated with the Commonwealth Games. We shall continue the further rollout in 2023/24.

We continued to develop our knowledge about how climate change impacts the resilience of our infrastructure. Reviews conducted following the extreme heat in the summer identified that use of dynamic risk assessments, proactive monitoring and maintenance, summer preparation plans, and the use of technology such as remote condition monitoring all contributed to our successful management of that extreme event given the temperatures faced. In addition, as part of our CP6 Weather Resilience & Climate Change Adaptation plan, we introduced more drainage and vegetation surveys to identify highest risk sites, and we're introducing further technologies to manage risks of earthworks failures.

People

It's been a challenging year in which we've delivered a reduction in the size of the management organisation to achieve operational cost savings and launched a significant change programme in our maintenance organisation to improve workforce efficiency. As a result of the latter, we've endured a lengthy period of national industrial action, to which our management team has responded brilliantly, undertaking additional training to provide a contingency workforce to protect our service.

The time and resources required to manage industrial action has impacted the delivery of our management development initiative. However, we have much to be proud of. Our 'One Team' ethos now comes to life through the senior leaders' development programme, we completed the roll-out of our All-Aboard colleague roadshow, and we've continued to make improvements in the diversity of our workforce.

The number of women in our workforce is now over 15 per cent, the number of colleagues from ethnic minorities has increased to 9.39 per cent, and the number of colleagues willing to share their personal data about their sexual orientation, race, and disability has also improved. These are all positive indications that we're moving in the right direction and truly represent the communities that we serve.

Year ahead 2023/24

In response to feedback from colleagues for better clarity on our strategic direction and clear priorities that make sense to everyone we launched our 'Musts'. Aligned to the Network Rail's strategic themes and the government's plan for rail, our Musts explain what we absolutely must do to put passengers first:
- everyone home safe every day and fit for the future – no life changing injuries
- a value for money railway – improve how we do things to save public money each year
- a transport service of choice – flexible and reliable so that more people choose rail
- a cleaner, greener railway that protects the environment and supports the economy
- one team where everyone plays their part – train, develop, and support our people to work together treating others with respect.

Over the year ahead, we'll work closer with industry partners to improve train and freight performance and passenger experience at stations, with joint action plans in place to deliver the service our passengers and freight users deserve. We'll continue to develop our industry-wide collaboration initiatives and investigate opportunities for further efficiencies through efficient possession planning and integration of Control and Property.

We're also building on the improvements made to the December 2022 timetable, with further improvements in the May 2023 timetable to increase capacity in the Snow Hill area and enhance the passenger offer.

TriLink is our major renewals programme focussing on getting the railway between Warrington and Carlisle ready for the future. TriLink launched at the end of February 2023, with the support of passenger and freight operators, our supply chain, and Government. It's a huge undertaking and over the next year we'll involve everyone across the industry early to get ready for successful delivery from 2024/25.

CASE STUDY

In last year's Annual Report & Accounts, we highlighted that we needed to improve how we manage safety of the stations within our region. Following the collapse of a gable wall at Northwich Station in 2021 we've been working collaboratively with Northern Trains to develop an approach to managing the station assets that will deliver improved safety and industry efficiencies.

The proposal involves combining the work currently undertaken separately by Network Rail and Northern Trains into a combined team. This single team will be better placed to make the trade-offs between maintenance and renewals and less distracted by managing the interface between different organisations. As a result, station condition will be improved for the available funding and opportunities to make them a more welcoming place that serves the wider community will be released. Our proposals have been developed alongside wider rail industry reform proposals associated with Great British Railways.

SCOTLAND'S RAILWAY

Alex Hynes
managing director, Scotland's Railway
13 July 2023

Scotland's Railway keeps passengers and freight moving - and communities connected - across a large and diverse network of more than 2,800 miles of railway including world-famous structures such as the Forth Bridge and Glenfinnan Viaduct.

Our railway provides a vital lifeline, not just for commuters between our seven cities, but for our rural communities and business customers too. Passenger numbers are gradually recovering after the easing of lockdown, and we're working hard with train operators to attract more customers back onto rail.

We've been working closely with our primary operator ScotRail Trains Limited, to develop a wide range of cross-company initiatives including more joined up activity at stations and linking up back-office support functions to provide a more streamlined service for our customers.

Safety

The tragic loss of a member of our supply chain workforce has rightly impacted our collective safety performance. This accident happened off the rail network, but we consider our supply chain part of our railway family and feel this loss as a result. Significant and shock events like this drive us to improve our health and safety across the complexities of the railway whether in construction, operation, or maintenance.

Slip, trip, and fall events continue to be our most prevalent incident category causing injury to our workforce. It is a persistent risk to our workforce and one that is tackled regularly through safety campaigns.

Scotland's Railway understands that poor management of health and wellbeing-related risks can lead to negative impacts on physical health, behaviour, commitment, and productivity. We've created our health and wellbeing plan, which will drive improvements in the assessment and management of different health risks. We're also driving change in our mental health and wellbeing approach to become positively engaged and to raise awareness with all colleagues.

Our safety culture change programme continues to progress, with successful completion of a pilot in the north of Scotland. Learning from the pilot has supported the development of a revised approach, allowing the creation of tailored culture interventions for each business area.

We continue to deliver robust risk assessments for level crossings to allow us to understand and manage the risk to level crossing users and the railway; deploying additional controls to help mitigate risk where necessary. Our local level crossing managers liaise with authorised users, the wider public, the British Transport Police, and other interest groups to promote education and improvements in level crossing use. Each year, we're accountable for core milestones for the closure or upgrading of level crossings, to ensure we continue towards our goal of elimination of level crossing risk.

We deliver risk assessments to proactively identify signals which pose a higher risk of a Signal Passed at Danger (SPAD) event resulting in a collision or derailment, and work with our asset management teams and with Train Operating Companies, Freight Operating Companies and on-track machine operators to implement engineering or instructional control measures where necessary. With these organisations, we also reactively attend Event Reviews following SPAD and operational incidents.

Network Rail operates Glasgow Central and Edinburgh Waverley – Scotland's two busiest railway stations – and as such, we're responsible for the health, safety, and welfare of all users of these stations. Passenger numbers are forecast to increase, and we remain focused on reducing station accident risk which causes slips, trips, falls, and accidents at the platform-train interface.

We manage crime and suicide on the railway in Scotland and work with other travel industry partners, including the British Transport Police, to introduce strategies which combat and reduce the associated risk to the health, safety, and welfare of all users of Scotland's Railway.

The Passenger Safety Train Accident Risk Reduction (TARR) metric is a key measure which comprises two elements: volumes and milestones. Through our volumes delivery we've contributed to TARR via successful delivery of our off-track work banks comprising vegetation management and drainage. Out of the key milestones, five have been met and the remaining two are on track to be met by year end.

Train Service Delivery

At the start of 2022/23 Scotland's Railway ran approximately 2,000 train services per day. After the May 2022 timetable was introduced, this increased to around 2,150 services per day. However, industrial action led to a reduction of circa 700 train services each day. From July 2022 ScotRail reinstated the full May 2022 timetable service.

Our key train performance metric is the Public Performance Measure (PPM). Scotrail's agreed target of 90.6 per cent has not been met and the PPM moving annual average (MAA) currently stands at 89.0 per cent in the final weeks of the financial year. This is a decline from last year's result of 90.2 per cent.

Severe weather, autumn, and structures were the biggest contributing factors to ScotRail's PPM loss. As a result of blanket speed restrictions followed by flooding, severe weather accounted for 70 per cent of this alone.

Subsequently, following changes to the Grant Agreement between ScotRail Trains Limited and Scottish Rail Holdings, Scotland's Railway's PPM MAA now excludes PPM failures that have been attributed to blanket speed restrictions specifically imposed because of forecasted rainfall. With this exclusion, Scotland's Railway's PPM MAA result is 89.4 per cent at the end of period 12, a difference of 0.34 percentage points.

Autumn 2022 itself was certainly a challenging season, and ScotRail's PPM was lower than the previous year during this time. The proportion of failures due to autumn-specific categories was slightly better, but when coupled with severe weather, fleet, and asset reliability issues, we significantly failed to meet our PPM target. Safety performance was better overall, with a reduction in SPADs, station overshoots, and the number of adhesion reports. Our Autumn Improvement Plan highlights the mitigating actions that will be taken ahead of autumn 2023.

Train fleet has also had a challenging year, influenced by changes to maintenance cycles and adverse weather. Fleet availability has been an issue for ScotRail and has resulted in the production of the Fleet Recovery Plan.

Asset performance remains challenging and is currently performing seven per cent worse than the PPM failure target, with the number of service affecting failures tracking one per cent worse. Signalling and points failures have caused the most disruption. Recent improvement works include the funding of the renewal of high-performance switching system points equipment at Newbridge, Asset Management reviewing a replacement of end-of-life signalling, and interlocking and cable replacement on the West Coast Main Line.

This year, we've had a decrease in fatalities and trespass incidents. However, we're seeing a seven per cent increase in delay minutes relating to these incidents. This correlates with an increase in mental health-related trespass, currently sitting at a six-year high.

As with ScotRail, our cross-border and freight operating customers have also experienced similar challenges to us. However, we've seen good underlying asset performance and protocols have been reviewed and refreshed around cross-border incident management and control to control communications. The Caledonian Sleeper Control function has been successfully relocated into Scotland's Railway's Integrated Control.

In response to current performance levels, we've devised short-term actions that aim to arrest the current decline in performance and seize the available opportunities to improve performance. In 2022/23, the Performance Improvement team made improvements in standardising and refining the Incident Learning Review (ILR) process for the benefit of all stakeholders of Scotland's Railway and we've conducted 35 ILRs and three Risk Management Maturity Model for Performance (RM3p) assessments this year which have led to various improvements.

Efficiency

This year we delivered £99m of efficiencies compared to a plan of £121m. Renewals efficiencies reduced by £12m in line with the programme deferrals. Operating cost efficiencies reduced by £10m due to reduced benefits through National Reform changes and delays in workplace management schemes.

We've had a number of key financial challenges in the year. Schedule 4, Schedule 8 (the financial compensation scheme between Network Rail and train operators) and variable track access were impacted by industrial action throughout this financial year. Industrial action has now been resolved and final compensation settlements are currently being agreed with operators. In addition, extreme adverse weather events and prolonged heavy rainfall over the autumn period impacted our income.

Operating costs have risen within maintenance and operations mainly due to the impact from industrial action and inflationary pressures. This placed increasing demands on our funding, with a limited level of risk funding for the remainder of the business planning period. Some of these pressures have been mitigated by identifying efficiencies whilst the remainder have been offset against our risk fund. We completed a major review exercise with the aim of identifying additional spending reductions and developing specific mitigations for all identified financial risks, to try and mitigate the likelihood of further pressures. We're engaged with the business on workforce reform which will deliver financial savings through initiatives such as agile working. These new ways of working within Network Rail, and closer collaboration with ScotRail, will provide a

better service for our customers while also delivering cost reductions. Within renewals, spending demands are rising because of increased cost pressures such as inflation.

Sustainable Growth

As our climate continues to change, so does the frequency and severity of extreme weather events which challenge the operation of our railway. Working to make our railway more resilient against the weather and future climate change is continuing and detailed in our Weather Resilience and Climate Change Adaptation (WRCCA) Plan. Actions delivered so far include a reduction in the number of earthworks vulnerable to failure because of heavy rainfall through targeted renewal and refurbishment of vulnerable assets. We've also expanded our remote condition monitoring capabilities with the installation of wireless tilt meters at various locations across the route. A dedicated WRCCA strategy manager has also been appointed to deliver specialist climate science and adaptation services, and to develop our WRCCA Plan for the new business planning period which commences 2024. Of the actions set out in our CP6 WRCCA Plan, 9 have been completed, 10 are on track for delivery as planned and 8 are on track to be partially delivered in CP6 as a result of certain schemes being deferred to CP7.

The Scottish Government has made clear that net zero by 2045 is a priority and while rail is already a green form of transport, we're working to promote modal shift from other means of transport onto trains and to deliver an even greener, more climate resilient and responsible railway. Throughout 2022/23, we continued to deliver our sustainability strategy which is made up of multiple delivery plans across ten priority areas. We've made good progress throughout the year, with over 80 per cent of our milestones being delivered or on track to be delivered next year. Our environmental scorecard target is heavily weighted to energy and carbon performance. Whilst our energy reduction activities are progressing and have resulted in reduced consumption, we've fallen short of our ambitious target. This is because significant issues with our supplier and their ability to provide accurate billing in a timely manner, which has meant that we've been unable to accurately monitor consumption throughout a significant part of the year, which has made it difficult to target areas of underperformance. We've worked hard with our supplier to improve billing accuracy and our data quality has improved significantly and is no longer based on estimates.

We've expanded the reach of the sustainable rail network by opening new stations at Reston (serving the communities in the south of Scotland) and at Inverness Airport. We'll soon be opening a new station at East Linton and have made good progress reopening the passenger railway, providing two new stations at Leven and Cameron Bridge in 2024 as part of the Levenmouth project. Decarbonisation of the corridors to Barrhead and East Kilbride has continued at pace, with development well under way to decarbonise both the passenger and freight markets between the Central Belt and Aberdeen. We're in the process of developing a Sustainable Travel to Stations strategy, enabling more collaborative working with our

Regional Transport Partnership and Local Authority partners to improve community access to our stations.

Customers and Communities

The Community Relations team has been working with our teams across the business including contractors, to reduce the number of complaints received. Pre-notification letters are now provided for all overnight planned works which resulted in a 29 per cent reduction in the number of advance notice complaints against the previous year. New letter templates have also been introduced to ensure relevant information is provided; emergency work templated information has been produced for the Network Rail national helpline who can provide relevant information to callers so their query or complaint can be closed at first point of contact.

Some headline deliverables from our Sustainability Strategy include creating habitat at Allan Water and Glenfinnan, giving out 2,000 reusable, vacuum water bottles to front line staff to encourage them to stop using single use plastic on site, bringing utilities billing, data management and reporting into the region resulting in much improved, high quality data, developing a strategy to transition our road fleet to zero emission vehicles over the next eight years, and calculating our total carbon footprint for Network Rail Scotland, including a baseline for our Scope 3 emissions. We had three significant environmental incidents relating to ancient woodland, nesting birds and a badger's sett. All three incidents have been fully investigated and actions developed to prevent a re-occurrence.

People

Industrial action through 2022/23 has placed increased demands on our people, managers and the HR teams preparing and managing the implications of industrial action which has impacted on delivering our people priorities as planned.

We've focused on efficiency with a headcount steering group supporting a review of our people asset, funding, and headcount, bringing our headcount within our budgeted forecasts. As part of modernising management, we concluded a voluntary severance scheme during April/May 2022 and we're currently running a voluntary redundancy scheme as we undertake modernisation within our maintenance organisation. This is with the aim of better more efficient working practices, use of technology and improved efficiency moving into the new business planning period.

The last 12-months have seen higher levels of resignations than previous years and challenges in recruiting and retaining critical skills, with industry supply and demand imbalance and competition with private sector salaries being key factors. We're using flexibility within our reward policies to mitigate risk and our Strategic Workforce Planning programme with a specific focus on building our own capability, more innovative attraction and resourcing strategies will also help us address this continuing challenge. We're working on broadening our apprenticeship offering to meet current and future skills and workforce demands, reviewing how we can drive forward our plans and opportunities.

Our employee engagement remains at 57 per cent, the highest across Network Rail. We've not carried out a further employee engagement survey since 2021/22 due to the prolonged industrial action. We are however surveying our employee's engagement with results expected by the middle of June 2023 and recognise the importance of all employees having their say about their work and environment. The information we'll obtain will help further shape our training and programmes to support and empower our teams across Scotland's Railway. We are also looking at the link between engagement and safety to consider how we may be able to support a more pro-active approach to poor culture.

We continue to connect with colleagues both in person and across virtual platforms, with engagement levels across our bi-monthly Microsoft Teams live events and Yammer remaining steady. A series of in person chats with Alex Hynes has launched to encourage collaboration and open conversation. Future programmes look to support line managers, women across the business, and high-potential talent, with all programmes focusing on mentoring, interpersonal development and key soft skills as well as supporting technical development and expertise. Senior leaders are being supported through the Scotland's Railway Leadership Group, and diverse talent is working more collaboratively through our Scotland's Railway DEI (Diversity, Equity, and Inclusion) steering group.

We've introduced more flexible options for the way our people work with hybrid working being introduced where possible, along with a rationalisation of our main offices in Glasgow and a restack of our head office to accommodate a more agile and efficient work culture.

Year ahead 2023/24

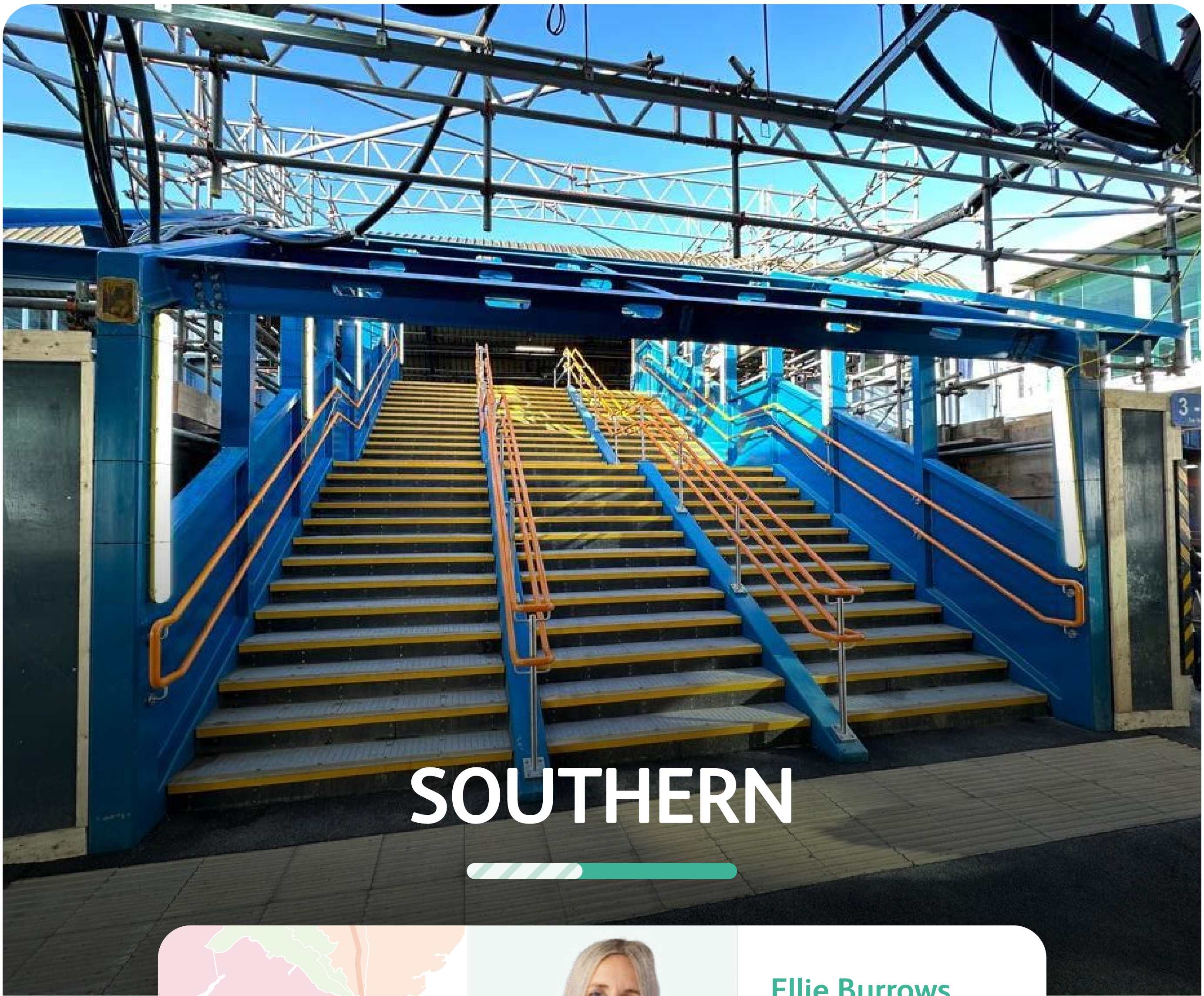
Our key focuses for the year ahead are running a reliable railway for our customers, Everyone Home Safe Every Day, reducing costs and continuing to develop our plans for net zero. Although industrial action and adverse weather brought with it financial challenges, it has also given us an opportunity to review the current operating model and identify new ways of working to build back stronger for the future.

In addition, we're working on implementing our business plans for the next Control Period and working closely with our stakeholders inside Scotland's Railway to ensure that our priorities are aligned to meet the requirements of our passenger and freight customers despite the coming headwinds.

CASE STUDY

Achieving Net Zero in Scotland

In our 2021/22 Annual Report we outlined our work on the development of strategies to deliver carbon reduction. As part of this, and to assess how best to reduce emissions in Scotland, we calculated NR Scotland's full carbon baseline across all emissions scopes, so that we understand where our largest areas of emissions are and therefore how tackle them. This work used Science Based Targets methodology and helps us to determine the right way forward for Scotland. This work highlights that we need to change the way that we think about carbon reduction in order to achieve Net Zero by 2045.



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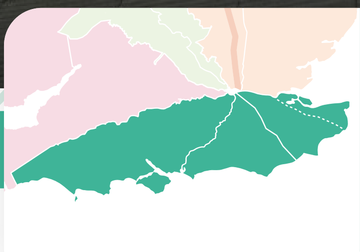


Ellie Burrows
managing director, Southern
13 July 2023

The Southern region comprises the Wessex, Sussex, and Kent routes. We link major towns and cities, including Bournemouth, Southampton, Portsmouth, Brighton, Canterbury, Ashford, and Dover to each other and London.

We operate the busiest and most congested rail lines in the country. Our performance impacts the lives of millions of passengers, our lineside neighbours, and the freight companies that depend upon us. Every day we carry large numbers of commuters to, and from, the capital as well as serving Gatwick and Southampton air and seaports. We manage several large stations including London Waterloo, London Bridge, and London Victoria which are the three busiest stations in the UK.

Our primary focus in 2022/23 was helping the railway emerge from the impact of the pandemic, to encourage passengers back and to start to put the railway back onto a sustainable financial footing. As reported in 2021/22, we simplified our operating model and the framework that we've used to drive the region forward is below:

- Our vision is to keep 'Putting Passengers First', achieved by delivering four ambitions covering our safety, people, efficiency, and service
- we've prioritised four change programmes of safety, culture, modernisation, and Control Period 7 (CP7)
- we've launched and started to embed three principles:
  - show you care
  - listen, learn, and improve
  - keep it simple.

Set against this, we've faced several challenges this year including managing the impact of industrial action by both our own staff and those of train operators. We've also experienced a deterioration in train performance and suffered a fatality on the Gatwick station improvement project.

Safety

We care about our people and our passengers; whether it's getting our passengers safely to where they need to go, delighting them at our stations with great customer service and facilities, or going the extra mile for our staff, looking after their well-being as well as their physical health. We want to show we care. Health, safety, and wellbeing is a crucial part of our cultural change programme, and an improved culture is in turn the single most important part of our plans to sustainably create a safer and healthier environment for all.

And yet, despite our efforts, one of our contractors was tragically killed whilst supporting a tower crane lift for the Gatwick station improvement project. We're working closely with the Rail Accident Investigation Branch (RAIB) and the contractors to understand what lessons can be learned from the incident, not just to the railway environment but to the wider construction industry. While the Gatwick fatality has meant that we missed our Fatality Weighted Index (FWI) target for the year, excluding this incident, we've achieved some of the best workforce performance we have ever had. Whilst this is encouraging, we're focused on making this sustainable through our 2023 Safety Framework plan which will continue to focus on assurance, culture, behavioural safety, and embedding and bettering the track worker safety improvements made this year.

Personal Accountability for Safety (PAF) performance also missed target this year following an increase in line block irregularities classified as high potential events. Line block irregularities are where a train has been erroneously signalled into a line blockage where workers are expecting the line to be free of moving trains. Work is underway to address this situation including dedicated briefings for signallers and track colleagues, increased assurance, and focus on implementation of additional protection to track workers. More positively, life-saving rule breaches, the other component of the PAF measure, have showed positive performance. This is particularly true for road vehicle speeding incidents which have significantly reduced since the introduction and use of the In Cab

Safety System (ICSS) that provides the driver with road information and speeding alerts.

Our ambition to ensure all line managers undertake mental health training by the end of CP6 is progressing well with overall compliance at 83 per cent against a 75 per cent target. We also launched our Hearts and Minds programme with the vision to create a safe haven for our people to talk openly and to break down the stigma associated with mental health.

Train service delivery

Train performance was not good enough in the year with the region 6.2 per cent down on its On Time performance target (the number of trains arriving within one minute of their planned arrival time). The causes for this included large external trespass and fatalities incidents, traincrew/driver non-availability, asset failures in critical locations (notably the core Thameslink lines through London), and higher levels of track issues and related speed restrictions, many associated with the weather impact from the very hot summer. Over winter, extreme cold and flooding also caused performance loss.

Following the decline in train performance, the Office of Rail and Road (ORR) challenged us to ensure that our plans to address the matter were robust and compelling. Working with our operator colleagues, additional focus was placed on our performance plans through a number of dedicated ‘task forces’ and performance workstreams.

In Kent, a performance improvement programme was developed from the timetable task force and was put in place after the December 2022 timetable change. This was designed to improve train performance and to reduce the number of service affecting failures (SAF’s) of our assets. Notable deliverables included the roll out of thermal imaging to prevent cabling and track circuit defects, an additional track team at the key location of London Bridge, and setting up the joint safeguarding strategy and trespass mitigation group.

Wessex launched its joint performance task force with South Western Railway (SWR), with early achievements including the resolution of a challenging signalling issue at Rowlands Castle, the efficient rectification of a major landslip at Hook, and improvement in right time departures from Waterloo.

Sussex Performance Improvement Recovery Plans continue to have particular focus on the Thameslink core, aided by the additional track team at London Bridge, and service recovery in the event of disruption.

As the year ended, whilst there remains much to be proud of in 2022/23, we were encouraged by these green shoots with performance improvement starting to be seen across all routes. The region remains focused on delivering improvement actions and recovering performance so that we can provide the safe, reliable, and efficient railway that our customers and funders seek.

Efficiencies

We delivered our efficiency target of £279m for the year. This included realising opportunities from our modernisation programme. In July 2022 we implemented a simplified management structure generating savings of £16m per annum. Work on modernising our maintenance organisation also commenced. These plans are well advanced and expected to be implemented in 2023 generating further savings for the region.

Whilst our underlying cost control was good, income receipts were much lower than we had planned. Poor train performance meant less Schedule 8 income from the operator compensation regime and the industrial action saw us pay out a further £64m in compensation to the train operators. Despite the challenge of the industrial action, we were pleased with our project delivery and invested £886m renewing the network and achieving our planned volumes. However, whilst Financial Performance Measure (FPM) performance for renewals was improved on last year, it still missed target. All asset categories fell short of target with signalling affected by contract pressures on the Victoria Phase IV project, earthworks experiencing high rates on several emergency projects including addressing landslips at Wormley, Hook, and Honiton and track affected by challenging tunnel works at Penge and Mountfield. Our work for CP7 has helped us get a better understanding of the cost drivers of our unit rates and will help us achieve further improvements in efficient delivery going forward.

In February 2023 we submitted our Strategic Business Plan for CP7 for the region to the ORR ahead of the draft determination published in June 2023. In a financially constrained environment, we’ve worked hard to produce a plan that maximises the outputs from our investment, doesn't lead to a decline in safety performance, and delivers an acceptable level of service and performance for freight and passengers to support us rebuild trust and confidence in the railway. The plan strives to be innovative and sees us continuing to modernise and forging ever closer working with our train and freight operator colleagues and the supply chain.

Throughout the five years of CP7, in our draft plan, we have committed to £638m of efficiencies across our Operating, Maintenance and Renewals funding (OM&R) by adopting new technology, new ways of working, optimising access strategies, and modernisation amongst other initiatives.

A key component of this, is the new approach to delivering our capital works through closer integration with supply chain using Project 13 principles. In February 2023, we announced our four partners; VolkerfitzPatrick for Buildings and Civils, Octavius for Electrification and Plant, VolkerRail for Track, and Atkins for Signalling. These four partners, along with our Works Delivery team, will form an innovative performance-based alliance to deliver the Southern region's estimated £9bn renewals portfolio for the next 10 years.

The year also saw some progress generating cross industry initiatives with our operators. Identified initiatives include how we better utilise and commercialise our combined property portfolios, looking at the delineation of responsibilities at Network Rail owned but operator managed stations, and continuing to extract system benefits from the greater use of blockades for maintenance and renewal activity. This will remain a key focus for us in the run up to CP7 and the eventual transition to Great British Railways (GBR).

Sustainable growth

Our enhancement milestone delivery and acceleration measure were met except for Thanet Parkway (where the opening was delayed until 30 July 2023) and Catford 'Access for All' (which opened in May 2023). At our Gatwick Airport station project, we commissioned platform 5/6 into use in January 2023 and, together with a new track layout and new timetable, this has significantly improved journey times and train performance. The date for the new airport entrance concourse will be reprogrammed to November 2023. This will make it easier for passengers to pass though the station to the airport with improved access to the platforms with new lifts and escalators. The year also saw the opening of several 'Access for All' schemes in the region including Crowborough, Chatham, St Mary Cray, Eridge, and East Grinstead, with the installation of lifts and other improvements making it easier and safer to use the station for many more people including those with mobility issues, travelling with children, or carrying large luggage.

Customers & communities

In 2021/22 we made significant improvements to the service that we provide our neighbours and stakeholders. We are pleased to report that there has been further improvement in 2022/23. Our focus on engagement was reflected in our complaints handling performance which saw us better our targets by 25 per cent and satisfactorily closing out complaints in a timely manner.

This year we missed our wavelength (passenger satisfaction) target with train performance and the disruption seen by the continued spell of industrial action being the main factors. Our communications team worked hard to explain our side of the arguments of the Network Rail industrial relations dispute, clearly setting out the rationale for the need to modernise and the affordability constraints that the industry faces with lower passenger numbers. We also collaborated well with train operators in amplifying travel advice; engaging passengers and stakeholders to keep them informed and aware of the impact to them.

Despite the negative impact of strike action, we sought to proactively engage our passengers, stakeholders, and communities to showcase investment on the railway and rebuild confidence post-Covid. We kept everyone informed through a variety of extreme weather challenges, including the landslips at Lingfield and Hook, which required a strong communications response lasting several weeks. We ran campaigns to raise awareness for 14 separate extended line closures, or blockades, including the Portsmouth Direct Upgrade, the Feltham and Wokingham resignalling campaign, the South-East upgrade, and many more – not to mention various closures over bank holidays.

We played a vital role in supporting Her Late Majesty Queen Elizabeth II's Jubilee celebrations and made passengers' journeys even more exciting with station street parties, brass bands, and flash mobs amongst the variety of customer experience enhancing activities we put on. We then supported the state funeral with our plans enabling thousands of visitors to the capital to pay their

respects. We also marked the region's role in Brighton Pride where our colleagues built a train float and joined the parade.

We have made significant improvements in delivering our sustainability plan, with benefits realised in carbon reduction, biodiversity enhancements, and social value. Despite this, our energy reduction performance remains behind target, although this is largely due to ongoing issues with national and regional energy data. Following these data issues, the Office of Rail and Road (ORR) challenged us to ensure that our data and systems were reliable and robust. We have responded to this by creating a data quality improvement plan. We've validated our data and have identified faulty utility meters that will be repaired this year. We fell just short of our carbon target for similar reasons but exceeded our targets in waste diverted from landfill and waste reused or recycled.

At the same time as addressing the errors in our energy and carbon data, we have also delivered a number of other carbon improvements including the installation of solar panels at two maintenance depots, installing electric vehicle charging points at seven maintenance depots and the introduction of our first 40 electric vehicles, and completing energy efficiency surveys at our 20 highest consuming sites. To support our commitment to protecting and enhancing biodiversity, we've planted over 75,000 trees in partnership with The Tree Council to support rewilding and the creation of green spaces in local communities and established twenty-five nature reserves totalling almost 200 hectares to either provide community access to designated green spaces or provide a protected site for high-value biodiversity to thrive. We have delivered a number of other sustainability improvements which include achieving ISO 14001 certification for our Environmental Management System, launching our first rough sleeping outreach programme at some of our managed stations in partnership with Shelter to provide housing and employment support to homeless people, and creating our first supply chain sustainability charter to focus our top ten suppliers on driving sustainability improvements through our supply chain.

People

Our people strategy focussed on attracting, developing, and retaining the best people.

Engagement, Diversity, and Inclusion: we strive for an employee population that mirrors the people that use our services and an inclusive workplace where all people can have their voices and views heard. Inclusion events were held during the year celebrating all forms of diversity and we developed a recruitment campaign targeting women to apply for jobs in seven of our roles where there is significant under-representation. This year the proportion of female employees increased by 0.5 per cent and we finished the year with 16.4 per cent female representation and 3.7 per cent of colleagues declaring a disability. The percentage of people from under-represented ethnic groups remained steady at 15 per cent.

Talent, Development and Performance: the region hosted Science, Technology, Engineering, and Mathematics (STEM) events focussing on unlocking the potential and curiosity of young people to careers in engineering and we launched our Leadership Development Programme. Over the next 18 months we will put all line managers through this three-day programme providing them with targeted development plans for continued self-improvement.

Resourcing and Workforce Planning: our work planning focussed on the key areas of signalling and electrical control. The year saw a concerted effort to increase the numbers of signallers employed and reduce the reliance on overtime and rest day working to increase business resilience. Eighty-eight signallers were recruited in the year with a recruitment campaign for electrical controllers due to start in early 2024.

Employee Relations: we concluded the reorganisation and modernisation of our management structure and concluded the local consultation stage of maintenance modernisation. The plans will be safety validated in early 2024 for implementation later in the year.

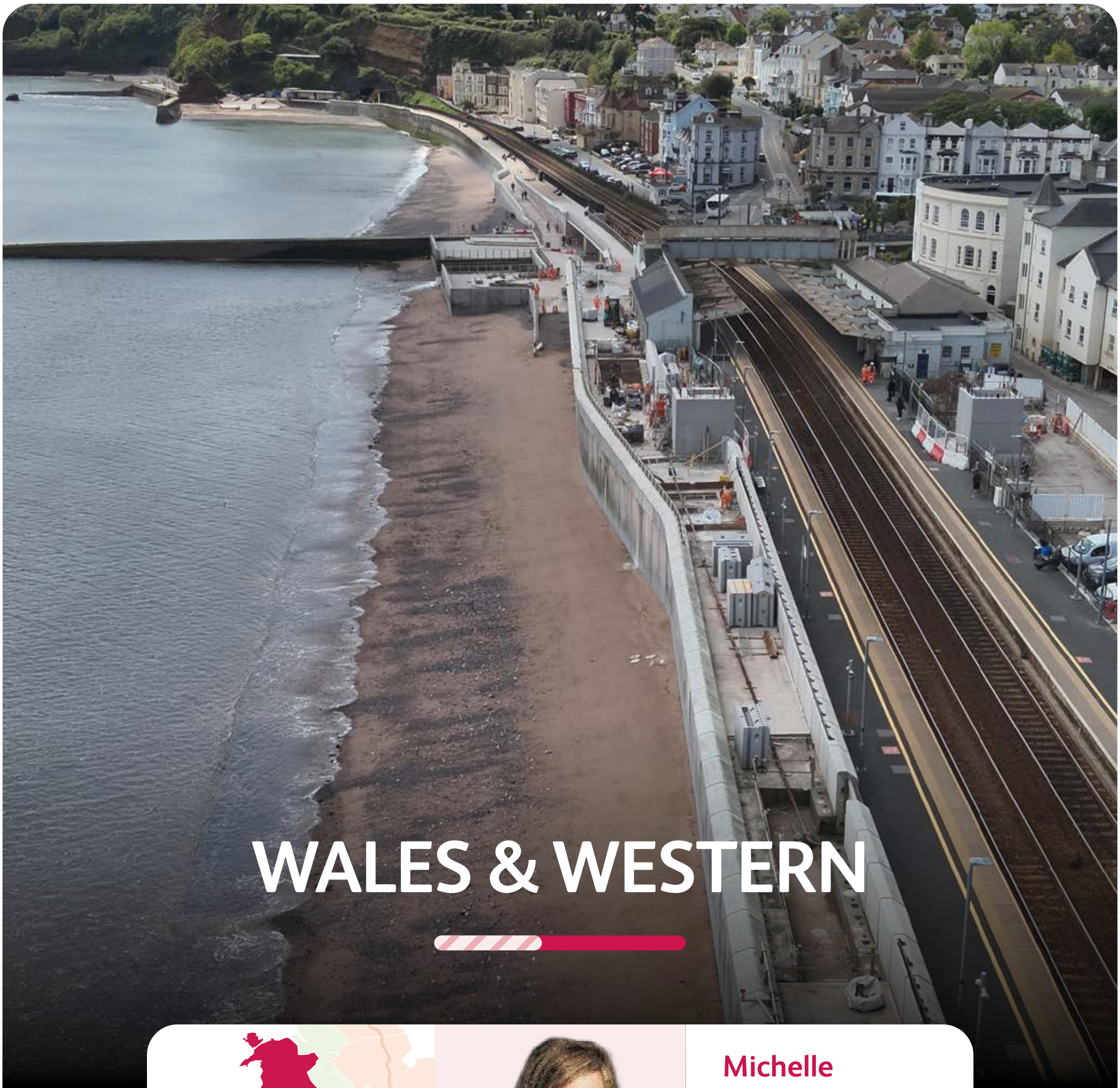
Through all the events and activities, we are constantly reinforcing our culture principles of Show You Care, Listen, Learn, and Improve, and Keep it Simple.

Key focus for 2023/24

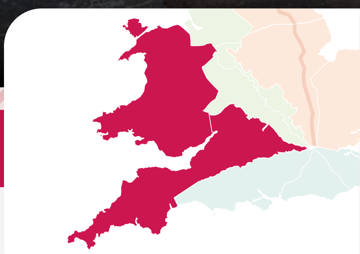
2023/24 is the last year of the current control period and so our focus must be getting ready for CP7, preparing for the transition to GBR and unlocking the benefits that will bring at the earliest opportunity. Whilst we need to convert our Strategic Business Plan for the region into a locally owned delivery plan, in 2023/24 it is imperative that we set the business up to have the best possible chance of success in CP7. That means improving train performance for passengers and freight users, successfully implementing our maintenance modernisation plans, and the effective mobilisation of our new capital delivery model.

CASE STUDY

In last year's report, we set out our plans for 2022/23 including our four business change priorities of Safety, Culture, Modernisation, and CP7. We've made great strides across all four of these areas. Our CP7 Strategic Business plan has been submitted and we're on track to implement our new capital delivery model. We've modernised our management structure and plans are ready for the maintenance organisation. We launched a new safety framework based on the six national elements and have recently refreshed this for 2023. Lastly, on our quest to improve our culture, we immersed over 2,000 colleagues in our three principles of Show You Care, Listen, Learn, and Improve, and Keep it Simple. Recognising that achieving true cultural change is hard, and yet so important to all we want to achieve, this remains at the top of our agenda to ensure that we deliver a sustainably safe and reliable railway in the Southern region.



WALES & WESTERN



Michelle Handforth
managing director, Wales & Western
13 July 2023

Connecting two nations and two capital cities, we serve people, businesses, and communities the length and breadth of Wales and Borders, Oxfordshire and the Thames Valley, west of England, and the south-west peninsula. We connect people and freight to international airports and ports, including Heathrow. Our current priority is to deliver a more reliable railway for passengers and freight users, running even more trains on time.

Safety

2022/23 remained challenging for colleagues faced with economic difficulties, industrial disputes, and increased numbers returning to offices after Covid-19 restrictions. As part of our commitment under the Rail Mental Health Charter, colleagues continued to receive support from more than 300 trained mental health first aiders (MHFA) within our region. We're planning further training in 2023/24 to add a further 50 MHFA.

Total workforce accidents reduced by 10 per cent in the past 12 months. Our fatality weighted index (FWI) did not meet the target we set ourselves due to a number of accidents causing more severe injuries than the previous year. Tragically, this included a fatal road traffic accident which occurred when returning home from work.

As part of our Track Workforce Safety programme, our teams are no longer relying solely on human intervention to warn of train movements while working on the track. We've introduced new technology to provide additional train warning protection and improvements at locations where our teams access the railway has resulted in fewer slips, trips, and falls. This has included additional lighting, new signage, and access steps.

To improve our personal accountability for safety (PAFS) measure, we've installed 1,320 speed warning systems into our road vehicle fleet and established a road safety working group. This has supported a significant reduction in speeding incidents.

Passenger safety has improved at our managed stations, but as more members of the public started to use our level crossings post Covid-19 lockdowns, we've seen an increase in level crossing incidents, including an accidental fatality in Wales and Borders route.

Using the risk management maturity model (RM3), we continue to move from reactive, incident-led safety improvements to planned and preventative actions. The average RM3 score is better than last year, with more than a 16 per cent maturity improvement.

Train service delivery

Delivering a great, reliable train service every day remains challenging. The number of trains arriving on time hasn't been at the level we want to achieve or what our passengers and freight users expect. Industrial action, trespassing, and the impact from extreme heat and storms have caused major disruption to passengers and freight. Planning for and running the railway during sustained periods of industrial action has required a huge focus across all teams. This has meant less time to deliver all the improvements we wanted to make during the year.

We supported the delivery of additional passenger services during Her Late Majesty Queen Elizabeth II's Lying-in-State. Regrettably, an overhead line equipment (OLE) failure on the day of the funeral caused significant passenger disruption. An independent review was conducted into the regional and industry response to this incident. We, and industry partners, are making the improvements identified in this review.

On strike days we successfully ran our pre-planned timetable for our key routes; safely running the maximum number of trains possible and delivering excellent customer service to passengers, primarily at stations. When strike action was cancelled, we mobilised quickly to re-instate services where possible, particularly in Wales and Border route.

The Office of Rail and Road (ORR) has escalated concerns with us for passenger and freight performance. The ORR responded positively to the actions we're taking to improve performance with our industry partners, and we recognise we must now deliver against these plans. These plans include additional anti-trespass measures, weather resilience improvements, removal of dead, dying, and diseased trees, plus the removal of temporary speed restrictions which increase journey times. Our Wales and Borders route has entered into a collaborative agreement with Transport for Wales (TfW) and their infrastructure partner Amey, focused on delivering a high performing train service.

Despite the operational challenges we successfully delivered many passenger improvements. We went live with the next stage of the Elizabeth line on 6 November 2022, providing a direct service from Reading to Abbey Wood via central London. We've also supported the implementation of new trains in North Wales working with TfW.

We successfully completed platform extensions on the St Ives line in Cornwall allowing Great Western Railway to run longer trains, providing 25 per cent more seats. This improvement followed passenger feedback in summer 2021 and was implemented in April 2022.

Efficiency

We continue to manage our business within our Control Period 6 (CP6) funding settlement, despite significant financial pressures from industrial action, train service delivery, and inflation. To remain within our CP6 funding settlement we've made difficult but well considered choices, which included reprioritising £50m of renewals into future control periods. However, our scorecard financial performance measure was £219.5m negative, £156m relating to the cost of industrial action and train service delivery. This measures our performance against the budgets we set in 2022/23 not our overall CP6 financial management.

We delivered our plan of £159m efficiency in 2022/23. We're planning to deliver an additional £65m of efficiency during CP6, delivering £539m in total. Modernising how we work is key to achieving these additional efficiencies. Our management modernisation programme is now complete, delivering £13.4m of annual savings and we've started consultation with our trade unions to modernise our maintenance teams in the next 12 months.

We're working with Train Operating Companies (TOCs) to deliver efficiencies. We're developing local profit and loss accounts so we can understand the levers to generate additional revenue and efficiencies and we continue to focus on optimising access, challenging commercial arrangements, and using new technology to drive efficiencies further.

We submitted our strategic business plan for Control Period 7 (CP7 2024-2029). Our plan is focused on delivering a great, modernised regional railway. Throughout 2023/24 we'll develop this into a delivery plan to ensure a successful start to CP7.

Sustainable growth

We've continued to focus on delivering and securing investment whilst also achieving our scorecard key investment commitments. This includes work to make our railway more resilient to weather as well as building infrastructure to meet passengers' needs and prepare for future growth.

On the South Devon coast, construction of the new seawall has been completed in Dawlish. The wall will provide greater protection to the railway and town from coastal erosion, and extreme weather for generations to come. A new rockfall shelter is under construction between Dawlish and Teignmouth which will protect trains from loose material falling from the cliffs above. Elsewhere, cliff stabilisation work has been carried out on a three mile stretch between Lydney and Gloucester to prevent landslips affecting the track below.

Following the success of the reopening of the Dartmoor line in 2021, the completion of infrastructure works has enabled passenger services between Exeter and Okehampton to become hourly since May 2022.

The MetroWest programme secured planning consent to construct a new railway line between Bristol Temple Meads and Portishead and is now undergoing detailed design. We've started construction on a new station at Ashley Down in Bristol, which follows on from Portway Park and Ride, which is due to open for passenger services in 2023.

At Barry station in South Wales, a brand-new, fully accessible footbridge and lifts were opened in July 2022 making access to the island platforms easier and safer for passengers. We also delivered infrastructure improvements to enable new TfW trains to come into operation, increasing capacity to improve customer experience.

We secured an investment commitment of over £150m from the Department for Levelling Up and Communities to deliver new entrances at Bristol Temple Meads, Mid Cornwall Metro, and Okehampton Parkway, a new station on the recently opened Dartmoor line.

During 2021/22 we experienced challenges in the delivery of our capital works portfolio. The improvements made since have enabled us to deliver £160m more renewals than planned in 2022/23 which will support greater asset reliability. We failed to deliver our overall renewals volume target due to delays to a major signalling project in Port Talbot. Following robust testing of the new technology needed to deliver a reliable train service, the work was successfully delivered in May 2023, three months later than planned. The second phase of this project remains on time for delivery in 2024.

We achieved our CP6 energy and carbon reduction targets one year earlier than planned. Our Biodiversity Implementation Programme (BIP) has delivered 15 pilot sites aimed at demonstrating habitat management techniques to enhance biodiversity on our lineside. We are using the learning from these trials to support our CP7 delivery plans.

Customers and Communities

We've consistently achieved our targets for how we handle and respond to customer complaints, but, unfortunately, we missed our passenger satisfaction wavelength target this year with low scores for station environments, and on-train crowding and cleanliness. We will focus on these improvements with our TOCs as well as continuing to improve the things we're doing well, such as the ease for passengers getting on trains and access to information screens.

We won rail industry awards for projects that have delivered significant benefits for customers and communities, including:

- Outstanding Teamwork Award and Outstanding Contribution to Society Award for the Dartmoor Line (along with Great Western Railway, Devon County Council and Devon and Cornwall Rail Partnership)
- Infrastructure Achievement Award of the Year for Paddington Train Detection
- Major Project of the Year Award for Bristol East Junction Remodelling
- Civils Project of the Year at the Conservation and Regeneration Awards for Barmouth Viaduct timber renewal.

We increased our stakeholder engagement throughout the year, hosting stakeholder breakfasts in the Oxford and Thames Valley areas and contributing to Western Gateway Sub-national Transport Body's vision for better transport connections in the south-west. We've also worked with TfW to undertake community engagement for works that will deliver additional train services on the Ebbw Vale line.

Navigating Bristol Temple Meads for those visually impaired has improved. Working with the Bristol Sight Loss Council we launched a first-of-its-kind audio guide to Bristol Temple Meads station, to assist blind and partially sighted people.

We've created a local railway team in Devon and Cornwall with the aim of driving local improvements in train service, customer satisfaction, and colleague engagement by empowering the team to make decisions that benefit the customers and communities they serve and we're working on a similar model for the Cambrian line in mid-Wales.

People

Our PROUD employee recognition scheme celebrates the great work our people undertake and the behaviours they display. So far, over a hundred people have been recognised for outstanding achievements, including ten at our first annual awards ceremony.

We've continued our Fixing Your Workplace programme for front line colleagues to make their accommodation and facilities safe, comfortable, and fit for purpose. During 2022/23 more than 2,400 people have been positively impacted by these improvements.

Our cultural insights tool was launched to focus attention on hotspots where levels of sickness, vacancies, disciplinaries, and grievances are above average. Recognising that low engagement can contribute to poor safety behaviours, the objective is to introduce interventions to target issues before avoidable accidents occur.

We have an objective to better represent communities we work in as well as the passengers we serve and have launched five working groups: Race Matters, Disability Matters, Welsh Language Matters, Sexual Orientations and Gender Identity Matters, and Gender Matters. All vacancies in Wales are now listed in both Welsh and English and early engagement activity in Welsh speaking communities is being offered in Welsh. The five working groups are sponsored by members of the regional executive team and information for each network is shared with new colleagues during induction.

Building on last year's commitments, the number of women working in our region has increased from 17 per cent to 17.6 per cent. Much more is needed to achieve our targets set in the region's three-year Diversity and Inclusion (D&I) plan, but through our networks we strive to promote equality giving everyone the same access to jobs and development opportunities. We've highlighted key locations within the region where there is a high recruitment need and held early engagement events and careers fairs in collaboration with colleges, local authorities, and businesses.

As a region, we chose to run a short pulse survey to measure the motivation and engagement of our colleagues. The overall engagement score fell to 36 per cent, but we continued to make progress in other areas such as safety plus health and wellbeing support.

Planning for and running the railway during industrial action put our people under additional and sustained pressure, as we focused on providing the best possible service to passengers and freight users. To support our people, we fast-tracked recruitment where required, undertook refresher training so those not on strike could support passengers, and encouraged access to our network of trained Mental Health First Aiders to those affected.

Key focus for 2023/24

Our strategy for 2023/24 is to safely recover passenger and freight service performance, deliver our committed renewals and enhancement projects, transform how we work, and motivate and reconnect with our colleagues.

We plan to strengthen our resources at vital signalling locations and focus on faster responses to incidents for quicker recovery of the train service. We remain determined to make the railway more resilient to extreme weather and embrace technology and innovative design to keep colleagues and passengers safe. To secure a sustainable future for the railway we also need to make permanent reductions in our operational costs. This means modernising the way we work through scrutinising current working practices and removing areas of inefficiency.

CASE STUDY

For the last 12 months the Fixing Your Workplace programme has focussed on delivering the biggest improvement to front line accommodation in a generation. We're proud to have delivered work that has positively impacted more than 2,400 colleagues to date. Our workforce deserves a high standard of accommodation to help day-to-day performance and we'll continue to drive further improvements in the year ahead.

Major upgrades
We've delivered three brand new purpose-built buildings at Ebbw Junction in Newport, Didcot, and Thames Valley Signalling Centre (TVSC). We've also relocated employees based at Ranelagh Yard to new accommodation nearby at Enterprise House in Paddington. These modern facilities include laundry and drying rooms, lockers, showers, kitchen and break out areas, and meeting spaces.

Minor upgrades
We will achieve a minimum standard of accommodation for our colleagues across the region. To do this we've upgraded our internet access in signal boxes and focussed on safety and security improvements such as installation of new CCTV, intercom systems, new fire doors, and improvements in cleaning and pest control. Some maintenance delivery units and signal boxes have only required minor improvements, such as repainting, new flooring, new kitchen appliances, and modern furniture.

ROUTE SERVICES

SCORECARD OUTTURN 2022/2023: **112%**

Route Services works closely with our route and regional customers and supply chain to deliver better outcomes for passengers and freight users.

We're made up of six teams:

- **Supply Chain Operations (SCO)** delivers the materials, machinery and components. It keeps our railway moving by ensuring everyone has what they need when they need it. The team also delivers national programmes on behalf of Network Rail, including Electrical Safety Delivery, National Records management and Infrastructure Monitoring
- **Information Technology (IT) and Telecom Services** provides the IT infrastructure, digital services and the connectivity that support the operational railway and the corporate estate
- **Business Services (BS)** manages the support systems needed to keep Network Rail working effectively. This includes training and administrative services, such as payroll
- **Commercial and Procurement (C&P)** sources and manages our strategic contracts. This includes more than 3,600 suppliers and £3.9bn of spend every year
- **Engineering Services (ES)** improves performance and reduces risk through efficient and effective delivery of multi-disciplinary design and engineering services.

We're supported by our Safety, Health, Environment and Quality (SHEQ), Finance & Business Support and Human Resources teams.

Our scorecard shows our performance in 2022/23 was 112 per cent. We've built on a strong start to the control period and will continue to deliver for our customers, passengers and freight users through the final year of control period six (CP6, 2019-2024).

Safety

One of the ways we evaluate our safety performance is by measuring the number and severity of injuries to our workforce using fatality weighted index (FWI) as a metric. Our FWI ended the year at 0.029, a further reduction from 0.044 – our lowest yet. However, with two significant worker safety events this year, we are mindful of our responsibility to do better.

We continue to develop decision support apps that provide smarter insights from data, delivered by the Intelligent Infrastructure (II) programme. Greater understanding and knowledge of our asset base helps us predict how it might behave in the future – for example with extreme weather. Apps such as geotechnical assets insights application (GAIA) gathers geotechnical data from multiple sources and extracts insights to help engineers evaluate the best way to stabilise and repair any weaknesses that have the potential to cause landslips and damage our infrastructure. GAIA also contributes towards the recommendations from the Carmont tragedy in Scotland.

Our Safe Service programme, started in 2021, has shifted from pushing safety improvements out from the centre, to being locally led. The focus is on local plans based on local cultures to nurture a more caring and inclusive ethos and working towards a zero tolerance of risk. This year we became signatories to the Rail Mental Health Charter led by the Rail Safety and Standards Board (RSSB), as we continue to encourage our colleagues' health and wellbeing and provide a work environment where our people can feel safe and empowered to flourish.

Our safety culture is also supported by efforts to build safety into our plant and machinery, following the tragic fatality at our depot at Eastleigh. We've continued to deliver enhancements that make the equipment safer to use and to ensure safety in our depots and worksites.

Train service delivery

We provide services that directly support our route and regional customers in delivering their train service to passengers and freight users. This includes renewing track and overhead line equipment (OLE) using our specialist train fleet, providing specialist skilled staff to renew and maintain mechanical locking signalling equipment, and delivering millions of tonnes of construction materials and components to support our customers' maintenance and renewals activities.

During the year, we delivered more than 2m tonnes of new ballast to worksites across the country. This is used on renewals to improve the condition of our railway.

Each year we play an important role during autumn because train performance is affected by leaf fall, resulting in adhesion issues on the railhead. This year we delivered 927,000 miles of treatment across the railway. Our fleet of trains deploys high pressure water jets to remove debris from the rail to support the safe and reliable delivery of the train timetable.

Some of our services, when they go wrong, can directly impact our passengers by causing delays. We continually review how best we can mitigate this by putting in place contingency plans to make sure disruption is at a minimum. We delivered 15 per cent fewer delay minutes than our target for 2022/23.

Efficiencies

At the start of the control period we committed to delivering £433m of efficiencies. We aim to exceed this target to support the economic recovery of the rail industry. In 2022/23 we had a target of £97m and exceeded that with £184m of efficiencies delivered.

The main achievements this year have been:
- embedding changes from our reform programme
- working more closely with our supply chain to deliver better and more cost-effective services
- improving our energy consumption and driving decarbonisation - rolling out electric vehicles, solar power and energy containment
- identifying further efficiencies to mitigate the impact of rising costs of heavy materials
- training modernisation.

As well as this, Commercial and Procurement saved £280m on behalf of our regional customers. This is £38m more than planned and was mainly achieved by sourcing new contracts, smarter.

Sustainable growth

As the procurement and consumption of energy becomes ever more critical in sustaining the delivery of the railway, we're moving our electricity consumption from traditional grid supply into renewable generation. So far, 64GWh have been moved to supply from solar and we're working on moving a further 1.5TWh into renewable generation. This will be through Corporate Power Purchase Agreements – 'sleeving' the green energy into our supply via the grid. We're developing opportunities to feed large scale renewable energy directly into our traction supply in both the AC and DC network. At a smaller scale we've started on site at Holgate depot installing solar panels onto the roof. These will feed 0.8MWh of green energy directly into the electricity supply on site.

The case study below reports our performance against our targets for transitioning our road fleet to ultra-low emission vehicles (ULEVs) or zero emission vehicles (ZEV).

Maintaining our focus on sustainability, more than 70,192 tonnes of used ballast has been recycled and reused to save on primary material procurement. Likewise, 8,374 sleepers, 2,920 baseplates and 3,420 feet of rail removed from the railway were recovered, processed and re-used on the network infrastructure.

Customers & communities

In 2020, our SCO team kickstarted an initiative, in Parc Prison, Bridgend, to offer a life-changing rail training scheme. Through the redundant asset team, we donated ballast, rails and sleepers worth around £6,000 to set up a dedicated training facility in the prison.

Since then, 59 trainees have completed the eight-week programme. Of the 49 who have been released, 24 are currently employed by Network Rail, helping to plug the industry's skills gap. A new end of year report, this year, has revealed that 84 per cent of people who completed the course have not reoffended. The SCO team is also looking at ideas to reach out to a women's prison, which would help us attract more women to the industry and upskill even more people.

The SCO team also hosted a cohort of Year 10 students to showcase Network Rail as a safe place to develop a lasting career. Engineering Services gave an overview of track engineering, software coding and system modelling, and the students also participated in a bridge design challenge.

IT Services's Digital Factory team tasked students to build an app. Students visited West Coast South training centre to learn the importance of signalling and how a high-altitude drone helps to patrol the track and respond to theft and other serious incidents.

People

This financial year has presented the twin challenges of modernisation and industrial action. It has been sad to say goodbye to over 659 Route Services colleagues, but the vast majority of those left voluntarily, achieving an outcome of mutual benefit.

We have taken a critical look at the services we offer, taking on board feedback from our regional customers and have plans in place that enable us to be a better and more intelligent partner. Key to this success is to nurture and develop our people, to provide the environment to enable each of us to deliver improvements for our passengers and freight users.

This year we delivered line manager training to 83 per cent of our workforce, less than the 90 per cent target we set at the beginning of the year, but still a great step forward and we will continue to focus on this next year. To deepen our understanding of how to support each of our colleagues to flourish, we carried out 22 cultural assessments at worksites, more than the 20 we committed to at the start of the year.

Every year we set ourselves targets to improve diversity in Route Services. This year we aimed to increase the proportion of female staff to 32.7 per cent and Black, Asian and minority ethnic employees to 14.79 per cent. Although we haven't met the targets, we know some activities and initiatives have been more successful than others, so we're focused on a concerted and consistent effort to ensure a positive outcome in the year ahead.

Year ahead 2023/24

Our number one priority is embedding the second phase of our Safe Service programme. This includes focusing on the localised, cultural aspects of safety and reducing our tolerance of risk to zero.

We're also preparing Route Services for the industry changes ahead, simplifying and strengthening our product offering and focusing on the professional development of our people, whilst identifying opportunities for those with a desire to create the future.

CASE STUDY

Transforming the national road fleet

We committed to transitioning 25 per cent of our cars to ultra-low emission vehicles (ULEVs) this financial year. With over 26 per cent now either a ULEV or a zero-emission vehicle (ZEV), we are on target to have 100 per cent of cars and vans ZEV by 2027.

The National Road Fleet Transformation Programme is delivering the charging infrastructure and business changes needed to meet this target. At the end of March 2023 we had 77 ZEVs, and plan to have more than 500 by March 2024.

We're also committed to reducing our road fleet size by streamlining ways of working and providing tools to better maintain a safe and roadworthy fleet. In the longer term we will not only see a reduction in emissions, but also reduced operating costs and fewer short term hire vehicles.

We are working closely with the regions to coordinate the charging infrastructure in line with vehicle deliveries and driver needs, minimising operational impact and making sure vehicles are fully utilised. By the end of 2023, 57 charge points will be installed at Route Services depots.

SYSTEM OPERATOR

SCORECARD OUTTURN 2022/2023: **123.7%**

System Operator (SO) is the operational heart of the railway. We operate the invisible system that keeps our passengers and freight flowing seamlessly and the whole railway performing safely and reliably. We integrate and deliver the national timetable and provide intuitive leadership on operations, capacity, railway strategy and customer relationships.

The operating model we launched in 2022 (below) has made us more agile and supports our role in integrating the industry across key operational needs (for example, the national timetable) and change delivery (for example, network weather risk management) while meeting licence obligations and being ready for industry reform – including Great British Railways (GBR).

NETWORK STRATEGY AND REFORM oversees long-term planning

CAPACITY PLANNING is dedicated to timetable planning

NETWORK OPERATIONS is the authority on operations

FREIGHT AND CUSTOMER leads on our customer and stakeholder relationships

These are supported by Programmes & Business Management, a team dedicated to supplying insight and managing System Operator's day-to-day business and programme delivery.

We're proud of the many SO colleagues who supported the industry during a challenging year of industrial action and our continued focus on delivery for passengers and freight customers has been constant throughout the last year.

Safety

Last year we reported how we'd reduced errors in the timetable that presented safety issues. Over the last financial year, we've reduced safety incidents caused by the timetable even further, especially around conflicts with possessions and operational issues with trains planned into platforms or loops too short to accommodate them. We expect this to drop from 192 issues in 2022/23 to a forecast of 183 (against a target of 288) in 2023/24. We plan to achieve this through a relentless focus on the tools developed to pinpoint issues, and timetable planning resource plans so we could accommodate suitable validation time in the process.

The 21st Century Operations portfolio which was initially set up to improve the management of competence within the operations community, has successfully piloted two digital signalling simulators and a Global System for Mobile Communications-Railway (GSM-R) digital simulator to support competence management and delivery of continuous professional development for signallers. These products are now available for route teams to use. The portfolio has also delivered additional competence frameworks for mobile operations managers and several new training courses to support the continuing competence management of our operational colleagues. The portfolio has provided 'best practice' and 'how to' guides for line managers carrying out assessments of their teams to improve quality and consistency.

To deliver our freight safety strategy we're working closely with the freight sector and groups such as the national freight safety group to address key factors involved in train accident risk, as well as lost time injuries, trespass, security, and operational risks. Key schemes such as the Condition of Freight Vehicles on the Network and the Freight.

Safety Improvement Portfolio (FSIP) forms part of the Freight Safety Strategy, in conjunction with regional areas of focus. Working collaboratively with the regions we will also be implementing regional freight safety boards. FSIP has allowed us to fund over one hundred separate schemes to improve local conditions, for example, enhancements to walkways and lighting for drivers at depots which improves the safety of colleagues trackside. The fund is used to address specific risks with network-wide initiatives. FSIP enables industry solutions for innovative improvements, and this approach will continue into CP7.

Train service delivery

The better timetables for passengers and freight users programme submitted a proposal to the Class Representative Committee members to change Network Code Part D and start transforming the way the timetable is produced, executed and managed for everyone involved. These changes included moving to a June and October timetable change date, with an optional intervention in February, and moving final publication of weekly amended timetables from timetable week TW-12 to TW-8, along with several other process improvements. Following an industry consultation period in late 2022, these changes were discussed by the Class Representative Committee on 5 January 2023. The proposals received six out of eight industry votes in favour of the change, on the condition that two specific issues raised by the Office of Rail and Road (ORR) would be resolved before formally making the change to Network Code Part D. We're following up on the ORR items, making some small Network Code Part D drafting amendments, and working through the details of implementing the changes across the timetable planning community, ready to use for the June 2024 timetable change date.

The Elizabeth line opened in stages in 2022. Through running lines between the tunnelled 'core' section and existing Network Rail infrastructure started on 6 November 2022. This was the culmination of an intense period of preparation, testing, and scenario planning for the new services, and was the result of close collaboration with Transport for London, MTR Elizabeth line and suppliers. The new service has been an instant success and is now used by an average of 600,000 passengers each day, representing over one in eight of all rail passengers on the entire national rail network.

Incident-learning reviews (ILR) for freight specific incidents (regardless of cause) have historically not been sufficiently held by Network Rail, often only getting real traction when the freight operating company brings necessary impetus for incidents caused by Network Rail. To better understand incident causes, recovery times and drive improvement, ILRs need to be driven from within Network Rail. The Freight and National Passenger Operators team has developed an online ILR tool for all routes, regions and customers which will support ILRs being held, clarify accountability for actions and track them to delivery.

Efficiencies

The new SO organisation was formally launched on 4 July 2022 following a transformation and modernisation programme to better integrate teams brought together through the dissolution of Network Services in early 2021. We successfully minimised instances of compulsory redundancy and efficiency was mostly achieved through attrition and voluntary severance measures. This resulted in approximately 20 per cent headcount reduction equating to around £14m each year across the function. Due to its operational nature Capacity Planning delivered a 10 per cent efficiency in order to maintain and protect core parts of its operations.

Delivery of early benefits through the industry timetable technical strategy programme has provided business improvements through tools including:

- automated station working
- electrification checks
- accurate routing of trains into the automatic routing systems
- improvements to timetable checks against the possession plans
- validation of train length against platform and loop lengths to reduce operational incidents.

These improvements have delivered a reduction in overall signaller workload through production of better quality timetables. It's also directly reduced the level of safety risk and train service delays associated with the timetable.

Another example of business efficiencies delivered by SO is our operational data initiative 'better data for better operations', which has overcome the historical barriers to digital collaboration often associated with the use of external software platforms. Work is underway to establish a digital collaborative environment. The trials are already demonstrating that by adopting new skills and capabilities like a digital collaborative environment, data engineering and data science can provide greater insight and improve railway performance without having to resort to costly systems engineering programmes. A trial is being undertaken with South Western Railway and Southern region to improve the speed of operational decision making, by providing more detailed train location information, without resorting to the costly development of new software systems. Another trial is underway involving conceptual timetable simulation for investment proposal appraisal. This will test the use of advanced data analytics using AI, machine learning and digital simulation.

Sustainable growth

Our mission for freight has been to accelerate the shift to rail by delivering better, faster, more sustainable services. We've worked hard to accommodate and promote freight on the network, encouraging longer and heavier traffic, prioritising freight services where possible and driving innovations such as express freight. By the end of Control Period 6 (CP6), the overall tonnage of goods moved by rail freight is forecast to have increased by 7.5 per cent compared to the start of the control period in 2019. Rail freight is crucial to large-scale civil engineering schemes, such as HS2, East-West Rail, and Northern Powerhouse Rail. The establishment of freeports will drive demand for increased intermodal services and we'll work closely with the industry to attract investment in facilities and freight terminals to maximise rail's competitive advantage. Together with the Great British Railway Transition Team's Strategic Freight Unit, we'll pursue opportunities to boost income and traffic through targeted enhancements.

The Weather Risk Task Force has grown in scope and ambition to deliver against a clear vision – to run a safe, affordable and more reliable service during adverse and extreme weather. We've capitalised on our research to make sure that our assets and operational processes deliver for passengers and freight users. We are continuously improving our systems as we better understand the risk weather poses – for example, we've changed the rainfall thresholds at which we apply speed restrictions to reduce disruption whilst keeping everybody safe. This is positive progress as we shift our culture away from letting the weather dictate our service and toward defining the service we want to run and amending our plans and interventions to achieve it.

Customers and communities

Our teams have continued to support the response to industrial action by the trade unions, planning the necessary timetable changes and wider response to the disruption. SO will lead the co-ordination of Network Rail's strike readiness going forward, continuing to develop both our contingent manager capability together with driving the signaller workforce to a level that is as resilient and sustainable as possible. This will serve to not only deliver a more resilient railway, with better equipped operational managers, but also play a key part in reducing both the chances and the impact of future industrial action.

On 8 September 2022 after the death of Her Late Majesty Queen Elizabeth II was announced, Timetable Production set up its command structure to manage the timetable response, which included:

- preventing the publication of the 8 September 2022 emergency industry action timetables for future strike action
- working with the heads of train planning across the industry to produce a timeline for reinstating timetables due to the removal of engineering operations from the network
- collaborating with routes and operators to establish a viable timeline and plan for producing timetable plans.

In addition to the above, Capacity Planning worked throughout the year to ensure the railway was open for customers during strikes and that timetables were available to freight and passengers at sufficient notice.

The Smarter Information programme has sought ways to increase customer satisfaction and enhance travel information delivery. The programme is cross-industry and there is involvement from around 220 stakeholders from 44 different organisations. We've worked with all train operator companies and the ORR to agree a set of standards to replace the no longer fit-for-purpose Approved Code of Practice document.

SO is working directly with other functions to explore how our routes can provide a better station experience for everyone. We have a vision that stations should be inclusive and welcoming places, encouraging more people to travel by train. To support this vision, we're delivering Access for All – which supports 150 schemes at franchised stations delivering accessible benefits to 253 stations across England, Wales, and Scotland.

People

SO is made up of over 950 colleagues focused on delivery across the five core pillars of our operating model. The commitment and agility of this organisation has been tested in different ways over the past year and we've seen a remarkable response to supporting the industry throughout a sustained period of disruption. People are our biggest asset and looking to the future we're committed to taking them on the journey of rail reform.

The interconnected structure and 'whole railway' mindset of our operating model will support the transition to Great British Railways (GBR) and over the past year we've been actively engaged in driving industry reform within the rail sector.

During the last year, we've assembled a diversity and inclusion working group to promote a culture of equity, trust, care and fairness and increased representation of the communities, stakeholders, passengers, and customers we serve within our function.

To do this our senior leadership team has set out the following priorities to:

- increase diversity in senior leadership positions
- be an inclusive and fair recruiter
- create an environment where everyone can be themselves and where people want to say, stay and thrive.

As well as the function's regular whole team meetings we also held an in-person event in November 2022 which saw high attendance and positive feedback from colleagues. The event included interactive 'market stalls' where teams showcased their work, a discussion panel with SO leadership and a keynote address from Jake Kelly, group director, SO. We hope to make this a regular feature on the SO calendar.

Our key focus for 2023/24

During the final year of CP6 we'll receive the final determination from the ORR and determine a delivery plan for the first year of CP7. Our effort as a function is to have a relentless commercial focus driving cost-efficiency and avoiding slippage.

Alongside this we'll continue to be actively involved in the development of GBR which aims to transform the rail industry by bringing together the different elements of the industry under a single, 'guiding mind'. By collaborating closely with our stakeholders, we aim to provide feedback and input into GBR as it develops to align with industry objectives and priorities. We'll continue to work with other industry stakeholders to address key challenges in the rail sector, such as enhancing the reliability and efficiency of train services, improving customer experience, and fostering innovation and growth in freight.

Work is also continuing on continuous improvement to the business's framework for determining Network Rail's position on the sale of new or amended access contracts – including support to customer teams and the Sale of Access Rights (SoAR) process and Panel. A new e-learning suite has been developed to support customer managers and executives, and a range of improvements to the Capacity Allocation process will be agreed with ORR following the reporting-out of an Independent Reporter Review. These are likely to include process improvements such as; revising SoAR paperwork to remove duplication of work and simplify paper content, reviewing delegated authorities and introduction / updating of internal guidance, efforts to encourage earlier internal consultations, and an updating of the ORR/Network Rail Working Practices Agreement.

CASE STUDY

While cost challenges persist, the post-Covid constraints were a prominent challenge in 2021/2022. We took a decision to manage this head-on in the SO and create opportunity in 2022/23 through a transformation programme which incorporated the efficiency drivers of management modernisation. Design principles underpinning this change included better integration of teams, a refocus on core deliverables and where required new and/or different structures to best support a new operating model.

Change of this nature is particularly unsettling. However, Network Rail's managing people through change process supported our programme to minimise risk for our people and offered opportunities such as voluntary severance and redeployment for individuals to consider – minimising compulsory measures.

The ambition for this programme was to save £14m in operating expenditure costs which equated to approximately 20 per cent of the function. This ambition has since been realised and we're back to business-as-usual activities. We supported employees who chose to leave through voluntary means and remain committed to those who chose to stay – particularly around developing advocacy and understanding around the transition to GBR.

TECHNICAL AUTHORITY

SCORECARD OUTTURN 2022/2023: **129.2%**

The Technical Authority was established during 2020 as a centre of expertise, accountable for setting technical guidance for Network Rail and the railway system. We cover safety, health and wellbeing, environment and sustainable development, security, engineering, technology, competence and capability, compliance, incident investigations and the system authority.

We find creative ways to apply technology for a better railway, to cut red tape and to provide strong competence and assurance regimes to manage the railway effectively. To help us achieve that we're closely connected with UK and international institutions and businesses, from the Rail Safety and Standards Board to the International Union of Railways.

High profile activities include tackling safety, health and wellbeing risks to our workforce, reducing the carbon emissions of the railway and adapting to climate change. Our research, development and innovation (RD&I) underpins improvements in these areas and is also critical to drive a more cost-efficient railway. Our focus for this year has been scaling up the pace and impact of business change led by Technical Authority teams. We've also prioritised getting ready for the establishment of Great British Railways, putting in place the means to deliver its broader railway system objectives.

Safety

We've reactivated our Technical Authority safety vision. We've run over 30 Everyone Home Safe Every Day workshops with 320 colleagues from around the function. The workshops have encouraged open and challenging conversations about why safety matters to every one of us and how we can be confident in raising safety concerns as a sign of caring for each other. More recently we've introduced follow-on training designed to give all colleagues across Technical Authority the confidence to hold safety conversations.

Over the last three years Network Rail has made a considerable effort to significantly reduce the use of lookouts for trackside working. We've achieved a significant reduction in near misses between track workers and trains and have successfully closed the Improvement Notices raised after the tragic fatalities at Margam in 2019. Each of our regions has introduced an assurance plan to continue to embed the changes made.

To complement the Safety Task force every region and function has continued with making improvements to our safety culture, tracking the changes using the industry Risk Management Maturity Model. These assessments, which are reported to our Board, focus upon leadership, keeping people apart from moving trains and machines, communications and front line assurance. Every region and function has its own safety improvement plans supported by expert advice provided by the Technical Authority and Network Rail's Multiplier team. Our aim is to enable change in our culture, not to dictate it.

We've made good progress on the improvements to first line of defence assurance, with all national and route-specific actions with the Office of Rail and Road (ORR) now closed out. The steering group and the ORR continue to drive the improvements into business as usual by sharing good practice and reviewing assurance outputs each period. We've made substantial progress this year on closing older RAIB recommendations with robust updates to our risk controls framework.

Fire safety is a matter that requires improvement across Network Rail. We've implemented significant changes that will deliver the necessary improvement:

- we now have a fire safety programme board to bring a national focus on fire safety risk assessments
- we are training our people to undertake the roles of 'Persons Responsible for Fire Safety'
- we have improved the visibility of data to help the business monitor progress and identify further opportunities to improve the way we manage fire safety risks

Improvements to public safety have retained a sharp focus within our work. We've embedded our work on gross disproportion factors to make sure that our investment in level crossings is appropriate for our safety risks. We're looking to extend the use of these principles as there are benefits to be gained from applying them to our asset management strategy. We've continued to implement change to reduce trespass and suicide events. The learning from the tragedy of Harrison Ballantyne's death in a freight yard in 2017 has been shared across the industry. The Samaritans have worked with us on Small Talk Saves Lives which was re tweeted by the Prime Minister, Rishi Sunak.

We've closed two electrical safety improvement notices related to (1) proving electrical equipment is isolated before work commences, and (2) the demarcation of electrical isolations. Closing the improvement notices was achieved through delivery of an updated standard for a single approach to isolations and introducing Reminder of Live Equipment (RoLE) across our regions. This was a significant piece of work which included briefing and assessing over 3,000 of our workforce, procurement of over 5,000 RoLE devices and the development of a new sustainable process for 'test before touch'.

The health of our people is an important factor for Network Rail. This year we've overhauled our approach to drugs and alcohol testing. We've increased our testing regime as an enabler to better health, with better support services. Mental health has been a consistent focus for us, with people better able to report concerns and access support. We've achieved an 18 per cent reduction in mental wellbeing-related sickness although we're likely to miss our full Control Period 6 target of a 25 per cent reduction.

To achieve Network Rail's vision of a railway 'Fit for the Future' we've made big strides towards delivering an in-house high quality occupational health service to proactively manage our people's immediate and long-term health and wellbeing. We've selected a technology platform for managing appointments, holding medical records and tracking referrals. We're in the process of setting up 22 Occupational Health centres across our network and have started to recruit occupational health professionals ready for the launch of the new service later in 2023.

Train service delivery

We've continued to develop intelligent infrastructure technology solutions designed to provide our maintenance teams with high quality information about the condition of our assets, so they can more effectively target maintenance to prevent faults which disrupt the timetable. For example, we've launched new tools across our network to manage the condition of track, drainage, signalling and operational property (our station and lineside buildings). We're currently testing a new decision support tool for our structures. Overall, these solutions are expected to generate £20m per year of savings from April 2024 onwards.

The first site installation of a new point operating equipment design, which sets points to allow trains to move between tracks, has been completed in Western route. The new design has features which remove the main reasons for equipment failure. Every site fitted with the new equipment will be more reliable and will improve train service reliability for our passengers.

The extreme temperatures of 18 and 19 July 2022 had a significant impact on train services, with no trains running on two of our main lines for several hours; an unprecedented event. In response we've been supporting the Lord Oakervee review of our standards for managing periods of hot weather. Early actions taken in response to the investigation include updates to our track maintenance standards to cater for higher air and rail temperatures and to reflect the best practice we've identified in other global railway infrastructure managers.

New risk-based maintenance standards have been released for signalling, track and plant. These updates build on previous reliability centred maintenance studies and make use of the increased coverage of train-based infrastructure monitoring and sensors fitted to our assets. Applying the new standards enables our maintenance teams to focus their inspections on locations and types of equipment with the highest risk of failure, resulting in more effective maintenance planning and less disruption to trains.

Part of our product acceptance process, the Design for Reliability (DFR) process has won a Global Excellence Award (the Combined Kepner Tregoe Technologies Excellence Award). This award confirms the importance of our DFR process, which makes sure that new products introduced to the railway system deliver high levels of reliability in our challenging operating environment.

Efficiencies

Research, development and innovation (RD&I) plays a vital role in unlocking opportunities in Network Rail and the wider rail sector to reduce costs. The RD&I programme in Control Period 6 (CP6) has already delivered seven technology solutions that are helping regions upgrade and maintain our infrastructure at lower cost. For example, research into how closely we can fit high voltage overhead lines to structures such as bridges is already benefitting electrification projects on the TransPennine and East Midlands Main Lines, with projected savings of £151m. The changes have been documented in our electrification standards so all similar projects can benefit from the same cost reductions. We've developed lower cost alternatives for safety systems at user-worked level crossings – saving £500,000 per installation and resulting in more level crossings being upgraded more quickly, with greater benefits for everyone using these crossings.

We only gain the benefits from our RD&I projects when they are rolled out across our regions. We're investing a greater proportion of our available RD&I funding to accelerate the introduction of new technology to improve the safety of our workforce on track, for automating inspection of our assets and for installing sensors that detect changes in water level in our drainage systems and help us prevent the railway flooding during periods of prolonged or heavy rain.

Most of our RD&I is delivered in partnership with suppliers and other organisations. We've leveraged our direct investment in RD&I with £63m funding from project partners to-date in CP6. Our combined resources not only allow us to work on a wider range of technology projects but also strengthen the capability of our supply chain and contribute towards Government targets for investing in small and medium enterprises and generating economic growth across Great Britain.

The cost of renewing and maintaining railway infrastructure is a major part of Network Rail spend. Sophisticated modelling software developed by our teams has been used by regions to prepare their Control Period 7 (CP7) strategic business plans. Technical Authority engineers have used the same tools to assess the regional plans against tests for value for money and whole life asset sustainability, with feedback being used to update and refine the final regional plans for CP7.

Customers and communities

We achieved a milestone with the successful delivery of the £10m Rail Aid for Ukraine project, the first of a kind for Network Rail. We specified and procured eight modular bridge spans, two bridge launch noses, 60 bridge trestles, 1,000m2 of tunnel lining kits, six JCB excavators and other tools and equipment needed to construct replacement bridges – in total over 1,100 tonnes of equipment and materials. Working with authorities across Europe, the Technical Authority team managed the delivery of two special freight trains to Ukraine, the first in December 2022 and the second in March 2023, less than nine months from the project start date. The materials provided everything needed to support Ukrainian railway engineers to repair war-damaged railway infrastructure. In addition to the procurement and delivery of the materials, a seven-day training programme has been given to Ukrainian engineers in the UK to maximise the value of the donated aid. This training was attended by the Secretary of State for Transport and the Ukrainian Ambassador, both of whom were very complimentary of the project.

People

We've completed the reorganisation of the Technical Authority, creating a more efficient function. The transition to the new organisation has helped us to reshape our priorities and reduce waste whilst delivering real value through efficiencies for the regions.

Our update of the occupational competence framework for signalling technicians so it is risk-based and sustainable for the long-term has continued during 2022/23. We've assessed all Network Rail maintenance team holders of signal maintenance competences, delivering practical assessments to over 1,500 signalling technicians and engineers. The result is a significant reduction in the number of signalling wrong side failures due to human error.

The diversity of the Technical Authority team continues to be monitored and has shown small positive changes in the last 12 months. Recruitment and retention activities are key to achieving a more diverse team, so we've introduced inclusive leadership training for all our line managers. This training has been delivered to nearly 50 per cent of this group. We've also scaled up activity to create widespread ownership for a more inclusive environment, for example by growing our network of diversity and inclusion champions across all of our teams and by the creation of team-based diversity and inclusion action plans.

We're encouraging our teams to make use of our volunteer leave opportunity, which enables them to take up to five days per year leave to support charitable work. This activity helps our local communities and supports the mental health and wellbeing of our teams. So far we're well ahead of our target for the number of people engaged in this activity.

Year ahead 2023/24

The Technical Authority will continue creating new solutions in many parts of our business, for example:

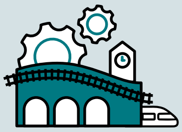
- we will replace Victorian railway detonators with signal disconnections, delivering productivity and safety benefits
- we will provide regions with a new tool to assess the safety risk to earthwork assets during extreme rainfall. This will enable us to select the optimum operating speed to balance both the safety risk and the need to provide good service to our passengers
- we will continue to develop our RailHub safety planning system, providing better data to our planners and simplifying the arrangements for safe track access.

We'll also focus on getting ready for CP7, developing more detailed plans so we're ready to begin our work on standards, competence frameworks and RD&I as soon as we enter the new funding period.

CASE STUDY

The first installation of the creative Flow bridge design funded by our RD&I was completed in Wales route, enabling the closure of a local farm crossing. As a new standard design, it will be delivered at a lower cost than conventional foot bridges, improving safety for people crossing over the railway and also reducing carbon embodied in our assets. A further six installations are being planned in Scotland region and we're developing design options to provide step-free access across the railway.

PROPERTY



Occupancy at our managed stations **90.1%** (86.2 % Business Retail Consortium)

Retail sales growth like-for-like **29%**

"Every day, across Britain, we touch the lives of close to a billion people through our managed estate. They travel through our stations, live and work in our neighbourhoods, shop with our brands and eat in our restaurants. The opportunity to transform our portfolio is huge." Robin Dobson, Director of Property, Network Rail

Realising Real Estate

The regeneration of railway land supports the delivery of new homes, workspace, retail and public realm for communities. Unlocking value from our land across the UK regions allows us to make a stronger contribution to both communities and wider economic growth. We create successful strategic partnerships across both the public and private sector to enable this regeneration and the continued delivery of vital infrastructure.

Exceptional Spaces

Network Rail generates income from its extensive property portfolio from retail lettings at the 20 stations it manages and from national partnerships across its advertising sites. This income is reinvested back into the railway.

Despite the slow increase in office working alongside the continued impact of industrial action, there has been an increase in both passenger footfall and spend per passenger across our major stations. Despite continued industrial action during the period footfall was up two per cent (footfall excludes London Bridge and London Victoria) year-on-year. Increasing the breadth of our customer offer across our destinations and a recovery in leisure passengers has seen an uplift in spend by 29 per cent to £696.8m for the 12 months.

Over the past year we opened 21 new retail units and welcomed new brands to the Network Rail portfolio such as:

- Maraugame, the global udon noodle brand, took a prime restaurant on the balcony level at Waterloo to extend our casual dining offer
- The London North Western, opened at Birmingham New Street, saw us introduce the largest pub across our estate at 8,000 sq ft with outside garden space
- Soul + Grain at Victoria delivered an independent grab and go concept, which started out in 2007 roasting coffee from a garden shed in Bristol.

In addition, 31 new pop-up stores also ensured our space continues to offer customers something different on each visit and at the same time drive additional rental income of over £700,000. Our pop-up space allows independent and smaller brands to have access to millions of customers. Highlights during the period included:

- Childish Energy at London Bridge, the brand behind You Tubers TGF8, launched their new energy drink giving fans the opportunity to purchase merchandise alongside meeting the founders
- The Barkery, at Leeds. A first for our estate, this brand offered treats, toys and grooming products just for dogs and tested a new market at our stations.

The focus on activating our space following the pandemic has seen a reduction in the overall void rate in our managed estate by 2.4 per cent to 9.9 per cent, ahead of the British Retail Consortium's benchmark vacancy rate of 13.8 per cent. The retail sector remains challenging. Administrations such as Paperchase in January 2023 highlights the continued challenge across retail for our team. Targeting the independent stationery brand, Postmark, which was new to the Network Rail portfolio, the five former Paperchase units were reopened and trading by May 2023.

Strategic Partnerships

During the year we entered a strategic collaboration with TTL Properties, Transport for London's (TfL's) wholly owned commercial property company. As two of the most significant landowners in London, the agreement aims to accelerate the delivery of regeneration and development activity across the capital.

In May 2023, we announced our partnership with IJM Land, one of Malaysia's leading property developers to explore development opportunities on land adjacent to the railway and through oversite developments in Network Rail's portfolio. The Partnership is currently considering brownfield sites in Central London and the southeast which can be developed into mixed-use schemes, residential, commercial or logistics properties.

Maintaining a safe estate and rail network remains a priority. The commercial filming team worked with The Samaritans to host educational webinars for our partners, including train operating companies and Heritage Railway companies. The campaign highlighted the link between suicide seen on screen and suicide rates and how limiting storylines in the future can contribute to a safer railway.

Regenerating the rail estate

Across our strategic developments we continue to make progress. At York Central, our major regeneration project in partnership with Homes England adjacent to York Station, the delivery of £100m of infrastructure improvements continues including new roads, footpaths, cycleways, two new bridges over the East Coast Main Line, and a new central park.

To transform one of London's busiest rail stations, we are partnering with Sellar and MTR on proposals for the comprehensive redevelopment of Liverpool Street station to create a new transportation hub and a seven-day-a-week retail and cultural destination. This comprehensive scheme will be delivered at no cost to passengers, or the taxpayer. A planning application was submitted for the scheme in May 2023.

Across Great Britain we have taken a proactive approach to development to kick start regeneration projects that deliver housing and a mix of uses, creating jobs and investments in cities such as Bristol, Cardiff, Newcastle and Oxford. All of these opportunities demonstrate the pivotal role rail infrastructure can contribute to development.

In parallel with this through our joint ventures of Solum and Blocwork we have delivered over 15,000 homes over the past five years through turnkey sales and through partnering with local housebuilders in sites such as Guildford, Bishops Stortford, Nottingham and Newcastle. This is an area that has huge growth potential by unlocking more brownfield land for development.

During the year the team was instrumental in supporting the delivery of major infrastructure projects across the regions. The property expertise and skill in areas such as planning, ensures schemes and projects can be successfully delivered. Significant milestones during the period include supporting the £1.3 billion rail upgrade between Huddersfield and Leeds which has seen works start on the full electrification of the line, and initial land assembly for a new Cambridge South Station which supports the growth of the biomedical industry within the city.

Our Planet

Supporting the end-to-end customer experience is key, as is delivering on our sustainability priorities. We have partnered with ZPN to install rapid electric vehicle charging for passengers and local communities at our stations. This partnership, the first of its kind in the industry, has the potential to extend to up to 70 sites. It will continue to lower the carbon footprint of passenger journeys and make a positive contribution towards our Net Zero strategy.

Our focus on reducing energy consumption across the business and for our customers saw us upgrade our office in Milton Keynes, delivering improved efficiency and a 48 per cent reduction in energy from our lighting. During the period we also installed SMART meters into 94 per cent of the retail units across our managed stations.

To ensure our estate continues to enhance social value in the neighbourhoods in which we operate, we mapped underutilised land in communities across all 32 London boroughs ahead of considering more sustainability initiatives including biodiversity gains and renewable energy sources. In North West & Central we also let two sites to community groups for biodiversity enhancement.

Our People

Across the property team our achievements during the past 12 months mean we have a lot to be proud of. We have the people and skills to continue to create a national property business that is regionally empowered and supports our operational colleagues. One that improves the experience for customers, creating value and delivering income. Every colleague in property at Network Rail plays an important part in this journey.

The most successful teams from both a colleague and value creation perspective are those that champion diversity. It can deliver greater creativity and a deeper understanding of customers. Our three colleague-led groups under our People Panel across DE&I, Health & Wellbeing and Learning have continued to raise awareness, create conversations and highlight educational resources and support for these important topics.

OUR PEOPLE

NETWORK RAIL

40,237
employees

19.05% female

80.95% male

9.93% Over 60

2.58% Over 65

9.6 % Black, Asian and minority ethnic
81.32 % white 7.48 % unknown
1.6 % prefer not to share

Of those who shared their data
1.66%
indicated that they were LGBT+

3.77 % disabled
69.22 % non-disabled
25.28 % not known
1.73 % prefer not to say

MANAGEMENT NETWORK RAIL (EXCLUDING BAND 4)

12,178
employees

31.35% female

68.65% male

6.43% Over 60

1.42% Over 65

12.02 % Black, Asian and minority ethnic
82.87 % white 3.01 % unknown
2.1 % prefer not to share

Of those who shared their data
2.64 %
indicated that they were LGBT+

4.8 % disabled
78.18 % non-disabled
14.53 % not known
2.49 % prefer not to say

In CP6, we started the path towards a service-led organisation through the Putting Passengers First programme which helped us make decisions closer to our customers and minimised the number of steps between the chief executive and customers. In 2018 the Putting Passengers First initiative was launched and whilst the pandemic and the financial challenges that followed have been really challenging for us, we have continued with this mission. We've continued to transform the value of work, supporting our people to make systemic changes that will result in a better service for our passengers.

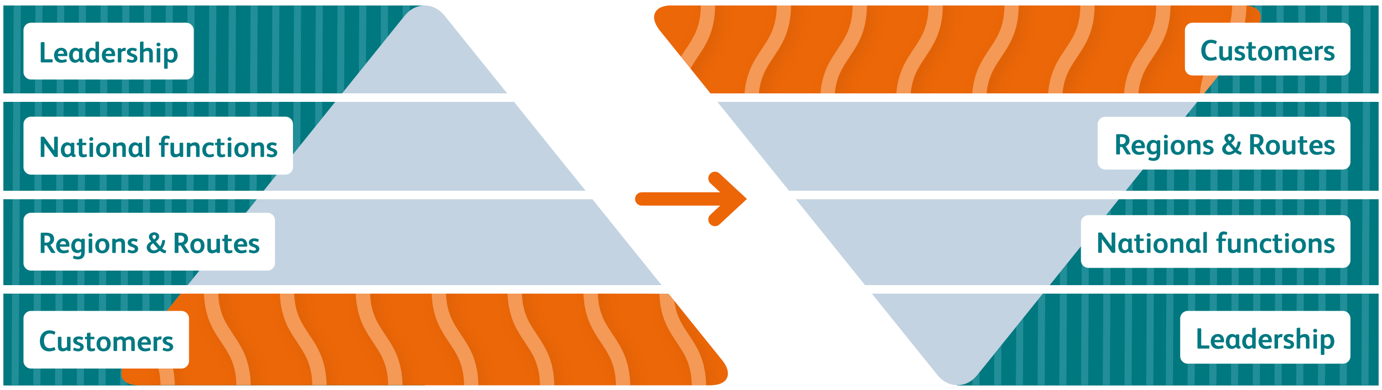
The financial challenges post-pandemic required us to accelerate pay and working practice reform. We had to freeze pay during 2020/21 but protected job security and signed the enabling framework agreement with the trade union to jointly commit to modernising the industry. We established joint working groups (coining the term of co-analysis with the trade union). These groups studied the working practice challenges that we faced as we started to modernise such as technology, planning, deployment, competence and change etc.

However, the context became more serious and divisive. Significant increases in inflation were seen alongside a slow recovery of passenger numbers. Changes to travelling patterns (increased working from home, changing nature of off-peak etc) deepened the financial challenges. The costs of living challenge faced by our people worsened. Efforts to negotiate a below-inflation pay settlement funded by working practice reform were met with difficulty. Our key focus during this financial year has remained being resolute in achieving our mission to modernise and deliver a cost effective, safe and sustainable railway. We agreed a pay deal with our management unions. Faced with strike action from other areas, we implemented industrial action management and contingency training to maintain critical services. We pressed on with reform and concluded all our pay deals, with the latest deal accepted in March 2023.

Whilst we were unable to offer our employees a pay increase in line with inflation due to affordability, we looked at alternative ways to reward our employees to support them with rising economic pressures. This included the provision of 75 per cent discounted leisure travel for employees and their family members. We also made a commitment to improve the fairness of managers' pay to ensure they are not paid less than those they manage.

Despite much of 2022/23 being troubled by industrial action, we continued to make good progress in becoming a cost effective, safe and sustainable railway. We continued to fix systemic problems, designing better work involving our frontline leaders in particular. In this way, we continued to "invert the pyramid" of our organisational structure from a top down 'command and control' operating model to a customer-led one. We have been listening to what really matters to the frontline who serve the customers. This enables us to focus on the work that will deliver the best outcomes for our customers.

Figure 1 Inverting the pyramid, so the organisation capability improves to listen, respond and deliver what matters to customers



To help achieve this we have supported the organisation to redesign and embed new operating models. This reduced the costs of management and flattened the pyramid structure to a degree. This also included implementing a new operating model for Group HR so we can better serve our regions and functions to deliver for our passengers.

Moving from an engineering led to a customer and service led organisation that puts the needs of our passengers and freight users first is essential in helping us achieve our goals. To do this, we needed to get closer to our people, particularly our frontline colleagues and transform the value of work, build a great employee experience, develop and sustain our people for the future and invest in great leadership.

Throughout the year, we continued to modernise our working practices to become more efficient and make work more rewarding. To attract and retain the best talent we provided greater learning and development opportunities to build a rewarding working environment, nurtured our future leaders and built a more diverse culture.

Transforming the value of work (Better Work)

To increase value for money and minimise disruption for passengers, in 2021 we started working more collaboratively with our frontline colleagues to work more effectively, efficiently, and safely. Our aim in 2022/23 was to build on the case study started in 2021 and get even closer to the people doing the work across different locations. To listen and understand the challenges they face and identify root causes of local issues to find better ways of working. As part of this, we worked with local maintenance teams across regions to identify 'what the optimum looks like' and have started to develop a 'model' high performing maintenance unit, perfecting ways of working, that can be replicated and localised across Network Rail.

This work has connected leaders to hidden challenges, showing them a true picture of the root-causes of inefficiency in their part of the organisation, creating the right environment for local decision making. By involving the people who do the work in improving the work, the work will become more satisfying and meaningful, the effectiveness of leaders in making change happen will improve and the introduction of technology will be easier.

Our vision is to be a customer led organisation with the interests of people at the heart of our culture. We know much more work has to be done to truly put the passenger first and be able to respond fully to customers' needs but we are well underway with that journey.

Building a great employee experience

Over the last year, we have increased our focus on creating a safer, more engaging and inclusive working environment. As well as creating better work, fixing complex issues at a local level, our priorities have been to improve Diversity & Inclusion, wellbeing, improve engagement and develop a better safety culture.

Our systemic inclusion initiatives are continuing to remove barriers for our people through continuous improvement and systemic change. To address under-represented groups, we have designed a number of programmes and initiatives. We're making progress against our targets for improving representation and increasing data sharing, but not at the pace required to hit all our CP6 aspirational, super-stretch goals. We know that a disproportionate number of females, disabled, LGBT+ and Black, Asian and minority ethnic people are leaving the business, so we will continue to increase our focus on Inclusion. A new exit and entrance process is being introduced to provide greater data and insights to identify the reasons and how we can support people better.

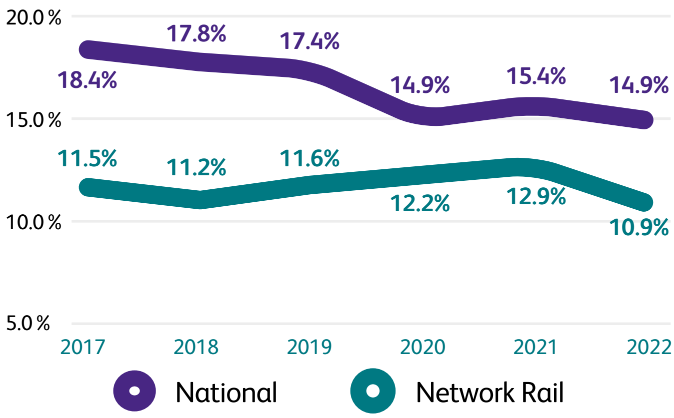
However, we have had some great successes. We've delivered major improvements in the diversity of recruitment pipeline; we have much greater representation of under-represented groups in our leadership population, and we have exceeded the national average for black representation in the workforce compared to the country's population.

Our employee networks have over 6,800 members. These are proactively launching new initiatives, development initiatives, services, awareness raising and policy changes on a frequent basis. We have launched a new Armed Forces employee network and have a growing wellbeing network. Collectively, our employee networks continue to educate and challenge the business to create a fairer and more inclusive workplace. We also share events and programmes across the Industry with Train Operating Companies and Supply Chains providing opportunities for the industry to collaborate as one creating better futures for our Industry.

We have retained our place in the Times Top 50 Employers for Women, a prestigious list of the employers committed to promoting gender equality. We've also been named a Top 25 Employer in the Investing in Ethnicity Maturity Matrix. This is the third time we've entered the benchmark and each year we've moved up a level, showing how the race matters project has matured and grown its reach and impact. For the first time, Network Rail has reached the top 100 employers in Stonewall's inclusion index. This is a notable benchmark and demonstrates the acceleration in progress in the last year. This year we also achieved the Armed Forces Covenant Gold status award.

We continue to publish our gender pay gap report and voluntarily publish our disability and ethnicity reports. This demonstrates our transparency and provides commentary on our commitment to close the gap over time.

Figure 2. Network Rail's Gender pay gap compared to the national average



Our gender pay gap for 2022/23 is nearly 11 per cent, a drop of two per cent compared with last year and remains lower than the UK gender pay gap.

Our ethnicity pay gap is just over six per cent, a slight decrease from last year.

Our disability pay gap is just less than three per cent, much lower than the national average of nearly 14 per cent. However, this figure may change as more colleagues are confident to share their disability or long term health condition with us making pay gap reporting more accurate.

We have continued to provide well-being support to our employees through our Occupational Health service and have continued to develop and embed our Accommodation Strategy to make our facilities more accessible and inclusive across the railway, e.g., introducing changing areas, toilets, and walkways.

Engagement has been a key focus against a backdrop of industrial action and organisational change. We have focused on local level engagement through better face to face engagement, adapting our communication plans to engage more at a local level. The network wide Your Voice survey approach has been reviewed to move to an annual full survey instead of every two years. During the year regions/functions deployed local pulse surveys to support local engagement activity as required.

Our safety culture work has been far reaching and deep. We have supported the safety task force and implemented findings to ensure a greater safety culture with an increased focus on improving the competence management system of work. As well as the cultural change, we're continuing to deploy safety equipment, including line blockage protection to further reduce 'unassisted lookout working' to protect our people.

Developing and sustaining our people for the future

Having the right people, in the right place, at the right time is essential in building a sustainable industry. Our talent, resourcing, and early engagement strategies deliver these outcomes.

Our talent strategies are focused on four phases which include:

- releasing potential by designing better work
- seeing potential by creating the opportunities e.g., in our improvement teams
- developing potential with coaching, bespoke support, and development programmes
- using potential through dynamic career development.

Empowering Talent is an employee-driven initiative designed to enable colleagues to raise their profile by sharing their skills, aspirations, and development requirements. To promote and develop from within Network Rail, Empowering Talent proactively notifies employees of roles matching their aspiration and provides visibility of talent across the organisation.

Our Region and Route functional talent review forums continue to provide the mechanism for local review of talent to develop succession plans for critical roles and identify gaps that need to be addressed in the future, linking into our network-wide Development and Mobility forums. We will get to know our people and the market, release potential and grow organisational capability to meet our needs. We'll recognise that people need different support as they progress through their career and take a situational approach.

We have established a workforce insights and forecasting tool and created a forum to bring together regional and functional needs. We've increased the focus on critical core railway skills such as signaller recruitment.

To deal with peaks and troughs in demand we've improved our contractor hiring process. Our new approach to contractor recruitment has helped generate £1.9 million in savings over the past 12 months, reduce our average time to offer to less than eight days and our average onboarding time to nine days. Overall, we have achieved 95 per cent customer satisfaction.

In terms of early engagement, we continue to build a framework of early engagement STEM initiatives to tackle the skills agenda with some impressive results:

- overall, we reached over 466,000 young people through our work
- 13 national STEM programmes delivered
- over 30 events reaching hundreds of thousands of young people
- over 14,000 young people had meaningful interactions with a Network Rail role model
- our STEM ambassador network now has over 635 colleagues signed up.

Focussing on graduates, we worked with industry partners to provide a coordinated approach to early engagement activities and promoted the rail industry as a fantastic career choice. In 2022 we welcomed 81 graduates, 30 placement students and 184 apprentices across Engineering, Operations, Finance, Property, IT, Commercial and Project Management. Despite a higher than usual rate of candidates declining offers, we were still able to fill 80 per cent of the places on offer.

For 2023, demand from the business for all schemes has increased and we are also introducing new schemes. Recruitment is well underway, and we're experiencing a healthy number of applications.

Great leadership

Great leadership will be pivotal to the successful delivery of Control Period 7 as we face a period of momentous change, both within Network Rail and the wider industry, with the anticipated creation of GBR. Our plan will address all three elements to building leadership excellence: structure, capability and environment to enable our leaders and frontline managers to be the best they can be and for people to have the best leadership they have ever had.

Throughout 2022, we developed seven industry leadership programmes, and were shortlisted for three CIPD People Management Awards.

To help bring more diversity in to our leadership, we have developed many programmes including:

- an industry wide career development programme for Black, Asian and minority ethnic employees
- an internal career development programme for disabled and LGBT+ employees
- a two-way diversity and inclusion reciprocal mentoring programme to deepen our leaders' understanding of the lived experience of colleagues on topics such as socio-economic status, race, disability and sexual orientation. In turn our mentoring partners have been supported with their career development
- continued promotion of our Race Matters 'Leading with Confidence' programme for senior leaders focussing on the role they play in creating an anti-racist culture
- coaching programme focused on building leadership skills early on
- better design of work so that leaders can be optimised improving change capabilities.

We opened our accelerated leaders programmes (ALP) to the wider industry. Aimed at different levels of leadership, we offered a total of 80 places, with 20 reserved for our industry partners. Half of places were offered to women and ten per cent to Black, Asian or minority ethnic colleagues.

We have also introduced a cross-industry programme to develop our identified talent senior leader's strategic focus.

Looking forward

Following on from the industrial action in 2022 and early 2023, we will focus on building trust and engagement with our people. We have developed cross-country workstreams that we will work on with our Regional and Functional colleagues to improve our systems and processes taking a whole system approach to drive end-to-end improvement creating better work to optimise outcomes and employee health and wellbeing. We're building a high performing, service led organisation that provides great customer value as well as being a great place to work, where people feel valued and cared for as we continue to modernise.

We will continue to improve the basics in terms of our policies, processes, data and insights to enable our leaders to make informed decisions. We'll develop our diversity, equity, and inclusion strategy, as well as building on our great employee networks to educate and bring our people together for an inclusive culture to build relationships and trust. We will create an employee value proposition and review our HR services to ensure they remain fit for purpose and value for money improving our overall employee experience.

We will also further develop our strategic workforce plans to build an organisation that is more resilient in the face of change and future fit. We'll further invest in our leaders and frontline managers creating opportunities by developing skills and capabilities to support career progression and to deliver our business priorities.

As we look ahead to 2023, better work and better relationships for a better future will be our ambition.

ENVIRONMENTAL SUSTAINABILITY

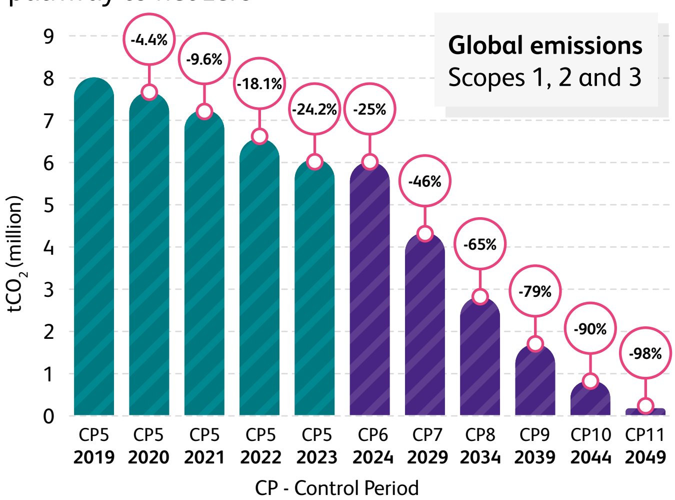
Rail continues to be one of the most sustainable form of mass transport. Now almost three years on from the publication of our Environmental Sustainability Strategy, and with our Social Value Framework having been in place for over a year, we're making huge strides towards our ambitions to become even greener.

Reducing our emissions

Our targets for carbon reduction are aligned to globally accepted climate science, and since the launch of our strategy we're on track to achieve our pathway to net zero (Figure 1).

Figure 1. Progress against our science-based target trajectory to net zero

Network Rail global carbon emissions pathway to net zero



Reducing operational emissions

We've exceeded our target to convert 25 per cent of our car fleet to Ultra Low Emission Vehicles (ULEVs) by December 2022 achieving 29 per cent (425 ULEVs). To support further transition of our entire fleet to zero emission vehicles by 2027 we have established a national Road Fleet Transformation Programme. The programme works with our regional businesses to conduct vehicle trials, deliver charging infrastructure, engage end-users, and inform policies and standards.

We have experienced challenges this year with the management of our energy data across such a large estate and have put in place new processes and governance to get this right. At the end of the 2022/23 financial year, we had reduced our energy use and carbon emissions by 12 and 24 per cent respectively compared to the end of Control Period 5. To achieve this, we've worked collaboratively across Regions and Functions to set up new contracts and frameworks to identify and deliver energy and carbon saving opportunities. We've also undertaken energy audits and developed robust plans to reduce energy in our managed stations, depots, and offices.

We signed our first Corporate Power Purchase Agreement for our non-traction energy with EDF Renewables. Our new agreement means that 49.9 megawatts (MW) of clean renewable energy will be available to us and will cover around 15 per cent of our yearly use of non-traction energy with a potential annual saving of 12,500 tonnes of carbon.

We have also completed detailed feasibility assessments to understand how we can move to using renewable energy sources for our traction power including the identification of several schemes that could facilitate the use of renewable power on the traction network.

Following the roll out of 452 charge points across the non-franchised estate, we're making progress in installing these technologies across our franchised stations and depots. We anticipate meeting our commitment to install 779 charging points across our wider estate by March 2024. We've also published new standards to support the delivery of electric vehicle charging points across the estate.

Reducing value chain emissions

A large element of our emissions footprint comes from our supply chain. We have a target for 75 per cent of our suppliers, by emissions, to have set their own Science Based Emissions Targets by 2025. So far, more than 74 per cent of our suppliers have committed or set Science Based Emissions Targets (Figure 2).

Figure 2. Number of suppliers committed to or that have set science-based targets

We continued to roll out the use of new low carbon platform components and make these available as the standard units during platform refurbishments. The current components use ground granulated blast-furnace slag (GGBS) as a cement replacement to achieve up to 51 per cent lower embodied carbon emissions than conventional concrete components.

We've also used the carbon management standards PAS 2080:2016 and BS EN 17472:2022 to complete a baseline whole life carbon study of conventional track electrification works. We have continued to roll out requirements for major infrastructure enhancement projects to assess and report on whole life carbon as part of our commitment to the Department for Transport. Further guidance has been published to help the business interpret which projects need to apply these requirements and we've started developing new tools to support the business with reporting.

Improving the air we breathe

Air quality forms a major part of our Environmental Sustainability Strategy and our ambition for our passengers, neighbours, and employees is to breathe healthier air. We're working closely with the RSSB to roll out diffusion tube monitoring across over 100 stations and analysing data on a monthly basis, looking for trends that may identify 'hot spots' and assist in creating regional air quality improvement plans.

We are completing risk assessments at high-risk enclosed stations as well as delivering technical briefings, awareness, and general support to manage air quality issues. We've been trialling the use of state-of-the-art air quality reference monitoring equipment on our network at stations like Birmingham New Street and acquiring real time data in Cricklewood, North London.

Furthermore, we're trialling a first of its kind 'Pluvo Column' in Birmingham New Street that will take in surrounding polluted air from platforms. This innovative technology aims to eliminate harmful airborne Particulate Matter (PM), targeted gases (e.g., Nitrous Oxides), and viruses. If the trial is successful, we intend to expand this to other enclosed stations.

A reliable railway resilient to climate change

Extreme weather experienced over the past year highlights just how exposed and vulnerable we are to weather extremes today. Many of these events will be made worse by climate change and we're working hard to improve our resilience to current and future weather events. With 2022 the UK's hottest year on record, including exceeding 40°C for the first time, we experienced significant impacts to our infrastructure with much of the network closed or impacted during the extremely hot days in July 2022. In the aftermath of the hot summer, as rain began to fall on dry embankments and cuttings, we started to be impacted by earthworks failures. The figure below provides an overview of the impact of different weather-related events and consequent delay minutes during the financial year 2022/23.

Figure 3. Delay minutes caused by different weather types 22/23

12 %
WIND
193,833 minutes

19 %
FLOOD
302,359 minutes

11 %
ADHESION
180,033 minutes

24 %
HEAT
379,754 minutes

18 %
SUBSIDENCE
282,056 minutes

2 %
LIGHTNING
38,288 minutes

3 %
COLD
45,777 minutes

11 %
SNOW
183,174 minutes

<0.01 %
FOG
597 minutes

We have continued to work collaboratively across Network Rail and the wider industry on managing and improving the weather and climate change resilience of the railway. To the end of 2022/23 we've completed 87 per cent of all CP6 Regional Weather Resilience and Climate Change Adaptation Plan milestones on time and have completed just under half of all planned milestones for the control period. Other notable work undertaken during 2022/23 includes:

- the **Weather Risk Task Force** has continued to deliver a programme of work implementing the recommendations from the Mair Slingo and RAIB reports following Carmont in 2020. We commissioned independent reviews of our operational and engineering response to the hot weather in July 2022 and the recommendations will feed into the Weather Risk Task Force going forward. The programme is delivering research, tools, systems, and data to make sure that our assets and operational processes deliver for passengers. This includes changes to the thresholds at which we apply speed restrictions, new earthworks asset information systems, increases in drainage maintenance resources and the creation of the Weather Academy to help our people get the training they need to better manage weather impacts
- we've developed detailed **weather and climate change adaptation plans** for 2024-2029 as part of our strategic business planning process and submitted these to the ORR. Details will be updated over the coming year prior to publication ahead of CP7
- we reviewed our **adaptive capacity** using the new Rail Industry Climate Change Adaptation Maturity Matrix and have created an improvement programme to improve the level of capacity going forward
- we continue our work to **integrate climate change adaptation into business as usual** within Network Rail including updating asset policies and working to update standards, processes, and specifications. Southern has kicked off a pilot long term climate change adaptation pathways strategy study which will feed into the methodology to be used as this work is expanded to other regions during CP7
- we're running several **research projects** internally and in collaboration with external stakeholders including projects mapping climate change vulnerability and criticality and understanding the cost of weather and climate change, the Climate Change Adaptation Handbook with the DfT led Transport Research and Innovation Board, and the REsilient RAilway (RERA) project with the International Union of Railways (UIC)

Helping plants and wildlife flourish

This year we published our sustainable land use strategic framework, signed off by the Rail Minister. We have also been working to complete our second annual state of nature report, building on the baseline set last year, which will showcase the good work that is taking place across the network:

- **Eastern** has been instrumental in obtaining an organisational licence for managing birds which nest in the vicinity of overhead powerlines. The licence will

enable teams to manage the nests safely and reduce the impact of short circuits due to nesting materials
- **North West & Central** has worked closely with Technical Authority and the licensing team at Natural England enabling an organisational licence to be issued for works in England which may impact on badgers
- **Scotland's Railway** is partnering with Forest and Land Scotland (FLS) helping to supplement their national rainforest restoration programme near the Glenfinnan viaduct. As the biodiversity at Glenfinnan flourishes into the future this will compensate for essential work taking place on the rail network across Scotland
- **Southern** has created the first 25 of their target of 50 nature reserves on Network Rail under-utilised land. This novel initiative combines social benefits with those of improved biodiversity and essential lineside vegetation management
- **Wales and Western** have been building relationships with the Welsh Government to support their aspirations for trees and woodlands in Wales.

We've continued our success with a highly commended award at the Rail Business Awards for our work with the Forestry Commission to identify land adjacent to the railway suitable for tree planting. This project has seen much interest from landowners and linear infrastructure operators and will be the topic of a national summit in mid-2023.

Creating a circular economy

We continued this year to work on our priority materials of ballast, sleepers, concrete, and steel:
- for the future supply of steel rail, a sourcing strategy has been developed to supply 'green' steel, which will be mandated from 2028. 'Green' steel means steel with 'near zero emissions', likely manufactured using an electric arc furnace (powered by renewable energy) as opposed to the traditional blast furnace method which is traditionally much higher in CO2 per tonne
- we have been able to make available an alternative sleeper that can be used in the place of timber, concrete, and steel with the main objective to reduce carbon, improve circularity and increase asset life. The sleepers use UK consumer recycled plastic waste and are manufactured in Yorkshire to provide a sleeper with an increased service life beyond current timber sleepers. The introduction of circularity within the design makes the sleeper fully re-usable. The sleepers can also be cascaded for re-use to lower track categories providing a possible life of over 100 years. Since April 2022, we've used 18,000 composite sleepers instead of traditional timber sleepers. This has saved over 12,600 tonnes of carbon and stopped over 4,500 100-year-old trees from being removed from the rainforests
- we've undertaken an applied research project to reduce the capital carbon, associated with the manufacture of pre-cast reinforced concrete platform coping stones and trestle slabs. Network Rail procures over 5,000 per year. The project has considered incremental improvements to the design and production process, such as alternative materials or a reduction in volume of materials, to provide significant carbon reduction. The project to investigate and innovate Network Rail platform copers has already resulted in a carbon saving of approximately 32.8 tonnes (4,677 copers have been installed to the end of 2022/23)

We have also relaunched our SurPlus app this year. This App allows surplus or used materials to be resold internally. For example, Network Rail has worked with HS2 to reuse materials from the London Euston station upgrade works. Through this initiative Network Rail has currently reused £250,000 worth of cable and £66,000 worth of LED signal heads with other assets available.

Creating social value

Social performance

Managing our social performance is about running a railway that is socially responsible, sustainable, accessible, and safe.

We seek to add an overall positive value to society beyond the core purpose of the rail network. Our regions and national functions apply the priorities of our **Network Rail Social Value Framework** – economic prosperity, equal opportunity, wellbeing and emerging from Covid-19 – in ways that meet local need in the communities we serve. For example, Southern has a social value plan focusing on six priority areas: charity partnerships, volunteering, employment and skills, social value in stations, community impact and measuring social value.

Rail Social Value Tool

Following its launch in May 2022 over 200 of our colleagues and supply chain partners are now using the **Rail Social Value Tool** (RSVT) to forecast, monitor, and evaluate the social value of projects and activities. The TransPennine Route Upgrade programme, for example, uses the RSVT to create social value reports.

Volunteering

Network Rail colleagues can take five days volunteer leave each year to support charities and community projects. In total our colleagues used just over 4,647 volunteer leave days in 2022/23.

Fundraising

The average number of colleagues donating through payroll giving per period is 97. Their average donation is £5.61 per colleague per period.

Charities can **apply to fundraise at our managed stations**. This year £895,958.81 was raised through collections at our managed stations.

Public donations through tap-to-donate in our Managed Stations has generated £18,391 for charities relating to homelessness including Shelter, Crisis, End Youth Homelessness, The Big Issue and Railway Children. Network Rail also participated in the Railway Children's Sleepout and helped raised £15,032.

Tackling homelessness

Our charitable programme for Control Period 6 is Routes out of Homelessness. With our charitable partner Shelter, we have continued outreach services to support people at risk of rough sleeping at Manchester Piccadilly and Birmingham New Street stations and commenced services at London Victoria and London Charing Cross stations.

Since the outreach services commenced in September 2022 at London Victoria and London Charing Cross stations there have been 106 referrals into the service, 39 individuals supported into accommodation and 5 individuals supported to prevent loss of their tenancy.

Shelter has captured learning from these services into a **Rough Sleeping on Rail toolkit** for railway station staff, and we've shared this with colleagues across the industry. Network Rail and Shelter have won three national awards for this important work during 2022/23.

Community rail

We have continued to work with our communities, with 21 colleagues working across all five regions to respond to requests from Community Rail Partnerships (CRPs), station adoption groups, and train operating companies to gain safe access to our property and land. Their activity includes creating murals and community gardens, organising community use of vacant property and 'try the train' sessions to support vulnerable people to travel by rail.

Minimising our impact on the environment

This year saw a total of 596 environmental incidents occur across the network. Of these events we experienced five category one events and 11 category two. These are our most significant environmental events and are down from a total of 26 category one and two events in the previous year. Most of our events (74 per cent) continue to be category four events which are categorised as having a negligible impact on the environment. The majority of these continue to be fly-tipping or minor oil spills.

We measure sustainability on our scorecard through the Environmental Sustainability Index (ESI) measure which compromises of four metrics including waste reused and recycled, waste diverted from landfill, energy reduction and reduction in carbon emissions. This year we achieved our national ESI target with three of our five regions also achieving their target (Table 1).

Table 1. Environmental Sustainability Index measure per cent achieved.

Achieving minimum target (2.5 per cent), middle target (5 per cent), and maximum target (10 per cent).

Region	ESI Weighted Index
Eastern	7.8 %
North West & Central	3.0 %
Scotland's Railway	5.8 %
Southern	2.9 %
Wales & Western	7.9 %
Network Rail	6.0 %

This year we have diverted 99.8 per cent from landfill with 93.2 per cent of waste being reused and recycled. The total amount of waste generated fell 33 per cent from the previous year to just above 1.5 million tonnes.

In regard to resources, we've achieved a 15 per cent reduction in paper procurement in the last two years. We've also begun workstreams to identify significant sources of single use plastics across the network to understand how we can reduce our plastics footprint. Our domestic and international flights have increased by 86 per cent since the previous year. This is likely due to easing of travel restrictions post-Covid.

An organisation enabled to succeed

Supporting our people

This year we continued to promote our 'Sustainability in Network Rail' competency to help colleagues from all disciplines understand the importance of sustainability, our environmental sustainability strategy, our social value framework, and the role they play. The competency is available for colleagues in the regions to use and has been a targeted requirement for our colleagues within the Technical Authority (TA) ending the year with 69 per cent of TA colleagues holding this competence. This will support better decision making for sustainability across the business.

We've also focused on updating and promoting our Project Safety & Sustainability Management training course. Aimed at the capital delivery and project management community the course covers the basics of managing projects safely and sustainably across their lifecycle. This year we've also made this course available to our principal contractors with more than eighty colleagues from our supply chain signing up to complete the course.

Improving our systems

This year we began the task of mapping our data flows for our reporting requirements and reviewing some of the systems that we currently use. This workstream will continue into next year as we create a new data strategy for sustainability data. Improving our systems and data is a key enabler for delivery of the strategy and will be a priority area for 2023/24.

Streamlined Energy & Carbon Reporting 2022/23

Energy consumption used to calculate emissions	Amount	Units
Total electricity used	449,143,809	kWh
Total gas used	48,434,423	kWh
Total fuel for company fleet	228,403,421	kWh

Emissions breakdown – conversion factor $kgCO_2e$

Scope	Emission category	Amount	Units	Conversion factor
Scope 1	Emissions from combustion of gas	8,841.2	tCO_2e	0.18254 natural gas
Scope 1	Emissions from combustion of fuel transport purposes	63,109.8	tCO_2e	2.16185 unleaded 2.55784 diesel 1.55709 LPG
Scope 2	Emissions from purchased electricity	86,855.4	tCO_2e	0.19338 UK Grid mix
	Total gross CO_2e based on the above	158,806.4	tCO_2e	

Intensity Metrics		Intensity ratio
Number of employees	40,237	3.95 tCO_2e / employee
Passenger kilometres (billions km)	53.317	2,978.5 tCO_2e / bn passenger km

Methodology

We have used the Network Rail Emissions Reporting tool, populated with invoiced consumption and metered data.

Principal energy efficiency measures (PEEMs)

In 2022/23 our Regions have further developed their strategies to meet energy and carbon targets and employed new staff to deliver the strategies.

We have continued to replace our vehicle fleet with over 150 electric vehicles and we have installed over 50 electric vehicle charging points at our maintenance depots.

We have carried out energy efficiency improvements at a variety of sites including, Severn Tunnel pumping station, a major station, 5 maintenance depots and over 250 lineside buildings. We have also started a programme of installing solar panels at our maintenance depots.

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

Our ability to adapt to changing climatic conditions will underpin Network Rail's success as stewards of Great Britain's railway infrastructure. The railway is open to the elements at all times and weather and climate has a significant impact on how well the network operates. Our approach to managing the impact of climate change is embedded in our asset management, our approach to risk, our governance and our environmental sustainability planning.

This report sets out the following key aspects:
- the financial impact in terms of risks and opportunities to Network Rail are mitigated by the considerable certainty provided to Network Rail by the regulatory funding process; by being a central government body within the DfT group; and by the Secretary of State for Transport having statutory responsibilities to protect the interests of rail users. This means the future risk of climate change has had little impact on our financial position as at 31 March 2023
- our strategic aims and targets through to the end of the decade and longer-term targets
- our plans show a ramp-up in expenditure on decarbonisation and climate change resilience expenditure
- future plans will be drawn-up by asset managers at a regional level using business-wide tools, systems, processes, guidance, and policies to give these plans a firm foundation.

We report against the requirements of the four elements of the Task Force for Climate-related Financial Disclosures (TCFD) – Governance, Strategy, Risk Management, Metrics and Targets throughout the Annual Report & Accounts and signpost disclosures made in other sections in the table below.

Disclosure requirement	Contents	Location
	GOVERNANCE	
A) Describe the board's oversight of climate-related risks and opportunities	Description of processes and frequency by which the board and/or board committees are informed about climate-related issues	Environmental Sustainability Committee Report (pages 132 to 133)
	Describe how the board or board committees consider climate-related issues when reviewing and guiding strategy, major plans of action, risk management policies, annual budgets, and business plans as well as setting the organisation's performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions, and divestitures	Audit and Risk Committee Report (pages 136 to 141)
	Describe how the board monitors and oversees progress against goals and targets for addressing climate-related issues	Environmental Sustainability Committee Report (pages 132 to 133)

Disclosure requirement	Contents	Location
GOVERNANCE		
B) Describe management's role in assessing and managing climate-related risks and opportunities	Describe how climate-related responsibilities are assigned to management or committees; and, how these are reported to the board or a committee of the board and whether those responsibilities include assessing and/or managing climate-related issues	Corporate Governance Statement (pages 118 to 127)
	Provide a description of the associated organisational structure(s) with respect to climate-related responsibilities	Corporate Governance Statement (pages 118 to 127)
	Describe processes by which management is informed about climate-related issues	Strategic Report, strategic priority measured by environmental sustainability index.
	Describe how we monitor climate-related issues	Environmental Sustainability Committee Report (page 132)
STRATEGY		
A) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term	A description of the processes used to determine which risks and opportunities could have a material financial impact on Network Rail; prioritising climate-related risks, including how materiality determinations are made; and, whether existing and emerging regulatory requirements related to climate change are considered	Strategic Report: Risk management (pages 94 to 104)
B) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning	The impact on the businesses and strategy in Products and services, Supply chain and/or value chain, Adaptation and mitigation activities, Investment in research and development, Operations (including types of operations and location of facilities)	Strategic Report: Risk management (pages 94 to 104)
	The impact on financial planning in the following areas: Operating costs and revenues, Capital expenditures and capital allocation, Acquisitions or divestments, Access to capital	Strategic Report: Risk management (pages 94 to 104)
	How climate-related risks and opportunities are integrated into their (1) current decision making and (2) strategy formulation, including planning assumptions and objectives around climate change mitigation, adaptation, or opportunities.	Strategic Report: Risk management (pages 94 to 104)

Disclosure requirement	Contents	Location
RISK MANAGEMENT		
A) Describe the organisation's processes for managing climate-related risks	Describe processes for managing climate-related risks, including how decisions to mitigate, transfer, accept, or control those risks are made	Strategic Report: Risk management (pages 94 to 104)
B) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into overall risk management	Strategic Report: Risk management (pages 94 to 104)
METRICS AND TARGETS		
A) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process	Key metrics used to measure and manage climate-related risks and opportunities. Organisations should consider including metrics on climate-related risks associated with water, energy, land use, and waste management where relevant and applicable	Environmental Sustainability report (pages 82 to 87)
	Methodologies used to calculate or estimate climate-related metrics	Environmental Sustainability report (pages 82 to 87)
B) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 Green House Gas (GHG) emissions, and the related risks	Scope 1 and Scope 2 GHG emissions and, if appropriate, Scope 3 GHG emissions (in line with GHG Protocol with methodologies explained) and the related risks	Environmental Sustainability report (Page 87)
	Generally accepted industry specific GHG efficiency ratios.	Environmental Sustainability report (Page 87)
C) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	Key climate-related targets such as those related to GHG emissions, water usage, energy usage, etc., in line with anticipated regulatory requirements or market constraints or other goals. Other goals may include efficiency or financial goals, financial loss tolerances, avoided GHG emissions through the entire product life cycle, or net revenue goals for products and services designed for a lower carbon economy.	Environmental Sustainability report (pages 82 to 87)

Disclosure requirement	Contents	Location
METRICS AND TARGETS		
C) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	In describing their targets, organisations should consider including the following: • whether the target is absolute, or intensity based • time frames over which the target applies • base year from which progress is measured • key performance indicators used to assess progress against targets.	Environmental Sustainability report (pages 82 to 87)

Impact on Network Rail's Financial Position

The financial impact in terms of risks and opportunities to Network Rail is framed by the considerable certainty provided to Network Rail by the regulatory funding process; by being a central government body within the DfT group; and by the Secretary of State for Transport having statutory responsibilities to protect the interests of rail users.

Network Rail is funded in five-year blocks called Control Periods. The Office of Rail and Road (ORR) determines charges and outputs before the start of each five-year period. In doing so the ORR has statutory obligations to produce a settlement that is reasonable to the licence holder. In short this means that financial opportunities (e.g., arising from increased rail usage), and financial risks (e.g., though additional expenditure such as climate change) will be taken into account by the ORR in setting charges and outputs. This means that Network Rail, as an entity, is more protected from the monetary impacts of climate change on its financial position than for example, an unregulated market body.

In terms of the impact on taxpayers and rail users, it's important to have in mind the context that the railway network costs over £8bn a year to operate, maintain and renew. The significant potential impacts, the planned costs and recent impacts referred to in this section do not indicate a material change in funding levels, but instead provide an insight into the significant financial headwinds that climate change is driving.

Strategic aims

We published our 30-year Environmental Sustainability Strategy in 2020, in which we set out our vision to serve the nation with the cleanest, greenest mass transport. To deliver our vision, and supporting the government's strategic objective of delivering environmental sustainability, we have four key priorities and ambitions:

1. a low-emission railway – we'll achieve net zero carbon emissions by 2050 in England and Wales, and by 2045 in Scotland, and deliver continual improvements to air quality so that our passengers, neighbours, and employees breathe healthier air
2. a reliable railway that is resilient to climate change – we'll prepare the railway infrastructure to minimise the impacts of climate change by 2050
3. improved biodiversity of plants and wildlife – we'll continue to look after nature and protect, maintain and enhance biodiversity across the railway
4. minimal waste and sustainable use of materials – we'll reuse, repurpose or redeploy all surplus resources, minimise use of resources, design out waste and embed waste life cycle/circular economy thinking into the rail industry by 2035.

The financial impacts of the first two elements: a low-emission railway; and a reliable railway that's resilient to climate change are discussed in more detail below.

Low-emission railway

Our strategic objectives are:

- reduce carbon: progress towards net-zero carbon emissions by 2050

- improve air quality: Reduce harmful pollutants in managed stations by 25 per cent by 2030, have dust suppression in place at all appropriate plant, worksites and depots by 2029
- non-traction energy reduction: feed in 100 per cent of our non-traction electricity from renewable sources by 2030.

Our recent strategic business plan set out how we plan, by 2029, to spend approximately £300m on decarbonisation, which primarily comprises of the transition of our road fleet to electric vehicles. We're also exploring opportunities to use renewable energy sources, including using unused land and roof space to generate renewable energy.

To meet our strategic objectives we'll also continue the enabling works that are already ongoing to embed and further develop the tools, systems, processes, guidance, and policies to give us a firm foundation to deliver our strategic objectives. For example, this will include further development of data collection and analysis tools that will allow us to monitor our sustainability performance better. This will enable better business decisions, embedding sustainability at the very outset of our infrastructure projects and in our day-to-day business operations.

Our plans set out our commitment to supporting the Government to achieve its target of reaching net zero by 2050. We have key targets for the reduction of scope 1 and 2 carbon emissions, and we're forecasting to achieve a 46 per cent reduction in scope 1 and 2 carbon emissions by 2029 compared to our 2018/19 baseline. We also have key targets for the reduction of scope 3 emissions, and we are forecasting to achieve a 28 per cent reduction in traction diesel by 2030.

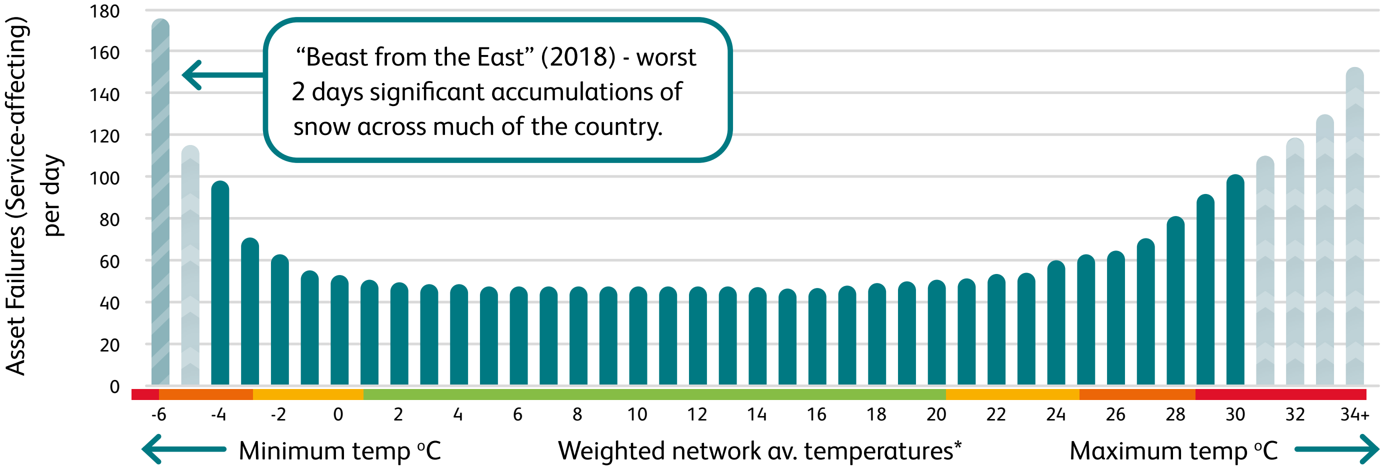
A key focus is to capture material / activity data for the components that make up our scope 3 emissions baseline so the benefits to invest in activities such as electrification can be accurately quantified. We're also working with our supply chain so that by 2025 at least 75 per cent of our suppliers, by emissions, will have set their own science-based targets. We expect to exceed this target as to date 74 per cent of our suppliers, by emissions, have done this.

Reliable railway that is resilient to climate change

Our ambition is to have prepared the railway infrastructure to minimise the impacts of climate change by 2050. We want passengers and freight to get where they need to be so we can keep connecting communities and businesses and supporting the UK economy. Climate change can cause an acceleration in the rate at which many of our assets deteriorate (especially for earthworks and drainage assets), and instances of weather-related service impacts. The following chart shows the impact of temperature change on asset performance.

Asset failures v Temperature

(based on daily actuals 1/1/2018 - 31/1/2023 excl early months of COVID)
Signalling/Points/Electrical Power (FMS Asset Priority 1-3)



*Temperatures are midpoint between weighted average across network and most extreme Delivery Unit figure. Extreme temperatures are low frequency events, so have a lower confidence due to sample size days.

The chart on the previous page shows levels of "service affecting asset failures" across the temperature range. This is based on actual numbers of daily faults and maximum / minimum temperatures from January 2018 to January 2023. This shows that, while there's no single threshold at which failures and speed restrictions occur, when viewed across the network, they increase progressively from around 20° C, and become particularly severe from around 30° C.

Network Rail carries insurance for severe weather incidents that go beyond normal asset performance expectations. The gross cost of these failures from severe weather amounted to £372m in the period 2014-2023, approximately 0.5 per cent of our running costs.

The severe hot weather in July 2022 saw a 40-50 per cent drop in train performance and £30m revenue loss. So to improve asset performance at higher temperatures Network Rail needs to target improved maintenance and renewals, as well as replace parts of the network with more resilient assets.

From 2024-2029 we plan to invest more than £1.5bn on improving our resilience to extreme weather and climate change including maintenance and renewals activities. This is broadly double our expenditure on these type of projects in the previous five years. Key areas of focus include maintaining and renewing drainage and earthworks systems, as well as some of our track and overhead electrical equipment renewals.

Each of our regions have developed Weather Resilience and Climate Change Adaptation (WRCCA) plans which provides granular detail on how we'll improve our network's resilience to extreme weather and climate change. In doing so asset managers will draw on consistent tools, systems, processes, guidance, and policies to give these plans a firm foundation.

We don't think this will cover all resilience requirements and we expect to see an increase in reactive works required to manage the impact of extreme weather and climate change.

Network Rail will continue to manage such events within the funding available, e.g., by using risk contingencies and insurance.

Further details of climate change risks and specific risk scenarios are detailed on pages 103 to 104. Further details of Environmental Sustainability, including measurements, are set out on pages 82 to 87.

RISK MANAGEMENT

Our vision is to make risk management integral to what we do, so we can maximise our ability of delivering for passengers and freight users.

At Network Rail, it's vital that we effectively manage any threats that could stop us running a safe and reliable railway, and that we make the most of opportunities to improve people's experiences of using the railway or working with us. These threats and opportunities are collectively known as our risks.

How we manage our risks

A Governance, Risk, Assurance, and Improvement approach is at the heart of our operating model and the risk framework element sets out our enterprise risk management requirements as well as providing guidance and tools. It helps us to identify, assess, and manage our risks consistently to support a more joined-up conversation on how they are managed, as well as providing opportunities for better monitoring of improvement actions and allowing us to identify common themes. The framework is based on the ISO:31000 international risk standard and is also compliant with the Government's Orange Book risk guidance.

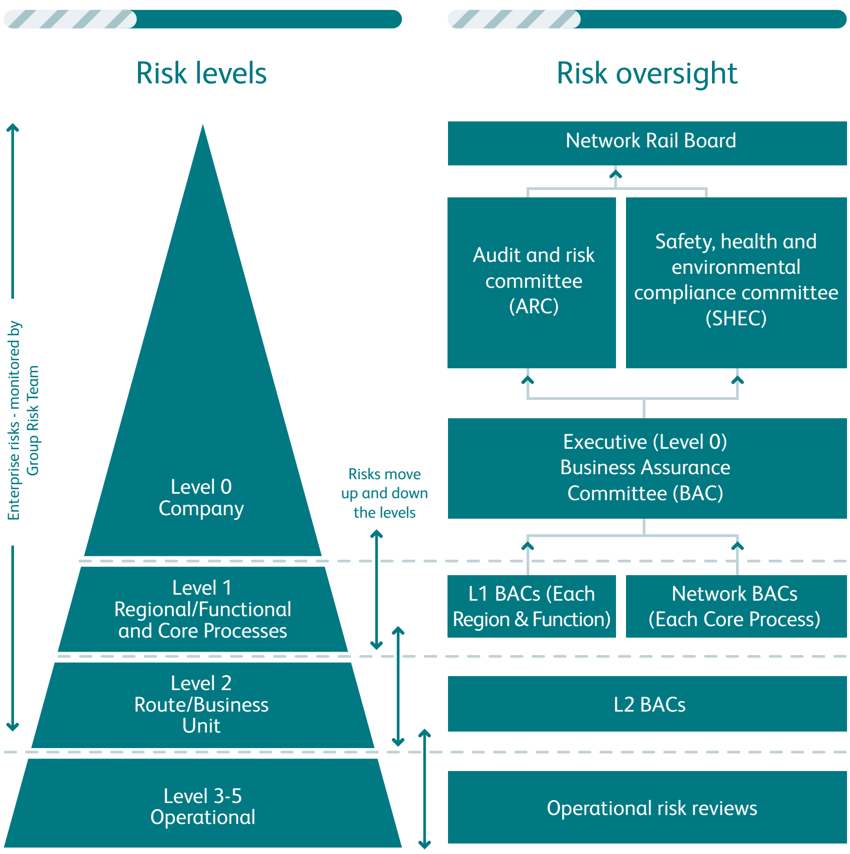
Diagram 1 - Risk framework

All our enterprise risks are managed in accordance with our enterprise risk management (ERM) framework, tailored as appropriate for specific risk types, such as safety, project and programmes, and climate change. For example, safety risk management follows our framework and is also supported by assessment against the Office of Rail and Road's (the ORR) Risk Management Maturity Model (RM3). RM3 is compatible with the ERM framework and is a tool for assessing an organisation's ability to manage health and safety risks, helping to identify areas for improvement, as well as providing a benchmark for year-on-year comparison.

Risk oversight

Everyone at Network Rail has a role to play in identifying and managing risks, but the Board is ultimately accountable. Enterprise risks are monitored and governed at the appropriate level of Business Assurance Committee (BAC) or equivalent meeting.

Diagram 2 – Monitoring of different levels of risk



The Board delegates day-to-day monitoring to the audit and risk committee (ARC) plus the safety, health, and environmental compliance (SHEC) committee for safety risks (see pages 136 and 128 respectively for committee information). Each risk has one owner. Level zero risks are owned by an executive member. Risk ratings, controls, their effectiveness, and improvement actions are updated quarterly and reviewed by executive leadership .

How do we decide how much risk to take?

We use company-wide risk appetite statements, updated annually, which set out how much risk the Board is willing to take for Network Rail to achieve its goals. There are four possible risk appetite levels – minimal, cautious, open, and eager – and they are supported by more detailed guidance on how to use them, including examples of decisions that are in or outside of appetite. Our aim is to consider risk appetite for all areas together when making decisions, rather than each in isolation and to proactively work to bring each risk within its target risk appetite.

Financial – Open
Within our core business, we're willing to accept and invest in opportunities with inherent financial risks, where these are understood and proportionate to the expected benefits to passengers and freight users.

Outside of our core business, we are only willing to accept and invest in opportunities with moderate inherent risks, where these are understood, proportionate to the expected benefits, and undertaken with necessary external approvals.

We are prepared to accept minimal risk of a breach of our agreed funding limits and will allocate funding to create buffers to mitigate the risk.

Political and stakeholder – Open
We are willing to accept some negative exposure to support high risk strategies, including national media coverage, political, or regulatory scrutiny (i.e., our stakeholders).

Safety, health and environment - Minimal
We will seek to continually reduce safety, health, and environment risks across the system, to reduce the likelihood of serious harm to the public, passengers, workforce, or the environment.

Train performance - Open
We are open to new approaches and will work across the industry to find better ways to support the passenger and freight user.

Innovation will be supported where the risks are understood and proportionate to the expected benefits.

Where risks are poorly understood, we will be cautious about making any decision that could negatively impact on train performance for passengers and freight users.

Each risk is assessed against all four of these appetite areas, and we report on whether they're in or out of appetite.

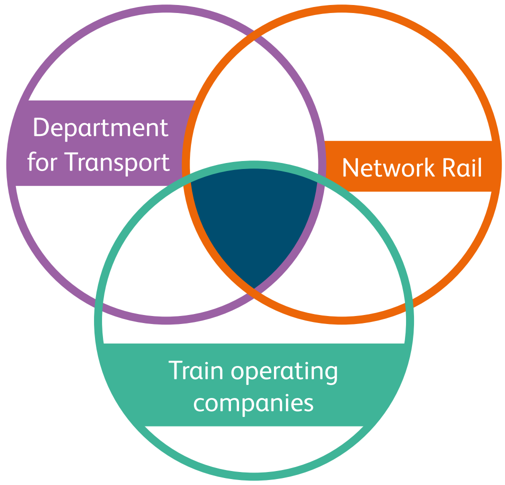
Emerging risks

One way for companies to better manage risk, particularly major shocks to their operation, is to look ahead to the future and think about how different scenarios could affect them. We conduct biennial horizon scanning workshops with executive leadership and the Board. The outputs of these exercises, plus any new emerging risks, are being monitored and reviewed through Audit & Risk Committee (ARC). To support this, we have an emerging risk radar – now part of our new risk dashboard – so we can track these in relation to our existing risks.

Planning for Control Period 7 (CP7)

Our planning for CP7 has considered how current risks will be impacted by our CP7 plans, as well as considering new threats or opportunities that may appear as emerging risks.

Putting Passengers First across the industry



Network Rail can't manage risks to the railway on its own – many risks require cross-industry collaboration. For example, train service delivery is affected not just by Network Rail's operations, but by the specification of passenger services by funders, as well as fleet reliability and sufficient train crew within the train operator.

Network Rail has led the co-ordination of cross-industry risks, with close collaboration with the Department for Transport (DfT), Great British Railways Transition Team (GBRTT), train operating companies and other rail industry organisations. Building on work started by the rail industry risk forum in 2021, we have developed shared risks to support an industry risk register. We have developed an industry supply chain disruption risk, with ongoing monitoring of actions, and are developing industry people and winter power disruption risks.

The rail industry risk forum continues to meet quarterly to monitor and review shared risks. One area of focus is to better understand the longer-term emerging risks and impact on the rail industry.

Continuous improvement

We regularly assess our risk framework against approaches in other organisations, through our active participation in industry groups and checking it against best practice risk industry standards, including updates to the Orange Book. In 2022, we implemented the Active Risk Manager (ARM) tool to manage all our enterprise risk information across Network Rail. We also built an automated risk dashboard, available to everyone at Network Rail. These initiatives have moved our risk documentation away from spreadsheets into dynamic data, reduced bureaucracy, and improved the quality of risk analysis.

Principal risks

The Board confirms that it has assessed and monitored Network Rail's principal and emerging risks throughout the year, in accordance with provision 28 of the UK Corporate Governance Code 2018.

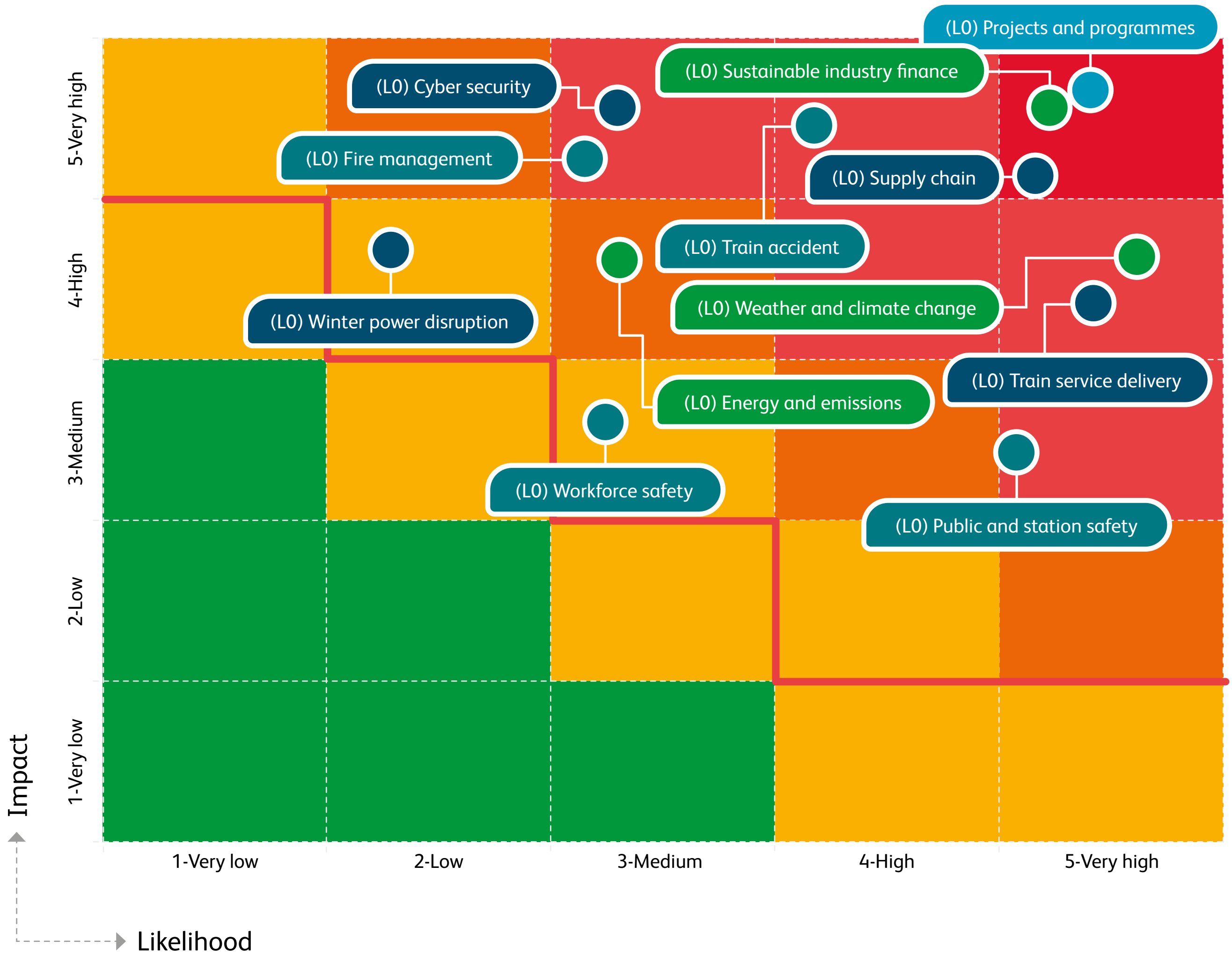
A principal risk (taken from our Board 'level zero' risk register) is defined as one that meets one or more of a set of criteria, including: the level and type of visibility the risk requires, how well controlled the risk is, the impact to our reputation if the risk occurred, or if the risk has a material financial impact.

The risk visuals and accompanying tables below show the risks that meet these criteria, how serious they are, and how they changed over the last year. The risk tables are grouped by Network Rail's strategic priorities (for more information on our strategic priorities, see 17 to 19).

Historically, our risk visuals have shown the stakeholder/ political impact and highest likelihood scores. As part of our move to a new risk dashboard, we are now reporting plausible worst-case impact (which could be safety, financial, train performance, or stakeholder/political impact) along with its associated likelihood score. If a risk has changed over the year, this has been highlighted in the tables below.

Diagram 3 - Threats to achieving our strategic goals

Threats map (as of 27 February 2023)



Over the year, we have seen a deterioration in our overall risk profile, with some key themes driving multiple risk changes.

The conflict in Ukraine, and subsequent economic effects including inflation and cost of living challenges have caused a deterioration in our Supply Chain and Sustainable Industry Finances risks and required us to implement new controls to effectively manage our Cyber Security threats.

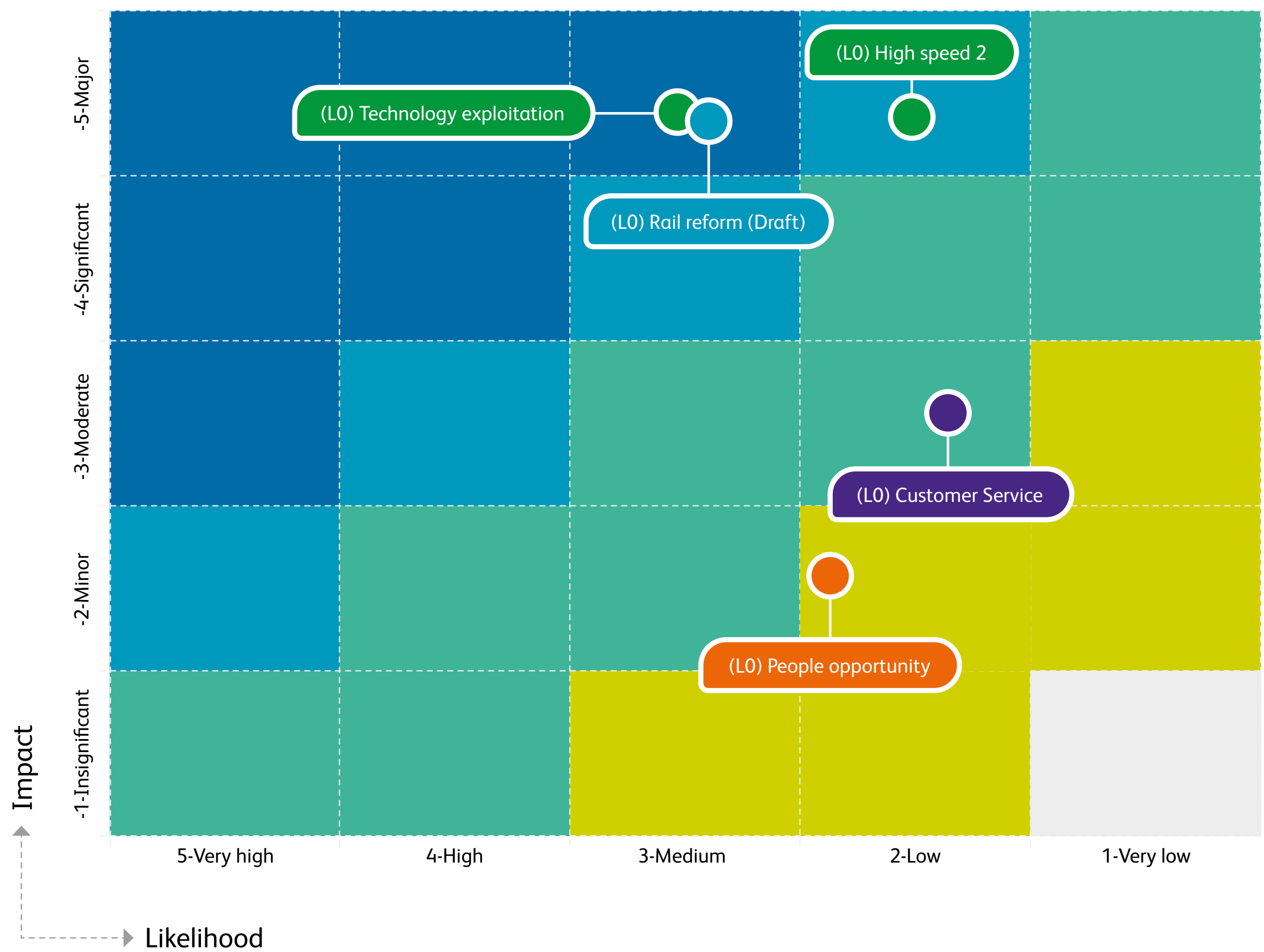
We are also undergoing and anticipating significant change as an industry and as an organisation. Industrial Relations risk (not shown in the visuals and table) materialised during the year which had a further knock-on impact on the Sustainable Industry Finances and Train Service Delivery risks.

Climate change risks

The two strategic threat risks related to climate change – Energy and Emissions, and Weather and Climate Change – are managed in line with our enterprise risk framework and reported quarterly as part of this process, in addition to being covered in the Environmental Sustainability and other relevant committees. You can read more on climate change risks and how we are responding to the recommendations from the task force on climate-related financial disclosures (TCFD), starting from page 88.

Diagram 4 – Opportunities

Opportunities map (as of 27 February 2023)



Risks by strategic priority

For more information on strategic priorities see page 17.

Strategic priority

Safety

Our safety vision is Everyone Home Safe Every Day. Our aim is to reduce risks to the public and passengers, as well as to the people who work for and with us. You can read more on safety in the Technical Authority section starting on page 71. The principal risks that could affect the achievement of this strategic priority are:

Fire Management
NEW

Threat

Failure to manage fire safety risk leading to a significant safety incident and or enforcement action.

What's changed? This is a new risk, escalated during the year due to its increased rating, financial impact, and need for mitigating actions.

Some of the actions we're taking

- implementing a comprehensive Fire Safety Improvement programme to strengthen our current control framework. On completion of this programme, we expect the risk to be de-escalated.

Public and Station Safety

Threat

Our framework is not robust enough to have suitable and sufficient infrastructure, systems and controls in place to safeguard passengers and public at the interface with trains and the railway (excluding train accident risk), resulting in a fatal or major injury.

Some of the actions we're taking

- continuing to improve our current approach to managing risk at level crossings, such as our strategy on targeting closures
- developing new level crossing technologies, such as providing warnings to users at passive crossings
- continuing to reduce trespass on the railway by targeting hot-spots and improving our own as well as wider industry governance of the risk, engaging with train operators for support
- reducing the risk of harm in stations and across the network through the Fire Safety Improvement programme.

Train accident

Threat

Network Rail fails to manage activities leading to a failure of an asset or operational process causing a catastrophic train accident.

What's changed? This risk worsened over the year due to data showing an increase in our asset risk.

Some of the actions we're taking

- activities in the Control Period 6 Delivery Plan aim to reduce train accident risk and include additional drainage, vegetation, and fencing management, with our earthworks and objects on the line being the highest priorities
- addressing the risks from earthworks, structures and extreme weather through our Weather Action Task Force
- the Intelligent Infrastructure and Research and Development programmes are working to provide better information to aid decision making for the front line
- addressing risks associated with signalling, including reassessing staff undertaking signalling maintenance testing.

Workforce safety

Our framework is not robust enough to safeguard our workforce resulting in injury, single and/or multiple fatalities of Network Rail staff (employees and contractors).

What's changed? This risk improved at the end of the reporting year (February 2023) as a result of the removal of ORR improvement notices, showing their increased confidence in our management of the risk, for example, a reduction in lookout working.

Some of the actions we're taking:

- our revised Safety Framework focuses on leadership, communications, assurance, safety culture, a refresh of our Lifesaving Rules and further plans to separate people from trains
- the Electrical Safety Delivery programme is reducing the risk of harm while work takes place on the electrified railway
- the Fire Safety Improvement programme is reducing the risk of harm in stations and across the network
- we've rolled out our in-cab safety system to support road drivers to drive safely.

Threat

Strategic priority

Customers and communities

Our aim is to improve the service we provide to our customers and communities, and to be an easy and collaborative partner to work with. You can read more on this strategic priority on page 18. We have one opportunity relating to the achievement of this strategic priority:

Improve the customer service we offer

We have the opportunity to change our culture, putting safe service at the heart of all we do and improve the experience we offer to our passengers, customers, stakeholders, and our own people.

Some of the actions we're taking

- a framework for delivering great customer service has been developed with regions and functions
- our aim is to define safe service for all and instil in everyone the belief and the commitment to deliver
- we plan to support our leaders and colleagues with the skills and guidance to deliver great service.

Opportunity

Strategic priority

Train service delivery

Our aim is to deliver a railway that people can rely on, with trains that turn up and arrive at their destination on time. You can read more on this strategic priority on page 17. The principal risks that could affect the achievement of this strategic priority are:

Cyber security

Hostile or malicious acts on Network Rail's cyber systems leading to loss, compromise or disruption impacting the operational railway, business services and supporting processes.

Some of the actions we're taking

- making targeted improvements to our compliance with Network and Information Systems (NIS) regulations, supported by new cyber security governance and assurance activity
- developing joint action plans with the regional teams to establish effective monitoring in Rail Operating Centres
- increasing daily monitoring of Ukraine/Russian cyber related threats and enhancing logical security for technology used by suppliers working in Ukraine
- contracting an incident response retained service for emergency support in the event of a cyber attack
- assessing exposure to, and use of, software or applications developed in Russia
- reviewing cyber incident types associated with the conflict to assess response plans.
- improving our Cyber Security Operations Centre to enhance our monitoring and incident response capability
- introduced formal project governance arrangements, particularly focusing on introduction of railway operational technologies such as the East Coast Digital Programme.

Threat

Supply Disruption and cost increases **Threat**	Disruption to supply of critical goods, services, materials, plant, or labour resulting in possible significant disruption to train services, planned cost increases, possible incomplete delivery of Control Period 6 outcomes from available budget and/or reputational damage. Linked to our supply chain risk, we also monitor the risk of modern slavery in our supply chain as part of our wider ethics work and have embedded modern slavery considerations throughout our procurement process and contractual provisions to help reduce the risk. You can find out more in our annual Modern Slavery Statement available on our website. **What's changed?** This risk has increased due to multiple economic, geopolitical and environmental factors including (but not limited to) the war in Ukraine, increasing fuel and energy prices, increasing inflation, interest rates and raw material/commodity prices, increasing labour rates and labour shortages, severe weather events, and competition for supply from other major infrastructure projects. The risk title and description were changed to reflect the growing impact of increased costs. **Some of the actions we're taking** • proactively monitoring key supplier resilience and reviewing financial and non-financial indicators across our supply chain to identify those with a raised likelihood of failing, with contingency plans developed for those suppliers most at risk • developing controls to better understand and manage inflation and price increases for both pre and post contract arrangements • reviewing our procurement strategies and timelines to enable Network Rail to obtain best value whilst the market remains volatile • liaising regularly with key stakeholders internally and externally to discuss key risks and issues regarding the availability and cost of key resources, materials, commodities and services, and associated options to manage these • launching a new post contract assurance process for contract and supplier management • launching a post-contract and supplier management training and development solution as part of the Commercial and Procurement competency framework • adopting the Cabinet Office's Modern Slavery Assessment Tool to help manage our highest risk commercial contracts.
Train service delivery **Threat**	Not achieving train or freight operating company performance targets as agreed with stakeholders, resulting in loss of reputational risk for the industry. **What's changed?** This risk score has increased as key operational performance targets were missed, with more services operating and the impacts of industrial action, train operator resources and extremes of weather. **Some of the actions we're taking:** • Routes and Train Operators have updated their Joint Performance Strategies and plans to drive whole system improvements this year • leading with Network Performance Board in developing an Industry Performance Recovery plan - to be launched when industrial action is resolved – including renewed focus on leading indicators • Routes and Train Operators have updated their Joint Performance Strategies and plans to drive whole system improvements this year • embedding a Performance Improvement Management System with train operating companies to drive continuous improvement • considering performance impact in all decisions about timetable change to increase timetable resilience with the Industry Timetable Performance Modelling programme enabling longer-term development of more resilient timetables • The Weather Risk Task Force is tackling improvements in weather resilience and in the appropriate operational response to weather events • You can read more on train service delivery and timetable planning in the System Operator section on page 67.

Winter Power Disruption
NEW

Due to reduced electricity supply to the UK power grid, there is a risk of power disruption, with limited or no warning and our ability to respond effectively, impacting industry assets and stakeholders, leading to widespread operational disruption and significant safety concerns.

What's changed? This is a new risk, added in response to the possibility that a shortage of gas leads to reductions in electricity supply and regional 'rota' disconnections in the event of a cold winter that exhausts reserves.

Some of the actions we're taking:
- a Power Resilience Task Force has been set up involving subject matter experts from across the business, including regional representation, to develop mitigation plans
- Working as part of a cross-industry (DfT led) planning group to minimise the risk to the industry and align planning activities
- Undertaking assessments of our level of power resilience across the organisation to understand the level of risk and resilience across the network

Threat

Strategic theme People

To help us attract and retain the best people, we must create an environment in which people can bring their whole selves to work, feel safe to be who they are without fear of discrimination, and be offered an environment in which they can fulfil their potential and feel valued. You can read more in the People section on page 77. The principal risks that could affect the achievement of this strategic priority are:

Better jobs and healthy, engaged people

Industry risk

There is an opportunity to have the right people with the right skills who are healthy and engaged, doing the right jobs safely.

Some of the actions we're taking
- developing a framework for engaged healthy and competent people to deliver high performing railway with regions and functions across Network Rail
- putting programmes in place to:
  - improve diversity and inclusion
  - improve competence management
  - retain talent in the industry
  - improve engagement with better job design
  - improve culture and capability.

Opportunity

Strategic theme Efficiency

As a public body, we have a responsibility to spend taxpayers' money wisely in operating, maintenance, renewing and enhancing the railway infrastructure. You can read more on this strategic priority, including KPIs and milestones on pages 18 and 19. The principal risks that could affect the achievement of this strategic priority are:

Project/programme delays and or increased cost
Industry risk

Schedule or cost growth could occur on individual or multiple projects (including TransPennine Route Upgrade) across the rail investment and delivery portfolio due to unforeseen internal or external factors, resulting in delayed benefits and stakeholder dissatisfaction.

Some of the actions we're taking
- continuously improving the Project Acceleration in a Controlled Environment (PACE) framework to reinforce the relationship between engineering, project management and sponsorship
- identifying and implementing cost and programme efficiencies through Project SPEED (Swift, Pragmatic and Efficient Enhancement Delivery)
- putting in place governance and peer review for major projects.

Threat

Early benefits from rail reform

In advance of legislative change, there is an opportunity for Network Rail to provide early benefits for passengers, freight, and taxpayers through the rail reform agenda.

What's changed? This opportunity is currently being updated in light of work done recently to identify passenger benefits Network Rail can deliver in advance of rail reform.

Opportunity

Strategic theme

Sustainable growth

Network Rail's vision is to be a responsible and environmentally sustainable company. We want to be a strategic partner with other rail industry and government stakeholders to ensure the railway develops in a way that is sustainable, efficient, responsive and optimises whole-industry costs and revenue. You can read more on this strategic priority on page 18. The principal risks that could affect the achievement of this strategic priority are:

Energy and emissions

Failure to decarbonise and improve air quality performance of Network Rail's activities and the British rail industry, leading to negative environmental impact, non-compliance, and reputational damage for both Network Rail and the wider industry.

Some of the actions we're taking

- Setting up power purchase agreements for a larger portfolio covering traction and non-traction energy consumption to significantly reduce our carbon emissions
- continuing to adopt low carbon copers and trestles as an innovative decarbonised solution for our infrastructure. We plan to establish an infrastructure baseline this control period so that we can start tracking carbon reductions in infrastructure on an annual basis
- starting to complete whole life carbon assessments across our tier 1 projects such that low carbon design options can be identified and implemented at appropriate design stages
- updating our scope 3 emissions baseline by accurately calculating the emissions of each module and using activity data where available. We will use this baseline to determine high-priority categories that need to be decarbonised so we can effectively reduce our scope 3 emissions footprint
- continuing to monitor air quality levels at stations and carry out audits at these locations against the diesel engine exhaust emissions standard; enabling the business to complete risk assessments aligned with the Control of Substances Hazardous to Health (COSHH) Regulations so that risks of poor air quality are controlled and mitigated to as low as reasonably practicable levels.

You can read more on energy and emissions management in the environmental sustainability section on page 132.

Threat

High Speed 2 integration (HS2)

Effectively integrate all phases of High Speed 2 with the existing rail network to maximise the nationwide social and economic benefits, and opportunities presented by HS2 to railway users and stakeholders. The status of this risk reflects the end of the 2022/23 reporting year and is subsequently being reviewed in light of Government announcements made since then.

Some of the actions we're taking

- We are defining and securing industry buy-in to HS2 configuration states and associated outcomes/benefits
- These configuration states are being put at the heart of industry decisions following recent (March 2023) HS2 announcements
- We have developed the cross-industry approach to HS2 Integration which defines the path towards and protects the integrity of those HS2 configuration states
- Control Period 7 funding proposals have been developed to account for HS2's introduction.

Opportunity

Sustainable industry finances **Threat**	There is a risk that passenger revenue does not recover, and efficiency commitments are not met, resulting in industry finance not recovering and unexpected subsidy requirements and loss of government support. **What's changed?** This risk increased due to the impacts of industrial action and external factors such as inflation, the current political landscape and the deliverability of CP6 and CP7 efficiencies. **Some of the actions we're taking:** • delivering the CP6 efficiency programme • developing our CP7 plans reflecting the affordability challenge whilst protecting the safety of the network • supporting GBRTT's local strategies for revenue recovery • developing third-party funding opportunities such as for Project Reach which aims to upgrade and install fibre optic cables to improve performance, safety, and passenger telecoms.
Technology **Opportunity**	Implement new technologies including research and development, digital, and intelligent infrastructure to improve the railway for passengers and freight users. **Some of the actions we're taking:** • aligning our research and development portfolio to our business priorities • committing to making investments in data • developing innovation solutions to align to industry outcomes • supporting the rollout of technology solutions and products through first of a type deployment.
Weather and climate change **Threat**	The railway fails to meet normal levels of performance during adverse and extreme weather events, today and in the future, because of climate change. **Some of the actions we're taking** • four Extreme Heat Task Forces will provide further recommendations to improve action to address risk from extreme heat • the Weather Risk Task Force continues to implement recommendations from the Mair/Slingo task forces and RAIB recommendations following Carmont and other incidents • Network Rail's 3rd Adaptation Report was submitted to December in 2021 and reviews past activities and sets out action plan for the next five years • the Weather and Climate Change Strategic Framework is being updated to provide common vision and improve alignment between regions and functions which will facilitate delivery of a resilient railway • regions will be developing long term climate change adaptation strategies during CP7 and we are running a pilot project in Southern Region to aide development of a methodology to be used across the network. You can read more on climate change resilience in the environmental sustainability section on pages 82 to 87, with our response to the tragic incident at Carmont at the forefront of how we improve.

VIABILITY STATEMENT

The directors have assessed the viability of Network Rail to maintain the UK's rail infrastructure over a three-year period, taking account of Network Rail's current position and the potential impact of defined scenarios on its principal risks and financial viability. Based upon this assessment, the directors have a reasonable expectation that the company will be able to continue in operation and meet its liabilities as they fall due over the period to March 2026. This longer-term assessment process supports the Board's statements on both viability, as set out below, and going concern, made on page 170.

Network Rail is funded in five-year blocks called Control Periods. This five-year block runs from 1 April 2019 to 31 March 2024 and the next runs from 2024-2029. The Office of Rail and Road (ORR) determines charges and outputs before the start of each five-year period. In doing so the ORR has statutory obligations regarding producing a settlement that is reasonable to the licence holder, Network Rail. This allows Network Rail a high degree of certainty regarding funding for its operations and investment activities.

The regulatory process towards setting charges and outputs allows stakeholders to define their required outputs from the network, and governments in Westminster and Holyrood to set out the funding they have available. These are built into Network Rail's strategic business plan. Once the ORR has determined outputs and charges, Network Rail produces a Delivery Plan. This plan is refreshed by bottom-up forecasts on a quarterly basis to manage outputs within the resources available.

Network Rail will not undertake any further borrowing during this control period through to 31 March 2024. Instead, its activities are largely funded by grants from the Department for Transport (DfT) and revenue from customers. Network Rail has a £32,303m loan facility with DfT, which it intends to draw upon to specifically refinance tranches of its existing debt with DfT amounting to £2,765m of the £30,709m currently drawn and to refinance commercial nominal sterling bonds of £1,150m in the period to March 2024. This facility remains within its parameters. Network Rail will agree a further borrowing facility with DfT by 31 March 2024.

Government has committed increased funding for the five-year period commencing April 2024. Nevertheless we expect that five year period to be more challenging due to inflation and the need to keep investing to maintain asset condition. This will be addressed in our planning processes.

Network Rail has separate grant agreements in place with DfT and Transport Scotland (TS) to fund activities in the period 2019-2024. These grants are:

- with DfT: Network Grant; Enhancements Grant; GBRTT Grant; British Transport Police Grant; Financing Costs Grant for DfT interest; Financing Costs Grant for external interest (bonds and swaps); and Corporation Tax Grant
- With TS: Network Grant and Enhancements Grant.

Network Rail is also investigating methods of attracting third-party capital to finance enhancements to the railway network.

In addition to the loan facility and deeds of grant described above, as the rail industry emerges from the pandemic Network Rail's direct customers, such as the passenger operating companies continue to be supported by Government.

On 20 May 2021 the Government announced plans to reform the rail industry. This proposes that a new public body, Great British Railways (GBR), will integrate the railways: owning the infrastructure, collecting fare revenue, running and planning the network, and setting most fares and timetables. It's planned that Network Rail will be absorbed into GBR to bring about single, unified, and accountable leadership for the national network. It is unlikely that this reform will involve the winding up of Network Rail Limited but in any event Great British Railways will assume the existing functions of Network Rail Limited as well as have a wider range of powers and functions. The transformation programme is dependent on further activities including legislation and will take time to fully deliver. Great British Railways: The Plan for Rail notes that 'the government will at least maintain the current infrastructure settlement, which runs until 2024, and will provide subsequent five-year infrastructure funding deals from 2024 onwards'.

Network Rail has business plans and financial models that are used to project cash flows and monitor financial risks and liquidity positions, and to forecast future funding requirements and other key financial ratios, including those relevant to our network licence. Analysis is carried out to understand the resilience of the group and its business model to the potential impact of the group's principal risks, or a combination of those risks. This analysis takes account of the availability and effectiveness of the mitigating actions that could realistically be taken to avoid or reduce the impact or occurrence of the underlying risks. In considering the likely effectiveness of such actions, the conclusions of the Board's regular monitoring and review of risk management and internal control systems, as described on pages 94 to 104, is considered.

Modelling has assessed the impact of cost shocks such as Covid-19 responses and industrial action on Network Rail's financial viability and shows that these may be mitigated by the financial risk buffer and the ability to safely defer works as required.

In addition, as Network Rail is an arms-length body classified within central government and a member of the DfT Group for consolidation purposes, its creditors can take into account His Majesty's Government security, and the legal and other obligations on the Secretary of State for Transport.

We've set out the details of the principal risks facing Network Rail on pages 99 to 104 described in terms of our ability to meet our strategic objectives. We identify our risks through a robust assessment that includes a continuous cycle of bottom-up reporting and review. In making this statement the directors have considered these principal risks and Network Rail's ability to withstand severe but plausible scenarios based on them. This included consideration of the political environment, industrial relations, and the safety of the rail network. The scenarios were considered in terms of the impact on the financial resources of Network Rail and the impact on delivery of future improvement work.

The assessment considered Network Rail's current financial position and any headroom in its current forecasts; it also considered other sources of funding or actions such as deferral of improvement work.

Several mitigating actions were identified including the adequacy of the financial risk buffer, coupled with the ability to safely defer works, plans to improve performance, and the group's insurance arrangements.

The approach was to assess three severe but plausible scenarios covering the principal risks. These scenarios augmented scenario assessments made in previous years:

Scenario 1

Sustained hot summer with extreme temperatures over a period of 6-8 weeks (e.g., 15 consecutive days at or above 30°C), with high temperatures on individual days up to or over 40°C in the South of the UK leads to: earthworks desiccation, extensive speed restrictions, partial and total line closure, overhead lines sagging and dewirement, flash flooding, lineside fires, vegetation and tidy lineside concerns, overheating in location cabinets / relays and more signals on cautionary aspects / reds, (increase of Signals Passed At Danger / Collision Risk, cracked 'T' pieces (fixing between the rail heads) and track circuit failures), leading to train performance issues and / or freight train derailment and collision with a passenger train in an urban area due to a buckled rail at a junction.

The following risks were relevant in assessing the financial impact of this scenario:

- Weather and Climate Change (L0)
- Train Accident (L0)
- Unable to produce a robust timetable (L1)
- Asset Management Excellence (L1)
- Environmental Management (L1)
- Maintenance Strategy (L1)
- Geotech (L2)

Conclusion

The potential cost of another summer with extreme heat is mostly covered by insurance with the excess of £50m. Preparation is key to managing the train accident risk with key route strategies to target main routes in advance. In the longer term, weather is predicted to become even more extreme. Funding for CP7 and beyond will need to consider the additional maintenance costs.

In the event that a train accident causes a nationwide review and change of process then:
- it could take a significant amount of time to implement a new safe system of work
- this would be expensive and require further cash reserves.

However, this has not been costed or risk assessed due to the very low likelihood of occurrence and high cost which would span a number of control periods.

Scenario 2

Following the confirmation of the Statements of Funds Available in Autumn 2022, inflation consistently and significantly exceeds the inflation assumptions (based on Bank of England forecasts) for the next three years. Once in CP7, updated forecasts show this likely to be sustained.

The following risks were relevant in assessing the financial impact of this scenario:
- Sustainable Industry Finances (L0)
- Disruption to Supply and Increased Costs (L0)
- Project/Programme Delays and/or Increased Cost (L0)
- CP7 funding and outputs consistency (L2)
- Financial Forecasting for Capital Delivery (L2)
- Breach of Control Totals (L2)
- Industrial Relations (L0)

Conclusion

A recession which may reduce the industry's income, and future increased or negative inflation cannot be controlled by Network Rail, although may be partially mitigated by some RPI-linked income flows. Work continues to agree flexible budgeting arrangements with the ORR, manage the relationship with suppliers so they absorb inflation costs and replan CP6 works into CP7 plans. In CP7, there could be further pressures with negative inflation to make additional efficiencies to remain within the Statement of Funds Available.

Network Rail continues to make efficiencies. However, there are limitations on how the inflation risk, which is unpredictable in the longer term, can be absorbed and still fully deliver rescheduled CP6 works within CP7. This could result in challenges with the affordability of CP8 should works be delayed further.

Whilst the funding and delivery risk against settlements in CP6 and CP7 is unlikely to impact viability in the short to medium term; longer term income and funding for the railway may be uncertain with the impacts of a recession and / or negative inflation. The risk would be compounded further if there are further unexpected economic failures or geopolitical events such as the war in Ukraine, that mean inflation continues to increase unpredictably. Any works not delivered as planned may lead to an increase in performance issues and reduced services for passengers and freight into CP8

Scenario 3

Collapse of a major signalling supplier, impacting the ability to deliver renewal and enhancement projects and support the existing operation of the network

The following risks were relevant in assessing the financial impact of this scenario:
- Disruption to Supply and Increased Costs (L0)
- Train Service Delivery (L0)
- Project Programme Delays/Increased Costs (L0)
- Asset Management Excellence (L1)
- Signalling (L2)

Conclusion

To significantly impact Network Rail, the supplier would need to fail with the additional loss of the Intellectual Property Rights (IPR's). This is seen as unlikely due to the size and importance of the organisations within their hosting countries and the value of IPRs in the marketplace. There are multiple controls to monitor the suppliers that would give sufficient warning of potential failure and provide contingency to transition to another supplier quickly and with minimal impact.

If we lost a major signalling supplier with no replacement, the cost would not impact Network Rail's viability. The existing infrastructure would be replaced with other technology gradually as it failed or became obsolete. This would be done over a number of control periods.

However, there would be an impact on train performance from the inability to access maintenance support where necessary for product failures.

Based on this robust assessment of the principal risks facing the group and on the assumption that they are managed or mitigated in the ways disclosed, the Board's review of the business plan and other matters considered and reviewed during the year, and the results of the sensitivity analysis undertaken and described above, the Board has a reasonable expectation that Network Rail will be able to continue in operation and meet its liabilities as they fall due over the period to March 2026.

HOW WE ENGAGE WITH OUR STAKEHOLDERS

As Network Rail's Board of directors, we have collectively and individually fulfilled our duties as set out in section 172 of the Companies Act 2006 to a high standard throughout this reporting period.

Our stakeholders include: our people, railway users and the public, industry partners, communities and the environment, tax payers, the Government, local government authorities, and supply chain partners.

Section 172, Companies Act 2006

Section 172 states that directors must promote the success of the company, while considering – among other things – the interests of stakeholders, the interests of employees, the environment and the long-term impact of business decisions. We believe that the success of Network Rail depends upon the value we provide to our stakeholders, the sense of safety and wellbeing felt by our staff, our impact on the external environment and the legacy we create for future generations.

Acting fairly between stakeholders

We're a publicly owned, not-for-dividend company. Our activities and engagement are concentrated on delivering our strategy and the needs of our stakeholders. We refer further to specific stakeholders below; these include rail passengers and freight users. We seek to promote the success of the business while also benefiting our stakeholders.

Our governance and decision-making processes are designed to ensure we manage the business responsibly and effectively, to a high standard of business conduct (see the corporate governance report on pages 118 to 127 for more information).

The Network Rail Story and our Board

Our story comprises our vision, values, strategy and performance. It outlines the culture we aim to achieve to support the long-term success of the rail industry. We appreciate that the interests of stakeholders and employees are an imperative consideration when making decisions. We seek to maintain effective communication with our employees and other stakeholders in order to achieve our vision to be a company that is:

- on the side of passengers and freight users
- easy to engage with
- an efficient dependable partner
- a company people are proud to work for
- instinctively recognised as an industry leader.

We believe that our Board has the right breadth and depth of knowledge, skills and experiences to run the business effectively. We recognise the importance of diversity, equality and inclusion and seek to improve this at Board level, in our executive leadership team, and throughout the business.

We've established a committee structure to provide detailed scrutiny of key areas of our responsibilities. We also have a series of company policies and guidance which set out expected standards of behaviour.

Covid-19 and stakeholder engagement

The industry continued to emerge from and adapt to the impact of Covid-19 throughout this reporting period. At the end of the reporting period 2022/23 industry revenue was at 89 per cent of pre-Covid levels, the Elizabeth line, which opened in May 2022, has had a major impact on this figure, with over 100 million people having now used the service.

External factors including inflation, the cost-of-living crisis and sustained industrial action has also affected overall recovery. The economic climate continues to appear challenging. We've continued to ensure that our business processes continue while we work closely with our stakeholders and look to the future.

In 2023/23 we continued to support our retailers with a reduced minimum guaranteed rent figure as they emerged from the pandemic. However, from April 2023 all retailers were back to their contractual minimum guaranteed rent.

Diversity, equality and inclusion and stakeholder engagement

Our "Stand up for Race Equality" initiative has been attended by the vast majority our employees and has been adopted by other stakeholders within the rail industry. We're focussing on accessibility which will lead to an Accessible Travel policy in the future to improve engagement with our passengers and customers who have disabilities. We have also introduced mandatory Disability Equality training for all our employees.

Her Late Majesty Queen Elizabeth II's funeral

The rail industry came together to help people travel to commemorative events, pay their respects and celebrate the extraordinary life of Her Late Majesty Queen Elizabeth II. We worked closely with all train operators to run extra services through the day and into the night and opened our managed stations 24 hours a day to provide shelter so people could safely wait for their trains to get home. This was the biggest public transport operation since the London 2012 Olympic and Paralympic Games.

Industrial action

2022/23 was a challenging year for the rail industry as it faced the biggest industrial action in recent history, in a dispute over pay and modernisation. The industrial action saw contingent staff and teams work together, over 11 months, to deliver a service for our passengers and freight users. Following a referendum in March 2023 the dispute between Network Rail and the RMT was resolved and we are now working on the implementation of new working practices relating to productivity.

Modernising management

There continues to be a loss of passenger revenue in this reporting period. We've had to make difficult decisions relating to workforce modernisation in view of this. We've engaged with trade unions and our workforce in this regard and we explain further in the Corporate Governance report, pages 118 to 127 (see the 'Modernising Network Rail' sub-heading on page 119).

Ukraine and stakeholder engagement

In response to the humanitarian crisis resulting from the war between Ukraine and Russia we raised a challenge to the rail industry to replicate the 1999 "train for life" aid train to Kosovo. This resulted in the "UK Rail for Ukraine" initiative which has facilitated the delivery of large quantities of aid items to those affected. We've also provided a substantial aid package to Ukraine consisting of bridging material and railway equipment.

Stakeholder engagement:

Our operating model is outlined on page 19. Please see page 17 for Network Rail's strategic priorities.

OUR PEOPLE

Key objectives:

To be a company people are proud to work for; to ensure our employees work in a safe and positive environment; to ensure our employees have the opportunity to develop their careers.

Comments we would like to hear:

"My manager cares about me and I am proud to work for Network Rail"

Examples of measures taken:

Your Voice surveys (an opportunity to suggest improvements); listening events; Customer Stakeholder and Relationship core GRAI (Governance, Risk, Assurance and Improvement) process, and Rail Wellbeing Live seminars.

RAILWAY USERS AND THE PUBLIC (this includes passengers, who are key stakeholders)

Key objectives:

To assist in the provision of safe, punctual and reliable train services.

Comments we would like to hear:

"I have a really good journey …. because my station is nice, safe and if things go wrong, I'm looked after"

Examples of measures taken:

Transport Focus surveys (informing us of the public's priorities); Wavelength measures, Network Rail's Public Perception Survey (informing us of passenger Net Promoter Score), Customer Experience Programme, Customer Service Live.

INDUSTRY PARTNERS (this includes freight users, also key stakeholders)

Key objectives:

To contribute to the efficiency of the railway, to build trusting relationships and improve the network together, to recover from the effects of the Covid-19 pandemic, inflation and the cost-of-living crisis.

Comments we would like to hear:

"Network Rail plans for the long-term future of the railway"

"Network Rail work with wider industry to identify opportunities to run longer services to improve the efficiency of freight operations and network utilisation".

'Rail freight is essential to Britain's environmental and economic wellbeing. It is at the heart of the nation's supply chains, keeping supermarkets stocked, builders building and medicine moving'.

'Rail freight produced 76 per cent less CO2 than the equivalent road journey. By carrying large quantities of containerised and bulk goods, rail freight removes the need for seven million lorry journeys each year, Annually this saves around 1.4 million tonnes of CO2 emissions.'

Examples of measures taken:

Regular engagement through industry forums, Level 1 engagement forums with freight operating companies, customer satisfaction surveys and scorecard measures for national passenger operators, freight end users and freight operating companies, Customer Advocacy surveys.

COMMUNITIES AND THE ENVIRONMENT

Key objectives:

Make a positive contribution to local communities and the environment; minimise the disruption caused by our work; ensure value for money and responsible use of resources.

Comments we would like to hear:

"Network Rail is a responsible and environmentally sustainable company"

Examples of measures taken:

Community meetings and response to complaints via our 'being a better neighbour' workstream, BEAP (Built Environment Accessibility Panel), to assist in ensuring our major building works, station designs and other amenities across the country are accessible and as inclusive as possible, to develop a weather resilience plan to avoid future disruption to our passengers' journeys.

THE GOVERNMENT

Key objectives:

To deliver the Government's strategy for the railway; to ensure an efficient service for the public; to contribute to nationwide economic development; to develop a railway for the future.

Examples of measures taken:

Maintaining strong working relationships with the Department for Transport, Transport Scotland and Transport for Wales to keep people and goods moving; developing long-term plans for investment across the Midlands and the North, including restoring certain historic railway lines as part of the "Restoring your Railway" scheme, working collaboratively with Ministers and officials at the Department for Transport, HM Treasury and No. 10, including for example, to agree and deliver ambitious plans for efficiencies across the railway; working across the rail industry and with National and Regional government to develop a 30-year plan for the railway through the Whole Industry Strategic Plan; give confidence by implementing robust governance standards, which accord with those expected of a publicly listed company.

The 'How we performed' section on pages 22 to 27 gives more detail on our scorecard and how we performed during 2022/23. The Chief Finance Officer's review of 2022/23 on pages 28 to 32 sets out a broader overview of our performance.

Periodically we welcome individuals from outside our organisation at certain Board and committee meetings, for example: representatives from the Rail Accident Investigation Branch, the Rail Safety and Standards Board, passenger focus groups, freight companies, train operating companies, and Government among others. This enables us to take on board views and requirements of a range of different stakeholders and also links to accountability.

CORPORATE GOVERNANCE

CONTENTS

OUR BOARD OF DIRECTORS

Peter, Lord Hendy of Richmond Hill, of Imber in the County of Wiltshire

Chair

Appointed to the Board: **2015**

Skills and experience

Peter was commissioner of Transport for London (TfL) from 2006 to 2015 and during that time he led the successful operation of London's transport for the 2012 Olympic and Paralympic Games.

Peter is a past international and UK president of the Chartered Institute of Logistics and Transport, is a fellow of the Chartered Institute of Highways and Transport, and of the Institution of Civil Engineers.

He was awarded a life peerage in 2022, having been knighted previously in the 2013 New Year's Honours List, and been made CBE in 2006 for services to public transport and the community in London. Peter conducted the 2021 review of the connectivity of the United Kingdom, commissioned by the Prime Minister, which concluded in the publication of 'The Union Connectivity Review' in November 2021.

Current external appointments

Member of the House of Lords, chair of London Legacy Development Corporation, trustee of the Science Museum Group, chair and director of Heritage Railway Association, chair of the Euston Partnership Board, trustee and director of the London Transport Museum, and president of the London Bus Museum.

Committee membership

Safety, health and environmental compliance committee; nomination and remuneration committee; property supervisory committee; director of Great British Railways Transition Team Limited and deputy chair of the Great British Railways Transition Team board.

Andrew Haines OBE

Chief executive

Appointed to the Board: **2018**

Skills and experience

Andrew became chief executive of Network Rail in August 2018. Following the publication of the Plan for Rail in May 2021, Andrew was also tasked with establishing interim arrangements for the creation of Great British Railways, alongside his role in Network Rail. Prior to joining Network Rail, Andrew was the chief executive officer of the Civil Aviation Authority from 2009-2018. Before that he had a wide-ranging career within the rail industry with British Rail, Railtrack, South West Trains and FirstGroup plc where he led the rail division in England, Scotland and Wales. In addition, he was a non-executive director at a rolling stock leasing company. Andrew was awarded an OBE in the 2016 New Year Honour's list for services to transport and is a fellow of the Chartered Institute of Logistics and Transport, the Royal Aeronautical Society, the Institute of Railway Operators and the Permanent Way Institute.

Current external appointments

Director of the Rail Delivery Group Limited.

Committee membership

Transition Team Lead of the Great British Railways Transition Team and an executive director of Great British Railways Transition Team Limited.

Jeremy Westlake
Chief financial officer

Appointed to the Board: **2016**

Skills and experience
Jeremy was formerly senior vice president for finance at Alstom Transport in France, responsible for investor management, financial performance and control, and project finance. Previously he spent 14 years at Rolls-Royce in a range of senior finance and supply chain roles in the UK and the United States. Jeremy is a fellow of the Institute of Chartered Accountants in England and Wales and has a master's degree in manufacturing from University of Cambridge.

Current external appointments
Non-executive director of Elevate Services Inc., providing technology and services to law firms and law departments.

Committee membership
Property supervisory committee; chief financial officer of the Great British Railways Transition Team and an executive director of Great British Railways Transition Team Limited.

Ismail Amla
Non-executive director

Appointed to the Board: **2021**

Skills and experience
Ismail is the executive vice president responsible for NCR's Global Professional Services. His team is made up of a global network of NCR technologists who deliver Technology Strategy Consulting for the Banking, Retail and Hospitality sectors. Prior to his role at NCR, Ismail was chief growth officer at Capita. Ismail has also served as managing partner for IBM's Global Business Services in North America; chief executive officer for the consulting firm Capco in North America; and a senior partner for Accenture where he was a member of the leadership team in the UK.

Current external appointments
A board member at UK Sport; a member of the board at Bradford Literature Festival; a fellow at University of Salford Business School; executive vice president at NCR Corporation.

Committee membership
Nomination and remuneration committee; non-executive director of Great British Railways Transition Team Limited.

Mark Bayley CBE
Non-executive director

Appointed to the Board: **2020**

Skills and experience
Mark has spent much of his career in the rail sector. He was chief executive of London and Continental Railways Limited, and chief executive of the Green Deal Finance Company. His interim work includes commercial director of High Speed 2 Ltd, and chief financial officer and board director of the Submarine Delivery Agency at the Ministry of Defence. Mark was awarded a CBE in 2012 for services to the rail industry.

Current external appointments
Non-executive director of Ofwat; a member of the DfT's Group Audit and Risk Assurance Committee; member of the board of trustees of Shadwell Opera.

Committee membership
Chair of the audit and risk committee; chair of the treasury committee; chair of the property supervisory committee.

Rob Brighouse
Senior independent non-executive director

Appointed to the Board: **2016**

Skills and experience
Rob has 40-years of experience in the rail industry, across three continents, and was previously the managing director of Chiltern Railways. He first joined the rail operator in 2000 as projects director, where he led the Evergreen 1 and 2 infrastructure projects and other works associated with the Chiltern 20-year franchise. He was also founding chair of the East West Railway Company, a government arm's length body, which is responsible for the introduction of direct rail services between Oxford and Cambridge. Rob is a fellow of the Institution of Civil Engineers and the Institute of Directors and is a chartered director. Rob holds an MBA from Aston Business School.

Current external appointments
Chair of the New Homes Quality Board (a government arm's-length body), a member of the Advisory Board at Aston Business School and advisor to the Programme Board of Dublin Area Rapid Transit (DART).

Committee membership
Safety, health and environmental compliance committee; audit and risk committee; environmental sustainability committee.

Stephen Duckworth OBE
Non-executive director

Appointed to the Board: **2021**

Skills and experience
Stephen founded and ran Disability Matters Limited, a research and consultancy business with an emphasis on inclusive design. He initially qualified as a medical doctor and followed this with an MSc in rehabilitation studies and a PhD in disability equality. Stephen currently sits on the boards of several organisations, has held numerous advisory roles to government, and carried out consultancy work with Southwest Trains and Eurostar. He was awarded an OBE in 1994 for services to disabled people.

Current external appointments
Non-executive director of the Hampshire Hospitals NHS Foundation Trust Board; board member of Palace of Westminster Restoration and Renewal Delivery Authority; trustee of Hampshire Hospitals Charity; trustee of the Rugby Football Union Injured Players Foundation; Professor of Bio Engineering at the University of Southampton.

Committee membership
Audit and risk committee; standing invitation to the safety, health and environmental compliance committee.

Michael Harrison
Special director and non-executive director

Appointed to the Board: **2020**

Skills and experience
Michael is a director in UK Government Investments (UKGI) an arm's length body of HM Treasury. As part of this role Michael has been a non-executive director of a number of companies in which the UK Government has a shareholding including Porton Biopharma, Ordnance Survey, the Met Office, and Working Links. Prior to working in UKGI Michael had a broad international corporate finance advisory career working for Credit Suisse First Boston, Barclays de Zoete Wedd, and Caliburn (in Australia).

Current external appointments
Employee of UK Government Investments (UKGI); board member of Urenco.

Committee membership
Nomination and remuneration committee; audit and risk committee; treasury committee; non-executive director of Great British Railways Transition Team Limited.

Silla Maizey OBE
Non-executive director

Appointed to the Board: **2016**

Skills and experience
Silla has significant experience in the aviation sector, and most recently was British Airways' (BA) managing director of Gatwick. She was part of BA's executive leadership team and BA's customer director. Silla brings a range of experience and insights to the Board, from operations to procurement, the shaping of the customer proposition and business reorganisations. Silla is a fellow of the Chartered Association of Certified Accountants and a fellow of the Chartered Institute of Purchasing and Supply. She was awarded an OBE in 2022 for services to the NHS.

Current external appointments
None.

Committee membership
Audit and risk committee; treasury committee; non-executive director of Great British Railways Transition Team Limited.

David Noyes
Non-executive director

Appointed to the Board: **2018**

Skills and experience
David has spent his career working in the leisure and transport sectors. In a 20-year career at British Airways he held various directorships. Subsequently, until December 2017 David was chief executive officer of Cunard and P&O Cruises, and a director of Carnival plc. David is experienced in leading devolved businesses in safety critical industries with a focus on delivering customer service excellence and driving cost efficiency.

Current external appointments
Chair of Leeds Bradford Airport, chair of Grays of Cambridge (International) Limited; chair of Celestyal Cruises; corporate advisory board member for The Teenage Cancer Trust.

Committee membership
Chair of the nomination and remuneration committee; chair of the environmental sustainability committee; safety, health and environmental compliance committee; non-executive director of Great British Railways Transition Team Limited.

Mike Putnam
Non-executive director

Appointed to the Board: **2018**

Skills and experience
Mike has over 25 years' executive experience across the development, construction and services sectors, and participated in successfully delivering high profile projects. Mike was president and chief executive officer of Skanska UK plc until May 2017, having been executive vice president and a director, responsible for the infrastructure and then the building and construction businesses. Mike is a Chartered Engineer and a fellow of both the Institution of Civil Engineers and Royal Institution of Chartered Surveyors.

Current external appointments
Independent non-executive director of TransPennine Route Upgrade; non-executive director of Southern Water Services Limited and Bazalgette Tunnel Limited; chair of Rail Investment Delivery Advisory Board; vice chair of the Supervisory Board of Arcadis NV.

Committee membership
Chair of the safety, health and environmental compliance committee; environmental sustainability committee.

Fiona Ross
Non-executive director

Appointed to the Board: **2020**

Skills and experience
Fiona is an experienced chair and non-executive director having served on boards in Ireland and the UK. Fiona chairs the Córas Iompair Éireann (CIÉ), Ireland's public transport provider and is a non-executive director at The Scottish Government. Fiona began her career as a stockbroker in London. In 2012 she was awarded a fellowship in Governance at George Washington University in the United States.

Current external appointments
Chair of Córas Iompair Éireann; chair of National Paediatric Hospital Development Board; chair of Natural Capital Ireland; non-executive director JK Funds; non-executive director of Evelyn Partners; non-executive director of SphereInvest (a UCITs fund listed in Dublin); non-executive director of The Scottish Government; non-executive director of the Northern Ireland Office.

Committee membership
Nomination and remuneration committee; environmental sustainability committee.

Susan Beadles
Group general counsel and company secretary

Skills and experience
Susan is responsible for the Legal and Corporate Services function. Susan is a qualified solicitor who has over 30 years' experience working in private practice and in-house, within both public and private sector companies. Susan joined the company from Crossrail Limited where she held the position of general counsel and company secretary. Susan's extensive experience includes providing and managing legal support to high-profile companies, and in connection with major and complex construction projects.

CORPORATE GOVERNANCE REPORT

At Network Rail we recognise the value of good corporate governance. We believe it's essential to the success of the company and to delivering our strategy for passengers and stakeholders. Throughout 2022/23 we've continued to ensure that our governance arrangements are suitable for the challenges we've faced. We continue to act on external feedback and corporate governance reviews in order to maintain a high standard of governance.

Rail industry reform

The Government's Plan for Rail white paper was published in May 2021. The Plan seeks to ensure the railway forms the backbone of a cleaner, more environmentally friendly and modern public transport system across the country. Among other things it's envisaged that Great British Railways will result in modern customer experience through a better integrated rail system, with franchising being replaced by passenger service contracts.

Work is now underway to deliver the objectives of the Plan for Rail. In September 2022 the Great British Railways Transition Team (GBRTT) Advisory Panel (Panel) was formally transitioned to a legal entity board as part of the Network Rail group of companies. The GBRTT board is overseeing GBRTT's operations, allowing the main Network Rail Board to remain focussed on delivering Network Rail's core strategy, operations and activity. The nomination and remuneration committee agreed the GBRTT board's directors and terms of reference and would continue to monitor the future of Network Rail as a corporate body. More information on the GBRTT board is set out in the nomination and remuneration committee report (page 147). GBRTT is discussed further on page 144.

As part of the governance of the GBRTT board, Network Rail's audit & risk committee and nomination & remuneration committee have expanded their remits to review GBRTT matters. You can find more information on the activities of both committees on pages 136 and 146 respectively.

Periodic Review 23 (PR23) committees

Control Period 7 (CP7) will cover the period 1 April 2024 to 31 March 2029.

A periodic review is the process by which access charges are set by the Office of Rail and Road (ORR) and Network Rail's expected outputs and funding for the next control period are agreed. Periodic reviews are one of the principal mechanisms by which our economic regulator, the ORR, holds Network Rail to account and secures value for money for users and funders of the railway.

The 2023 Periodic Review (PR23) will lead to our funding and agreed set of outputs for CP7. There are a number of factors that shape the overall approach to PR23, including industry reform. Therefore, there needs to be flexibility in PR23 decisions to accommodate the delivery of reforms during CP7.

We have established a PR23 Board sub-committee, and an Executive Leadership Team (ELT) PR23 sub-committee. The ELT sub-committee facilitates discussions regarding the development of CP7 plans and funding, in addition to wider regulatory framework issues. One of its purposes is to consider and agree the overall approach to developing the CP7 plan so that it's consistent with overall corporate strategy and Government's strategic objectives for rail. Another purpose is to consider and agree the overall strategy for engaging on CP7 with key stakeholders.

Among other things the PR23 Board sub-committee assures the Board that emerging CP7 plans and framework policy positions are credible and supportive of the delivery of Network Rail's strategic ambition for CP7 and beyond. Linked to CP7 plans and the PR23 sub-committees is the fact that each of our regions has a regional challenge panel. Their purpose is to provide external scrutiny of our CP7 plans. They comprise a range of stakeholders, including rail beneficiaries and external experts (for example, representatives from local transport bodies, local councils and industry associations). The challenge panels carry out stakeholder engagement regarding their plans, forming part of their overall and ongoing engagement with customers and stakeholders.

The PR23 Board sub-committee membership is comprised of the chief financial officer (chair), the chief executive and five non-executive directors. A small number of other directors and managers within the business attend these meetings too, for example the director of Planning and Regulation and the Planning and Regulation programme manager. All Network Rail directors have an open invitation to attend these meetings.

In December 2022 the Department for Transport published two key documents. One set out what it wanted our railway to deliver (High Level Output Statement – HLOS) and the other, how much funding it was making available (Statement of Funds Available – SoFA), for CP7.

On 19 May 2023 Network Rail published its CP7 Strategic Business Plan (SBP) for England and Wales. We aim to publish the final Scotland CP7 SBP in Summer 2023.

Managing industrial relations

In 2022/23 we activated our Strategic Crisis Management Team (SCMT) in response to the disputes with the trade unions and the ensuing industrial action called by the RMT.

We also adjusted our executive leadership team meeting cycle. This allowed (i) the right people to focus on resolving the dispute and also running the best train service that we were able to run within the constraints faced by Network Rail and the train operators and (ii) normal business decisions and project approvals to continue as normal.

Having resolved the dispute with the RMT, the lessons learned from the changes made to corporate meetings are being reviewed, with recommendations implemented where appropriate.

Modernising Network Rail

During 2022/23 we continued to implement workforce modernisation. This accords with an industry-wide approach to pandemic related challenges. As we have emerged from the pandemic, it has become clearer that hybrid working has become an established working practice, resulting in fewer rail commuters and therefore season ticket revenue.

The focus at Network Rail has been to produce a leaner management structure and to improve efficiency. We believe that this will benefit customers and passengers. During 22/23 we saw our management headcount reduce by 2,877. This was achieved by utilising the industry voluntary severance scheme, local adjustments using voluntary redundancy and by controlled attrition.

In 2022/23 we also started our modernising maintenance initiative. Modernising Maintenance is about the need for us to modernise, to be more efficient, to work better together - including with our trade unions – and for our people to be prepared to change. Network Rail is committed to never making changes that make colleagues less safe.

Covid-19 governance

In 2021/22 our Strategic Crisis Management Team (SCMT) was responsible for Network Rail's strategic direction in the context of the pandemic and managing the impact of coronavirus on Network Rail, our passengers and our people. The SCMT continued to meet during 2022/23, as did the National Alert Co-ordination Group (NACG) which manages the logistical response to the pandemic within Network Rail. The NACG includes representatives from across the industry. Both the SCMT and NACG were wound down during the latter stages of the 2022/23 financial year.

Engaging with our stakeholders

Our stakeholders are an essential component of our strategy. The interests of key stakeholders and the matters set out in the Companies Act 2006 related to directors' duties (section 172) are routinely considered in Board discussions and in decision-making.

Significant stakeholder engagement took place throughout 2022/23, including:

Trade unions	• Workforce modernisation, both management and maintenance. • Pay. • Resolving the industrial action. • Track worker safety reforms.
Government	• Board appointments for both Network Rail and Great British Railways Transition Team. • Rail reform. • Financial and budgetary challenges, including inflation. • Planning for Control Period 7.
Our people	• Trackworker safety reforms. • Workforce modernisation, both management and maintenance. • Pay. • Resolving the industrial action. • Systems thinking interventions, involving our people in redesigning their work to make it more efficient and enjoyable. • Diversity and inclusion initiatives, particularly those around the development of our Black, Asian and minority ethnic colleagues (including reverse mentoring). • Rationalisation of our corporate office estate in response to increased hybrid working. • Employee newsletters (The Network and Front Line Focus). • employee networks, sponsored by executive leaders.
Office for Rail and Road (our regulator)	• Trackworker safety reforms. • Planning for Control Period 7. • Financial and budgetary challenges, including inflation.
Train operators	• Planning for Control Period 7. • Rail reform. • Industrial action affecting train service delivery.

More information on the measures taken in this reporting period can be found in the "How we engage with stakeholders" section, pages 109 to 112.

The Network Rail Board

The chief executive presents a Board report at each Board meeting, which focuses in part on the operation and performance of the railway. In addition, the chief executive's Board reports include updates relating to our strategic priorities (these are described on pages 17 to 19).

During 2022/23, the Board focussed on the following topics in particular:
- managing the industrial relations disputes with the trade unions
- workforce modernisation, both management and maintenance
- workforce safety/safety task force
- rail reform and Great British Railways
- CP7 submissions in response to the Governments' HLOS and SOFA reports.

During 2023/24, it's anticipated that the Board's focus will be on:
- CP7 readiness
- earthworks/weather resilience/environmental sustainability strategy
- rail reform and Great British Railways
- Network Rail's readiness for Great British Railways.

Compliance with the UK corporate governance code

The Board believes that in 2022/23 the company fulfilled the principles and provisions of the UK Corporate Governance Code 2018 (The Code), except for the following provisions that we're unable to comply with, mainly due to our status as an arm's length body of Government:
- provision 5: relating to the prescribed methods of engagement with employees. The three options suggested by the Code were considered by the Board. However, each was discounted because our workforce engagement activities go beyond the requirements of the Code
- provision 9: in respect of appointment of the chair. The Secretary of State appoints the chair in accordance with the Governance Code on Public Appointments
- provisions 25 and 26: in respect of the appointment, re-appointment and removal of the external auditor. Under the terms of the Framework Agreement between the company and the Department for Transport (DfT), the Comptroller and Auditor General assisted by the

National Audit Office acts as Network Rail's external independent auditor
- provision 34: in respect of the remuneration for the chair. Under the terms of the Framework Agreement, the remuneration of the chair is agreed by the Secretary of State.

Code provision 19 stipulates that "The chair should not remain in post beyond nine years from the date of their first appointment to the board. To facilitate effective succession planning and the development of a diverse board, this period can be extended for a limited time, particularly in those cases where the chair was an existing non-executive director on appointment. A clear explanation should be provided".

Peter, Lord Hendy of Richmond Hill, CBE has been appointed as Network Rail's chair for a further two year term. This means that in total he would serve for 10 years. The Company and the DfT were mindful of the Code's provision in considering Peter's reappointment. It was decided, however, that given the Government's plans for reforming the rail industry and the anticipated formation of Great British Railways, Peter's reappointment would be the best way of achieving a smooth transition and ensuring continuation of knowledge during this critical period of transformation for the Company. The Company therefore believes that it does comply with provision 19 of the Code.

The Code can be found on the Financial Reporting Council's website: **www.frc.org.uk/directors/corporate-governance-and-stewardship/uk-corporate-governance-code**

The Board believes that the company complied with the Corporate Governance in Central Government Departments: Code of Good Practice. **The code can be found on the Government's website: Corporate governance code for central government departments 2017 - GOV.UK: www.gov.uk**

Board leadership and company purpose

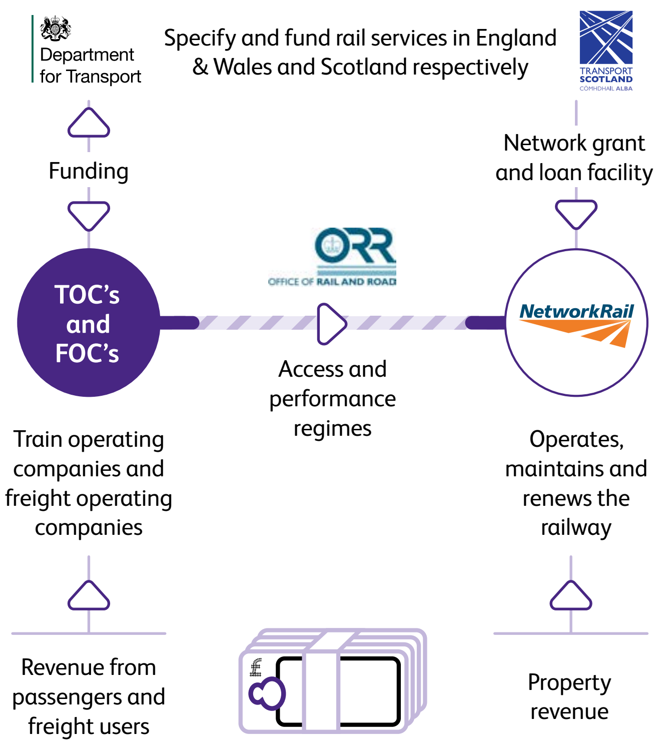
Network Rail owns, operates and develops Britain's railway infrastructure. We operate within regulatory and control frameworks and are an arm's length government body. Our financial management and corporate governance ways of working with the DfT are described in the Framework Agreement. A copy of the agreement is available on our website: **www.networkrail.co.uk**

The Board ensures there is effective engagement with stakeholders and encourages participation from them. Michael Harrison, director of UK Investments at UKGI, was appointed as the special director in May 2020. On behalf of the Secretary of State, he is responsible for communicating the views of the Secretary of State and the DfTs wider strategic, statutory and fiduciary interests to the Board, while acting in accordance with his duties as a non-executive director.

Network Rail is regulated by the Office of Rail and Road (ORR) under its Network Licence for our management of the rail infrastructure. The ORR decides how much money it believes we need to run our business efficiently and to deliver what the UK and Scottish governments have asked for in each five-year control period. Our Board is accountable to the Secretary of State for Transport for the leadership and management of the business.

The Board oversees workforce policies and practices, ensuring these are consistent with our values and support our long-term sustainable success. More information on our whistleblowing policy and code of business ethics can be found on our website: **www.networkrail.co.uk**

The Board is also responsible for running Network Rail to the standards required of a company with shares listed on the London Stock Exchange.



The Board's role and responsibilities

The Secretary of State is the sole member of the company, and as the Special Member has special rights:

Rights of the Special Member (the Secretary of State for Transport)	**How these rights were exercised in 2022/23**
To appoint and remove the chair of Network Rail.	The chair's term was extended for two more years, from 16 July 2023 to 15 July 2025.
To approve the Board's suggested candidate for chief executive of Network Rail.	N/A
To appoint a special director of Network Rail.	Michael Harrison was appointed as the special director for a second three-year term, to expire on 10 May 2026.
To be consulted on non-executive director appointments.	Network Rail consulted with the DfT in relation to reappointing Silla Maizey, with her term now due to expire on 21 November 2023. Network Rail consulted with the DfT in relation to reappointing Mark Bayley and Fiona Ross, each for a further term of three years, to expire on 10 May 2026. The Secretary of State and the Prime Minister approved those reappointments. GBRTT Board and NED reappointments.
To hold regular meetings with the chair, to discuss corporate strategy and raise concerns.	The chair regularly meets with the Secretary of State and the Permanent Secretary of the DfT.
To approve the three-yearly remuneration policy for executive directors of the company.	The three-yearly remuneration policy is due for approval at the 2023 annual general meeting (AGM). Network Rail consulted with the DfT and HMT on the content of the policy, which can be found on page 161.
To set the pay for the chair and non-executive directors.	N/A

The chair leads the Board as it develops Network Rail's strategy to deliver the outputs required in each of the five-year control periods. The Board is responsible for ensuring that appropriate resources are in place to deliver the strategy.

The responsibilities of the Board are described in the list of matters reserved for the Board which is available on our website: **www.networkrail.co.uk**

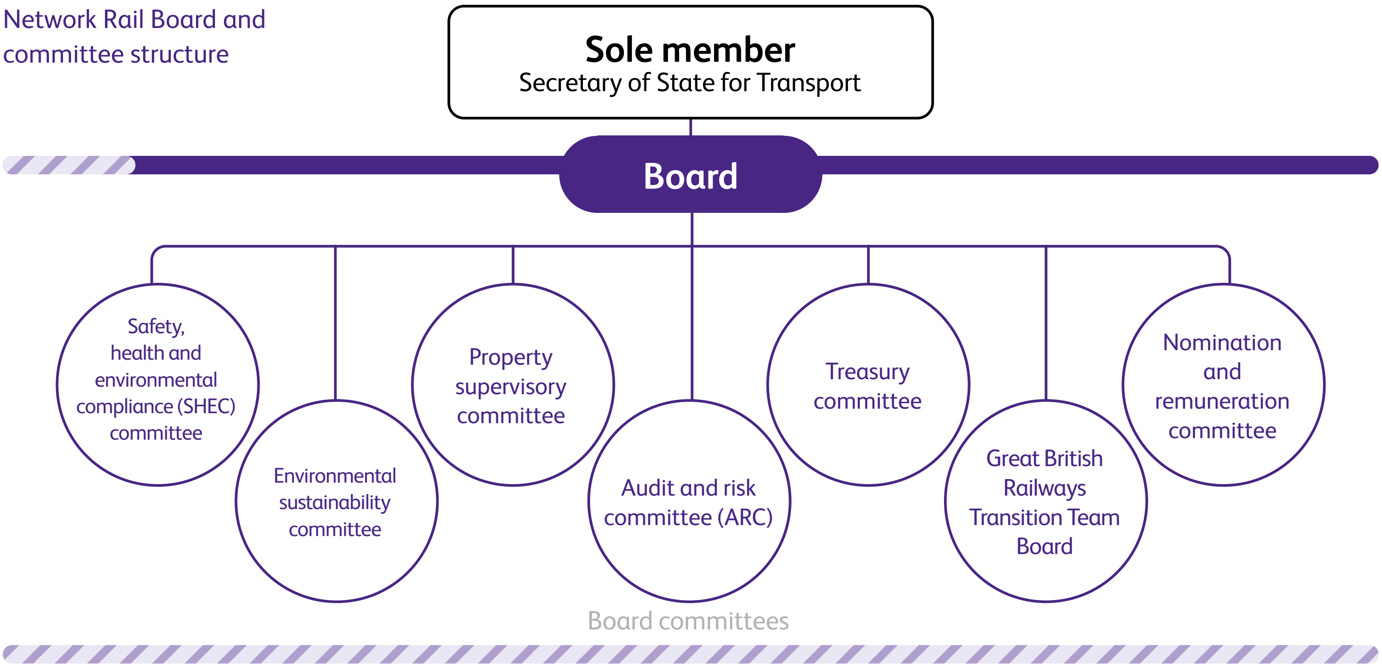
The Board understands the importance of delivering value for money in the company's management of the railway and considers the principles set out in the Code of Conduct for Board Members of Public Bodies, the seven Nolan Principles of Public Life, and the Civil Service Code, as part of its decision making process. The seven Nolan Principles of Public Life can be found on the Government website: **gov.uk/government/publications/the-7-principles-of-public-life**

Board committees

The Board has delegated several of its responsibilities to its committees. A summary of their activity in 2022/23 is included in each committee's report:

Audit and risk committee, pages 136 to 141.
Nomination and remuneration committee, pages 146 to 167.
Safety, health and environmental compliance committee, pages 128 to 131.
Treasury committee, pages 142 to 143.
Environmental sustainability committee, pages 132 to 133.
Property supervisory committee, pages 134 to 135.
Great British Railways Transition Team Board, pages 144 to 145.

Network Rail Board and committee structure



Board and committee terms of reference

The terms of reference govern the structure, remit and operations of our board and committees, including their delegated responsibilities and authorities. Terms of reference are reviewed annually to ensure the activities reflect current regulatory and governance requirements and best practice. The terms of reference can be found at **www.networkrail.co.uk**

The executive leadership team

The executive leadership team is responsible for the day-to-day management of the company. It meets regularly to consider strategic and operational matters. The team includes the chief executive, chief financial officer, five regional managing directors and six other senior executives.

Board composition and division of responsibilities

At the date of this report, the Board consisted of one non-executive chair, two executive directors and nine non-executive directors.

Photographs and biographies of directors, including details of their skills and experience can be found on pages 114 to 117.

Chair – Peter, Lord Hendy of Richmond Hill, CBE
The chair is responsible for leading the Board, its effective functioning and promoting the highest standards of corporate governance. He encourages all directors to actively contribute to Board meetings and promotes constructive relations between the executive and non-executive directors. The chair represents Network Rail and works with the chief executive to develop strategic relationships with the non-executive directors, the customers of Network Rail, DfT, HM

Treasury, Parliament, the Cabinet Office, Transport Scotland, Welsh Assembly Government and other stakeholders. The chair reviews the performance of the non-executive directors.

Senior Independent director (SID) – Rob Brighouse

The SID acts as a sounding board for the chair and serves as an intermediary for the other directors when necessary. The SID is responsible for the chair's performance review. He is available to the Secretary of State if the Secretary of State has concerns or where contact through the chair is inappropriate or has failed to resolve an issue.

The special director – Michael Harrison

The special director is appointed by the Secretary of State. He is responsible for communicating the views of the Secretary of State and the DfT's wider strategic statutory and fiduciary interests to the Board, while acting in accordance with his duties as a non-executive director.

Chief executive – Andrew Haines OBE

The chief executive is responsible for setting the strategic direction of the company and for the company's performance. He keeps the Board informed and brings to its attention all matters that significantly affect, or are capable of significantly affecting, the achievements of Network Rail. The chief executive provides clear and visible leadership in business conduct and promotes the requirement that all executive leadership team members and employees demonstrate the company's values. He's accountable to the Board for all elements of Network Rail's business, and specifically for safety performance. He's also the accounting officer.

The chief executive is personally accountable to Parliament for safeguarding the public funds available to Network Rail; for ensuring appropriateness, value for money and feasibility in the handling of those public funds; for the day-to-day operations and management of Network Rail; and for signing the accounts, the annual report and the governance statement. He's required to ensure that Network Rail is run following the principles, rules, guidance and advice set out in Managing Public Money, which can be found on the Government's website: **www.gov.uk/government/publications/managing-public-money**

As the accounting officer, Andrew is supported by the Board for the responsibilities set out in Managing Public Money, and for the proper conduct of business and maintenance of ethical standards. The internal audit function also supports the accounting officer. The director of Risk and Internal Audit reports to the audit & risk committee quarterly and, in accordance with the Group Assurance Letter process, reports annually to both the audit & risk committee and the Accounting Officer. This process requires consideration of the overall adequacy and effectiveness of Network Rail's framework of governance, risk management and control. For further details on the internal audit function and on the audit and risk committee, see pages 136 to 141.

Chief financial officer – Jeremy Westlake

The chief financial officer is responsible for leading Network Rail's finance function which includes the teams working on matters related to (i) planning, finance and efficiencies; (ii) financing, funding and commercial matters; and (iii) governance, risk, assurance and improvement (GRAI).

In addition, the Rail Investment Centre of Excellence sits within the finance function. Its purpose is to continuously improve the way Network Rail plans and delivers projects and to provide confidence that benefits will be realised for passengers and freight users.

Chief executive and chief financial officer – objectives

Earlier in the financial year the nomination & remuneration committee noted the objectives set by the Department for Transport for the chief executive and the chief financial officer. It's acknowledged that a balance is required in terms of time spent by the chief executive on his Network Rail role and time spent on rail reform. The objectives align closely with our six strategic priorities. Certain objectives will likely continue for some time, for example developing the Whole Industry Strategic Plan requiring a 30-year strategy. Also, the need to unify the industry to identify and deliver cost efficiencies in response to the post-pandemic revenue gap and the opportunities created by industry reform.

Independent non-executive directors

Ismail Amla, Mark Bayley, Rob Brighouse, Stephen Duckworth, Silla Maizey, David Noyes, Mike Putman and Fiona Ross are considered by the Board to be independent of the company.

The non-executive directors provide independence and challenge to the Board through broad business and commercial experience from the rail and other industries. They provide assurance that the executive directors are exercising good judgement in the delivery of strategy and decision-making.

The Board reviews the independence of its non-executive directors as part of its Board effectiveness process. It has considered if there are any circumstances which are likely to impair or could appear to impair the independence of a non-executive director.

When considering the appointment of new directors, the Board considers the other demands on the proposed director's time. The Board requires that significant commitments and an indication of the time commitment are disclosed to the Board prior to appointment.

The Board notes that the UK corporate governance code includes guidelines on the meaning of "independence". We must disclose that Rob Brighouse and Mark Bayley are beneficiaries of the Railway Pension Scheme (RPS). Over 150 companies from the rail industry participate in the RPS and the scheme is run by independent trust managers. Given this structure, the board considers that both directors are independent as Network Rail is only one of the contributing companies to RPS.

The statements of responsibility for the chair, chief executive, senior independent director and the non-executive directors can be found on the Network Rail website: **www.networkrail.co.uk**

Group general counsel and company secretary – Susan Beadles

The group general counsel and company secretary provides advice and support to the Board, the chair and the directors on legal and governance matters. She ensures that a high standard of governance is maintained so that the Board functions effectively and efficiently. The appointment and removal of the company secretary is a matter for the Board as a whole.

Directors' attendance at meetings

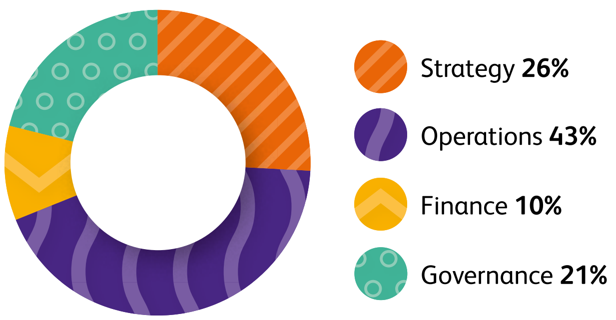
The Board met eight times during 2022/23 and also held one strategy meeting.

Directors' attendance at Board meetings for the year ending 31 March 2023 is shown in the table below. Non-executive directors are also required to attend various committee meetings and their attendance is shown in the respective committee reports on pages 128 to 167.

	Total
Ismail Amla	8/8
Mark Bayley CBE	7/8
Rob Brighouse	8/8
Stephen Duckworth OBE	7/8
Andrew Haines OBE	8/8
Michael Harrison	7/8
Peter, Lord Hendy of Richmond Hill, CBE	8/8
Silla Maizey OBE	7/8
David Noyes	7/8
Mike Putnam	8/8
Fiona Ross	8/8
Jeremy Westlake	8/8

Board activities during the year

The chart below shows the key activities of the Board during 2022/23 and how the Board allocated its time. The Board's activities are shaped around our six strategic priorities: safety; train service delivery; efficiency; sustainable growth; customers and communities; people.



Strategy: For example, PR23 and also rail reform and Great British Railways.

Operations: This relates to matters including the industry response to the pandemic; workforce safety and the safety task force; and the modernisation programme, as well as managing the impact of industrial action.

Finance: For example, our business plans (including CP7 strategy) and the annual report and accounts.

Governance: Matters including reviews of meeting minutes, feedback from board committee meetings, etc.

Composition, succession and evaluation

Board recruitment and induction

No new directors were appointed during the year.

Succession planning

The Board and the nomination and remuneration committee considers whether the appointment process and the approach to succession planning supports a diverse and sustainable pipeline of talent for senior roles within the business. The Board recognises that effective talent management programmes are necessary to improve diversity within all levels of the company and are essential for the delivery of the company's long-term strategy and objectives.

Board and executive diversity

The Board is aware that diversity extends beyond gender and ethnicity, and includes amongst other things age, social, educational and professional backgrounds. Further details about Network Rail's organisational diversity and inclusion policies and how these have been implemented in the year can be found in the People section, starting on page 77.

We know that to truly put passengers first, empower our people and make them proud to work here, our senior leadership needs to be reflective of our passengers, our people and the communities we serve. We recognise the importance of building and maintaining an increasingly open, diverse and inclusive organisation. We reported last year that the Board approved Network Rail's first Board diversity and inclusion policy in February 2021. This notes the company's long-term ambitions in relation to board diversity and specific objectives to progress towards them.

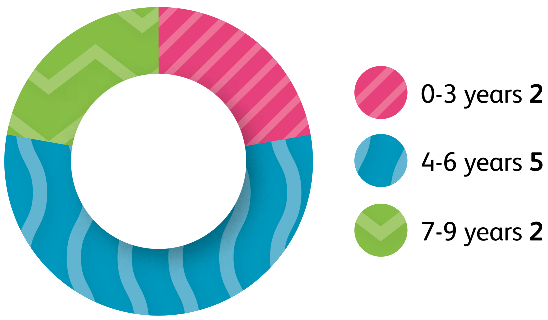
One of these has been met: that at least one of the directors will be from a Black, Asian and minority ethnic background. The Board continues to work towards its gender diversity target. We are also mindful of other areas relating to diversity and inclusion, for example disability; neurodiversity and LGBT+ employees.

One of our non-executive directors, Stephen Duckworth OBE, is a wheelchair user. Stephen regularly meets with people across the business to share his experience of travelling by rail.

The policy is supplementary to the organisational equality, diversity and inclusion policy and the Everyone Matters diversity strategy and implements their aspirations in the context of our senior leaders. The full policy can be found on the Network Rail website: **www.networkrail.co.uk**

The Board is comprised of nine non-executive directors, one non-executive chair and two executive directors. These individuals come from a variety of backgrounds and experience. The Board is 83 per cent male and 17 per cent female. When considering non-executive directors only, the split is 80 per cent male and 20 per cent female.

The following chart shows the length of service of the non-executive directors (NEDs):



Board effectiveness

The Board is committed to maintaining the highest standards of corporate governance. Manchester Square Partners (MSP) undertook a review of the effectiveness of the Network Rail Board in early 2021.

The Summary Observations noted in MSP's review confirm that the Board functions well and that overall performance is deemed strong. The review also noted that the observed dynamics between Board members seem excellent.

The nomination and remuneration committee will review a proposal to hold a Board effectiveness review during 2023/24.

Professional development, training and support for directors

Board members are offered a range of training and development opportunities each year to support their continuing professional development. Directors often receive corporate governance and legal updates, as appropriate.

Regional managing directors and function heads regularly attend Board meetings to provide updates on the key issues affecting their areas of the business.

The directors have access to the advice and services of the group general counsel and company secretary, who is responsible for compliance with Board procedures and the provision of information to the Board in a timely manner. The directors have the right to seek independent professional advice at reasonable expense to Network Rail.

Election and re-election of directors

Each of the directors is subject to re-election at the 2023 AGM.

Directors' conflicts of interest

The Board identifies and manages potential conflicts of interest that directors may have. Each Board meeting begins with disclosure of potential conflicts of interest. At the date of this report, the following key potential conflicts of interest have been identified:

- Michael Harrison is director of UK Investments at UKGI
- Mike Putnam is a member of Arcadis NVs supervisory board
- Fiona Ross is a non-executive director at The Scottish Government
- Ismail Amla has been invited to be a member of the Rail Transformation Advisory Group (RTAG). This is intended to support the Secretary of State for Transport in ensuring that the reforms set out in the Plan for Rail white paper are implemented across the sector. It is likely that the RTAG will meet quarterly.

Directors' and officers' (D and O) liability insurance

Network Rail maintains D and O liability insurance. The company Articles of Association provide that Network Rail shall indemnify its directors and officers against liabilities relating to company matters. It was not necessary to exercise the indemnity provisions during 2022/23.

The Annual General Meeting (AGM)

The formal business of the AGM is set out in a number of separate resolutions to be considered at the meeting. The company's sole member, the Secretary of State for Transport, is provided with a copy of the notice of meeting, alongside the annual report and accounts (as is the National Audit Office). The Secretary of State can vote either for or against a resolution or can withhold his vote (although the law does not class a withheld vote to be a vote). Final voting figures are announced at the London Stock Exchange.

PETER, THE LORD HENDY OF RICHMOND HILL, CBE

chair, 13 July 2023

ANDREW HAINES OBE

chief executive and accounting officer, 13 July 2023

SAFETY, HEALTH AND ENVIRONMENTAL COMPLIANCE COMMITTEE REPORT

I am pleased to report to you on the work of the committee during 2022/23. Running a safe railway will always be our priority. We want everyone to feel safe whether they're working on, living near, or traveling on the railway.

The Committee was pleased with the progress made by the weather risk task force to implement the recommendations from the independent reports published by Lord Robert Mair and Dame Julia Slingo following the derailment of a passenger train at Carmont on 12 August 2020. Whilst there was still work to be done, the committee was comfortable that the prioritised action plan supported the task force's strategic objective to run a safe, affordable, and more reliable service for passengers during adverse and extreme weather.

Sustainability of the railway remains important to the committee as it helps ensure the safety of passengers and our people. We are in the process of identifying ways in which we can improve how we measure and predict defects and faults on the railway, as well as planning for maintenance and renewals in Control Period 7 (CP7) and beyond.

Tragically, two people working for different contractors were fatally injured whilst at work this year. In July 2022, a slinger/signaller working for Kilnbridge, a contractor for Costain on the Gatwick Station Project, was fatally injured by a falling load during a lifting activity. In November 2022, a scaffolding inspector working for Zenith Scaffolding fell through a sky light at Houston Street, in Glasgow. Both incidents occurred on construction sites and were subject to investigations by the Health and Safety Executive. Our thoughts are with their families, friends, and colleagues.

We didn't hit our Fatality Weighted Injuries (FWI) year-end target (a metric used to measure injury severities). In the financial year, we recorded fewer accidents and injuries than ever before, but as we're working fewer hours and still having fatal accidents, we're not achieving this intentionally challenging target. We have however, seen our best ever performance in the Lost Time Injury Frequency Rate (LTIFR) with the fewest recorded lost time injuries ever.

In terms of leading indicators, we're seeing an increase in the amount of safety conversations held, planned assurance and inspection activities, and safety hours.

The volume of Lifesaving Rule breaches, a major component of the Personal Accountability for Safety metric, are now reducing and back to pre-pandemic levels. With the roll out of a new in-cab safety system to our road fleet close to complete, we expect, and are already seeing, a big reduction in speeding offences in the future, along with a greater understanding of driving patterns. The increased volume of random drugs and alcohol testing, now 20 per cent of staff per year, is expected to reduce the volume of life saving rules breaches as well.

Train accident risk as measured by the Precursor Indicator Model has reduced throughout the year and is now better than the Control Period 6 (CP6) target. The improvement is mainly attributed to the reduction in earthwork-related incidents such as landslips. We're working with the Rail Safety and Standards Board (RSSB) to formulate a methodology to measure the robustness of earthworks when adjusted for extreme weather events.

Since April 2019, the start of CP6, we've closed 159 level crossings. That's a total of 1,336 closed since April 2014, with another 69 temporarily closed through Traffic Regulation Orders. Sadly, there were two level crossing accidental fatalities during the year, one at Lady Howard, near Ashtead in Wessex, and one at Darby Green, near Yatley in Wessex. This is compared to seven the year before.

The number of suicides and trespass incidents that took place on the railway was slightly lower than that of the previous year. Between 11 December 2022 and 7 January 2023 (period 10 2022/23) we saw the lowest number of suicides ever recorded on our infrastructure, with five in total for the period. Our route crime and trespass groups are working closer together and this is identifying many good practice ideas and encouraging the sharing of strategic and tactical intelligence.

The committee reviewed the safety performance element of the performance-related pay award for senior executives and made a recommendation to the remuneration committee (see page 152).

Within health and wellbeing, we implemented a target to reduce work-related mental health absences by 25 per cent for the duration of CP6. Data in Period 11 2022/23 indicates 93 instances of work-related mental wellbeing absence across the business. This is an increase of 12 absences from Period 10 2022/23. We continue to support the business by work delivered through the mental wellbeing and resilience strategic project, such as the new mental wellbeing discussion tool, an updated stress management standard, and a target to annually train 10 per cent of line managers in supporting mental wellbeing. Thus far we have trained 39 per cent of all line managers.

Introduced in April 2021, we have now completed circa 15,000 new style Safety Critical medicals, called the Health, Safety & Wellbeing Medical (HSW). The HSW medical, includes a wellbeing check as well as the safety critical assessment and health surveillance requirements. In 2021/22 we completed 9,581 HSW medicals and 5,534 in the 2022/23 programme. A combination of the new style medical and operational delivery model has significantly reduced the number of colleagues deemed unfit for role compared with the old format medical. This success can be attributed to better use of clinical resource, improved understanding of the job roles, enhanced monitoring techniques and rapid escalations to senior clinicians confirming fitness for work. The wellbeing component of the HSW has provided greater insights into the health and wellbeing of our safety critical employees, with circa 30 per cent of over 55s identified as having diabetes and 93 per cent of colleagues being overweight or obese. Safety Critical employees will now undergo the HSW every three years, as opposed to the previous age-related format, whereby employees could wait 5-10 years for their next medical. The increased frequency of the medical at three years allows for more proactive identification of health concerns and the data provided will help shape future health initiatives and strategy.

During the early days of the pandemic, we changed the delivery of our Health Surveillance programme to include an initial telephone call with an Occupational Health clinician. Running in tandem with the HSW medical, the Health Surveillance programme delivers an annual assessment for employees exposed to workplace hazards such as noise, respiratory sensitisers, and hand arm vibration. In 2021/22 we completed 6,211 initial assessments for those employees identified as requiring it, with an overall compliance rate of 96.6 per cent. As we come to the end of the 2022/23 programme we have completed 8,646 initial assessments however the final compliance rate is unlikely to reach the previous year's figure due to several factors including disruption due to industrial action, increase in seasonal short term and pandemic related absences, as well as a continued high rate of non-attendance for appointments.

Within environmental management we've been assessing areas for improvement as regards environmental incidents.

Bespoke workstreams to improve environmental incident identification and reporting, through to categorisation, investigation, and drafting of recommendations is being undertaken through cross-discipline collaboration. This includes, competency work within key roles, and identifying and resolving weaknesses in the systems, governance, and processes controlling environmental management.

This year we have had a total of 480 environmental incidents with an environmental incident frequency rate of 0.370 per 100,000 hours. This has decreased from 2021/22 when there were 620 environmental incidents and a frequency rate of 0.420.

During the last year, Network Rail have had 15 category one and two environmental incidents that either Network Rail or our Principal Contractors were directly responsible for. Of these 15 incidents, two had a direct impact on water. The first incident was silt entering the water course near Honiton Tunnel. Straw baling was applied to control the spill and no obvious signs of impact were reported. The second incident involved a Principal Contractor where 3,000 litres of concrete wastewater was spilt on the banks of River Huntspill. Network Rail ecologists are monitoring the site to determine the impact on river banks.

On average, over the past three years Network Rail has had an average of two category one and two incidents with a direct impact on water. This year Network Rail has launched a Water Management Strategy which aims, amongst other things, to play our part in improving water quality.

Category 4 incidents (the lowest impact category) constitute 68 per cent of all environmental incidents, while those incidents requiring investigation, constitute 22 per cent.

Spillages, mainly from trains, and fly tipping by the public continue to be the most common environmental incidents, making up 90 per cent of all our incidents.

We are currently using eight per cent less energy and emitting 18 per cent less carbon than we were at the end of Control Period 5. Whilst this fell short of achieving this year's energy targets we have successfully achieved this year's carbon emissions target as part of our work to support the UK's net zero target for 2050 (2045 in Scotland). Further information on the work we're doing to lower our energy use and emissions can also be found in the Environmental Sustainability section of the Strategic Report on pages 82 to 87.

Mike Putnam

Chair, safety, health and environmental compliance committee

13 July 2023

Committee members	Formal appointment to the committee	Number of meetings attended during the year
Mike Putnam	Feb 2018	4/4
Rob Brighouse	Jan 2016	4/4
Peter Lord Hendy of Richmond Hill, CBE	Oct 2015	3/4
David Noyes	Dec 2018	4/4

Note: although not a member of the committee, Stephen Duckworth has a standing invitation to attend all meetings.

Committee attendees

The executive directors of the company, chief health and safety officer and group director for the Technical Authority normally attend meetings by invitation of the committee. Other members of the Board and other senior executives of the group also attend as and when requested to report on specific areas that lie within the committee's areas of responsibility.

The general secretary of the National Union of Rail, Maritime and Transport Workers (the RMT) is invited to attend all meetings. This adds scrutiny and challenge to the committee's business and is consistent with our commitment to remain transparent to the wider rail industry and its important stakeholders. No-one from the RMT attended a meeting in 2022/23.

Ian Prosser CBE, chief inspector of railways and director of railway safety at the ORR, attends two meetings each year to present the regulator's view on our safety performance. Ian has an open invitation to attend the remaining meetings when he is available.

Role and responsibilities of the committee

The environmental aspect of the committee's role has been redefined since the creation of the environmental sustainability committee in 2019. The safety, health, environment compliance (SHEC) committee oversees environmental legal and regulatory compliance while the environmental sustainability committee has broader responsibility for environmental strategy and related matters.

The committee's role is to monitor how the company implements its responsibilities on safety and health through its everyday business activities, and how it complies with its environmental obligations. The committee must satisfy itself as to the adequacy and effectiveness of the safety and health policies and strategies, and the effectiveness of environmental compliance within the Network Rail group.

The committee's activities include:

- reviewing the group's strategies, systems, policies, and practices for SHEC. It also makes sure that the governance and management structures support these being implemented effectively

- considering significant risks to individuals and the company's strategies for SHEC and whether the executive is managing them effectively
- reviewing internal audits, within its SHEC remit, that are carried out across the company on the effectiveness of strategies, systems, policies, and practices. It makes sure that the audits have the correct scope, and it follows up to confirm that any recommendations have been properly addressed and implemented
- considering findings from internal and external investigations and how the executive has responded to them
- making recommendations to the nomination and remuneration committee on the company's safety performance to inform decisions about performance-related pay
- considering regular Duty Holder reviews from Regions and Route Services.

After each committee meeting, the chair reports to the Network Rail Board and answers its questions on the committee's work.

Principal activities during the year

Matters considered by the committee in 2022/23:

- quarterly SHEC reports from the group Technical Authority. These included scorecard data, information on workforce safety, workforce and contractor accidents, track accident risks, level crossings, health and wellbeing, public safety, and contractor performance
- quarterly updates on safety risks and internal audits on SHEC matters
- progress of the Safety Task Force, including the increase in scope to include the Rail Accident Investigation Branch and other industry recommendations
- presentations from duty holders and route managing directors to demonstrate the adequacy and effectiveness of their safety and health systems and environmental systems. The following regions and functions attended the committee:
  - North West & Central
  - Eastern
  - Route Services
  - Southern
- how the Optimized Train Track Operation concept delivers safety, operational efficiencies and performance benefits linked to business needs
- the suggested train accident risk key performance indicators and provide feedback
- progress on the Fair Culture project and the Lifesaving Rule refresh project
- progress on engineering and maintenance competence improvements
- changing patterns to asset life. The need to prioritise mitigations in CP7 to counteract the increased asset performance risks and prevent growth in safety incidents
- progress in managing the risk of accidental obstruction of the railway by road vehicles.

Internal audit

Internal audit plays a key role in providing independent assurance in managing SHEC risks. The director of risk and internal audit updated the committee at each meeting on any changes to the SHEC audit plan, notable audits, overdue actions, themes, and key issues arising from Internal Audit's work.

Audits included our Safety Framework and First Line Assurance, and activities are now underway to address the risks. This included mapping of safety risks to assurance activities and defining and allocating responsibilities for delivery and coordination of regional safety framework initiatives.

Annual site visit

The committee periodically visits locations around the country to see first-hand the SHEC issues they discuss at meetings. In 2022 the committee went to Basingstoke for a tour of the training facility and operations centre. The committee also visited Machynlleth, Wales to visit the European Train Control System (ETCS) signalling centre and a jointed track site to understand the intricacies of inspection and maintenance of a rural railway with older asset types.

Planned activities for 2023/24

In the 2023/24 financial year, the committee will:

- review progress of the Extreme weather resilience task force. The task force will investigate and make recommendations on how we can develop our approach to resilience during extreme weather
- receive a deep dive on station security
- review the safety framework
- review the plans in place to evacuate disabled passengers from trains affected by fire
- monitor the weather risk task force and progress of the integrated plan to deliver industry recommendations
- review Occupational Health including insourcing of occupational health
- conduct railway station site visits.

ENVIRONMENTAL SUSTAINABILITY COMMITTEE REPORT

I'm pleased to present the committee's report into the key activities undertaken during 2022/23 alongside its anticipated activities for 2023/24.

Network Rail has developed a delivery plan that sets out the pathway to achieve the targets for each of the four priorities outlined in the environmental sustainability strategy (see page 4 of the **Environmental sustainability strategy 2020-2050 (networkrail.co.uk)**). The committee assists the Board in reviewing policies, practices, targets, and performance of Network Rail against this ambitious plan. Much progress has been made in all strategy areas. There has been some public recognition of this, with the winning of two International Union of Railways (UIC) international rail awards; one for Best Green Corridor and one for Best Diversity & Inclusion Initiative for the Rough Sleeping on Rail project.

David Noyes

chair, environmental sustainability committee

13 July 2023

Committee members	Formal appointment to the committee	Number of meetings attended during the year
David Noyes	September 2020	4/4
Rob Brighouse	September 2020	4/4
Mike Putnam	September 2020	2/4
Fiona Ross	September 2020	4/4

Committee attendees

Internal: The chair of the Board, group safety and engineering director – Technical Authority, chief environment and sustainability officer, and head of strategic communications.

External: Representatives from the Department for Transport, the chair of the Sustainable Rail Executive (SRE) of the Rail Safety and Standards Board (RSSB) and expert advisers, including Julian Glover OBE and John Varley OBE, attend periodically.

Role and Responsibilities of the Committee

The committee oversees, supports and where appropriate, provides guidance to the executive in the implementation of the strategy, ensuring that Network Rail is keeping abreast of wider environmental issues as well as co-ordinating its programmes with wider industry environmental initiatives.

Principal activities and challenges during the year

In 2022/2023, the committee met every quarter to review progress and explored a wide range of themes including:

- engagement with key stakeholders across all strategic areas related to Environment and Sustainability (E&S)
- the role that the committee could play in implementing the findings and recommendations from the internal audit completed in 2022.

- endorsing proposed corrective actions and mitigations to address the findings from an external environmental compliance audit of the regions and functions
- monitoring each region's progress against the delivery plan, and ensuring that the regions were adequately supported to deliver the strategy
- informing the ongoing work on the RSSB-led initiative into developing a whole industry Sustainable Rail Blueprint
- alignment of the industry on sustainability and readiness for Great British Railways
- uptake and utilisation of the Rail Social Value Tool (RSVT)
- potential benefits of having a 'digital twin' of the railway system to get insight into the emission sources that could present high risks.

The Committee monitored progress against the four pillars of the environmental sustainability strategy (ESS) as follows:

Greener assets, healthier air

The committee reviewed:

- initiatives being rolled out to improve data collection at source and in particular, improvement in how Network Rail's estate is metered on a regional basis
- the national programme to transition to zero emission vehicles (ZEV)
- potential use of ammonia as an alternative traction fuel
- the strategy for whole life carbon reporting and the carbon emissions reduction target
- progress in the implementation of the Commercial & Procurement (C&P) strategy and how the C&P team had actively worked on rolling-out science based targets to the supply chain
- Network Rail's first Corporate Power Purchase Agreement (CoPPA1) which is due to start generating at the end of 2024
- exploring the potential to build a hydrogen powered plant.

Climate change adaptation

The main areas that the Committee explored under this theme were related to:

- integration of E&S principles into core processes and standards across Network Rail
- implementation of recommendations from the two commissioned reports - the Weather Advisory Task Force (WATF) report and a Review of Earthworks Management report, to tackle adverse or extreme weather to make Network Rail's infrastructure, assets and facilities sustainable and resilient
- the Third Adaptation Report to Defra and the work underway on the Weather Resilience and Climate Change Adaptation (WRCCA).

Improving biodiversity of plants and wildlife

The Committee considered the following topics:

- implementation of biodiversity standards and management on the railway including a deep dive into the delivery of central aspects of the Varley programme (John Varley's 2018 report on Network Rail's lineside vegetation management)
- Sustainable Land Use Strategic framework to improve the use of Network Rail's lineside estate and challenges and opportunities associated with biodiversity and sustainable land use.

Circular Economy

The Committee undertook a deep dive into the circular economy to consider risks, opportunities, and progress including with the priority materials of steel, concrete, ballast and sleepers. The following topics were explored:

- relaunch of Surplus App, an 'internal eBay' app, that allowed surplus or used materials to be resold internally
- post implementation review of the waste management standards
- the committee's own role in the embedding of circular economy principles across the organisation
- raining, awareness and sharing best practice to stimulate culture change within Network Rail.

Planned activities for 2023/24

In the next year, the committee will continue to monitor the delivery of the strategy, including all the key programmes listed above. Some of the planned activities include:

- a deep dive into the four pillars by rotation
- a review of the environmental sustainability strategy and how environment and sustainability principles were being embedded into the company culture and working practices
- assurance and review of CP7 resourcing in regions (to progress sustainability initiatives)
- potential solutions for the generation of rail traction energy and future freight solutions
- monitoring compliance with the environmental act and other legislation
- reviewing C&P alignment on sustainability.

PROPERTY SUPERVISORY COMMITTEE REPORT

I'm pleased to present the committee's report into its key activities undertaken during 2022/23, alongside its anticipated activities for 2023/24.

The committee has continued to monitor Network Rail's overall property performance against its strategy for Control Period 6 and developed new key performance indicators to benchmark regional performance.

The year has been challenging for Network Rail's commercial estate as our tenants try to adapt to market conditions that have been impacted by the increase in the cost of living and industrial action in the rail industry. Passenger volumes and associated footfall have, understandably, fluctuated significantly across the year, with consequential impacts on our retail tenants in managed stations.

Network Rail opened 21 new units including refurbishments, tendered/awarded 20 units and delivered 31 pop-up units which drove an incremental income of £700k. Advertising sales have recovered broadly in line with market performance and station footfall. Safety incidents and fire alarm activation have been reduced by 25 per cent versus pre-pandemic levels, retailer recycling increased by 11 per cent to 83 per cent which included 213 tonnes of cardboard. I was pleased that Network Rail commissioned a research agency to conduct a passenger insight study, to understand how customers are using our stations now and identify what changes we can make to improve the customer experience.

As part of the Group Property vision, the Development Property team has worked throughout the year to develop strategic partnerships with Homes England and Transport for London and other authorities.

The Committee will continue to monitor Group Development's progress in terms of the proposed merger with London & Continental Railways (LCR). Scrutiny is expected to intensify as further progress is made and key decision points are reached. If approved a dedicated residential and commercial property development company will be established to deliver regeneration projects and provide affordable residential homes across Great Britain.

Mark Bayley CBE

chair, property supervisory committee

13 July 2023

Committee members	Formal appointment to the committee	Number of meetings attended during the year
Mark Bayley CBE	October 2020	6/6
Robin Dobson	March 2022	6/6
John Halsall*	December 2019	3/4
Peter, Lord Hendy of Richmond Hill, CBE	December 2019	4/6
Neil Sachdev MBE	July 2016	4/6
Stephen Smith	July 2016	6/6
Jeremy Westlake	April 2016	6/6

*John Halsall left Network Rail on 20 January 2023.

Committee attendees

A senior regional representative, and the general counsel (Property) normally attend meetings by invitation, as well as representatives from the Department for Transport and the Infrastructure and Projects Authority.

Regional property directors also have a standing invitation to attend most parts of committee meetings. The committee is supported by the company secretariat.

Role and responsibilities of the committee

The terms of reference (ToR) govern the structure and operation of the committee, including its delegated responsibilities and its delegated authority. The ToR are reviewed regularly, to ensure the activities of the committee align with the needs of the organisation.

The committee's role is to consider and provide advice upon:
- the long-term vision and strategies for Network Rail's development property portfolio and its commercial estate
- regional property strategies and delivery, including reviewing the respective regional property directors' business plans
- key risks and opportunities
- the performance of the regional property directors and Group Property
- subject to the committee's delegated authority, making decisions or recommendations
- any other matter specifically referred to the committee by the Board or the executive leadership team.

Principal activities during the year

The committee normally conducts a site visit prior to each meeting. Sites visited included Glasgow Queen Street station and London Paddington, London Liverpool Street and London Bridge stations.

The committee receives detailed property updates for discussion at each meeting. A written summary of the committee's activities, the main discussion points, findings, and any recommendations is provided to the Board for its next meeting.

Key areas of focus during 2022/23:

The key areas of focus during the year have included:

Strategic Project Key Issues
The Committee received updates on the portfolio of strategic projects including those at Bristol, York, Newcastle, Bow in East London and London Victoria.

Redevelopment of London Euston station
The committee reviewed and provided feedback on the key developments underway at London Euston station.

Workplace accommodation strategy
The committee has been provided with regular updates and gave feedback on the plans to utilise office space more efficiently.

Regional Property directors' reports
All regional property directors have presented to the committee, giving an overview of regional property strategies, targets, performance, and efficiencies.

Financial Performance
The committee received regular finance updates including updates on year-to-date performance, profit forecast versus budget and capital expenditure.

Expected focus areas in the year ahead

In the year ahead, the committee will continue to monitor progress on:
- Property's strategy and planning for Control Period 7
- the regional Property model
- workplace optimisation, including co-location opportunities with train operators and the effective use of our office estate with new working patterns
- the proposed merger of LCR with the Network Rail Group Property team
- safety and sustainability.

AUDIT AND RISK COMMITTEE REPORT

I'm pleased to present the committee's report into the key activities undertaken during 2022/23, alongside its anticipated activities for 2023/24. During 2022/23, the committee continued to focus on the audit, assurance, and risk management processes within the business in addition to its oversight of financial and other regulatory requirements. The committee's work focussed on the risks facing the business, to understand better the nature of the risks and provide assurance to the Board on the effectiveness of the associated mitigations and internal controls.

Mark Bayley CBE

chair, audit and risk committee

13 July 2023

Committee members	Formal appointment to the committee	Number of meetings attended during the year
Mark Bayley CBE	May 2020	4/4
Rob Brighouse	Jan 2016	4/4
Stephen Duckworth OBE	April 2021	2/4
Michael Harrison	Sept 2020	4/4
Silla Maizey OBE	Nov 2016	4/4

Committee attendees

The chief financial officer, director of risk and internal audit, group controller (Finance), and the group general counsel and company secretary attend meetings of the committee by invitation. Representatives from the National Audit Office (NAO) also attend each meeting. At the quarterly meetings, time is set aside for the representatives from the NAO and the director of risk and internal audit to meet with committee members without executive management present. Ismail Amla attends the meeting by invitation when matters related to cyber security are discussed.

Representatives from Great British Railways Transition Team (GBRTT) were invited to attend a special meeting of the ARC which was convened to focus on GBRTT. Ismail Amla was also in attendance at the meeting as an invitee with special expertise on cyber security and to cover representation from the GBRTT Board.

Role and responsibilities of the committee

The committee monitors the integrity of the financial reporting and the audit process and Network Rail's system of internal control. The committee also oversees risk management, regulatory reporting and compliance. The committee makes recommendations to the Board on the level of risk appetite acceptable to the company. In June 2022, the remit of the Committee was expanded to include oversight and assurance of GBRTT.

Following each meeting, the chair provides a summary of the committee's activities, main discussion points and findings to the next Board meeting. This is accompanied by a written report provided by the committee secretary with any recommendations to the Board.

Principal activities during the year

The committee had presentations from four regional managing directors on the key risks affecting their business plans. There were also updates on cyber security, supply chain disruption, HS2, train service delivery, winter power disruption, weather resilience and climate change, the counter-fraud programme, the whistleblowing procedure, and the Code of Business Ethics. At each meeting the committee receives business updates from Group Finance, Internal Audit, Group Risk, and the independent external auditor. In addition to regular updates, the committee considers the emerging and principal risks facing the business and elevates these to the Board where necessary. Further information on principal risks is on pages 94 to 104. The committee conducts an annual evaluation of its effectiveness, details of which are provided below.

Fair, balanced and understandable

Following a review, the committee confirmed that the annual report and financial statements for 2022/23 present a fair, balanced and understandable overview and provides the information necessary to assess the company's position, performance, business model, and strategy. The committee therefore proposed the document for approval to the Board

Significant accounting judgements, key assumptions and estimates

With the support of the NAO, the committee assessed whether suitable accounting policies had been adopted, whether management had made appropriate estimates and judgements and disclosures were balanced and fair. The main areas of focus during the year are set out below.

Accounting judgments	How the committee addressed those judgements
Valuation of rail network and compliance with regulatory requirements	The revaluation model used to measure the value of the rail network consists of a number of estimates and judgements made both by the company and by the Office of Rail and Road (for example anticipated financial and operational outperformance in the Control Period (CP6). The committee reviewed reports from management on the key estimates and the methodology applied to the revaluation model. The committee also reviewed the work of management and findings of the external auditors in respect of the reasonableness of key judgements and estimates in respect of the forecast for CP6, and the appropriateness of the associated disclosures in the financial statements. In the current year an adjustment was applied for the difference between the market cost of borrowing and that allowed in the CP6 regulatory return. Previously, because of the stability in long-term borrowing rates it had been observed that the cost of debt was broadly unchanged from that determined at the start of CP6. However, rates had moved considerably, and this led to an adjustment to the valuation. The accounts include an adjustment for £1.7bn in relation to this. After this review, the committee confirmed the valuation derived from the estimates, key judgments and valuation methodology.
Deferred tax	It was considered whether it remains appropriate for Network Rail not to recognise a deferred tax asset in relation to its brought forward tax losses. The committee agreed not to recognise a deferred tax asset until it was satisfied when it could be exchanged for economic benefits. With the high levels of investment expected for the foreseeable future, the committee saw little prospect that taxable profits would exceed capital allowances, therefore requiring use of tax assets (including losses brought forward) to reduce tax liabilities.

Pension assumptions	The group operates defined benefit and defined contribution pension schemes. Valuation of the defined benefit schemes is dependent on certain key assumptions and complex actuarial calculations. External actuaries are therefore engaged to assist in advising on key assumptions and determining the value of the pension obligations. The committee discussed the key assumptions, including the degree to which these were supported by professional advice from the actuaries. The independent auditor also focussed attention on this area and provided reporting to the committee on this matter. Finally, the committee considered the valuation of the scheme assets, noting the estimation uncertainty associated with Level 3 assets. This included a consideration of the work of management and the auditor to take account of movements to the year end, and the focussed work of the auditor in respect of higher risk assets.
Capital accruals	The estimate of cost of work done is a key judgement in Network Rail's accounts. The additions to property, plant and equipment are valued at an estimate of the cost of work done (COWD) in the year to 31 March 2023. To the extent that the COWD is greater than the invoiced amount, fixed asset accruals are recognised based on expected amounts required to settle contractual obligations. To value the COWD on capital projects appropriately, commercial managers with the appropriate level of experience assess the progress to completion of the project at the expected cost. Both progress and expected costs have elements that are estimates and require accounting judgement. Reports on management's approach to measuring cost of work done were reviewed alongside details of internal validation and the external auditor's report on sample testing.
Valuation of investment properties	Investment properties are stated at fair value. The valuations are based on assumptions and estimates that require judgement. The committee agreed the appropriate methodology had been used. The methodology was consistent with prior years and included valuations and additional assistance from external valuation specialists. The valuations were reviewed by management and the external valuation specialists.

The committee is required to review any correspondence received from regulators in respect of financial reporting. There has been no correspondence from the Financial Reporting Council (FRC) or the ORR in relation to Network Rail's financial reporting during the 2022/23 financial year.

Committee effectiveness

The committee completed a self-evaluation effectiveness review in 2022/23, supported by more detailed interviews with committee members. The review has shown that the committee was functioning effectively, and no significant areas of concern were raised. A number of recommendations emerged from the review to further improve the work of the committee and these are being taken forward.

The approach taken to the appointment of the external auditor

The Comptroller and Auditor General (C&AG), supported by the NAO, was appointed as Network Rail's independent auditor in 2015. In addition to providing an opinion on the group accounts, the C and AG also audits the individual accounts of Network Rail Infrastructure Finance PLC, Network Rail Infrastructure Limited, Network Rail (High Speed) Limited and Great British Railways Transition Team Limited.

The obligation to appoint the C&AG as Network Rail's independent auditor is a direct impact of the reclassification of Network Rail as an arm's-length government body and is in line with standard arrangements for other public sector bodies. The company is, therefore, not in a position to comply with the Competition and Markets Authority's Order or the UK Corporate

Governance Code 2018 in respect of tendering prior to the appointment of an auditor and this will remain the company's position for the foreseeable future.

PricewaterhouseCoopers (PwC) acted as the independent auditors for the remaining subsidiaries in 2022/23.

Objectivity and independence of the independent auditor

The NAO is independent of Network Rail in accordance with the ethical requirements relevant to the audit of financial statements in the UK, including the FRC's Ethical Standard as applied to listed entities/public interest entities. The committee has put in place safeguards to maintain the independent auditor's objectivity and independence. To enhance independence and in line with established auditing standards, the senior statutory auditor of the independent auditor is regularly rotated, along with other key audit principals within that firm.

The committee has established a policy whereby employment of the independent auditor on work for the company is prohibited without prior approval by the committee, other than for audit services or tax compliance services. Such requests are unlikely as the NAO does not offer non-audit services. The NAO does carry out value for money assessments for Network Rail, but this does not represent a service to Network Rail as it is performed under statute and on behalf of Parliament.

In 2022/23 the fee for audit services was £0.674m (£0.615m in 2021/22). This includes the NAO's cost of auditing Network Rail Infrastructure Limited, Network Rail Infrastructure Finance plc, Network Rail (High Speed) Limited, Great British Railways Transition Team Limited, the regulatory accounts and review of interim financial statements of Network Rail Limited and Network Rail Infrastructure Finance plc. It excludes the cost of the audit of some smaller subsidiaries which continue to be audited by PwC.

The fee paid to PricewaterhouseCoopers for auditing the smaller subsidiaries was circa £252k in 2022/23 (£190k in 2021/22).

Effectiveness of the external auditor

A review of the independent auditor's performance and effectiveness is undertaken as part of the overall effectiveness review of the auditing process. Following the conclusion of the 2022/23 reporting cycle, the auditing process was assessed. The independent auditor was also invited to comment on what worked well and where improvements could be made. The committee was satisfied that the independent auditor was fully effective and performed as expected in discharging its duties and obligations. Following two years of fully remote working due to Covid-19, the external audit has continued to be delivered with a significant remote element, with good communication retained between teams.

Evaluating the effectiveness of internal control and risk management systems

The committee regularly reviews the corporate risk profile, including the status of mitigating actions; complementing the SHEC Committee, which reviews the safety, health and environmental compliance risk profile and mitigating actions. The committee reviews and approves any changes to the enterprise risk management (ERM) framework, which determines the design, implementation, monitoring, and review and identification of risks. During the year the committee also reviewed Network Rail's risk appetite statements and the remit of Risk Management to ensure it remained appropriate for the company's strategy. The committee was satisfied that a robust risk process was in place to manage and mitigate risks with appropriate plans and monitoring. Where risks have been identified, appropriate actions are being taken to manage the impact on passengers, customers, and the organisation. The committee had oversight of the process and assessment of the group's prospects to carry on its business under severe but plausible scenarios undertaken in support of the viability statement. Further details of the analysis/scenario testing for the viability statement can be found on page 106.

Internal audit

The committee approved the annual internal audit plan and reviewed it through the year to check alignment with the group's strategic priorities and key risks (safety, health and environmental compliance elements of the audit plan are approved and reviewed through the SHEC committee). At each committee meeting the director of risk and internal audit updated the committee on changes to the plan including notable audits, overdue actions, themes, and key issues arising from internal audit activity. The audit programme was periodically reviewed to assess the impact of changes in Network Rail's risk profile and updated to maintain an appropriate level of assurance.

In addition to delivering formal risk-based audits, independent advisory reviews have been undertaken to support key programmes and respond to emerging issues. These reviews have included GBRTT, control period 7, and how industry planning has been updated to support recovery from the pandemic.

Internal Audit continue to use a root cause framework to identify, analyse, and highlight common themes arising from audit activity for consideration by the committee. Over the last year, these included:

- **assurance and monitoring:** audits found control weaknesses in assurance and monitoring arrangements relating to, for example, station asset management, control centres and environmental sustainability strategy
- **governance:** audits identified cases of less mature governance, risk, and control frameworks both in design and operating effectiveness. Examples include audits of working with plant and machinery, and the Power Supply Upgrade 2 project on the East Coast Main Line
- **processes and procedures:** audits found evidence of gaps that meant the operation of controls could not be demonstrated. Improvements were identified in processes underpinning payroll, renewals, and IT programme delivery activities.

Where areas for improvement have been identified through audit activity, these are being actively managed, and the improvements closely monitored by the committee.

Additionally, the committee approved the internal audit charter which defines internal audit's purpose, authority, responsibility, and position within the company.

Quality assurance

An external quality assessment of the Internal Audit function was carried out last year and improvements have been made to address the minor areas highlighted for improvement. These include an update of audit methodology and refresh of the terms of reference for each engagement. Each audit is subject to independent review by the head of internal audit for quality and consistency and a more detailed review of compliance with methodology is undertaken on a sample of audits through the year. Actions arising are actively monitored and tracked in the Internal Audit action plan.

Risk management and internal controls

The Board has ultimate responsibility for Network Rail's risk management and internal control systems, but delegates oversight to the committee, which then reports its findings and makes recommendations to the Board. This covers all material controls (financial, operational, and compliance) and the risk management framework. Risk management systems and internal controls are designed to manage rather than eliminate risk and provide reasonable, but not absolute, assurance that the group's risks are being appropriately managed and mitigated. The delegated responsibilities for risk management and internal control are detailed in 'Role and responsibilities of the committee' on page 136.

The committee reviews the current status of existing risks and progress against agreed action plans to manage them. Detailed oversight of safety related risks, including physical security, is delegated from the Board to the safety, health and environmental compliance committee.

The Board and executive leadership continue to monitor emerging risks, such as winter power disruption and those identified in the horizon scanning workshop in January 2022, to consider their impact on Network Rail in the future.

Network Rail's approach to risk identification and management, its risk appetite, and an assessment of its principal and emerging risks is provided on pages 94 to 104.

In addition to regular updates, the committee reviews the emerging and principal risks that require particular attention. During the year, these included:

- the risk of hostile or malicious acts exploiting vulnerabilities in Network Rail's cyber systems
- the risk of winter power disruption
- the opportunity for Network Rail provided by HS2 integration
- the risk of supply chain shortages and the impact of inflation

- the risk of the railway not meeting expected levels of train service delivery
- the financial risks associated with weather resilience and climate change.

Business ethics

The committee reviews and makes recommendations to the Board on the company's whistleblowing (Speak Out) procedures and arrangements for the independent investigation and follow-up of such matters. It also discusses major findings of internal investigations and management's response to them.

In March 2023 the committee assured the Board that the required policy, processes, and systems were in place to manage whistleblowing reports effectively. The Code of Business Ethics (CoBE), policies and ethical decision-making tool are accessible on all company mobile devices via 'EthicsApp'. Periodic dashboards are also produced to monitor ethical performance across the organisation, these cover: e-learning completion, gifts, hospitality and conflicts of interest declarations and Speak Out cases.

In the last year the ISO:37001 Anti-Bribery Management System accreditation was obtained which recognises the controls and systems that had been put in place to minimise the threat of bribery within Network Rail's highest risk areas.

The Speak Out policy, which clearly identifies the channels available for those wishing to raise concerns and how Network Rail endeavours to respond to investigating whistleblowing allegations, was also updated.

Planned activities for 2023/24

In the 2023/24 financial year, the committee will continue its oversight of the risk management and internal control systems and internal audit, monitoring the integrity of the financial statements including the interim statements, and reviewing the external audit process. The committee will continue to adapt the structure and focus of meetings to reflect the current risk landscape, including the impact of industrial action, recovery of passenger numbers, progress of industry reform, the preparations for CP7 and other key challenges facing the organisation and wider industry. This will include: oversight of the risks specific to each region; continued monitoring of governance, risk, assurance and improvement activity; assurance of the capital delivery programme; and assurance of cyber security risk management.

TREASURY COMMITTEE REPORT

Mark Bayley CBE

chair, treasury committee

13 July 2023

Committee members	Formal appointment to the committee	Number of meetings attended during the year
Mark Bayley CBE	May 2020	3/3
Michael Harrison	September 2020	3/3
Silla Maizey OBE	November 2016	3/3

Committee attendees

The chair of the Board, chief financial officer, group finance director, head of treasury, corporate finance and business development director, the group general counsel and company secretary attend meetings by invitation.

The role and responsibilities of the committee are reviewed regularly to ensure that the activities of the committee align with the needs of the organisation.

The committee's role is to:
- approve or recommend strategies and policies in relation to areas of treasury management including financing, cash and liquidity management and forecasting, regulatory requirements, investor relations, bank relationships, and treasury control, governance and assurance
- review proposed treasury and corporate finance activities including banking, cash and liquidity management and forecasting, debt management, investment management, and treasury risk management
- review the treasury function's financial reporting and internal control procedures
- approve specific transactions within treasury responsibility
- review Network Rail's corporate finance activities and major corporate transactions.

Principal activities during the year

The Committee received detailed updates on Network Rail's cash and liquidity position, its debt and derivative portfolio, its intercompany financing arrangements, and major corporate finance transactions.

Corporate finance transactions

During the year, the committee noted the progress that had been made on the pipeline of projects and reflected and reviewed opportunities for third-party investment in Network Rail Infrastructure (NRIL). Factors that could threaten the viability of any of the projects were considered.

The projects included:
- renewing and upgrading telecoms infrastructure
- power purchasing agreements to support decarbonisation of the railway
- private funding/ third-party investment in Network Rail infrastructure, depots and other projects (including electric vehicle charging points at railway stations)
- proposed merger of Network Rail and London & Continental Railways (LCR) property functions to create a new railway property development company.

Tax Strategy

The committee reviewed the proposed tax strategy for 2022/23 for the Network Rail Group. The revisions were intended to strengthen the associated governance arrangements.

Network Rail Financing arrangements

- The committee continued to monitor the impact on funding caused by industrial action and inflation and the approach to managing the financial impact of any future strike action and inflationary pressures
- the committee reviewed the grant agreement funding for Network Rail, including the Great British Railways Transition Team (GBRTT) Grant Agreement which was signed on 10 October 2022
- the committee reviewed the effectiveness of Network Rail's banking arrangements..

Other specific topics considered by the committee during 2022/23 included:

Legacy Debt

The committee reviewed the continued operation of the existing loan facility from the Department for Transport (DfT) which refinances Network Rail's external debt as set out on page 189, when it falls due for repayment.

Network Rail has in issue a number of structured legacy bonds that contain early repayment options which can be exercised every five years by the investor. The recent unforeseen and rapid rises in market rates highlighted the requirement to increase the DfT Loan Facility to provide the required funding to refinance these legacy structured bonds, should investor options be exercised in the future.

Review of Treasury Policy Manual

The committee reviewed the treasury policy manual and introduced minor changes to the document. Network Rail Group's cash and liquidity position will be defined as 'group cash', representing the aggregate total of NRIL cash and available cash at Network Rail's captive insurance company. Notification triggers were introduced to ensure that senior leaders are informed promptly when cash held by the insurance captive is applied to meet short-term liquidity requirements.

Enterprise Risk Record

The committee reviewed the newly introduced Enterprise Risk Record in relation to emerging Control Period 7 treasury matters. Activities include the negotiation of a new suite of government grants for funding rail activities, and the agreement of a replacement DfT loan facility to replace the existing facility for refinancing debt.

Planned activities for 2023/24

- Governance and assurance of all Group Treasury activities
- review of CP7 risks and agreement of CP7 financing and funding agreements
- corporate finance transactions overview (including oversight of planned merger of NR and LCR property development activities)
- development of policy, governance and assurance activities as GBRTT scope and activities are increased.

GREAT BRITISH RAILWAYS TRANSITION TEAM LIMITED BOARD REPORT

The Bradshaw Address in February 2023 confirmed the Government's commitment to creating a simpler, better railway for everyone in Britain. The ambitious changes outlined in the Plan for Rail, these ambitious changes will make our railway a more environmentally friendly and modern public transport system which supports the levelling up of our towns, cities and regions.

Central to the Plan for Rail is the establishment of a 'guiding mind' for the sector: Great British Railways (GBR), which will run and plan the rail network, own the infrastructure, and receive the fare revenue. It will procure passenger services and set most fares and timetables. This will bring the whole system under single, national leadership.

The creation of GBR and broader changes across the sector will take several years to fully implement and the arrangements will continue to evolve thereafter. In the Plan for Rail, the Government said that interim arrangements should be developed to bring forward benefits and deliver change in the sector in advance of GBR's creation.

The Great British Railways Transition Team (GBRTT) is developing and realising those benefits. GBRTT is guided by a clear purpose – 'creating a simpler, better railway for everyone in Britain'. The purpose expresses why GBRTT exists as an organisation and guides everything it does.

Board members	Formal appointment to the Board	Number of meetings attended during the year
Keith Williams CBE	September 2022	6/10
Peter, Lord Hendy of Richmond Hill, CBE	September 2022	9/10
Ismail Amla	September 2022	9/10
Dyan Crowther OBE	September 2022	6/10
Andrew Haines OBE	September 2022	9/10
Michael Harrison	September 2022	10/10
Silla Maizey OBE	September 2022	8/10
Jane Mee	September 2022	8/10
Heidi Mottram CBE	September 2022	4/10
David Noyes	September 2022	8/10
Anthony Poulter OBE	September 2022	8/10
Jeremy Westlake	September 2022	8/10

Keith Williams CBE

chair, GBRTT board

13 July 2023

Board attendees

GBRTT Limited was formally established with the current Board of directors appointed in September 2022. The Board, led by Keith Williams, brings expertise from across the rail industry and wider transport sector. The Board met ten times during the year to 31 March 2023, initially as an Advisory Panel, to oversee delivery of GBRTT's strategic goals on behalf of the Secretary of State for Transport. As GBRTT is a transition organisation intended to exist for a short period of time, it was agreed with HM Government that Board members would not be remunerated or receive fees for their appointments and we are grateful to them all for giving up their time to support the work of the transition team.

Attendees at Board meetings included GBRTT's Lead Director and representatives from the Department of Transport, as well as members of the Executive Committee where required.

The Board met on a monthly basis from April to October 2022, with additional away days and deep dives into key strategic areas to establish priorities and develop knowledge. It was then considered appropriate for Board meetings to move to quarterly intervals.

A number of directors were unable to attend some meetings, including ad hoc deep dive sessions, in 2022 due to prior commitments. All directors have access to the Board papers and contribute their comments to the Chair or his deputy if they are unable to attend meetings.

Directors do not receive fees or remuneration for their GBRTT Board appointments.

Role and responsibilities of the board

GBRTT has been set up to deliver the Plan for Rail, working with Government and across the rail sector. This will lead to the creation of GBR, a new public body that will bring the whole system under single, national leadership.

The board's role is to oversee and provide advice to GBRTT management as it delivers the reforms in the Plan for Rail and develops plans for the creation of GBR. This includes providing advice on:

- the strategy, values and standards for GBRTT as it delivers its vision, mission and policies
- the culture and the approach to diversity and inclusion, together with the development of necessary whole industry capabilities
- opportunities, threats and risks, and the mitigation of emerging risks and opportunities
- business plans and delivery plans
- GBRTT's corporate and organisational structure with a view to the future state of GBR.

After each meeting the lead director or policy and transformation director briefs the Network Rail Board on the board's work and makes recommendations as appropriate.

The board's terms of reference are available on the GBRTT website: **www.gbrtt.co.uk**

Principal activities during the year

Progress has already been made. We see this in:

- Generating more than £109m in revenue through initiatives such as the Great British Rail Sale and other national marketing campaigns
- Launching the Strategic Freight Unit – advocating for rail freight and making working with the industry easier for operators
- Forming the first integrated view of costs and revenue across the industry, to help inform investment decision making

The Department for Transport (DfT) has commissioned GBRTT to take forward specific activities. This includes designing GBR's regions and network, developing rail's commercial framework, leading the National Rail Accessibility Strategy, forming GBR's brand and culture framework, as well as creating the future customer value proposition.

In October 2021, the Secretary of State for Transport announced a public competition to choose the new headquarters of GBR. The competition launched in February 2022 with 42 applications from towns and cities across the country. In March 2023 the Secretary of State for Transport confirmed that Derby would be the headquarters for GBR, with more than 200,000 members of the public giving their opinion on the location.

The Plan for Rail included a commitment to develop a sector-wide, Long-Term Strategy for Rail. Produced for Ministers, the 30-year high level plan will be the first strategy of its kind. It is shaped by strategic objectives that have been developed for the benefit of our passengers, freight users, taxpayers, and staff. The objectives also support Britain's nations, regions, and communities to achieve their goals, and benefit the economy and the environment for the long term. GBRTT ran a call for evidence which received over 300 responses. A first draft will be published in 2023.

GBRTT's work in improving the fares, ticketing and retail offer is starting to be felt by our passengers. GBRTT is achieving this by transforming the digital experience, reducing the cost of sale, offering simplified fares, modernising physical retailing, and establishing a model of continuous improvement. Passengers will soon experience this through the roll-out of pay-as-you-go ticketing outside of London.

Planned activities for 2023/24

GBRTT has set six outcomes that will need to be achieved to make the reforms in the Plan for Rail a reality:

- a simpler sector created
- customers choose rail
- a more cost-effective railway
- an aligned industry with a clear direction
- a major shift in culture
- trusted to deliver reform.

The Board has approved GBRTT's Annual Business Plan for 2023/24, which focuses on the delivery of these outcomes and will be published at **www.gbrtt.co.uk**

NOMINATION AND REMUNERATION COMMITTEE REPORT

2022/23 was another challenging year for Network Rail, train operating companies and our passengers and freight users. While as a country we continued to emerge from the pandemic, the rail industry faced sustained industrial action due to disputes with the trade unions.

Bearing this in mind, I present my report on behalf of the nomination and remuneration committee.

While Network Rail's revenue continued to be impacted by changing passenger numbers post-pandemic, the cost of living crisis and aforementioned industrial action further constrained our finances. So again during this financial year, we've had to make difficult decisions related to our people, both in terms of pay and also reviewing the structure and size of our teams as we modernise our business.

The nomination and remuneration committee is a single committee however we report on its work in two parts. The first section of the report examines the 'nomination' aspects of the committee's work, and the second section reports the prescribed elements of the directors' remuneration report. Areas subject to overlap will be highlighted where appropriate.

David Noyes

chair, nomination and remuneration committee

13 July 2023

Committee members	Formal appointment to the committee	Number of meetings attended during the year
David Noyes	October 2018	5/5
Michael Harrison	May 2020	4/5
Peter, Lord Hendy of Richmond Hill, CBE	October 2015	3/5
Fiona Ross	September 2020	5/5
Ismail Amla	April 2021	4/5

Committee attendees

The committee ordinarily invites the chief executive, the group general counsel and company secretary, the group Human Resources director, the Human Resources director national and the senior reward manager to attend meetings. Others may attend for specific items. Meetings are routinely attended by a representative from the Department for Transport.

Role and responsibilities of the committee

The committee's role is to consider and comment on:
- board appointments and the induction of new directors
- board culture and diversity
- board effectiveness
- board and senior executive remuneration
- any other matter within its remit that it may consider necessary or appropriate.

After each meeting the committee chair briefs the full Board on the committee's work and makes recommendations as appropriate.

During 2022/23 the committee's remit was expanded to include oversight and assurance of Great British Railways Transition Team Limited matters.

The committee's terms of reference are available on our website: **www.networkrail.co.uk**

Principal nomination activities during the year

Network Rail board reappointments

During the 2022/23 financial year, the committee managed the reappointments of Silla Maizey, Mark Bayley and Fiona Ross as non-executive directors, subject to the approval of the Secretary of State and the Prime Minister.

Peter, Lord Hendy of Richmond Hill and Michael Harrison's terms of appointment were reviewed by the DfT following a recommendation from the committee that they should be reappointed. Both were reappointed by the Secretary of State, having secured the Prime Minister's approval.

In making its recommendations to the DfT, the committee considered (i) the individual performance of the director, (ii) the skills and expertise that they each contributed to the board and the Company as a whole, and (iii) the requirements of the business now and over the medium term.

Having completed two three-year terms, Silla Maizey was appointed for a further one year term, expiring on 21 November 2023. Mark Bayley and Fiona Ross were both appointed for a second three-year term to expire on 10 May 2026, subject always to the status of the Network Rail board in the context of rail reform.

Peter, Lord Hendy of Richmond Hill was appointed for a further two year term to expire on 15 July 2025. Michael Harrison was reappointed as special director for a second three-year term to expire on 10 May 2026, subject always to the status of the Network Rail board in the context of rail reform.

Great British Railways (GBR) Transition Team (GBRTT) board

From 1 September 2022 GBRTT Limited had been formally established as a legal entity, within the Network Rail group of companies. The GBRTT advisory panel members had been appointed as directors GBRTT Limited, initially for a period of one year. This was another step towards the development of GBR.

The GBRTT Limited board oversees delivery of rail reform, allowing the Network Rail Board to remain focussed on that business' core strategy, operations and activity.

Directors of GBRTT Limited continue to be unpaid appointments.

Succession planning for the Network Rail route director roles

The talent and succession pool for the role of route director was reviewed. In particular there was a focus on what was being done to address the lack of diversity amongst this group, and indeed more generally across the talent pool.

Planned activities for 2023/24

In the year ahead, the committee will:

- consider the need for a board effectiveness evaluation to be carried out
- consider any necessary appointments to the Network Rail and GBRTT Boards in light of any directors reaching the end of their terms in office, with a focus on Board diversity and inclusion
- continue to consider the future of Network Rail as a corporate body in the context of rail reform
- manage any relevant matters relating to rail reform and/or workforce modernisation
- continue to review talent development strategies to ensure the organisation has the appropriate skills and capabilities in place to execute its accountabilities effectively.

DIRECTORS' REMUNERATION REPORT

CONTENTS

ANNUAL STATEMENT FROM THE REMUNERATION COMMITTEE CHAIR

I'm pleased to present the 2022/23 directors' remuneration report for Network Rail. The nomination and remuneration committee, which has been combined since 2018, is dedicated to the highest standards of disclosure on remuneration and recognises that executive pay is an important issue for a public body. We operate in line with the remuneration requirements which apply to all UK listed companies and the provisions of the UK Corporate Governance Code. The committee follows good governance practice by reviewing the terms of reference every year.

The 2022 report was approved at the Annual General Meeting by our member, the Secretary of State for Transport (SoS). The current three-year remuneration policy for executive directors (Policy) was approved at the 2020 AGM and sets out the framework and limits for how executive directors are paid. The Policy was included in the 2020 directors' remuneration report and can also be viewed on our website **www.networkrail.co.uk**. In accordance with corporate governance regulations, the Policy is reviewed every three years, so at the AGM in 2023, a revised Policy will be put forward for approval by the SoS. This report outlines the key changes and includes the full Policy.

Key agenda items for the year

Our annual remuneration report outlines the outcomes for the 2022/23 financial year in terms of executive remuneration. The key points to note for 2022/23 outcomes are:

- the proposed executive remuneration framework is broadly similar to the previous 2020 Policy and still comprises of three components - base salary, pension and performance related pay (PRP)
- the performance related pay scheme was approved by the committee for 2022/23. The chief executive declined to accept a payment this year. The chief financial officer received a payment equivalent to five per cent of salary.

The rest of this statement explains how executive remuneration is determined at Network Rail and gives more details on the outcomes of this year.

Implementation of Policy in 2023

Decisions made by the committee during the year were all within the framework agreed as part of the Policy in 2020:

1. **Simple:** the framework should be transparent and simple for all stakeholders to understand.
2. **Competitive and fair:** attracting and retaining leaders of the necessary ability requires remuneration arrangements that are reasonable in the markets that we compete in for talent, and which fairly reflect the appropriate market rates for the skills and experience of the individual. At the same time, we need to ensure value for money for the taxpayer and to reflect our status as a publicly funded body.
3. **Performance and safety:** there should be a performance-related element of the package which rewards performance in areas that are most important for our stakeholders. There shouldn't be a reward for failure. The safety of our workforce, passengers and the general public is at the heart of everything we do and must be reflected in the remuneration framework.
4. **Aligned across Network Rail:** where possible, remuneration structures will be aligned across the organisation. All Network Rail employees continue to be eligible for performance-related pay, determined using a consistent performance framework across the organisation, but it is not a contractual entitlement.

The remuneration framework for executive directors agreed in 2020 is based on the principles below:

Salary	Salaries are set at a level which reflects the skills and experience of the individual as well as the scope of the responsibilities of the role.
Pension	Participation in pension schemes is on the same basis as other managerial positions at Network Rail.
Performance related pay	Our plan is based on the achievement of stretching annual performance targets, which is aligned to the business scorecard.

2022/23 outcomes for executive directors

Business performance is measured through the scorecards. These evaluate performance against key measures and targets that have been agreed with customers and stakeholders. The measures on the scorecard represent the key strategic themes of train service delivery, safety, efficiencies, sustainable growth, customer and communities and people. PRP for senior employees uses the national scorecard outturn and one quarter (25 per cent) of PRP is also determined by an individual's performance rating. This gives a direct line of sight between the achievement of individual objectives and PRP.

Overall national scorecard performance was below target at 20.4 per cent.

Further details of the PRP scheme can be found on pages 158 to 160.

2023 Policy review

The current Policy was agreed in 2020 and has therefore been reviewed. The review considered a range of factors to recognise that senior appointments are balanced with public pay constraints, whilst allowing Network Rail to attract and retain highly talented leaders who can help drive performance. It was agreed that the current Policy still achieves this, however the following key amendments were made:

- the £95k redundancy cap for new appointments has been removed as this legislation was introduced but later repealed
- in relation to the formation of Great British Railways, the Policy will continue to apply for the full term, or until such time as a separate Great British Railway's executive director's remuneration policy is created and approved.

The full Policy can be found on pages 161 to 167.

David Noyes

chair, nomination and remuneration committee

13 July 2023

ANNUAL REMUNERATION REPORT

This report has been prepared in accordance with the requirements of Schedule 8 of the Large and Medium-sized Companies and Groups (Accounts and Report) (Amendment) Regulations 2013. Where indicated, some of the disclosures in these sections have been audited.

Single total figure of remuneration for 2022/23 (audited)

The table below summarises all remuneration received for the executive directors in respect of 2022/23 (and the prior year comparative). Further discussion of each of the components is set out on the pages which follow.

£'000	Salary		Benefits[1]		Pension[2]		Performance Related Pay (PRP)[3]		Total	
	2022/23	2021/22	2022/23	2021/22	2022/23	2021/22	2022/23	2021/22	2022/23	2021/22
Jeremy Westlake	373	373	12	12	35[3]	37	19	0	439	422
Andrew Haines OBE	590	590	3	3	0	0	0[4]	0	593	593

1. Benefits include car allowance, private medical cover, any annual travel subsidy, life assurance and relocation.
2. Pension includes the value of all pension benefits receivable in respect of the relevant year. This includes any supplementary cash allowance and a value from participation in the defined benefit or defined contribution pension arrangements or allowances for those who have opted out of their respective pension arrangements in the relevant year (calculated in accordance with the methodology prescribed by the Regulations). Further details of these pension benefits are set out in the pension section on page 152.
3. Jeremy's pension was lower this year as he received an arrears payment for 2020/21 in 2021/22.
4. Andrew declined to receive a payment under the PRP 2022/23 scheme year.

Pay ratios (audited)

The Government announced new legislation for employers to publish their pay ratios from 2020. The pay ratio is the gap between the chief executive and the 25th, 50th and 75th percentile of employees – using the single figure disclosed in remuneration reporting in the table above. A historical record will be published incrementally to a 10-year period moving forward.

For transparency and good governance, the nomination and remuneration committee decided to publish the pay ratio information a year early in the 2018/19 report and to also publish the information from 2017/18 so that it could be compared.

There are three calculation methodologies to choose from:

A. Calculate total remuneration for all employees and take the percentiles to calculate the pay ratio against the chief executive single figure total remuneration.
B. Using existing pay data i.e., gender pay gap reporting, take the 25th, 50th and 75th percentiles and then calculate the total remuneration for these and compare against the chief executive single figure total remuneration.
C. Same as option B but using other recent pay data.

The nomination and remuneration committee decided that option B, using existing gender pay gap reporting, would be used. This data already exists and is in the public domain, therefore making it more familiar and easier to obtain.

	Method	25th percentile pay ratio	Median pay ratio	75th percentile pay ratio
2017/18	**Option B**	25.1:1	20.0:1	16.2:1
2018/19[2]	**Option B**	20.9:1	16.1:1	13.3:1
2019/20[3]	**Option B**	18.0:1	14.3:1	11.9:1
2020/21	**Option B**	17.5:1	14.3:1	12.8:1
2021/22	**Option B**	17.1:1	13.8:1	11.2:1
2022/23	**Option B**	16.1:1	13.3:1	8.5:1

1. PRP has been removed from the calculations for all years for consistency, as PRP payments for 2021/22 for some employees had not yet been made at the time of this report.
2. Change of chief executive during the year. Pay ratio based on Mark Carne CBE and Andrew Haines OBE's combined single figure total for 2018/19.
3. Andrew Haines OBE's single figure total was used for 2019/20 onwards.

When taking the employee data for the 25th, 50th and 75th percentile, the total remuneration figure has been calculated based on an office worker at these percentiles rather than other employee groups. The latest 2022 pay gap data used to identify employees at each percentile was taken on 31 March 2022 with the total remuneration data covering the same period as that in the single figure total remuneration table. The total pay and benefits along with the salary component for each of the employees at each percentile are shown in the table below.

Percentile	Total pay & benefits	Salary component
25th Percentile	£36,831	£33,388
50th Percentile	£44,548	£44,059
75th Percentile	£70,003	£52,999

Executive director changes

There have been no changes this year.

Incentive plan 2022/23 – annual PRP (audited)

During the year, two directors were eligible to participate in this scheme; Jeremy Westlake and Andrew Haines OBE. The maximum potential annual PRP award for Jeremy Westlake in 2022/23 was 20 per cent of salary. Andrew Haines OBE's maximum potential annual PRP award was nine per cent. Stretching performance targets were set at the start of the year in the context of the national scorecard, which can be found on pages 158 to 159. The approach for PRP is aligned across the business, including executive directors. The national scorecard outturn determines the percentage pay-out against the maximum award. For 2022/23, one quarter (25 per cent) of PRP was based on an individual's performance rating, and each rating carried a different percentage weighting. For example, a 'good' performance rating will have an 11.25 per cent contribution to the overall PRP. In addition, Network Rail has accrued PRP for 2021/22 and 2022/23 financial years based on those in full attendance during industrial action.

Performance against the national scorecard is summarised on pages 22 to 27. Our National scorecard performance was below target at 20.4 per cent. This year saw the rail industry face a number of challenges including severe weather incidents, track incidents, an increased number of train cancellations and felt the impact of industrial action. We have taken a number of steps to address some of the issues we have faced, including the introduction of a National Recovery Programme, a study into the drivers of passenger satisfaction and we continue to make the safety of our passengers and staff a priority.

In addition, each year the safety, health and environmental compliance committee (SHEC) considers the overall outturn from a safety perspective and decides whether to recommend any further adjustments to reflect safety performance. Having reviewed the outturns of the safety measures and overall safety performance, the committee concluded that no further adjustments were necessary this year.

Pension (audited)

1. Executive directors are eligible to participate in one of the Network Rail defined benefit pension schemes or the

defined contribution pension scheme on the same basis as other employees.

2. Under the existing executive pension policy, Jeremy Westlake is entitled to an allowance in lieu of pension on the same basis as other employees of Network Rail, subject to the discretion of the group HR director. This allowance is equivalent to the employer's pension contributions otherwise payable, minus an adjustment for the cost of providing continued life assurance and the employer National Insurance Contributions payable. Andrew Haines OBE was not eligible for an allowance in lieu of pension as part of his appointment.

3. Previously, executive directors received an additional pension allowance in the form of a cash supplement based on a percentage of their earnings above the notional earnings cap (£181,800 for 2022/23 tax year and previously £172,800 for 2021/22). This policy no longer applies to new appointments.

The table below sets out details for executive directors for 2023 in respect of all Network Rail pension benefits, split between the defined benefit and defined contribution/additional allowance. The value shown in the final column of this table is included as the pension column in the single total figure of remuneration on page 151.

	Defined benefit schemes				Other pension arrangements[4]		
	Normal retirement age[2]	Accrued pension at 31 March 2023 £000	Increase in accrued pension (net of inflation) during 2022/23)	Transfer value of accrued pension at 31 March 2023 £000[3]	Value included in single figure table (A) £000	Cash salary supplement or contribution to defined contribution scheme (B) £000	Total pension value reported in single figure table (A+B) £000
Andrew Haines OBE[1]	–	–	–	–	–	–	–
Jeremy Westlake	–	–	–	–	–	35	35

1. Andrew Haines OBE does not receive any pension contribution nor cash in lieu.
2. The normal retirement age shows the age at which the director can retire without actuarial reduction.
3. Transfer values at 31 March 2023 have been calculated in accordance with the 'Occupational Pension Schemes (Transfer Values) (Amendment) Regulations 2008'.
4. For the defined benefit schemes, the value shown in the single figure table (A) has been calculated in accordance with the regulations by applying a multiplier of 20 to the increase in accrued pension (net of inflation) during the year. For the additional pension allowance (B), the value shown is the gross cash allowance in the year. The value shown in the single figure table is the sum of A and B.

Non-executive directors' fees (audited)

Under the framework agreement the SoS sets the pay for the chair and non-executive directors of Network Rail. The fees for newly appointed non-executive directors were last reviewed in 2016 and were decreased at that time.

The table below summarises the remuneration for the non-executive directors for 2022/23.

	2022/23		2021/22	
	Fees £000	Benefits £000	Fees £000	Benefits £000
Rob Brighouse[1]	49	–	57	–
Peter, Lord Hendy of Richmond Hill, CBE	316	–	316	–

	2022/23		2021/22	
	Fees £000	Benefits £000	Fees £000	Benefits £000
Silla Maizey OBE	40	–	40	–
David Noyes[2]	50	–	50	–
Mike Putnam[3]	50	–	50	–
Michael Harrison[4]	–	–	–	–
Mark Bayley[5]	66	–	65	–
Fiona Ross	40	–	40	–
Ismail Amla	40	–	40	–
Stephen Duckworth	40	–	40	–

1. Rob Brighouse reappointed from 1 January 2022 to 31 December 2023. Base fees reduced from 1 January 2022 but continues to receive additional fee for role as senior independent director.
2. David Noyes' receives an additional fee as chair of the Nominations and Remuneration Committee however has waived his fee as chair of Environmental Sustainability Committee.
3. Mike Putnam receives an additional fee as chair of the Safety, Health and Environmental Compliance Committee.
4. Michael Harrison was re-appointed on 11 May 2023 for a second term as the Secretary of State's designated non-executive special director. It is an unpaid appointment for three years.
5. Mark Bayley received additional fees in 2021/22 for chairing the Audit and Risk Committee and the Property Supervisory Committee. There is an increase in overall fees as he also took over as Chair of the Property Committee as of 30 April 2021

Payments to former directors (audited)

There were no payments made to former directors in 2022/23.

Payments for loss of office (audited)

There were no payments for loss of office to executive directors in 2022/23.

Outside appointments

Executive directors need to seek approval from the committee to retain any fees for external non-executive directorships.

Andrew Haines OBE is a director of the Rail Delivery Group and does not receive fees for this appointment, although he does have a travel pass that comes with the directorship, which allows him free rail travel for personal and business use.

Jeremy Westlake is a non-executive director of Elevate Services Inc. Whilst there are no fees taken for this, share options are available.

Additional disclosures

The following disclosures are required by the regulations to provide additional background for considering executive remuneration.

Percentage change in remuneration

The table below shows the percentage change in the salary, benefits and PRP of the chief executive and all Network Rail employees from 2021/22 to 2022/23.

For the table below, the change in the value of each of the components for the chief executive has been calculated using the data disclosed in the relevant columns of the single total figure of remuneration table shown on page 151.

	Chief executive	All employees
Salary[1]	0 %	4.7 %
Benefits	0 %	0 %
Performance related pay[2]	0 %	0 %

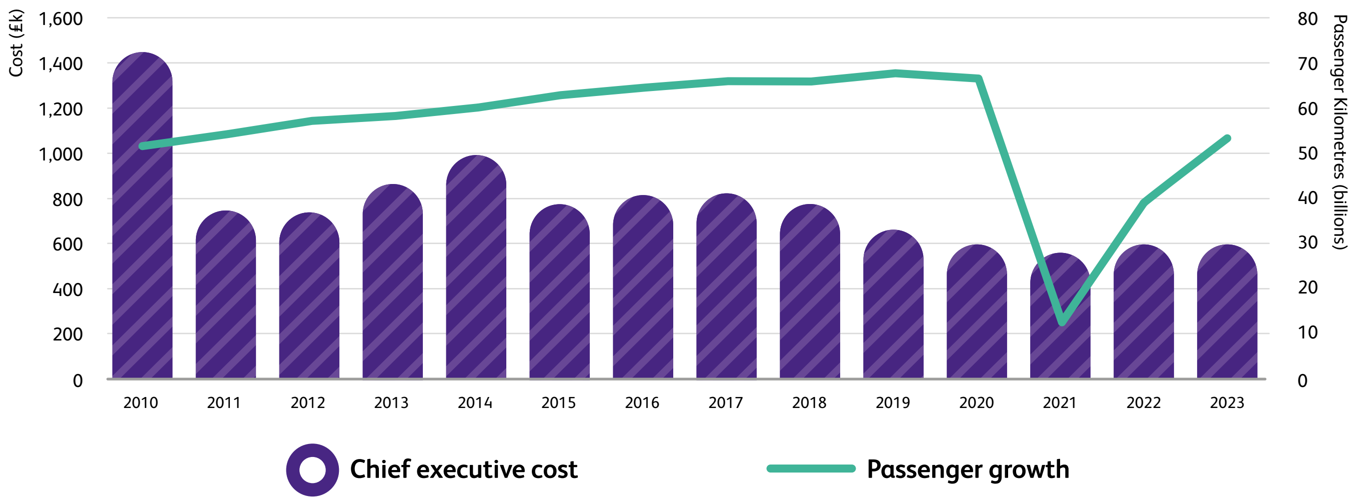
1. Based on salary reviews effective on either 1 January or 1 July 2022.

2. PRP is based on any changes to maximum opportunity.

Performance graph and table

Under the regulations, companies need to include a chart showing historic total shareholder return (i.e., share price and re-invested dividends) over an eight-year period alongside a table that shows the remuneration paid to the chief executive over the same period. As Network Rail does not have shares, or a share price, we have used the metric of 'passenger kilometres travelled' instead.

Number of passenger kilometres travelled



	Chief executive	Single total figure of remuneration	PRP (% of vesting)
2022/2023	Andrew Haines OBE	£593k	0 %
2021/2022	Andrew Haines OBE	£593k	0 %
2020/2021	Andrew Haines OBE	£557k	0 %
2019/2020	Andrew Haines OBE	£595k	0 %

	Chief executive	Single total figure of remuneration	PRP (% of vesting)
2018/2019	Andrew Haines OBE	£371k	0 %
	Mark Carne CBE	£285k	N/A
2017/2018	Mark Carne CBE	£769k	54.6 %
2016/2017	Mark Carne CBE	£820k	37 %
2015/2016	Mark Carne CBE	£811k	34.7 %
2014/2015	Mark Carne CBE	£771k	0 %
2013/2014	Mark Carne CBE	£200k	20.9 %
	Sir David Higgins	£790k	N/A
2012/2013	Sir David Higgins	£836k	28.6 %
2011/2012	Sir David Higgins	£736k	0 %
2010/2011	Sir David Higgins	£161k	N/A
	Iain Coucher	£528k	N/A
2009/2010	Iain Coucher	£1,447k	56.8 %

- Iain Coucher was appointed chief executive on 1 August 2007. He resigned on 31 October 2010.
- Sir David Higgins was appointed chief executive on 1 February 2011. He resigned on 28 February 2014. Mark Carne CBE was appointed chief executive on 24 February 2014. He retired on 4 September 2018. Mark Carne CBE also voluntarily declined any PRP in 2018.
- Andrew Haines OBE was appointed chief executive on 14 August 2018. He declined any PRP in 2019, 2020 and 2022 due to the financial pressures arising from the Covid-19 pandemic
- N/A indicates that there was no eligibility for an award vesting in respect of the relevant year.
- The combined single total figure of remuneration for Andrew Haines OBE and Mark Carne CBE for 2018/19 was £656k.

Relative importance of spend on pay

Under the regulations, companies need to illustrate the relative importance of spend on pay, by disclosing the total employee remuneration and returns to shareholders (i.e., dividends and share buybacks) in the reporting year and the prior year. Network Rail is a not-for-dividend company so cannot provide data on returns to shareholders. Therefore, other key Network Rail metrics have been used in the table below to show employee remuneration in the context of overall business activities.

	2022/23	2021/22	Change (%)
Total employee remuneration	£2,831m	£2,975m	-4.8 %
Total expenditure	£11,834m	£10,785m	9.7 %

Consideration of directors' remuneration – remuneration committee and advisers

The committee during the year was made up of the following independent non-executive directors: David Noyes, Peter, Lord Hendy of Richmond Hill, Fiona Ross, Michael Harrison and Ismail Amla.

The group general counsel and company secretary is secretary to the committee. The committee is also supported by the group HR director, and head of reward and benefits. The chief executive attends meetings when invited by the committee. No individual is present when their own remuneration is being discussed.

In line with best practice, the committee seeks independent external advice when needed. During the year, the committee retained Deloitte LLP to provide independent advice on executive remuneration. Deloitte was chosen by the committee in 2012 following a selection process undertaken by the committee. The committee is satisfied that the Deloitte engagement partner and team provide fair and independent remuneration advice to the committee and do not have any connections with Network Rail that may affect this.

Deloitte is a founding member of the Remuneration Consultants Group and voluntarily operates under the code of conduct in relation to executive remuneration consulting in the UK. The code of conduct can be found at **www.remunerationconsultantsgroup.com**. Deloitte did not provide any advice to the committee during 2022/23, and as such no fees were payable in this respect.

Key remuneration committee agenda items during the year

May 2022	• Pay award discussions. • Update on modernisation consultations. • Senior pay quota. • Executive directors' objectives. • Committee report for annual report & accounts 2022. • PRP outturn 2020/21.
September 2022	• Update on modernisation consultations. • PRP 2021/22.
November 2022	• Update on modernisation consultations. • PRP 2021/22 for general grades. • PRP 2021/22 for executive band and band 1.
February 2023	• Update on modernisation consultations. • PRP 2022/23. • Executive directors' remuneration policy.
March 2023	• Update on modernisation consultations. • Indicative PRP outturn for 2022/23. • Scorecard approval 2022/23. • Executive directors' objectives. • Succession planning.

Committee members

Member	Formal appointment to committee	Number of meetings attended during the year
David Noyes (chair)	October 2018	5/5
Fiona Ross	May 2020	5/5
Peter, Lord Hendy of Richmond Hill, CBE	July 2015	4/5
Michael Harrison	May 2020	4/5
Ismail Amla	April 2021	4/5

Role of the remuneration committee

In 2018, the nomination and remuneration committees were combined to form one committee. The committee continues to cover policy, governance, and decision-making in relation to all senior employees with salaries above the Government's senior pay threshold (£150,000).

The full terms of reference of the committee can be found on the website: **www.networkrail.co.uk**

Pay for performance structure for executive directors – aligned to what is important for customers

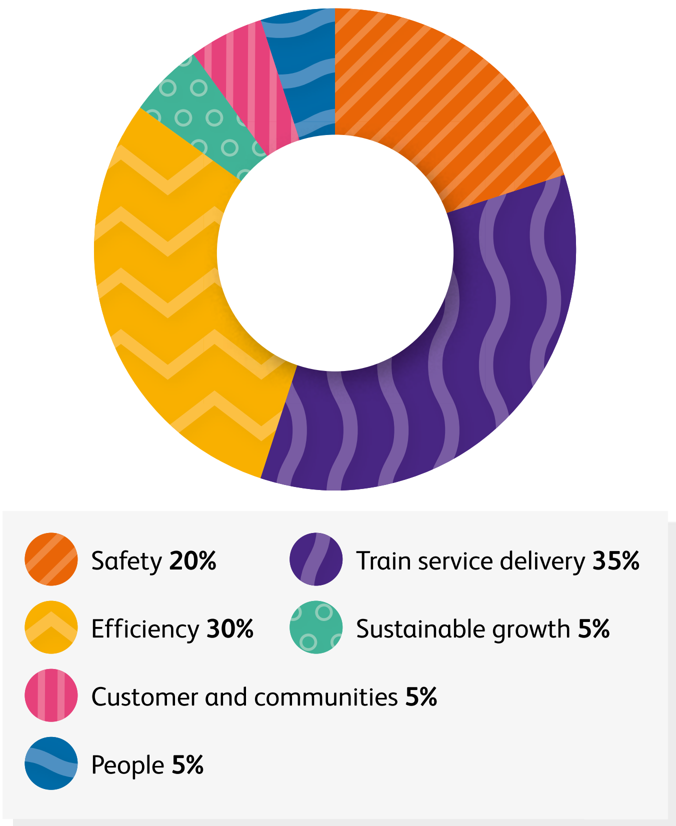
The PRP arrangements for executive directors and other employees are aligned to business performance and based on the national scorecard outturn. The national scorecard has been designed to ensure our customers and passengers are at the heart of how we operate.

National Scorecard for 2022/23

The scorecard has been aligned to our six strategic priorities. There are twelve measures, carefully weighted to incentivise and reward success, whilst giving an appropriate weighting to important areas such as train service delivery and safety.

Regional scorecards include measures which match each region's responsibilities along with universal measures such as safety and financial performance.

The scorecard weightings and targets are shown in the table on the next page:

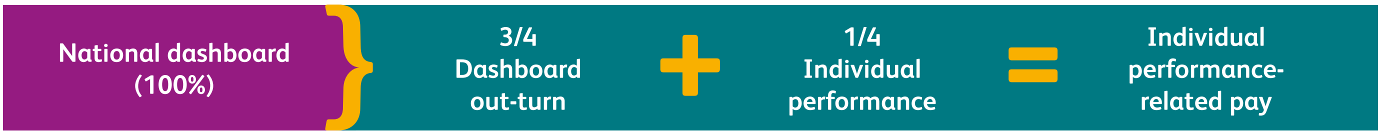


Strategic themes	Measure	Weighting	Target
Safety	**Passenger Safety (Train Accident Risk Reduction) (TARR)** Measures achievement of the key milestones and metrics to reduce train accident risk. TARR is made up of milestone targets and volume targets, both of which have different achievement weightings.	10.0 %	95.0 %
	Workforce Fatalities and Weighted injuries (FWI) An index representing workforce safety, using fatalities and non-fatal injuries per hour worked. A lower FWI represents better performance.	5.0 %	0.054
	Personal Accountability for Safety (PAFS) A measure of how much we are improving our culture and behaviours to help keep ourselves and our colleagues safe. The measure assesses the combined reduction in (i) Breaches in Life Saving Rules, and (ii) High Potential events.	5.0 %	820
Train service delivery	**On time** The percentage of Recorded Station Stops called at on time (early or <1min late).	12.5 %	73.1 %
	Passenger satisfaction Reported as a mean score of passenger journey satisfaction on a scale of 1-10 (1 poor – 10 excellent).	15.0 %	7.94 %
	Freight cancellations The number of Network Rail and Other Operator- caused cancellations, as a percentage of freight trains run.	7.5 %	1.17 %
Efficiency	**Financial performance measure (FPM)** An assessment of how Network Rail has performed compared to the financial targets set out in the CP6 Business Plan. The measure is an aggregation of the three individual FPM measures from prior years (P&L, Renewals and Enhancements).	15.0 %	£0m
	Enhancement Milestones and Accelerations An index measure consisting of (i) the per cent of milestones completed ahead of time or on time, (ii) cost saved through application of SPEED principles, and time saved through application of SPEED principles.	10.0 %	100.0 %
	Effective Volumes A measure of how much additional life our renewals activities add to our assets, which provides a medium-term view of sustainability. Calculated as a weighted aggregation of renewals volumes, where the weighting distinguishes between activity types and their different impacts on asset life.	5.0 %	100 %
Sustainable Growth	**Environmental Sustainability Index** An index representing performance against four key environmental measures: (i) % of waste recycled, (ii) % of waste diverted from landfill, (iii) % reduction in carbon emission, and (iv) % reduction in non-traction energy usage.	5.0 %	100 %
Customer and communities	**Complaints Handling** An index calculated from (i) the number of complaints, (ii) the average age of open service requests, (iii) quality assurance score for complaints handling, and post contact customer survey score.	5.0 %	100 %
People	**Employee engagement** An index representing the proportion of employees surveyed who responded favourably to key questions on engagement.	5.0 %	56.5 %

Local scorecards are still used to manage business performance at a local level, but they are not directly linked to PRP. In addition, no payment will be made in respect of any performance measure which does not exceed the minimum level of performance (worse than target threshold).

Any evidence of under reporting against safety would result in the outcome of the safety measures being reviewed and reducing performance accordingly, including potentially to zero.

For executive directors and employees aligned to the national scorecard, the figure below demonstrates how individual PRP is calculated:



EXECUTIVE DIRECTOR'S REMUNERATION POLICY

Background

Network Rail performs an essential role in managing and enhancing Great Britain's rail infrastructure to drive economic growth for passengers and freight. As a Department for Transport (DfT) delivery body, we manage resources at similar levels to FTSE 100 companies so it is essential that we can attract and retain the right calibre of senior executives to deliver the Government's economic and transport priorities. It is also recognised that senior appointments must be mindful of public sector pay constraints and the importance of delivering value for taxpayers and passengers.

The remuneration policy (Policy) has been agreed by the Network Rail nominations and remuneration committee (the committee) in accordance with The Companies (Directors' Remuneration Policy and Directors' Remuneration Report) Regulations 2019. The policy will be effective following the date of the 2023 Annual General Meeting (AGM), subject to approval from the Secretary of State for Transport (SoS).

This approach reflects Network Rail's status as an arm's length body (ALB) delivering for passengers and freight users whilst being mindful of managing public money.

The policy is based on a set of pay principles, developed by the committee working closely with the DfT. The principles set out the framework within which remuneration policies and decisions are made for senior executive remuneration. They apply to all new appointments and over time may be applied to existing executives' remuneration packages. It is important that decisions about remuneration are not separated from organisational plans and priorities. Exceptions to these principles must be agreed by the committee and where required, approval would need to be sought from ministers.

It is important to note that Great British Railways is planned to come in to place during the term of this policy. This policy will continue to apply for the full term, or until such time as a separate Great British Railway's executive director's remuneration policy is created and approved.

The framework flowing from the principles applies to all senior roles, not just executive directors.

Senior Executive Remuneration principles – Agreed January 2019

Remuneration Benchmarks

Total remuneration benchmarking should use comparator groups and benchmark data sources agreed by CSEP.	Remuneration will normally be offered in lower quartile against the total remuneration benchmarks a starting point for all posts.	Clear rationale provided for any packages above lower quartile.	Annual pay awards should be value for money and be mindful of public sector pay constraints.

Appointments above £150k should be based on evidenced business cases that reflect: business needs; scarcity of skills; difficulty in recruitment and retention, market comparators and alignment to workforce plan.

Performance related pay / Pay at Risk

For most roles, performance related pay should be included.

The weighting should take account of the nature of the role, impact of the role and exposure to risk.

Remco (or the Board) should be accountable for PRP approaches and processes.

PRP / Pay at Risk policies and processes should:
- Be linked to organisational objectives and KPI's
- Encourage positive behaviours in accordance with ALB values
- Balance individual and organisational performance

The number of senior executive posts (£150k+)

All relevant remuneration must be disclosed in public sector transparency data.

Any constraint on numbers of senior posts (Captured by Transparency reporting) should be linked to delivery plans, organisation's size, complexity and risk profile. These will be agreed with HMG.

Where practical to meet business needs, posts should be based outside central London to provide access to wider labour markets.

Remuneration Committee

Chair / Remco are directly accountable to Ministers for explaining how these principles are being applied.

Remco / Board holds overall responsibility for ensuring an effective remuneration strategy is in place for the ALB, to be applied consistently, fairly and responsibly, with the long-term interests of the organisation and its shareholders in mind.

DfT shareholder Observer on each Remco.

The Remco (or the Board) are responsible for assuring the linkage between workforce plans, pay strategies and delivery plans for staff at all levels.

Remco should be responsible for ensuring appropriate remuneration arrangements to enable the attraction and retention of the right executive capability, and its sustainability (succession).

Other rewards benefits

Benefits should be flexible and aligned with budgets agreed with HMG and be in line with either contractual obligations or public sector norms (e.g., no company cars, except for operational needs or private healthcare). Cash shouldn't offered as an alternative to pension.

“Loss of office payments must be consistent with contractual obligations or in lline with public sector limits unless explicitly agreed with HMG in exceptional circumstances, following an evidenced business case.

Summary of remuneration package for executive directors

The remuneration package for executive directors has three components – base pay, pension and performance related pay. PRP is based on performance within the financial year (April to March). Existing incumbents will continue with their current arrangements.

Component and purpose/ link to strategy	Operation	Quantum
Base salary To provide an element of fixed remuneration which reflects the skills, knowledge and experience of the individual, allowing the company to recruit the calibre of individual needed to lead the business.	Salaries of executive directors are determined by the nominations and remuneration committee, and is subject to the agreement of the SoS and Chief Secretary to the Treasury. Salaries are set at a level which reflects the skills, knowledge and experience of the individual, as well as the scope and responsibilities of the role. In considering the above, the committee takes into account the levels of remuneration in the market based on lower quartiles on information for similar roles in comparable organisations. Salaries are reviewed annually, and any changes are normally effective from 1 July, and would not normally be a higher percentage than that paid to management grades. The current FTE salaries for the executive directors are: Andrew Haines £588,000 Jeremy Westlake £371,316	The approach to determining remuneration will normally be based on the lower quartile against the total remuneration. Annual pay awards should be value for money for taxpayers and passengers and be mindful of public sector pay constraints. Increases above this level may be made by the committee in circumstances where it considers it appropriate, such as to reflect: • an increase in the scope and responsibilities of the role • a change in role. If recruitment is needed to replace an executive director role, the package will be reviewed by the remuneration committee to ensure the right balance between the fixed elements of the package (base pay) and the variable elements (performance related pay).
Pension To provide a retirement benefit in line with senior managers and other employees at Network Rail.	Executive directors are eligible to participate in one of the Network Rail pension schemes, on the same basis as other employees. Benefits in the pension schemes are limited to a cap on pensionable earnings (£181,800 for 2022/23), subject to annual review from the Department for Work and Pensions.	The defined benefit schemes have an accrual rate of 1/60th of pensionable earnings. The maximum employer contribution under the defined contribution scheme is seven per cent of pensionable earnings. After five years' service employees can opt to join the Railway pension scheme (RPS65). Executive directors appointed since 1 Feb 2019 are not entitled to any form of alternative benefit/cash supplement if they choose to opt out of the pension scheme due to lifetime allowance or any other reasons.

Component and purpose/ link to strategy	Operation	Quantum
Performance related pay Performance related pay is based on the achievement of stretching annual performance targets in areas which we, our customers and stakeholders care about most. Cascading the performance framework throughout the organisation creates aligned objectives and shared successes.	Performance related pay provides an opportunity to reward performance and meets the needs of the passengers and freight businesses. Following the end of the financial year, the committee will assess performance against stretching performance targets set at the start of the year. The committee also has overriding discretion to make adjustments to reflect its assessment of the overall business performance in the year, safety and the wider economy The overall structure is in line with the pay principles.	The executive director's performance related pay eligibility will be in line with the existing scheme which is approved by both the SoS and Chief Secretary of the Treasury, and details of the current scheme are available via the company intranet site As noted earlier, at the time of recruitment to replace an executive director role, the balance between the fixed element of the package (Base salary) and variable element (performance related pay) will be reviewed by the committee. The intention is for the expected value of the total package would not increase.

Approach to recruitment remuneration

New executive directors would be appointed on to the remuneration package described in the above policy table. The approach which the committee would take to each of the components is as follows:

- salary would be set based on the lower quartile of the total remuneration using comparator groups and benchmark data sources agreed by the Civil Service employment policy team.
- participation in the Network Rail pension schemes would be in line with all employees. No cash supplements will be issued in lieu of pension.
- eligibility to participate in the performance related pay scheme, in line with the policy table. Participation in the year of appointment would normally be on a pro-rata basis to reflect the period worked in the relevant scheme year. Any pro rata participation would be qualified by an assessment of the realistic impact a new joiner could make in the year of appointment. There are no deferral payments under this performance related payment scheme. For new executive directors, they must be employed on or before 30 September of that performance year to qualify for a payment in that scheme year.

Any travel or relocation payments are only to be provided in exceptional circumstances where there is a strong business case and is in line with existing Network Rail policies. Any request outside of policy will require DfT/HMT approval.

Performance related pay – performance framework and target setting

Overall framework

For executive directors, performance related pay will be based on the national dashboard, which is designed to bring together the priorities of our customers, passenger satisfaction, our financial performance, efficiency and our continued prioritisation of safety. The committee believes this is the most appropriate way to reward performance in the range of areas mentioned above which are most important to Network Rail's customers and other stakeholders.

The current dashboard measures are detailed in the annual remuneration report.

The targets for each measure are agreed by the committee at the start of each year. For each measure, a target range applies, under which between 0 per cent and 100 per cent of the maximum pay out is based on actual performance against the target range. The target ranges are designed to be stretching and to only deliver a pay out where performance is above expectations, with maximum pay out requiring exceptional performance.

Overall business performance

In addition, the committee has an overriding discretion to make adjustments to reflect its assessment of overall business performance in the year, including safety, passenger satisfaction, financial performance and the wider state of the economy. Their review considers a range of factors including a report from the safety, health and environment (SHE) committee.

For the avoidance of doubt, in the event of a serious safety incident during the year which impacts passengers, workforce, or the public, for which Network Rail was responsible, no performance related pay would normally be payable to any executive director in that year.

Service agreements

Executive directors have service agreements which can be terminated by the company or the director by giving six months notice. This applies to all current executive directors and would normally be applied as the policy for future appointments.

For the full-service agreement please contact the company secretariat via **cosec@networkrail.co.uk**

Name	Effective date of agreement	Notice period (from executive director and from company)
Andrew Haines	3 September 2018	6 months
Jeremy Westlake	24 February 2016	6 months

Policy on loss of office

Where an executive director leaves employment, the committees' approach is to minimise the cost to Network Rail and to ensure that any performance related payments offered appropriately reflect performance.

There would be no entitlement to any payment in lieu of notice (PILON).

An executive director is only entitled to any performance related payment for the current scheme year if they are in Network Rail's employment on 30 June of that scheme year. The exception to this is if the executive director leaves employment for one of the following reasons and will be classed as a 'good' leaver;

- ill health severance
- death in service
- redundancy
- any other reason at the discretion of the committee and agreement from the Secretary of State (including a participant leaving by mutual agreement).

In all these circumstances, the executive director would be entitled to a pro rata payment based on the number of calendar days employed in that scheme year. If there is no performance rating, a 'good' rating will be applied for payment calculations. This also applies should an executive director have died in service.

Illustration of remuneration policy

The reporting regulations require the inclusion of charts which illustrate the application of the remuneration policy set out in the policy table for executive directors, by showing the potential value of the annual remuneration package under three scenarios.

The assumption used in the charts below are:

Chief executive

- 'Minimum' shows fixed pay only (base salary effective as at 1 July 2022 and the annualised disclosed pension/benefits for 2022)
- 'Above expectations' includes fixed pay and 50 per cent of the maximum pay out under the performance related pay scheme (i.e., 4.5 per cent of salary)
- 'Maximum' includes fixed pay and maximum pay out under the performance related pay scheme (i.e., 9 per cent of salary).

Chief executive estimate
(Andrew Haines)

Scheme year	Amount	Payment date
2019/20	£22,623 voluntarily declined	2020
2020/21	PRP voluntarily declined	2021
2021/22	PRP voluntarily declined	2022
2022/23	PRP voluntarily declined	2023

Chief finance officer

- 'Minimum' shows fixed pay only (base salary effective as at 1 July 2022 and the annualised disclosed pension/benefits for 2022)
- 'Above expectations' includes fixed pay and 50 per cent of the maximum pay out under the performance related pay scheme (i.e., 10 per cent of salary)
- 'Maximum' includes fixed pay and maximum pay out under the performance related pay scheme (i.e., 20 per cent of salary).

Chief financial officer estimate
(Jeremy Westlake)

Scheme year	Amount	Payment date
2019/20	£31,748 voluntarily declined	2020
2020/21	PRP voluntarily declined	2021
2021/22	PRP voluntarily declined	2022
2022/23	£18,777	2023

Performance related pay is based on performance measures that are aligned to what is important to our customers:

- Safety **20%**
- Train service delivery **35%**
- Efficiency **30%**
- Sustainable growth **5%**
- Customer and communities **5%**
- People **5%**

The new overall national scorecard is used to measure performance every period and is used for performance related pay measures and targets.

Poor financial performance will result in reduced performance related pay and potentially no payment.

Network Rail also reserve the right to reduce or withhold payment in the event of a significant safety incident.

DIRECTORS' REPORT

The directors present their annual report and the audited accounts for the year ending 31 March 2023.

Disclosures regarding business performance and activities, future business developments and risk management are contained in the strategic report (pages 6 to 113) and corporate governance report (pages 114 to 170).

The company is limited by guarantee, having no share capital. There are no share disclosures in this report.

Directors

The directors who served during the year and held office at the date of signing the annual report and accounts are detailed on pages 114 to 117.

Directors' conflicts of interest

In accordance with company law and the company's articles of association, the directors have the power to authorise any matter which would or might otherwise constitute or give rise to a direct or indirect conflict of interest. However, the authority can only be exercised if a director has declared their actual or potential conflict of interest to the Board. The directors have a continuing obligation to update any changes to their conflicts of interest. Further details about directors' conflicts of interest can be found on page 127.

Branches

The company's subsidiary Network Rail International Limited has subsidiaries in Australia, Canada, the United Kingdom (UK) and the United States of America (USA). The UK subsidiary has an established branch in Saudi Arabia.

Contracts of significance

There were no contracts of significance existing during 2022/23 to which any Network Rail undertaking was a party and in which a director of the company is or was materially interested (as defined by Listing Rule LR 9.8.4R).

Political donations

It is Network Rail's policy not to make political donations or to incur political expenditure in the UK and the EU. No political donations were made, and no political expenditure was incurred during the year (2022/23: £nil).

Investment in research and development

Technology and innovation are fundamental to Network Rail's success in Control Period 6 and beyond. During the year the group charged £20m to the income statement (2021/22: £38m) on research and development.

Further information on the cost of research and development can be found in note 5 on page 197.

Engagement with our people, passengers and stakeholders

Further information can be found in the "How we engage with our stakeholders" section on pages 109 to 112. That section refers to our operating model; our strategic priorities; and sets out examples of the actions we have taken during the financial year to develop arrangements aimed at key priorities. Our stakeholder objectives and priorities have related to the following:

- building the views of our people into decision-making processes and encouraging their active involvement in the company's performance
- understanding railway users' priorities and providing the service they expect
- working with industry partners to operate a world-class railway
- making a positive contribution to local communities and the environment
- supporting UK governments and our supply chain partners to promote economic growth and develop a railway fit for the future.

Financial disclosures

Disclosures relating to:
- the group's use of financial instruments
- the company's financial risk management objectives and policies, including its policy for hedging each major type of forecasted transaction for which hedge accounting is used
- its exposure to price risk, credit risk, liquidity risk and cash flow risk.

can be found under note 23, pages 214 to 219.

Particulars of important events affecting the group since the financial year end and an indication of likely future developments can be found in the Chief Financial Officer's (CFO) statement, pages 28 to 32.

Directors' statement of responsibilities

The directors are responsible for preparing the annual report, the directors' remuneration report and the financial statements in accordance with applicable law and regulations.

Company law requires the directors to prepare financial statements for each financial year. In compliance with this legal obligation, the directors have prepared the group and company financial statements in accordance with International Financial Reporting Standards (IFRS). Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the group and the company, and of the profit or loss of the group for that period. In preparing these financial statements, the directors are required to:
- select suitable accounting policies and then apply them consistently
- make judgements and accounting estimates that are reasonable and prudent
- state whether applicable IFRS Standards have been followed, subject to any material departures disclosed and explained in the financial statements.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the company's transactions and which disclose, with reasonable accuracy, at any time the financial position of the company and the group. This enables them to ensure that the financial statements and the directors' remuneration report comply with the Companies Act 2006 and as regards the group financial statements, Article 4 of the IAS Regulation. They are also responsible for safeguarding the assets of the company and the group, and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Legislation in the UK governing the preparation and distribution of financial statements may differ from legislation in other jurisdictions.

The directors are responsible for the maintenance and integrity of the company's website.

The directors consider that the annual report and accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for its member to assess the company's performance, business model and strategy.

Each of the directors in office at the date of this report, whose names and functions are listed on pages 114 to 117 confirm that to the best of their knowledge:
- the financial statements, prepared in accordance with the applicable set of accounting standards, give a true and fair view of the assets, liabilities, financial position and profit of the group and the undertakings included in the consolidation taken as a whole
- the management report is incorporated into the strategic report and directors' report for the purposes of the Disclosure and Transparency Rules (DTR 4.1.8R). It includes a fair review of the development and performance of the business and the position of the group and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that the group faces.

Independent auditor

Resolutions for the re-appointment of the current independent auditor, the National Audit Office, which also acts for the Comptroller and Auditor General, and to authorise the Audit and Risk Committee (ARC) to determine the independent auditor's remuneration, will be proposed at the forthcoming Annual General Meeting. The notice of meeting is enclosed, together with explanatory notes, in a pack with this report.

Disclosure of information to the independent auditor

Each of the directors at the date of approval of this report confirmed that:
- so far as the director is aware, there is no relevant audit

information of which the company's independent auditor is unaware
- the director has taken all the steps that they ought to have taken as a director in order to make them aware of any relevant audit information and to establish that the company's independent auditor is aware of that information.

Going concern statement

The group's business activities, together with the factors likely to affect its future development, performance and position, and the group's principal risks and uncertainties are set out in the strategic report section, pages 6 to 112. The financial position of the group, its cash flows, liquidity position and borrowing facilities are described in the CFO's review, pages 28 to 32.

Note 23 to the accounts on pages 214 to 219 includes the group's objectives, policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments and hedging activities; and its exposure to credit, liquidity and foreign exchange risk. The viability statement on pages 105 to 108 sets out a longer-term assessment than this going concern statement.

The group has considerable financial resources, together with long-term contracts, with a number of customers and suppliers.

Business plans and financial models are used to project cash flows and monitor financial risks and liquidity positions, forecast funding requirements and other key financial ratios, including those relevant to our Network Licence. Analysis is undertaken to understand the resilience of the group and its business model to the potential impact of the group's principal risks, or a combination of those risks. This analysis takes account of the mitigating actions realistically to be taken to avoid or reduce the impact or occurrence of the underlying risks. In considering the likely effectiveness of such actions, the conclusions from the Board's regular monitoring and reviews of risk management and internal control systems, as described on pages 94 to 104, are disclosed in detail.

Consequently, the directors believe that the group is well placed to manage its business risks.

After making enquiries, the directors have a reasonable expectation that the company and the group have adequate resources to continue in operational existence for the foreseeable future.

For this reason and on the basis of the above, the directors consider it appropriate for the group to adopt the going concern basis in preparing the company's and the group's annual report and accounts.

Losses and special payments

Managing public money requires a statement showing losses and special payments by value and by type, to be shown where they exceed £300,000 in total and those that, individually, exceed £300,000. Losses may relate to cash and store losses, bookkeeping losses, losses arising from a failure to make adequate charge for the use of public property or services, fruitless payments and claims abandoned as well as frauds. Special payments may relate to extra-contractual, extra-statutory and ex-gratia payments and compensation.

Network Rail Limited had total losses and special payments in the current year amounting to £14m.

	2022-23		2021-22	
	Total number of cases	Total amount £000	Total number of cases	Total amount £000
Losses	37,143	13,483	27,051	12,801
Special Payments	11	425	3	137
Total	37,154	13,908	27,054	12,938

Individual losses and special payments in excess of £300,000 in 22/23 were as follows:
1. £378,578 is the estimated cost of replacement of stores lost within a Network Rail property that caught fire. The fire was not arson.
2. A £1.4million fine issued to Network Rail following an investigation by the Office of Rail and Road (ORR). The fine is for a health and safety breach.

Post balance sheet events

Except as disclosed above, there have not been any significant post balance sheet events, whether adjusting or non-adjusting.

S Beadles

SUSAN BEADLES

group general counsel and company secretary,
13 July 2023

FINANCIAL STATEMENTS

CONTENTS

INDEPENDENT AUDITOR'S REPORT

TO THE SOLE MEMBER OF NETWORK RAIL LIMITED AND THE HOUSES OF PARLIAMENT

Opinion on financial statements

I have audited the financial statements of Network Rail Limited and its Group for the year ended 31 March 2023 which comprise:
- Network Rail Limited and its Group's Balance Sheets as at 31 March 2023
- Network Rail Limited's Group Income Statement; Statement of Comprehensive Income; and Statement of Changes in Equity for the year then ended
- Network Rail Limited and its Group's Statement of Cash Flows for the year then ended
- the related notes including the significant accounting policies.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and the UK adopted International Accounting Standards. The parent company financial statements are prepared in accordance with the provisions of the Companies Act 2006.

In my opinion the financial statements:
- give a true and fair view of the state of Network Rail Limited's and its Group's affairs as at 31 March 2023 and of the loss for the year then ended
- have been properly prepared in accordance with UK adopted International Accounting Standard
- have been prepared in accordance with the requirements of the Companies Act 2006.

Opinion on regularity

In my opinion, in all material respects the income and expenditure recorded in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements conform to the authorities which govern them.

Basis of opinions

I conducted my audit in accordance with International Standards on Auditing (UK) (ISAs (UK)), applicable law and Practice Note 10 'Audit of Financial Statements and Regularity of Public Sector Bodies in the United Kingdom (2022)'. My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of my report.

Those standards require me and my staff to comply with the Financial Reporting Council's Revised Ethical Standard 2019. I am independent of Network Rail Limited and its Group in accordance with the ethical requirements that are relevant to my audit of the financial statements in the UK. My staff and I have fulfilled our other ethical responsibilities in accordance with these requirements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

The framework of authorities described in the table below has been considered in the context of my opinion on regularity.

Framework of Authorities	
Authorising legislation	Companies Act 2006
Operating requirements	Network Licence
HM Treasury and related authorities	Managing Public Money

Conclusions relating to going concern

In auditing the financial statements, I have concluded that Network Rail Limited and its Group's use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

My evaluation of the director's assessment of the entity's ability to continue to adopt the going concern basis of accounting included evaluation of management's assessment of:
- future cash requirements
- future income streams
- debt funding arrangements
- potential legislative changes
- the impact of ongoing work to implement the recommendations of the Plan for Rail.

The Plan for Rail was published on 20 May 2021 and makes recommendations for reform of the rail industry. These recommendations include the establishment of a new public sector body (Great British Railways) into which Network Rail will be absorbed. Legislation will be required to bring about these changes, however, this is yet to be brought before Parliament. I have reviewed the recommendations and made enquiries with Network Rail Limited; the Department for Transport; and the Office of Rail and Road. Decisions on how these proposals will be implemented and precisely how this will impact on Network Rail Limited are still to be taken.

Based on the work I have performed, I have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on Network Rail Limited and its group's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

In relation to the Group's reporting on how they have applied the UK Corporate Governance Code, I have nothing material to add or draw attention to in relation to the directors' statement in the financial statements about whether the director's considered it appropriate to adopt the going concern basis of accounting.

My responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report.

Overview of my audit approach

Key audit matters

Key audit matters are those matters that, in my professional judgment, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditor, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team.

These matters were addressed in the context of the audit of the financial statements as a whole, and in forming my opinion thereon. I do not provide a separate opinion on these matters.

This is not a complete list of all risks identified though the course of my audit but only those areas that had the greatest effect on my overall audit strategy, allocation of resources and direction of effort. I have not, for example, included information relating to the work I have performed around management override of control, disclosure of Directors' remuneration and the recognition of revenue and capital expenditure (other than for capital accruals). These are areas where I identified risk, but where my work has not identified any matters to report.

The key audit matters were discussed with the Audit and Risk Committee; its report on matters that it considered to be significant to the financial statements is set out on pages 136 to 141.

In this year's report, the only changes to key audit matters compared with the prior year is the inclusion of Capital Grants Deferred Income, which has been included as a key audit matter but is not considered to be a significant risk.

Property, plant and equipment – valuation of the rail network

Description of risk

The Group accounts for the rail network as a single asset carried in the Balance Sheet at its fair value. In the absence of an active market, fair value is estimated using the discounted cash flows associated with the asset.

As explained in Note 10 to the financial statements, the Group continues to use the Regulated Asset Base ('RAB') as the starting point for its discounted cash flow valuation of the rail network. This is on the basis that a private owner of the rail network asset would have its revenue requirement determined using the building block model of regulation, which includes both a link between revenue and the future amortisation of the RAB and a mechanism to offset the owner's cost of capital. Since fair value involves the determination of an exit price, management uses the hypothetical situation of a private sector buyer – rather than Network Rail's own situation – to guide its valuation assumptions.

Management applied two key adjustments to the RAB to reflect the network's fair value. As in previous years, an adjustment has been made to reflect performance against the current regulatory determination. This reflects the premium or discount that an investor would apply to reflect the deliverability of the current regulatory determination. For 2023, this adjustment was a premium of £150 million (2022: discount of £200 million). Management have calculated this adjustment based on their own performance forecasts for the remainder of the current Control Period (CP6). The risk this estimate of future performance poses to the valuation has decreased as the current regulatory determination ends on 31 March 2024, so most out- or under-performance has already crystallised.

For 2023 an additional adjustment to the valuation of the rail network has been made by management to reflect changes in economic conditions. An assumption underpinning the valuation is that the regulatory rate of return (Weighted Average Cost of Capital or WACC) set out in the CP6 Determination is equivalent to the market cost of capital available to a market participant. Management's analysis of market cost of capital indicated that this had moved by more than 200bps since the start of CP6. Management have adjusted the value of the RAB to reflect the higher cost of borrowing that a market participant would be exposed to. Applying this adjustment at the reporting date led to a £1.7 billion reduction in the valuation.

In evaluating the value of the RAB, I focussed my audit effort on the continuing validity of key valuation assumptions, the estimation of the Performance Adjustment, and the estimation of the WACC adjustment.

How the scope of my audit responded to the risk

Key observations

Evaluating underlying valuation assumptions

Having read the regulator's determination for CP6, I considered whether a market participant could reasonably expect their revenue requirement to be determined using the traditional regulatory funding model. I assessed management's judgement that a market participant would value the rail network asset by reference to the RAB as reasonable. I confirmed with the regulator that, in their view, the sale of all (or part) of the rail network could take place without a regulatory 'reopener' (a new regulatory determination with revised outputs and a revised assessment of efficient costs). Accordingly, I assessed as reasonable management's judgement that in valuing the rail network asset a market participant would make an adjustment to deliverability of the current regulatory determination (see below). I also reviewed the reasonableness of the other underpinning assumptions noted in Note 10.

I also considered the continuing impact of the Plan for Rail. Having reviewed management's position, I evaluated as reasonable its view that, whilst the White Paper indicates that government intends to maintain ownership of the rail network in the future, the use of RAB as the basis for the valuation included in the accounts remains appropriate. As part of my evaluation I considered, amongst other things, the use of the RAB as a basis for pricing the recent transfer of railway assets from Network Rail to the Welsh government.

Addressing measurement uncertainty
The company has measured the Performance Adjustment as the difference between its revised CP6 Delivery Plan, updated at 31 March 2023 to reflect its latest forecast, and the CP6 regulatory baseline.

I evaluated the appropriateness of the method of measurement, and the inherent assumptions, by assessing management's performance forecast against relevant metrics which might be considered by a buyer at the year-end. I evaluated management's assumptions by comparing forecasts against historic and emerging performance trends, as well as considering publicly available metrics (e.g., on train performance) and my wider understanding of the business.

I evaluated management's decision to apply a two per cent adjustment to the WACC by analysing movements on AAA-rated bonds since the start of CP6; reviewing management's calculation of the adjustment; and assessing the adequacy of the disclosures included in Note 10.

I also reviewed the adequacy of management's disclosures on significant judgments and assumptions.

In the course of completing this work, I did not identify any material misstatements

Defined Benefit Pensions Scheme – valuation of deficit

Description of risk
The Group is party to two defined benefit pension schemes, described in Note 24. These are funded schemes with significant assets under management.

Based on risk and value, I focussed my work primarily on the defined benefit Network Rail section of the Railway Pensions Scheme ('RPS'). The balances related to this section 97.2 per cent and 94.0 per cent of the group's total pension scheme assets and liabilities respectively, with the Group's Career Average Retained Earnings ('CARE') scheme making up the remainder. Both schemes are on a 60:40 shared cost basis between the Group and scheme members.

There is significant complexity, and estimation uncertainty, in the valuation of both the assets and liabilities contributing to the net scheme positions, as described in Note 24 to the financial statements. Scheme movements are presented in that note on an aggregated basis for the RPS and CARE schemes, inclusive of members' share, with the impact on the Balance Sheet being 60 per cent of this figure (the employer's share).

Scheme liabilities
As with all defined benefit pension schemes, an actuarial estimate of the liability reflecting amounts to be paid out to members of the RPS and CARE schemes in the future (£8,407 million and £541 million respectively as at 31 March 2023 including members' share) involves significant estimation in respect of key financial assumptions and other assumptions including demographic assumptions.

Scheme assets
In respect of RPS scheme assets, an accurate and timely valuation is needed of the various asset classes held in the pension fund administered by Railpen (formerly RPMI) on Network Rail's behalf (£8,350million as at 31 March 2023 including members' share).

I placed particular emphasis on assurance over unquoted equity instrument valuations, particularly in respect of timing risk. The standard practice of the scheme assets manager is to value investments using the most recent evidence available, and to adjust for subsequent cash flows where necessary. This leads to a risk of unrecognised fair value differences where the valuations are for a period before the year end (typically, the end of the previous quarter). I worked with Network Rail and the fund administrator to determine enhancements which would allow better account to be taken of year end market conditions.

How the scope of my audit responded to the risk

Key observations

Scheme liabilities

I contacted Network Rail's actuaries to obtain an up to date understanding of the methodology used to calculate the actuarial assumptions. I performed my initial assessment of the independence and expertise of these actuaries and engaged an actuarially qualified auditor's expert to examine the methodology used to value the obligations, including both financial assumptions and the roll-forward procedures used to update membership data. I note that actuarial assumptions were overall within reasonable ranges, and that changes in financial assumptions, particularly with respect to the discount rate have been the primary cause of the large in-year decrease for pension obligations.

My expert has concluded that the assumptions used with both the RPS and CARE scheme valuations are reasonable.

I also tested the input data used by the Scheme actuaries in the valuations, including cashflows arising from benefit payments and contributions.

Scheme assets

My work on scheme assets is informed by the results of the statutory audit of the RPS financial statements, which is independently performed by another firm based on a year-end of 31 December 2022, but my primary assurance comes from substantive procedures I perform directly to evaluate asset values at 31 March 2023. These included sample testing on distinct asset classes within the Funds in which the Group is invested:

- for quoted and actively traded assets, I independently agreed valuations to observable market prices
- for pooled investment assets, I agreed valuations to the investment manager valuation report and reviewed relevant observable active market data to evaluate its reliability, as well as considering potential indicators of impairment
- for directly held property investments, I have reviewed the independent third-party property valuations performed for the scheme asset manager and reviewed the valuation movements against those in similar property sectors to confirm that the movements are in line with the wider market.

I completed additional procedures over private equity and non-exchange-traded pooled investment vehicles (unquoted equities). These included an evaluation of the reliability of the fund manager's valuation through procedures including:

- a review of the most recent audited accounts
- work to understand the nature of the investment
- an informed consideration of impairment indicators.

These additional procedures also included, in respect of the timing risk described above, a review (including sample test) of 31 March 2023 asset valuations received post year-end to judge the effect of time lags in the valuation presented for audit, both in respect of known movements, and projections of likely movement in the minority of funds which had not received March valuations.

I have reviewed the appropriateness of continuing to apply the 60:40 shared cost mechanism in light of the December 2022 High Court ruling on cost sharing arrangements for the Railways Pension Scheme. I am satisfied that the ruling does not impact the current basis of accounting for the Scheme.

In the course of completing this work, I did not identify any material misstatements in the valuation of defined benefit obligations in the financial statements.

Accruals for capital work - valuation

Description of risk

The Group's accounting for its capital investment involves a level of estimation at the year-end about the value of work delivered but not yet paid for. This may differ from plan, for example because of unexpected under- or over-delivery by Network Rail's contractors. Both controllable factors (e.g., contractor project management, the potential for delivery optimism bias) and uncontrollable factors (e.g., ground conditions and weather) contribute to inherent estimation uncertainty. The Group addresses these risks through a post-Balance Sheet review exercise which includes the Regions and other delivery areas. These factors are part of the estimation uncertainty outlined by the Group under the comments concerning cost of work done in the 'Critical accounting judgements and key sources of uncertainty' section of Note 2.

Network Rail's capital accruals comprise the significant majority of the £884 million 'other accruals' in Note 16 of the financial statements (2022: £968 million). The estimate is built from the aggregation of estimates made by individual project teams, overseen by financial controllers and directors within the routes and delivery areas.

For the 2022-23 audit I have included accruals for capital work as part of a significant risk on the recognition of revenue and capital expenditure. I consider that the capital accruals aspect of this risk is a key audit matter due to the level of audit resource that is required to perform the testing responsive to this element of the risk.

How the scope of my audit responded to the risk

Key observations

I took a sample of capital accruals after management had applied adjustments to revise accruals estimates based on actual delivery. To address any latent risk of delivery optimism, I ensured my sample selection was sufficient to allow a robust evaluation of the potential effect on the accounts. I furthered my coverage by testing capital accruals at the level of projects, rather than task lines; and by using a risk-based stratified approach. This approach involved picking separate samples for accruals valued above and below the threshold used by management to guide whether they performed additional checks, since I expected this to have an effect on residual levels of valuation risk.

In the course of completing this work, I detected some misstatements caused mostly by clerical issues, and extrapolated the results, projecting a most likely error well below my performance materiality threshold. I did not identify any material misstatements.

Capital grant deferred income - valuation

Description of risk

The Group receives capital grants from the Department for Transport (DfT) and Transport Scotland (TS) in order to fund enhancements to the Railway Network during CP6. This funding arrangement is new for this control period, as previously such enhancements were funded through the regulatory determination. As a result of this mechanism a significant deferred income balance has been recognised where cash grants have been drawn down from DfT and TS to fund liabilities outstanding the end of CP5.

I obtained assurance over this balance through a combination of brought-forward assurance over the opening balance of deferred income from my prior-year audit, and testing of the movement in the balance during the year.

I undertook additional procedures to satisfy myself that it was appropriate to rely on the brought-forward assurance over the opening balance. To satisfy myself that the opening balance was materially fairly stated, I:

- analysed the Capital Grant Deferred Income balances to confirm whether, on an individual project level, capital grants have been accounted for within the financial statements correctly
- reviewed historical movements on the balance to understand when this balance first occurred and
- reviewed Network Rail's own analysis of the balance.

This has been considered a key audit matter as it has taken a considerable audit effort to obtain the assurance required.

How the scope of my audit responded to the risk

Key observations

In CP6, Network Rail draw down grant to meet their forecast cash requirements. Amounts drawn down are accounted for as deferred income until they are matched to capital expenditure, at which point the deferred income is released to income.

In 2019/20, at the start of CP6, Network Rail drew down grant which was used to pay liabilities brought forward from CP5. As the expenditure occurred in the previous year, the deferred income could not be matched to it and it has not yet been released to income. The value of deferred income is £515 million in the 2022/23 accounts (£150 million in 2018/19 at the end of CP5).

I challenged management's judgements in relation to this accounting policy. The judgements made by management, and the accounting treatment applied are consistent between capital grants and revenue grants. I am satisfied that it continues to be appropriate to recognise this deferred income relating to the change in working capital balances from the prior control period.

In the course of completing this work, I did not identify any material misstatements in the capital grants related deferred income in the financial statements.

Application of materiality

Materiality
I applied the concept of materiality in both planning and performing my audit, and in evaluating the effect of misstatements on my audit and on the financial statements. This approach recognises that financial statements are rarely absolutely correct, and that an audit is designed to provide reasonable, rather than absolute, assurance that the financial statements are free from material misstatement or irregularity. A matter is material if its omission or misstatement would, in the judgement of the auditor, reasonably influence the decisions of users of the financial statements.

Based on my professional judgement, I determined overall materiality for Network Rail Limited and its Group's financial statements as a whole as follows:

	Overall threshold	Additional threshold
Materiality	£802 million	£132 million
Basis for determining materiality	Approximately 1 per cent of the carrying value of Property, Plant and Equipment of £82,733 million (2021/22: £702 million, based on approximately 1 per cent of £75,890 million.	Approximately 1 per cent of total expenditure, calculated as gross expenditure less depreciation, plus capital additions (2021/22: £122 million, based on approximately 1 per cent).
Rationale for the benchmark applied	We have based materiality on the value of the rail network asset carried in the Balance Sheet as the maintenance and operation of that asset under the network licence issued by the Office of Rail and Road is the main function of the Network Rail Group and likely to be a key focus of users of the financial statements.	We assess that due to the funding of Network Rail's in-year expenditure by operating companies and the Westminster and Scottish governments, an additional threshold applying to all work not purely connected with the valuation of the network asset is appropriate, reflecting the decision-making sensitivity of users of the account and key stakeholders on financial statement elements related to the use of public funding.

Performance Materiality
I set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the financial statements as a whole. Group performance materiality was set at 75 % of Group materiality for the 2022/23 audit (2021/22: 75 %).

Other Materiality Considerations
Apart from matters that are material by value (quantitative materiality), there are certain matters that are material by their very nature and would influence the decisions of users if not corrected. Such an example is any errors reported in the Related Parties note in the financial statements. Assessment of such matters needs to have regard to the nature of the misstatement and the applicable legal and reporting framework, as well as the size of the misstatement.

I applied the same concept of materiality to my audit of regularity. In planning and performing audit work to support my opinion on regularity and in evaluating the impact of any irregular transactions, I considered both quantitative and qualitative aspects that would reasonably influence the decisions of users of the financial statements.

Error Reporting Threshold
I agreed with the Audit and Risk Committee that I would report to it all uncorrected misstatements identified through my audit in excess of £1 million, as well as differences below this threshold that in my view warranted reporting on qualitative grounds. I also report to the Audit Committee on disclosure matters that I identified when assessing the overall presentation of the financial statements

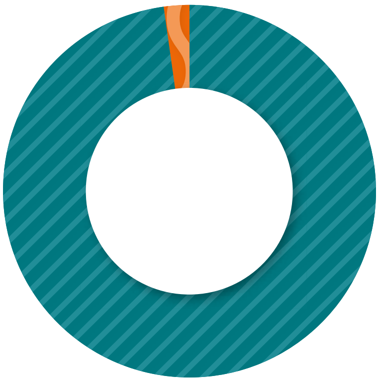
Total unadjusted audit differences reported to the Audit and Risk Committee would have decreased total comprehensive income and assets by £19.6 million.

Audit scope

The scope of my Group audit was determined by obtaining an understanding of the Group and its environment, including the Group wide controls, and assessing the risks of material misstatement at the Group level.

Network Rail Limited does not hold any assets or liabilities. All balances are consolidated into the group accounts from other components. Over 98 per cent of these balances are held by either Network Rail Infrastructure Limited (the main operating company) or Network Rail Infrastructure Finance Plc (which holds the legacy debt and derivative portfolio). I place reliance on my audits of those accounts to support my opinion on Network Rail Limited and confirm that the amounts included in the Network Rail Limited Group financial statements are reported correctly.

Gross assets of individual components of the Network Rail Limited group (as at 31 March 2023)



Significant components **98%**
Non-significant components **2%**

I have assessed the other components of the group as being non-significant. For these entities I required component auditors to provide a return confirming receipt of group instructions, adherence to ethical standards and, on an exception basis, to report any errors or issues that might be significant to the group position. I have not received any reports of significant errors or issues arising on component entity audits.

This work covered substantially all of the Group's assets and the loss for the year, and together with the procedures performed at Group level, gave me the evidence I needed for my opinion on the Group financial statements as a whole.

Other information

The other information comprises the information included in the Annual Report but does not include the financial statements and my auditor's report thereon. The directors are responsible for the other information.

My opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in my report, I do not express any form of assurance conclusion thereon.

My responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements, or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

If I identify such material inconsistencies or apparent material misstatements, I am required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact.

I have nothing to report in this regard.

Opinion on other matters prescribed by the Companies Act 2006

In my opinion the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006.

In my opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements
- the Strategic Report and the Directors' Report have been prepared in accordance with applicable legal requirements
- the information about internal control and risk management systems in relation to financial reporting processes, and about share capital structures, in compliance with rules 7.2.5 and 7.2.6 in the Disclosure Rules and Transparency Rules sourcebook made by Financial Conduct Authority (the FCA Rules), is consistent with the financial statements and has been prepared in accordance with applicable legal requirements
- the information about Network Rail Limited's corporate governance code and practices and about its administrative, management and supervisory bodies and their committees complies with rules 7.2.2, 7.2.3 and 7.2.7 of the FCA Rules.

Matters on which I report by exception

In the light of the knowledge and understanding of Network Rail Limited and its Group and its environment obtained in the course of the audit, I have not identified material misstatements:

- in the Strategic Report or the Directors' Report
- the information about internal control and risk management systems in relation to financial reporting processes and about share capital structures, given in compliance with rules 7.2.5 and 7.2.6 of the FCA rules.

I have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires me to report to you if, in my opinion:

- adequate accounting records have not been kept or returns adequate for my audit have not been received from branches not visited by my staff
- I have not received all of the information and explanations I require for my audit
- the financial statements and the parts of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns
- certain disclosures of director's remuneration specified by law are not made
- a corporate governance statement has not been prepared by the parent company.

Corporate governance statement

The Listing Rules require me to review the Directors' statement in relation to going concern, longer-term viability and that part of the Corporate Governance Statement relating to the Network Rail Limited and its Group's compliance with the provisions of the UK Corporate Governance Statement specified for my review.

Based on the work undertaken as part of my audit, I have concluded that each of the following elements of the Corporate Governance Statement is materially consistent with the financial statements, or my knowledge obtained during the audit:

- Directors' statement with regards the appropriateness of adopting the going concern basis of accounting and any material uncertainties identified set out on page 170

- Directors' explanation as to its assessment of the entity's prospects, the period this assessment covers and why the period is appropriate is set out in the Viability Statement on pages 105 to 108
- Directors' statement on fair, balanced and understandable set out on page169
- Board's confirmation that it has carried out a robust assessment of the emerging and principal risks set out on page 97
- the section of the annual report that describes the review of effectiveness of risk management and internal control systems set out on pages 140 to 141
- the section describing the work of the Audit & Risk Committee set out on pages 136 to 141.

Responsibilities of the Directors for the financial statements

As explained more fully in the Directors' Statement of Responsibilities, the directors are responsible for:
- maintaining adequate accounting records
- providing the C&AG with access to all information of which management is aware that is relevant to the preparation of the financial statements such as records, documentation and other matters
- providing the C&AG with additional information and explanations needed for his audit
- providing the C&AG with unrestricted access to persons within Network Rail Limited from whom the auditor determines it necessary to obtain audit evidence
- preparing Group financial statements, which give a true and fair view, in accordance with the Companies Act 2006
- ensuring such internal controls are in place as directors determine is necessary to enable the preparation of financial statement to be free from material misstatement, whether due to fraud or error
- preparing the Annual Report, which includes the Directors' Remuneration Report, in accordance with the Companies Act 2006
- assessing Network Rail and its Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the entity or the group or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

My responsibility is to audit and report on the financial statements in accordance with the applicable law and International Standards on Auditing (UK) (ISAs (UK).

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue a report that includes my opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

Extent to which the audit was considered capable of detecting non-compliance with laws and regulations including fraud

I design procedures in line with my responsibilities, outlined above, to detect material misstatements in respect of non-compliance with laws and regulations, including fraud. The extent to which my procedures are capable of detecting non-compliance with laws and regulations, including fraud is detailed below.

Identifying and assessing potential risks related to non-compliance with laws and regulations, including fraud

In identifying and assessing risks of material misstatement in respect of non-compliance with laws and regulations, including fraud, I:
- considered the nature of the sector, control environment and operational performance including the design of Network Rail Limited and its Group's accounting policies, key performance indicators and performance incentives
- inquired of management, Network Rail Limited's head of internal audit and those charged with governance, including obtaining and reviewing supporting documentation relating to Network Rail Limited and its Group's policies and procedures on:
  - identifying, evaluating and complying with laws and regulations
  - detecting and responding to the risks of fraud

  - the internal controls established to mitigate risks related to fraud or non-compliance with laws and regulations including Network Rail Limited and its Group's controls relating to Network Rail Limited's compliance with the Companies Act 2006, the Network Licence, and Managing Public Money
- inquired of management, Network Rail Limited's head of internal audit and those charged with governance whether:
  - they were aware of any instances of non-compliance with laws and regulations
  - they had knowledge of any actual, suspected, or alleged fraud
- discussed with the engagement team including significant component audit teams and the relevant internal and external specialists, including internal IT auditors and external pensions specialists regarding how and where fraud might occur in the financial statements and any potential indicators of fraud.

As a result of these procedures, I considered the opportunities and incentives that may exist within Network Rail Limited and its Group for fraud and identified the greatest potential for fraud in the following areas: revenue recognition, posting of unusual journals, complex transactions, bias in management estimates. In common with all audits under ISAs (UK), I am also required to perform specific procedures to respond to the risk of management override.

I obtained an understanding of Network Rail Limited and its Group's framework of authority and other legal and regulatory frameworks in which Network Rail Limited and its Group operate. I focused on those laws and regulations that had a direct effect on material amounts and disclosures in the financial statements or that had a fundamental effect on the operations of Network Rail Limited and its Group. The key laws and regulations I considered in this context included Companies Act 2006, Managing Public Money, employment law, pensions legislation, tax legislation, and health & safety law.

Audit response to identified risk

- To respond to the identified risks resulting from the above procedures: I reviewed the financial statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described above as having direct effect on the financial statements
- I enquired of management, the Audit and Risk Committee and in-house legal counsel concerning actual and potential litigation and claims
- I reviewed minutes of meetings of those charged with governance and the Board and internal audit reports
- in addressing the risk of fraud through management override of controls, I tested the appropriateness of journal entries and other adjustments; assessed whether the judgements made on estimates are indicative of a potential bias; and evaluated the business rationale of any significant transactions that are unusual or outside the normal course of business; and
- reviewing Office of Rail and Road notifications in case of any regulatory action.

I communicated relevant identified laws and regulations and potential risks of fraud to all engagement team members including internal specialists and significant component audit teams and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

A further description of my responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of my report.

Other auditor's responsibilities

I am required to obtain evidence sufficient to give reasonable assurance that the expenditure and income recorded in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements conform to the authorities which govern them.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control I identify during my audit.

SARAH CHE

Senior Statutory Auditor, 14 July 2023

For and on behalf of the Comptroller and Auditor General (Statutory Auditor)
National Audit Office
157-197 Buckingham Palace Road, Victoria
London, SW1W 9SP

INCOME STATEMENT

FOR THE YEAR ENDED 31 MARCH 2023

	Note	2023 Group £m	2022 Group £m
Revenue	3	**10,014**	**9,553**
Net operating costs	4	**(7,040)**	**(6,594)**
Operating profit	5	**2,974**	**2,959**
Property revaluation movements and profits on disposal		**(11)**	**51**
Profit from operations		**2,963**	**3,010**
Finance income		**3**	**1**
Other gains and losses	7	**92**	**157**
Finance costs	8	**(4,198)**	**(2,844)**
(Loss) / Profit before tax		**(1,140)**	**324**
Tax	9	**504**	**(925)**
Loss for the year attributable to the owner of the company		**(636)**	**(601)**

Under section 408 of the Companies Act 2006 the group has elected to take the exemption with regard to disclosing the company income statement. The company's result for the year was £nil (2022: £nil).

STATEMENT OF COMPREHENSIVE INCOME

FOR THE YEAR ENDED 31 MARCH 2023

	Note	2023 Group £m	2022 Group £m
Loss for the year		**(636)**	**(601)**
Other comprehensive (expense)/income:			
Items that will not be reclassified to profit or loss:			
Gain on revaluation of the railway network	10	4,803	1,844
Actuarial gain on defined benefit pension schemes	24	2,330	966
Deferred tax relating to components of other comprehensive income	20	(1,783)	(856)
Total items that will not be reclassified to profit or loss		**5,350**	**1,954**
Items that may be reclassified to profit or loss:			
Reclassification of balances in the hedging reserve to the income statement		83	95
Total items that may be reclassified to profit or loss		**83**	**95**
Other comprehensive income for the year		**5,433**	**2,049**
Total comprehensive income for the year		**4,797**	**1,448**

STATEMENT OF CHANGES IN EQUITY

FOR THE YEAR ENDED 31 MARCH 2023

Group	Revaluation reserve £m	Other reserves* £m	Hedging reserve £m	Retained earnings £m	Total equity £m
Balance at 31 March 2022	**2,432**	**249**	**(184)**	**7,858**	**10,355**
Loss for the year	-	-	-	(636)	(636)
Other comprehensive income					
Revaluation of the railway network	4,803	-	-	-	4,803
Transfer of deemed cost depreciation from revaluation reserve	(114)	-	-	114	-
Increase in deferred tax liability on the railway network	(1,201)	-	-	-	(1,201)
Actuarial gain on defined benefit pension schemes	-	-	-	2,330	2,330
Deferred tax on actuarial gain	-	-	-	(582)	(582)
Transfer between reserves – deferred tax	29	-	-	(29)	-
Reclassification of balances in hedging reserve to the income statement	-	-	83	-	83
Total comprehensive income	**3,517**	**-**	**83**	**1,197**	**4,797**
Balance at 31 March 2023	**5,949**	**249**	**(101)**	**9,055**	**15,152**
Balance at 31 March 2021	**1,074**	**249**	**(279)**	**7,863**	**8,907**
Loss for the year	-	-	-	(601)	(601)
Other comprehensive income					
Impact of change in tax rate	-	-	-	(153)	(153)
Revaluation of the railway network	1,844	-	-	-	1,844
Transfer of deemed cost depreciation from revaluation reserve	(33)	-	-	33	-
Increase in deferred tax liability on the railway network	(461)	-	-	-	(461)
Actuarial gain on defined benefit pension schemes	-	-	-	966	966
Deferred tax on actuarial gain	-	-	-	(242)	(242)
Transfer of deferred tax	8	-	-	(8)	-
Reclassification of balances in hedging reserve to the income statement	-	-	95	-	95
Total comprehensive income	**1,358**	**-**	**95**	**(5)**	**1,448**
Balance at 31 March 2022	**2,432**	**249**	**(184)**	**7,858**	**10,355**

* Other reserves of £249m (2022: £249m) include a £242m vesting reserve on privatisation.

There has been no movement in the current or prior year affecting the statement of changes in equity for the company.

BALANCE SHEETS

FOR THE YEAR ENDED 31 MARCH 2023

	Note	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
Assets					
Non-current assets					
Intangible assets		59	60	-	-
Right of use assets	22	408	424	-	-
Property, plant and equipment – the rail network	10	82,733	75,890	-	-
Investment property	11	231	212	-	-
Derivative financial instruments	18	72	9	-	-
Interest in joint ventures	12	28	27	-	-
		83,531	**76,622**	**-**	**-**
Current assets					
Assets held for sale	13	4	36	-	-
Inventories	14	349	299	-	-
Trade and other receivables	15	1,729	1,597	-	-
Current tax asset		50	-	-	-
Derivative financial instruments	18	21	4	-	-
Cash and cash equivalents		303	477	-	-
		2,456	**2,413**	**-**	**-**
Total assets		**85,987**	**79,035**	**-**	**-**
Liabilities					
Current liabilities					
Trade and other payables	16	(3,727)	(3,666)	-	-
Current tax liabilities		-	(1)	-	-
Borrowings	17	(4,037)	(2,801)	-	-
Derivative financial instruments	18	(49)	(55)	-	-
Provisions	19	(68)	(78)	-	-
		(7,881)	**(6,601)**	**-**	**-**
Net current liabilities		**(5,425)**	**(4,188)**	**-**	**-**
Non-current liabilities					
Borrowings	17	(55,463)	(53,982)	-	-
Derivative financial instruments	18	(182)	(206)	-	-
Other payables	16	(644)	(511)	-	-
Retirement benefit obligation	24	(215)	(2,259)	-	-
Deferred tax liabilities	20	(6,450)	(5,121)	-	-
		(62,954)	**(62,079)**	**-**	**-**
Total liabilities		**(70,835)**	**(68,680)**	**-**	**-**
Net assets		**15,152**	**10,355**	**-**	**-**
Equity					
Revaluation reserve		5,949	2,432	-	-
Other reserve		249	249	-	-
Hedging reserve		(101)	(184)	-	-
Retained earnings		9,055	7,858	-	-
Total shareholder's funds and equity attributable to equity holders of the parent company		**15,152**	**10,355**	**-**	**-**

The financial statements and accompanying disclosure notes on pages 183 to 224 were approved by the board of directors on 13 July 2023 and authorised for issue on 18 July 2023.

They were signed on its behalf by: **Andrew Haines** Chief executive — **Jeremy Westlake** Chief financial officer

Company registration number: 4402220

STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED 31 MARCH 2023

	Note	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
Cash flows from operating activities					
Cash generated from operations	21	5,417	5,278	-	-
Interest paid*		(1,176)	(1,232)	-	-
Income tax paid		(2)	-	-	-
Net cash flows generated from operating activities		**4,239**	**4,046**	**-**	**-**
Investing activities					
Interest received		3	1	-	-
Purchases of property, plant and equipment		(6,522)	(6,182)	-	-
Proceeds on disposal of property		29	82	-	-
Capital grants received		2,234	2,131	-	-
Net cash inflows from joint ventures		2	11	-	-
Net cash used in investing activities		**(4,254)**	**(3,957)**	**-**	**-**
Financing activities					
Repayments of borrowings		(2,790)	(8,060)	-	-
New loans raised		2,680	7,888	-	-
Decrease in collateral placed	17	114	114	-	-
Increase/(Decrease) in collateral received	17	2	(105)	-	-
Cash flow on settled derivatives		(25)	162	-	-
Repayment of lease liabilities	22	(140)	(133)	-	-
Net cash used in financing activities		**(159)**	**(134)**	**-**	**-**
Net decrease in cash and cash equivalents		**(174)**	**(45)**	**-**	**-**
Cash and cash equivalents at beginning of the year		477	522	-	-
Cash and cash equivalents at end of the year		**303**	**477**	**-**	**-**

* Balance includes the net interest on derivative financial instruments

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 MARCH 2023

1. General information

Network Rail Limited ('the company') is a company limited by guarantee which is incorporated and domiciled in Great Britain and registered in England and Wales under the Companies Act 2006. Network Rail Limited is an arm's length body of the Department for Transport.

The company registration number is 04402220.

The company's registered office is situated at Waterloo General Office, London, SE1 8SW, United Kingdom.

The company's and its subsidiaries' (together 'the group' or 'Network Rail') principal activities are detailed in the 'About us' section on pages 15 to 21.

Network Rail is organised as a single operating segment for financial reporting purposes.

The Secretary of State is the sole member of the Company.

2. Significant accounting policies

Basis of accounting

The financial statements of Network Rail Limited have been prepared in accordance with UK-adopted International Accounting Standards and with the requirements of the Companies Act 2006 as applicable to companies reporting under those standards.

The financial statements have been prepared on the historical cost basis, except for the revaluation of the rail network to a value determined using an income approach, the revaluation of investment properties, the measurement of certain financial assets and liabilities at fair value through profit and loss (FVTPL) and the measurement of derivative financial instruments at fair value.

The principal accounting policies adopted by the directors are set out below.

Functional and presentation currency

The financial statements are presented in Pound Sterling (£) which is the functional and presentation currency of Network Rail Limited. All values are rounded to the nearest million pounds (£m) unless otherwise stated.

Adoption of new and revised standards

The accounting policies adopted in this set of financial statements are consistent with those set out in the annual financial statements for the year to 31 March 2022.

The following accounting standard has not been early adopted by the company but will become effective in future years:

IFRS 17 Insurance Contracts

IFRS 17 issued in May 2018, establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts within the scope of the Standard. It introduces a new comprehensive model (general model) for the recognition and measurement of liabilities arising from insurance contracts. In addition, it includes a simplified approach and modifications to the general measurement model that can be applied in certain circumstances and to specific contracts such as reinsurance contracts, direct participating contract and investment contracts with discretionary participation features.

IFRS 17 Insurance Contracts is effective for years beginning on or after 1 January 2023 with restated comparatives. Management have entered into a process of assessing the impact on the financial statements of the Group. The assessment is not finalised and therefore the overall and financial impact is not yet known. More knowledge of the impact of implementing the standard on the Group will be known at the next financial reporting date.

Going concern

The group's business activities, together with the factors likely to affect its future development, performance and position are set out in the 'About us' section on pages 17 to 21, and 'Business unit summaries' on pages 33 to 76. The financial position of the group, its cash flows, liquidity position and borrowing facilities are described in the Chief Financial Officer's review on pages 28 to 32.

The directors took into account the publication of the Plan for Rail Review and its plans to reform the rail industry. This proposes that a new public body, Great British Railways, will integrate the railways, owning the infrastructure, collecting fare revenue, running, and planning the network, and setting most fares and timetables. It is planned that Network Rail will be absorbed into the public body to bring about single, unified, and accountable leadership for the national network. At this stage it is not likely that this reform will involve the winding up of Network Rail Limited but in any event Great British Railways will assume the existing functions of Network Rail Limited as well as have a wider range of powers and functions. The transformation programme is dependent on further activities including legislation and will take time to fully deliver.

The group has considerable financial resources together with long-term contracts with a number of customers and suppliers. Network Rail does not expect to undertake any new borrowing in the next 12 months. Instead, its activities will be largely funded by grants from the Department for Transport (DfT) and revenue from customers. Network Rail has secured a £32.3bn loan facility with the DfT, which it intends to draw upon to specifically refinance its existing debt. This facility remains within its parameters.

Network Rail has nine separate grant agreements in place with DfT and Transport Scotland (TS) to fund activities in the next 12 months. These grants are: - with DfT - Network Grant; Enhancements Grant; Great British Railways Transition Team Grant; British Transport Police Grant; Financing Costs Grant for DfT interest; Financing Costs Grant for external interest (bonds and swaps); and Corporation Tax Grant - with TS - Network Grant and Enhancements Grant.

Business plans and financial models are used to project cash flows and monitor financial risks and liquidity positions, forecast future funding requirements and other key financial ratios, including those relevant to our network licence. Analysis is undertaken to understand the resilience of the group and its business model to the potential impact of the group's principal risks, or a combination of those risks. This analysis takes account of the availability and effectiveness of the mitigating actions that could realistically be taken to avoid or reduce the impact or occurrence of the underlying risks. The board considers the likely effectiveness of such actions through regular monitoring and review of risk management and internal control systems. Further details are set out in the Viability Statement on pages 105 to 108. In addition, note 23 to the accounts includes the group's objectives, policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments; and its exposures to credit, liquidity and foreign exchange risk.

After making enquiries, including those detailed above, the directors have a reasonable expectation that the company and the group have adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt the going concern basis in preparing the annual report and accounts.

Basis of consolidation

Subsidiaries are all entities (including structured entities) over which the group has control. The group controls an entity when the group is exposed to, or has rights to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity / to direct the activities of the entity. Transactions with non-controlling interests that do not result in a loss of control are accounted for as equity transactions. In terms of subsidiaries, the group:

- consolidates subsidiaries from the date on which control passes to the group and deconsolidates from the date control ceases
- changes the accounting policies of subsidiaries, where necessary, to ensure consistency with the policies adopted by the group
- eliminates intercompany transactions and balances in the group results.

Revenue recognition

The group recognises revenue from the following major sources:

Revenue stream	Recognition
• Grant income	Recognised in line with costs incurred that the grant is provided to cover -See "Grants" accounting policy.
• Franchised network access • Freight revenue • Other income	Recognised as access is provided to run trains.
• Property rental income	Recognised in accordance with the provision of the property.

Franchised network access and Freight Revenue .
Network Rail earn income from providing access to Train Operating Companies (TOCs) and Freight Operating Companies (FOCs) to run trains on the network.

Performance obligations for the running of the trains are based upon fixed and variable volume access to the railway during the relevant year. Performance obligations are satisfied by providing track access over time as per agreement with the TOCs and FOCs. There are no significant judgments applied to determine whether performance obligations have been satisfied because it is readily apparent whether the train has run or not.

Revenue is measured based on consideration specified in a contract with the TOC or FOC. The amounts recognised take account of any performance penalties or bonuses in respect of the year. The performance penalties and bonuses are estimated in each four-week period based on that period's performance and reflect management's best estimate of the amounts due.

Property rental income
Fixed rental income from property leases is recognised on a straight-line basis over the term of the relevant lease. Contingent rent is recognised as earned.

Grants
Network Rail receives grant funding as a contribution towards both its revenue and capital expenditure.

Revenue Grants arise from the deeds of grant agreed at the start of each control period. They are received as a contribution towards Network Rail's running costs and are recognised across the control period to match the expenditure to which they relate. Grants can be drawn down flexibly to meet our working capital requirements. To the extent that they are drawn in advance of expenditure, to meet temporary working capital requirements, then they are deferred until that expenditure is incurred. The deferred income is then released to profit/loss as the related expenditure is incurred.

Network Rail funds its renewals programme through its net cash generated from operations, which is the net of cash received or spent on operations and includes revenue grants. The assets constructed under the renewals programme meet the definition of Property Plant and Equipment and are capitalised as additions in the year.

It is noted that determination of charges undertaken by the Office of Rail Regulation sets track access charges after taking into account government grants. Part of the determination of charges includes an allowance for the amortisation of the Regulatory Asset Base (RAB). This allows the funding of renewals of the railway network in a financially sustainable manner. Currently the value of RAB amortisation is equal to the renewals incurred in the year. The RAB is used to underpin the valuation of the railway. The valuation movement in the year is reflected in the revaluation reserve. The revaluation reserve is reduced by the difference between RAB amortisation (which our revenue covers as described above) and PPE depreciation reflected in our operating costs.

Capital Grants are received as contributions towards the cost of property, plant and equipment from DfT, TS and third parties. Network Rail draws down Capital Grants from DfT and TS based on historical costs incurred in order to meet future forecasts cash flows. Third Parties are invoiced for capital grants either in advance or arrears based on individual grant agreements. Capital Grants are recognised in the same period as the additions they are intended to fund and are deducted from the cost of those assets. Capital grants are then credited to the income statement over the economic useful life of the rail network as the related costs are recognised.

Leases
The group as lessor
The group assesses leases where it is lessor in order to determine whether the lease is an operating lease or a finance lease. This assessment is made where the group owns the asset being leased or the group itself is also leasing the asset and hence the lease being assessed is a sub-lease. The assessment considers whether the lease transfers substantially all of the risks and rewards incidental to ownership of the asset being leased. Where the lease is a sub-lease, this assessment is made by reference to the Right of Use asset the group has for the head-lease. If the lease transfers substantially all of the risks and rewards incidental to ownership, then the lease is classified as a finance lease. If it does not, then the lease is classified as an operating lease.

Rental income from operating leases and initial direct costs are recognised on a straight-line basis over the term of the relevant lease.

The group as lessee
For all leases other than those of less than 12 months or low value, the Right Of Use (ROU) asset and Lease liability are initially measured on a present value basis.

The present value of the following lease payments is used to determine the value of the lease liability:

- fixed payments less any lease incentive receivable
- variable lease payments that depend on an index or a rate
- amounts expected to be payable by the Group under residual value guarantees
- the exercise price of a purchase option if the Group is reasonably certain to exercise that option
- payments of penalties for terminating the lease, if the lease term reflects the Group exercising that option.

The lease liability is subsequently measured at amortised cost using the effective interest rate method. Remeasurement of the lease liability occurs if there is a change in the lease payments (when a corresponding adjustment is made to the ROU asset), the lease term or in the assessment of an option to purchase the underlying asset.

The discount rate used to discount the lease payments is the Group's incremental borrowing rate. This is the rate that the group would have to pay to borrow similar funds to fund a similar asset. ROU assets are initially measured at the same amount as the lease liability plus any initial direct costs.

Each ROU asset is depreciated over the shorter of its useful life and the lease term on a straight-line basis.

Payments associated with short-term leases and low value leases are recognised on a straight-line basis as an expense in profit or loss.

The company is responsible for infrastructure works from the supply chain, rather than the right to use specific assets. As a result of this, most supply chain assets are generally not 'identified' within the meaning of IFRS 16. As a result, the company does not generally retain the rights to direct the how and for what purpose specific assets are used.

Foreign currencies

Monetary assets and liabilities expressed in foreign currencies are translated into sterling at the exchange rates prevailing at the balance sheet date. Foreign currency transaction amounts are initially recorded at the exchange rates prevailing on the dates of the transactions. Gains and losses arising on retranslation are included in the income statement for the period and are classified as either operating or financing depending on the nature of the monetary item giving rise to them.

Borrowing costs

All borrowing costs are recognised in the income statement in the period in which they are incurred.

Operating profit

Operating profit is stated before finance income, finance costs, other gains and losses, and revaluation movements and profits on disposal of properties.

Retirement benefit costs

Payments to the defined contribution retirement benefit scheme are charged as an expense as they fall due.

For the defined benefit schemes, the cost of providing benefits is determined using the projected unit credit method, with full actuarial valuations being carried out at least every three years and updates to these valuations carried out in intervening years. The current service cost and plan administration expenses are recognised as an operating expense in the consolidated income statement.

The group's share of the actuarial gains and losses are recognised in full in the period in which they occur. They are recognised outside the income statement and presented in the statement of comprehensive income.

The net interest cost is the charge in the year on the net defined benefit liability. The charge reflects the passage of time and is recognised as a finance cost in the income statement.

Past service cost and credits are recognised immediately in the consolidated income statement.

The retirement benefit obligation recognised in the balance sheet represents the present value of the defined benefit obligation, as adjusted for unrecognised past service cost, and as reduced by the fair value of scheme assets. Any asset resulting from this calculation is limited to past service cost, plus the present value of available refunds and reductions in future contributions to the plan.

The group reflects its share of the deficit in the financial statements. The IAS 19 deficit, service cost and interest cost therefore represent 60 per cent of the total for each of the schemes. Further details on the retirement benefit schemes are provided in note 24.

Research and development

Research and general development expenditure is charged to the income statement as incurred. Expenditure on the development of specific projects is capitalised only if all of the following conditions are met:

- an asset is created that can be identified

- it is probable that the asset created will generate future economic benefits
- the development cost of the asset can be measured reliably.

Tax

The tax expense represents the sum of the current tax and deferred tax. The group's current tax liability is calculated using the tax rates that have been enacted or substantively enacted by the balance sheet date.

Current tax is based on the taxable results of the group and calculated in accordance with tax rules in the United Kingdom.

Deferred tax is the tax expected to be payable or recoverable on the temporary differences that arise when tax authorities recognise and measure assets and liabilities with rules that differ from those of the consolidated accounts. Deferred tax is calculated under the balance sheet liability method at the rate of tax expected to prevail, subject to the rate being enacted or substantively enacted by that date, when the temporary differences reverse. Deferred tax is not discounted.

Deferred tax liabilities are recognised for all taxable temporary differences. Deferred tax assets are recognised on all deductible temporary differences to the extent that it is probable that there will be taxable profits available against which the temporary timing differences can be utilised.

Deferred tax is charged or credited in the income statement except when it relates to items charged or credited directly to equity. In this case the deferred tax is also accounted for within equity.

Property, plant and equipment – the rail network

The group has one class of property, plant and equipment, being the rail network. This is the integrated network that the group uses to deliver the operation, maintenance and renewal of Great Britain's national rail infrastructure.

Valuation methodology

The rail network is carried in the balance sheet at its fair value. As there is no active market in railway infrastructure assets, the company has derived the fair value of the rail network using an income approach. The income approach assesses the discounted future cash flows that are expected to be generated by the rail network, including an assessment of under and out performance against the current five-year regulatory determination.

This valuation is carried out twice a year and revaluation gains and losses are reflected in other comprehensive income in the Revaluation Reserve.

Depreciation

The rail network is depreciated on a straight-line basis over its estimated weighted average remaining useful economic life. The estimated weighted average remaining useful economic life of the network is currently 40 years (2022: 40 years). The remaining useful economic lives of network assets are estimated annually, with external verification of the valuation and asset lives carried out where required.

Capitalisation of operating costs

In line with IAS 16 Property, plant and equipment all directly attributable costs necessary to deliver the investment programme are capitalised. Employee and other associated costs are capitalised if they arise directly as a result of delivering the investment programme.

Presentation of capital grants

Grants and other contributions received towards the cost of property, plant and equipment are deducted from the fair value of assets which the grant funding relates to. See Note 10 Property, plant and equipment – the rail network for detail of the gross and net values of capital grants included in the property, plant and equipment balance.

Investment property

Investment property, which is property held to earn rentals and/or for capital appreciation, is stated at its fair value at the balance sheet date. Gains and losses from changes in the fair value of investment property are included in the income statement for the period in which they arise.

Intangible assets

An intangible asset is only recognised if it is probable that future economic benefits will flow to the group and its costs can be measured reliably. Intangible assets are measured initially at purchase cost and are amortised on a straight-line basis. Cost includes the original purchase price of the asset and the costs attributable to bringing the asset to its working condition for its intended use. Licences and concessions are amortised over the length of their contractual agreement. Intangible assets are tested for impairment at each balance sheet date by comparing their carrying value and the expected discounted cash flows expected to arise from them over their contractual agreements. If the carrying value exceeds the discounted cash flows expected to arise from the assets, the carrying value would be impaired accordingly.

Assets held for sale
Non-current assets are classified as held for sale if it is highly probable that they will be recovered primarily through sale or distribution rather than through continuing use.

Immediately before classification as held for sale, the assets are re-measured in accordance with the accounting policies for the asset category. Subsequently, the assets are held at the lower of carrying value and fair value less costs to sell. Any impairment loss on a disposal group is recognised immediately in the income statement.

Inventories
Inventories are stated at the lower of cost and net realisable value. Cost comprises direct materials, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method.

Financial instruments
Financial assets and financial liabilities are recognised on the group's balance sheet when the group becomes party to the contractual provisions of the instrument.

Financial assets
Financial assets at amortised cost
Financial assets are classified as at amortised cost where the business model is to hold assets in order to collect contractual cash flows, and the cash flows consist solely of payments of principal and interest (SPPI) on the principal amount outstanding.

Trade receivables do not carry any interest and are stated at their nominal value as reduced by appropriate allowances for estimated irrecoverable amounts, recognised in the income statement.

Financial assets at Fair Value Through Profit and Loss (FVTPL)
Financial assets are classified as at FVTPL where the asset does not meet the amortised cost criteria or if doing so, eliminates or significantly reduces or eliminates a measurement or recognition inconsistency. Gains and losses arising from changes in fair value of these assets are recognised in the income statement.

Impairment of financial assets
Financial assets, other than those at FVTPL, are assessed for indicators of impairment at each balance sheet date. Financial assets at FVTPL are stated at fair value with any resultant gain or loss recognised in the income statement.

Financial assets are impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been reduced.

The carrying amount of the financial asset is reduced by the impairment loss for all financial assets with the exception of trade receivables, which are reduced by allowances for irrecoverable amounts. As financial assets, trade receivables are subject to the "Expected Credit Loss model" under IFRS 9. The group's exposure to credit risk is limited largely to property rental income, and no significant increase in credit risk has materialised. Therefore, the group has continued to recognise 12 month expected losses that are updated at each reporting date, in the form of allowances for irrecoverable amounts, which approximate the expected losses for the next 12-month period.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed through the income statement. The reversal is only made to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortised cost would have been had the impairment not been recognised.

Cash and cash equivalents
Cash and cash equivalents comprise bank balances held by the group and commercial paper at varying rates. The carrying amount of these assets approximates their fair value.

Joint ventures
The results and net assets of joint ventures are incorporated in these financial statements using the equity method of accounting. Investments in joint ventures are carried in the balance sheet at cost and adjusted by post-acquisition changes in the group's share of net assets of joint ventures, less any impairment in the value of individual investments. Losses of a joint venture in excess of the group's interest in a joint venture are not recognised.

Financial liabilities
Financial liabilities are classified according to the substance of the contractual arrangements entered into.

Financial liabilities at Fair Value Through Profit and Loss (FVTPL)
Financial liabilities are classified as at FVTPL where the financial liability is a derivative financial liability or designated at FVTPL at initial recognition.

A financial liability is designated as FVTPL upon initial recognition if such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise exist.

The group derecognises financial liabilities when, and only when, the group's obligations are discharged, cancelled or expire.

Debt

Debt instruments not designated at FVTPL are initially measured at fair value, net of discount and direct issue costs, and subsequently recognised at amortised cost using straight line amortisation as a proxy for the IFRS 9 effective interest rate method. Finance charges, including premiums payable on settlement or redemption and direct issue costs, are accounted for on an accrual basis to the income statement using the effective interest rate method, and are added to the carrying value of the debt instrument to the extent that they are not settled in the period in which they arise.

Certain bonds, as set out in Note 17, are designated at FVTPL. These bonds are hedged by derivative financial instruments as part of a documented risk management strategy. By recognising these bonds and derivatives at FVTPL the recognition inconsistencies that would otherwise exist with regard to these risk management strategies are significantly reduced.

Trade payables

Trade payables are ordinarily not interest bearing and are stated at amortised cost.

Derivative financial instruments and hedge accounting

The group's activities expose it primarily to the financial risks of changes in interest rates and foreign currency exchange rates. The group has previously issued interest rate swaps, cross-currency swaps and foreign exchange forward contracts to hedge these exposures. The use of financial derivatives is governed by the group's policies approved by the treasury committee of the board, which provide written principles on the use of financial derivatives.

All the hedged events have now occurred and there will be no new hedging programme.

Derivatives are initially recognised at fair value at the date a derivative contract is entered into and are subsequently remeasured to their fair value at each balance sheet date. Derivatives are presented on the balance sheet in line with their maturity date.

The group designates certain derivatives as hedging instruments - either cash flow hedges or fair value hedges. At the inception of the hedge relationship, the entity documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the group documents whether the hedging instrument that is used in a hedging relationship is highly effective in offsetting changes in fair value or cash flows of the hedged item.

Some derivatives, while complying with the group's financial risk management policies, do not qualify for hedge accounting and are therefore classified as financial instruments at FVTPL. Changes in the fair value of derivative financial instruments that do not qualify for cash flow hedge accounting are recognised in the income statement as they arise.

Cash flow hedge accounting is discontinued when the hedging instrument expires, is sold, terminated, exercised or no longer meets the criteria for hedge accounting. The latter case occurs most often in practice, principally when the hedged event has occurred, terminating the economic relationship between the derivative and the hedged item. In such cases the cumulative gain or loss on the hedging instrument that remains in equity from the period where the hedge was effective (i.e., the hedging reserve balance) is amortised from to profit and loss in line with the periods in which the hedged cash flows – predominantly finance costs in respect of hedged debt issuances – affect profit and loss. The amortisation is included in finance costs. In cases where the forecast transaction is no longer expected to occur, or an irrecoverable loss is assessed to have occurred, the hedging reserve balance is immediately recognised in the income statement. Cumulative losses in the hedging reserve following the passage of a hedged event, such as hedging the rate at which debt is issued using interest rate swaps, are offset by a favourable financial effect from correspondingly lower cash flows arising on interest from the issued debt.

Embedded derivatives within a financial asset host contract are not separated from the host contract, instead, the whole contract in its entirety is accounted for as a single financial instrument.

Embedded derivatives within a host contract that is a financial liability are separated from the host contract and accounted for as a derivative financial instrument when economic characteristics of the embedded derivative and host are not closely related, an identical instrument (with the same terms) would meet the definition of a derivative, and the entire contract is not measured at fair value through profit or loss. Gains or losses from the movement in fair value of the financial instrument are reported in the income statement. There are no separated embedded derivatives included in the financial statements.

Note 18 sets out details of the fair values of the derivative instruments used for hedging purposes. Movements in the hedging reserve in equity are detailed in the statement of changes in equity and in the statement of comprehensive income.

Provisions
Provisions are recognised when the group has a present obligation as a result of a past event, and it is probable that the group will be required to settle that obligation. Provisions are measured at the directors' best estimate of the expenditure required to settle the obligation at the balance sheet date, and are discounted to present value where the effect is material.

Critical accounting judgements and key sources of uncertainty
(i) Property, plant and equipment – the rail network: the estimate of the fair value of the rail network is based on an income approach using the regulatory asset base, which equates to the discounted future cash flows associated with the network, adjusted for the net present value of any variances from the Office of Rail and Road's determination using the building block model of regulation. Management have assessed the valuation methodology considering the ORR's Final Determination and have concluded that it remains appropriate. The 2 key judgements are CPI and WACC which combined have driven the revaluation of £4.8bn. These are discussed further in note 10.

The most significant judgement underpinning the valuation is that the regulatory framework and associated cash flows remain sufficiently stable and robust to form the basis of a third-party valuation. Management assess that based on the current regulatory environment, an investor could reasonably expect to recover the RAB value through the revenue deriving from future amortisation allowances and the regulatory return thereon. In its assessment management has considered the amendments to the regulatory framework that are set out in the regulator's determination for Control Period 6 (2019-2024), and noted that although the regulated asset base has ceased to be a building block in the determination of the company's revenue requirement, the link between income and the regulated asset base would be reinstated in the event that the rail network asset were transferred to a private owner.

In addition, recent disposals from the railway network have been in line with the carrying value. This emphasises that the valuation approach undertaken in these accounts remains appropriate.

Management have deducted the portfolio of assets held for sale from the RAB in arriving at the fair value of the rail network. Further detail on this and other key judgements applied in the valuation are set out in Note 10.

The key source of estimation uncertainty within the valuation is the assessment of future performance against the regulatory determination which is discussed in more detail in Note 10. The assessment covers the remaining years of the current control period and so the number of years being considered naturally reduces during the control period.

Whilst not affecting the fair value of the asset recognised at the balance sheet date, management's assessment of the remaining life of the asset affects the depreciation that is charged on the asset and is also an area of estimation uncertainty. IAS 16 requires that management regularly review asset lives on at least an annual basis and that depreciation is charged on a systematic basis that reflects the way the asset is consumed. Network Rail produce a depreciated replacement cost (DRC) valuation of the rail network for inclusion in DfT's group accounts. In preparing these financial statements management reviewed the weighted average remaining asset lives as produced in the DRC valuation and concluded that it is still appropriate to use 40 years as the weighted average remaining life.

Cost of Work Done (COWD): The additions to property, plant and equipment are valued using an estimate of the cost of work done in the year to 31 March. To the extent that the COWD is greater than the invoiced amount, a PPE addition and 'other payable' (Note 16) are recognised on the basis of expected amounts required to settle contractual obligations. COWD assessments are predominantly based on information readily available to project managers on the status of works, but some estimation uncertainty is involved in the year-end measurement, in respect of the evaluation of how contractual dispute positions are likely to resolve, and in measuring the value of works performed at the precise year end date.

(ii) Investment property – an element of the investment property portfolio valuation is determined using the Beacon method. Jones Lang LaSalle provided their assessment of yields for 17 classes of property and areas in the portfolio. These are then used to produce income multipliers and applied to the rental streams from each of the individual properties in the portfolio to form an overall valuation. For investment property transferred to assets held for sale this is also the inherited method of valuation. Further details are set out in Note 11.

(iii) Retirement benefit obligations – the group recognises and discloses its retirement benefit obligation in accordance with the measurement and presentational requirement of IAS 19 (Revised) 'Employee Benefits'. The calculations include a number of judgements and estimations in respect of the expected rate of return on assets, the discount rate, inflation assumptions, the rate of increase in salaries and life expectancy among others. Changes in these assumptions can have a significant effect on the value of the retirement benefit obligation. The key assumptions made are set out in Note 24. The total contribution rate payable under the Railway Pension Scheme (RPS) and the Career Average Revalued Earnings (CARE) scheme is normally split in the proportion 60:40 between the group and the members, respectively. The group reflects its share of the contribution in the financial statements.

(iv) Taxation – the group recognises and discloses its deferred tax assets in accordance with IAS 12. Where it is considered to be probable that deferred tax assets can be matched to future taxable profits then deferred tax assets are recognised, or offset against the overall deferred tax provision as appropriate. This evaluation requires significant judgements to be made, including the uncertainty of the availability of future taxable profits. Further details are set out in Note 9.

3. Revenue

	2023 Group £m	2022 Group £m
Grant income	7,515	6,513
Franchised network access	2,221	2,768
Freight revenue	11	53
Property rental income	219	177
Other income	48	42
Revenue	**10,014**	**9,553**

Qualitative disclosure

The effect of the performance regimes was a net loss of £609m (2022: net profit of £182m) which is included in the Franchised network access line in the above table. This led to an increase in revenue in the Grant Income line as additional grant was drawn down.

4. Net operating costs

	2023 Group £m	2022 Group £m
Employee costs (see note 6)	2,831	2,975
Own costs capitalised	(940)	(1,061)
Maintenance external charges	1,154	1,005
Energy charges	698	583
Business rates	269	261
Telecommunications and IT	204	180
Operational external charges	978	892
Other industry costs	149	136
Other operating income and recoveries	(402)	(326)
Net operating costs before depreciation and amortisation	**4,941**	**4,645**
Depreciation (see notes 10 and 22)	2,405	2,197
Amortisation of grants	(306)	(248)
Net operating costs	**7,040**	**6,594**

Other operating income and recoveries includes income earned by the group's trading subsidiaries and ancillary income.

5. Profit from operations

Total profit from operations is stated after charging/(crediting):

	2023 Group £m	2022 Group £m
Research and development costs expensed	20	38
Amortisation of intangible assets	1	1
Profit on sale of properties	-	(19)
Decrease/(Increase) in the fair value of investment properties	11	(32)
Cost of inventories recognised as an expense	162	169
Write down of inventories recognised as an expense	4	5

Amounts payable to auditors		
Fees payable to the company's auditors for the audit of the company and consolidated financial statements	0.53	0.49
Fees payable to the company's auditors for audit-related services:		
– The audit of the company's subsidiaries	0.07	0.06
– Regulatory accounts audit and interim review	0.07	0.07
Total amounts payable to group auditors	**0.67**	**0.62**

For financial years ended 31 March 2023 and 2022 no fees were payable to the company's auditors in respect of non-audit related services. In addition to the audit fee information given in the table the group pays £0.3m for the audit of subsidiaries that are not performed by the group auditor.

6. Employee costs

The monthly average full-time equivalent number of employees (including executive directors) was:

	2023 Group Number	2022 Group Number
Management and operation of the railway	**41,659**	**44,255**

	2023 Group £m	2022 Group £m
Their aggregate remuneration comprised:		
Wages and salaries	2,222	2,311
Social security costs	258	261
Defined contribution pension costs – current service costs (see note 24)	27	24
Defined benefit pension costs – current service costs (see note 24)	324	379
Total employee costs	**2,831**	**2,975**

In the years ended 31 March 2023 and 31 March 2022 key management personnel were all the executive directors and the chair of the board of directors. Full details of their remuneration are included within the annual remuneration report on pages 151 to 160.

7. Other gains and losses

	2023 Group £m	2022 Group £m
Net decrease in fair value of non-hedge accounted debt	7	-
Gain on derivatives not hedge accounted	85	157
Total other gains	**92**	**157**

No other gains and losses have been recognised in respect of financial assets or liabilities other than those disclosed in this note. No gains or losses have been recognised on financial liabilities measured at amortised cost.

The movement in fair value of debt designated as fair value through profit and loss and exchange differences on retranslation of foreign currency debt that form part of the above total other gains and losses are in relation to debt issuances disclosed in Note 17.

8. Finance costs

	2023 Group £m	2022 Group £m
Interest on bank loans and overdrafts	68	26
Interest on loan issued by Department for Transport	640	611
Interest on bonds issued under the Debt Issuance Programme	3,318	1,987
Interest on derivative instruments	99	149
Defined benefit pension interest cost (see note 24)	60	60
Lease interest payable (see note 22)	13	11
Total finance costs	**4,198**	**2,844**

An increase of £1,379m accretion on index linked bonds has driven the increase on Interest on bonds issued under the Debt Issuance Programme.

9. Tax

The tax credit/(charge) is made up as follows:

	2023 Group £m	2022 Group £m
Current tax:		
Corporation tax charge	-	-
Adjustment in respect of prior years	50	(10)
Total current tax credit/(charge)	**50**	**(10)**
Deferred tax:		
Current year credit/(charge)	262	(97)
Effect of rate change	-	(883)
Adjustment in respect of prior years	192	65
Total deferred tax credit/(charge)	**454**	**(915)**
Total tax credit/(charge)	**504**	**(925)**

The tax credit/(charge) for the year can be reconciled to the loss per the income statement as follows:

	2023 Group £m	2022 Group £m
(Loss)/Profit before tax	(1,140)	324
Tax at the UK corporation tax rate of 19 per cent (2022: 19 per cent)	217	(62)
Adjustments in respect of prior years	242	55
Rate changes	-	(883)
Income/(Expenses) not subject to tax	44	(35)
De-recognition of deferred tax assets recognised in the year	1	-
Total tax credit/(charge) for the year	**504**	**(925)**

Under IAS 12 deferred tax assets can only be recognised where it is probable that taxable profits will be available against which the deferred tax asset can be utilised. As in 2022, it remains improbable that Network Rail will produce a level of taxable profits that will allow for recognition of a deferred tax asset relating to the trading losses carried forward. Network Rail uses all its profits to fund capital expenditure. Management's current assessment is that there will be no significant taxable income for the year to 31 March 2024. Beyond the current funding regime, there is no certainty over the funding mechanism of Network Rail and hence the use of any losses.

Deferred tax at 31 March 2023 is calculated at a rate of 25 per cent (2022: 25 per cent) based on the tax rate expected to prevail based on legislative enactments at the point temporary differences resolve. The amount at which temporary differences crystallise is sensitive to the decisions on future tax laws to be taken by Parliament.

UK corporation tax is calculated at 19 per cent (2022: 19 per cent). In Budget 2021 it was announced the corporation tax rate will increase to 25 per cent with effect from 1 April 2023.

10. Property, plant and equipment – the rail network

	Group assets £m	Group capital grants £m	Group carrying value £m
Valuation			
At 31 March 2021	**80,779**	**(8,781)**	**71,998**
Additions – Enhancements	2,200	(2,200)	-
Additions – Renewals	3,939	-	3,939
Total Additions	**6,139**	**(2,200)**	**3,939**
Disposals	(27)	-	(27)
Transfers to held for sale	-	-	-
Transfer to investment property	(11)	-	(11)
(Depreciation charge)/grant amortisation for the year	(2,093)	240	(1,853)
Revaluation in the year	1,844	-	1,844
At 31 March 2022	**86,631**	**(10,741)**	**75,890**
Additions – Enhancements	2,445	(2,445)	-
Additions – Renewals	4,046	-	4,046
Total Additions	**6,491**	**(2,445)**	**4,046**
Disposals	(28)	-	(28)
Transfers to held for sale	-	-	-
Transfers from/(to) investment property	2	-	2
(Depreciation charge)/grant amortisation for the year	(2,278)	298	(1,980)
Revaluation in the year	4,803	-	4,803
At 31 March 2023	**95,621**	**(12,888)**	**82,733**

Given the economic and physical interdependency of the assets comprising the rail network, the company has concluded that the rail network is considered as a single class of asset. The rail network is carried at its fair value.

As there is no active market in railway infrastructure assets, the company has derived the fair value of the rail network using an income approach. Under this approach the cash flows that a network licence holder expects to generate from the rail network are assessed using a market rate of return. This valuation is carried out twice a year and revaluation gains and losses are reflected in other comprehensive income.

The independent rail regulator, the Office of Rail and Road (ORR), has stated (in the 2018 periodic review final determination: Supplementary document – financial framework) that a private network licence holder of the railway network would have its revenue requirement determined using the building block model of regulation. Under this model the network licence holder's annual income (received in the form of the network grant and track access charges) would comprise:

a) The regulator's assessment of the efficient costs of operating and maintaining the network.
b) An allowance for Regulatory Asset Base (RAB) amortisation – qualifying capital expenditure is added to the RAB as incurred and recovered by the company through future amortisation allowances (in order to spread the cost to customers and stakeholders of investment in the rail network over many years).
c) An allowed return on the RAB – calculated by applying the rate of return permitted by the ORR (based on its assessment of the market's cost of capital) to the RAB balance.

In the determination for Control Period 6 (2019-2024), published on 31 October 2018, ORR explains that from 1 April 2019 the RAB will no longer be a building block in the determination of the company's revenue requirement, but that the previous method of revenue determination would be restored if the rail network asset were to be transferred to a private owner. IFRS 13 Fair Value Measurement requires management to assess fair value from the perspective of a theoretical market participant, rather than based on the value-in-use. Accordingly, the amendments made to the regulatory framework for Control Period 6, which reflect the proximity of Network Rail to the public sector, and which would not apply to a market participant, are not relevant to the valuation.

Future cash flows under (a) are assumed to be equivalent over time to the network licence holder's actual costs of operation and maintenance, on the basis that the Regulator aims to set targets which are ambitious but achievable. These therefore have no net impact on forecast future cash flows, or the valuations. The allowed return (c) is based on a cost of capital which would be offset in a discounted future cash flows model (see Discount rate below). The economic rights inherent in ownership of the regulated rail network asset are therefore vested primarily in the value of the RAB, which will be recovered through future regulated income as the RAB is amortised (b).

This means that it is possible for the RAB itself to be used as the starting point for a discounted cash flow valuation. The RAB fluctuates in valuation; increasing in value principally as a result of allowances for capital expenditure and inflation indexation, whilst reducing for amortisation. The adjustments may give rise to upwards or downwards revaluations. Further changes are subject to:

a) Adjustment for any difference between regulatory rate of return and the market cost of capital that a third-party investor would use to assess the value of the network (the rate of return and market cost of capital are currently assessed as fully aligned); and
b) Adjustment for forecast future under or out performance against the regulatory determination over the remainder of the current control period. No adjustment is made in respect of future control periods on the expectation of the Regulator setting, over the long term, ambitious but achievable determination.

When valuing the network, management is required to consider the value a knowledgeable willing party would place on the network in an arm's length transaction. On the grounds that third-party investors are known to value the assets of regulated companies by reference to the RAB, and that the cash flows associated with the regulatory framework are considered sufficiently stable and robust to form the basis of a third-party valuation, management has used the RAB as the starting point for its valuation.

Revaluation

The valuation includes a £4,803m upward movement in the value of the railway. There are 3 key drivers for the valuation, being the difference between:

- The impact of indexation inflation (£8.2bn increase in the valuation) offset by
- The rate of return in the WACC has been adjusted by 2% for the remainder of the Control Period as a result of significant increases in the cost of borrowing. This results in a decrease in the valuation of £1.7bn. The valuation is sensitive to the WACC assumption. If WACC varied by 100bps then the valuation would increase by an additional £0.8bn and depreciation by £10m in the valuation of the network
- The rate at which assets are amortised in the RAB and assets are depreciated under IAS 16 (£1.8bn decrease in the valuation).

In line with regulatory guidance, indexation inflation was based on the November 2022 CPI, of 10.7 per cent.

Third-party funding

Additions to the railway network funded by capital grant, rather than via the RAB funding mechanism, are included in the valuation at cost. The carrying value of property, plant and equipment is calculated after netting off associated grant funding received or receivable.

Disposals
The disposals of £28m were as the result of property sales in the usual course of business. In line with Regulatory Accounting Guidelines the net proceeds of sales are deducted from the RAB, reducing the valuation of the Railway Network Valuation. The valuation of the disposals is assessed as being equal to the reduction in the valuation of the railway network relating to property sales.

Depreciation
The depreciation charge for any year is calculated using the average carrying value for the year and the estimated remaining weighted average useful economic life of the rail network. The remaining weighted average useful economic life of the rail network was calculated using the engineering assessment of serviceable economic lives of the major categories that comprise the rail network. The estimated remaining weighted average useful economic life of the network is currently 40 years (2022: 40 years).

Discount rate
The discount rate used in the income approach is the pre-tax rate of return set by the ORR. The ORR performs a periodic review every five years, which leads to the setting of the appropriate rate for the five-year period. The ORR's method encompasses advice from consultants, comparisons to similar infrastructure assets and discussions with Network Rail. Management believes this cost of capital reflects the assumptions that a market participant would make in arriving at a discount rate.

Should the ORR amend the permitted rate of return in future quinquennial reviews, the regulator would raise or lower the permitted charges to customers so as to achieve the new rate of return. In other words, the cash flows would change but the RAB would not.

The ORR confirmed that a conventionally funded market participant would receive an allowed return equal to the full market cost of capital. This has been reiterated in their final determination for CP6. Management expects that if the rail network asset were to be transferred to a private owner during CP6, ORR would determine the private owner's revenue requirement for CP6 using the original pre-tax (CPI) WACC of 4.15 % set out in their final determination for this Control Period amended for the movement since then. Management expects that the rate of return set by the regulator in subsequent quinquennial reviews will be consistent with the market discount rates for infrastructure assets at the quinquennial review date.

Accordingly, the valuation includes a reassessment of this rate to determine whether it continues to reflect market conditions. This assessment is by reference to movements in observable market data, including the risk-free cost of borrowing, and changes in the weighted average cost of capital of listed utilities with similar gearing ratios. The following table shows the effect of changes in the market discount rate on the carrying value of the rail network and on the depreciation charge. The analysis only considers the effects of movements in the market discount rate until the end of Control Period 6 (2024), and not in perpetuity. The effect of changes in the market discount rate apply equally to increases and to decreases in discount rates.

	Change in cost of capital (basis points)	31 March 2023	31 March 2022
Change in fair value	25	**£196m**	£332m
	50	**£391m**	£666m
Percentage change in fair value	25	**0.2%**	0.4 %
	50	**0.5%**	0.9 %
Change in annual depreciation charge	25	**£2m**	£8m
	50	**£5m**	£17m

Forecast performance variations
In assessing the value of the rail network, management considers that a knowledgeable willing third party would take into account the perceived fairness and deliverability of the current regulatory determination. Accordingly, management makes an addition (or deduction) to the valuation for its assessment of the likely ORR determination in respect of the financial consequences of anticipated future out (or under) performance against the regulatory determination.

Cost outturns on capital work (renewals and enhancements) have an impact on future cash flows under the regulatory framework, since only efficient overspending in excess of regulated cost targets can be added to the RAB.

At 31 March 2023 the valuation included £150m of projected outperformance (31 March 2022: £200m of projected underperformance) which is expected to crystallise in the income statement over the next year. During the year, post pandemic travel behaviours and trends and their impact on performance have continued to be monitored in arriving at the assumptions. The result of this review is that there is no significant change in the expected performance for the remaining year of the Control Period prior to a refreshed determination. As there is no significant change in underlying performance, the crystallisation of underperformance and the minor adjustments to expected performance are the key drivers for the £350m reduction in the PVCFA in the period.

Measures taken to change franchise contracts by both DfT and TS has continued to allow train operating companies to settle amounts owed to Network Rail as they fall due.

Critical judgements

The valuation includes the following critical judgements:

a) The regulatory framework, and associated cash flows remain sufficiently stable and robust to form the basis of a third-party valuation. As noted above, the ORR has made it clear in its final determination for CP6 that the amendments made to the regulatory framework for CP6 reflect the proximity of Network Rail to the public sector and the amendments would not apply to a market participant.

b) The ORR has committed to providing a market cost of capital return to a conventionally funded owner and operator of the network and the fair value calculation has been prepared on that basis. An adjustment has been made to the valuation in respect of the difference between the regulatory rate of return and a market participant cost of capital.

c) Management's assessment of the deliverability of the current regulatory determination is a good indication of how other management groups would perform against the determination.

d) The deliverability of the current 5-year regulatory determination does not have any implication for the deliverability of future determinations (i.e., the ambition of the regulator at the start of each Control Period is to set the regulatory determination at a level which is challenging but achievable).

e) The RAB includes historic expenditure on the company's investment properties. In accordance with IAS 40 Investment Property and IFRS 5 Non-current Assets Held for Sale and Discontinued Operations the fair value of investment property and assets held for sale is separately recognised in Notes 11 and 13 to the accounts. The fair value of the railway network excludes the fair value of RAB-funded investment properties (and assets held for sale) on the grounds that a private owner of the railway network would not expect to derive any future economic benefit from the sale of investment property (i.e., the regulator would make a downwards adjustment to the RAB for the value of any investment properties sold). The valuation performed at 31 March 2023 includes a downwards adjustment of £208m to exclude the fair value of relevant investment property and relevant assets held for sale (31 March 2022: £224m).

f) When considering the appropriateness of the valuation methodology, the directors took into account the publication of the Plan for Rail Review and its plans to reform the rail industry. The directors concluded that the current methodology remained appropriate. In considering this, the directors noted that disposals from the railway network in the last two years have been in line with the carrying value of the railway network. This emphasises that the valuation approach undertaken in these accounts remains appropriate.

At 31 March 2023 the group had entered into contractual commitments in respect of capital expenditure amounting to £3,543m (2022: £3,631m).

We have classified the valuation of the rail network as Level 3 under IFRS 13.

11. Investment property

	Group £m
Fair value	
At 31 March 2021	**212**
Additions	1
Disposals	(36)
Transfer from property, plant and equipment	11
Transfer to assets held for sale (Note 13)	(8)
Increase in fair value in the year	32
At 31 March 2022	**212**
Additions	1
Disposals	(1)
Transfers to property, plant and equipment	(2)
Transfers from assets held for sale (Note 13)	32
Decrease in fair value in the year	(11)
At 31 March 2023	**231**

The market values of the group's investment properties at 31 March 2023 have been arrived at on the basis of a valuation carried out at that date in conjunction with Jones Lang LaSalle, external valuers not connected with the group. Network Rail undertake a detailed review of the investment property portfolio to allocate the portfolio to beacons which represent particular groups of property sharing the same characteristics. Network Rail apply yields provided by Jones Lang LaSalle to these beacon categories. Jones Lang LaSalle will also value specific properties, as instructed by Network Rail.

Management are satisfied that Jones Lang LaSalle hold a recognised and relevant professional qualification, and have had recent experience in the location and category of the investment property being valued. The fair value of the group's investment property portfolio is deemed to be the market value.

The valuation, which conforms to International Valuation Standards, was arrived at by splitting the portfolio between one-off individual properties to be valued separately and the remainder of the portfolio to be valued under the Beacon method.

Jones Lang LaSalle provided independent valuations of 18 one-off individual properties (2022: 15), amounting to 46 per cent (2022: 47 per cent) of the total valuation. The balance of the estate was valued under the Beacon method by splitting the portfolio into 17 homogeneous classes (2022: 18) of property and areas, assuming that the current passing rent received from these properties are in line with market rent. Jones Lang LaSalle independently assessed the appropriate yield to be adopted within each of these classes and areas. This enabled the directors to estimate market values by applying the provided yields to the net rental income from these properties, in accordance with a standard UK investment property valuation.

The property rental income earned by the group from assets categorised at the year-end as investment property, all of which is leased out under operating leases, amounted to £14.1m (2022: £12.9m). Direct operating expenses arising on the investment properties in the year amounted to £2.8m (2022: £3m).

The group's investment properties are let on a tenant repairing basis. The group's maintenance obligations are limited to common areas and vacant property units.

Property valuations are by their nature subjective, as they are made on the basis of assumptions made by the valuer. They have been classified as Level 3 and the key inputs to the valuations, defined as 'unobservable' by IFRS 13, are analysed in the table below.

		Estimated rental value per sq. ft			Equivalent yield		
	Fair value at 31 March 2023 £m	Minimum £	Maximum £	Weighted average £	Minimum %	Maximum %	Weighted average %
Valuation technique:							
One-off valuation	**107**	**0.39**	**148.29**	6.98	4.5	12.2	6.97
Beacon method*	**124**	**n/a**	**n/a**	n/a	5	14.5	8.1

* The Beacon methodology splits all the properties within the portfolio into 17 homogenous groups. The properties in each group are valued by applying a yield to the annual rent (passing or void) for the property. Yields applied are on the basis that the property is rack rented i.e., the current passing rent received from these properties are in line with market rent. As such, an estimated rental value per square feet for these properties is not available.

All other factors being equal, a higher yield would lead to a decrease in the valuation of a property and an increase in the current or estimated future rental stream would have the effect of increasing the capital value, and vice versa. However, there are interrelationships between the unobservable inputs which are influenced by market conditions, which would impact the changes in fair value.

12. Investment in subsidiaries and joint ventures

Subsidiaries in the financial statements are included in the table below.

Principal subsidiaries	Country of incorporation	Proportion of all classes of issued share capital owned	Principal activities
Network Rail Infrastructure Limited	Great Britain	100 %	Main operating company
Great British Railways Limited*	Great Britain	100 %	Dormant
Great British Railways Transition Team Limited	Great Britain	100 %	Drive the transitional activities in advance of the establishment of Great British Railways Limited (GBR) and Fares and Ticketing Reform (FTR)
Network Rail Insurance Limited	Guernsey	100 %	Insurance company
Network Rail Holdco Limited*	Great Britain	100 %	Holding company of Network Rail Infrastructure Limited
Network Rail (High Speed) Limited	Great Britain	100 %	Holds St Pancras concession and High Speed Railway Services Agreement
Network Rail Development Limited	Great Britain	100 %	Holds 49.95 % of each of the property Joint ventures Innova Investment Limited Partnership and Solum Regeneration Epsom Limited Partnership. Solum is a property development business.
Network Rail One Limited*	Great Britain	100 %	Dormant
Network Rail Pension Trustee Limited	Great Britain	Company limited by guarantee	Administration of defined contribution and CARE defined benefit pension schemes
Network Rail International Limited	Great Britain	100 %	International rail consultancy business
Network Rail Certification Body Limited	Great Britain	100 %	Conformity assessment services to the rail industry
Network Rail (VY1) Limited	Great Britain	100 %	Holds land required for works access
Network Rail (VY2) Limited	Great Britain	100 %	Holds land required for works access
Network Rail (Stations) Limited	Great Britain	100 %	Dormant
Network Rail Consulting Limited	Great Britain	100 %	International rail consultancy business
Great British Railways Consulting Limited	Great Britain	Company limited by guarantee	Dormant
NR Corporate Secretary Limited	Great Britain	100 %	Provides secretarial services to other companies within the Network Rail group
Network Rail Property Limited	Great Britain	100 %	Dormant
Network Rail (Spacia) Limited	Great Britain	100 %	Dormant
Victoria Place Shopping Centre Ltd	Great Britain	100 %	Dormant
Spacia (2002) Ltd	Great Britain	100 %	Dormant
Railway Property Ltd	Great Britain	100 %	Dormant
Kew Bridge Manco Limited	Great Britain	Company limited by guarantee	Dormant
Railway Safety & Standards*	Great Britain	Company limited by guarantee	Dormant
Railway Safety*	Great Britain	Company limited by guarantee	Dormant

* Directly owned by Network Rail Limited company.

Shares held by a trustee			
Network Rail Infrastructure Finance PLC	Great Britain	Intertrust Corporate Services Limited	Issuer of the Debt Issuance Programme
Network Rail MTN Finance Limited	Great Britain	Intertrust Corporate Services Limited 99.998 %, Intertrust Nominees limited 0.002 %	Issuer of NR's Medium Term Note (MTN) Programme.

The shares in Network Rail Infrastructure Finance PLC are held by Intertrust Corporate Services Limited, for charitable purposes. The sole purpose of this company is to act as a special purpose funding vehicle. The company is treated as a subsidiary for accounting purposes as proceeds from debt issuances are lent on to Network Rail Infrastructure Limited and are used to finance the activities and to refinance the existing debt of the group.

Network Rail Infrastructure Limited is a member of Newcastle NE1 Limited. Newcastle NE1 Limited is a not-for-profit limited company (by guarantee); NRIL's liability as a member is limited to an amount not exceeding £1. The company is a Business Improvement District representing several businesses in Newcastle.

Joint ventures accounted for by the equity accounting method in the financial statements are included in the table below.

Joint ventures	Country of incorporation	Proportion of all classes of issued share capital owned	Principal activities
Innova Investment Partnership GP Limited	Great Britain	50 %	Hold 0.1 % in Innova Investment Limited Partnership
Innova Investment Limited Partnership	Great Britain	49.95 %	Property development
West Hampstead Square LLP	Great Britain	50 %	Property development
Blocwork LLP	Great Britain	50 %	Property development
Blocwork (Henley) LLP	Great Britain	50 %	Property development
Blocwork Projects LLP	Great Britain	50 %	Property development
Blocwork (No.4) LLP	Great Britain	50 %	Property development
Blocwork (No.5) LLP	Great Britain	50 %	Property development
The Station Office Network LLP	Great Britain	50 %	Provides flexible office space, meeting rooms and virtual offices
Solum Regeneration Epsom (GP) Limited	Great Britain	50 %	Hold 0.1 % in Solum Regeneration (Epsom) Limited Partnership
Solum Regeneration (Epsom) Limited Partnership	Great Britain	49.95 %	Property development
Solum Regeneration (Haywards) LLP	Great Britain	50 %	Property development
Solum Regeneration (Guildford) LLP	Great Britain	50 %	Property development
Solum Regeneration (Twickenham) LLP	Great Britain	50 %	Property development
Solum Regeneration (Bishops) LLP	Great Britain	50 %	Property development
Solum Regeneration (Surbiton) LLP	Great Britain	50 %	Property development
Solum Regeneration Holding 2 LLP	Great Britain	50 %	Property development
Solum Regeneration (Maidstone) LLP	Great Britain	50 %	Property development
Solum Regeneration (Walthamstow) LLP	Great Britain	50 %	Property development
Solum Regeneration (Redhill) LLP	Great Britain	50 %	Property development
Solum Regeneration (Kingswood) LLP	Great Britain	50 %	Property development
Solum Regeneration Holding 1 LLP	Great Britain	50 %	Property development

The movement in the investment in joint ventures is as follows:

	2023 Group £m	2022 Group £m
At 1 April	27	38
Investment in joint ventures	5	8
Equity repayments	(7)	(13)
Share of profit/(loss)	3	(6)
At 31 March	**28**	**27**

13. Assets held for sale

	2023 Group £m	2022 Group £m
At 1 April	36	28
Transfer (to)/ from investment property	(32)	8
At 31 March	**4**	**36**

14. Inventories

	2023 Group £m	2022 Group £m
Raw materials and consumables	**349**	**299**

As at 31 March 2023 a provision of £28m (2022: £29m) was held in respect of inventories.

15. Trade and other receivables

Current assets: trade and other receivables	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
Trade receivables				
- receivable from contracts with other customers	301	320	-	-
- receivable from agreements with Government	-	-	-	-
- receivable from property portfolio customers	123	124	-	-
Capital grants receivable	602	486	-	-
Other taxation and social security	198	148	-	-
Collateral placed with counterparties	141	255	-	-
Other receivables	84	17	-	-
Prepayments	82	76	-	-
Accrued income				
- receivable from contracts with other customers	131	121	-	-
- receivable from property portfolio customers	67	50	-	-
Total	**1,729**	**1,597**	**-**	**-**

Trade receivables from contracts with customers, agreements with government and from the property portfolio are all based on unconditional rights to consideration, and are not contingent on conditional or dependent on satisfying other performance obligations.

Trade receivables include an allowance for estimated irrecoverable amounts from the supply of services of £52m (2022: £43m). This allowance has been made by reference to past default experience. Past default experience is adjusted for forward looking information where relevant. The group provides fully for receivables overdue by over six months. Average debtor days were 63 days (2022: 49 days).

The directors consider that the carrying value of trade and other receivables approximates to their fair value. All balances are non-interest bearing and denominated in sterling.

The group's credit risk is primarily attributable to its trade receivables. Around 97 per cent of the company's income is received from train operating companies and in the form of revenue grants from Government. Franchises are issued to train operating companies by the Department for Transport in England and Wales and Transport Scotland in Scotland. The group believes that amounts receivable from Government and the train operating companies represent a high level of credit quality. This is because in the extraordinary circumstance that a train operating company were to be unable to meet its obligations then provisions in the franchise agreements allow the Department for Transport to take over services at any time. Measures taken to change franchise contracts by both DfT and Transport Scotland during the global pandemic have allowed train operating companies to continue to settle amounts owed to Network Rail as they fall due. Before accepting any other new customer, the group uses an external credit scoring system to assess the potential customer's credit quality.

Included in the group's trade receivable balance are amounts totalling £78m (2022: £62m) which are past due at the reporting date for which the group has not provided as there has not been a significant change in the credit quality and the amounts are still considered recoverable. The group does not hold collateral over these balances. The average age of these receivables is 27 days (2022: 23 days).

The following table shows the age of financial assets for the group which are past due and for which no specific provision has been raised:

Current assets: trade and other receivables	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
Past due by 1 – 28 days	58	43	-	-
Past due by 29 – 56 days	21	11	-	-
Past due by 57 – 84 days	9	3	-	-
Past due by 85 – 180 days	8	17	-	-
	96	**74**	**-**	**-**

Trade receivables of £31m (2022: £30m) are overdue by six months or more and have been fully provided for.

16. Trade and other payables

Current liabilities: trade and other payables	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
Trade payables	(1,124)	(731)	-	-
Collateral received from counterparties	(2)	-	-	-
Payments received on account	(43)	(45)	-	-
Other payables	(433)	(533)	-	-
Other interest accruals	(269)	(250)	-	-
Other accruals	(884)	(968)	-	-
Deferred income	(972)	(1,139)	-	-
Total	**(3,727)**	**(3,666)**	**-**	**-**

Deferred income includes £792m (31 March 2022: £831m) relating to cumulative timing differences between government grants received and expenditure being incurred which gives rise to the recognition of income under grant agreements. The remainder of the balance relates principally to IFRS 15 items referred to in that standard as 'contract liabilities'.

£39m of the property deferred income balance at the beginning of the year was recognised as revenue in the current year.

The average credit period taken for trade purchases is 38 days (2022: 30 days).

Before accepting new suppliers, and upon letting significant contracts, the group evaluates suppliers' creditworthiness using external credit scoring systems and other relevant data.

The directors consider that the carrying value of trade and other payables approximates to their fair value. All balances are ordinarily non-interest bearing and denominated in sterling.

The Other accruals balances contains a degree of estimation uncertainty regarding the amounts to be paid. The majority of the balance relates to COWD which is disclosed as a key source of estimation uncertainty.

Non-current liabilities: other payables	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
Capital grants deferred income	(515)	(497)	-	-
Other payables	(129)	(14)	-	-
Total	**(644)**	**(511)**	**-**	**-**

As part of the acquisition of Railtrack PLC, Network Rail received a grant of £300m from the Strategic Rail Authority to fund the purchase. In line with Network Rail's accounting policy this revenue is deferred and amortised over the average remaining life of the railway network (as this represents the substantial part of the assets purchased), currently 40 years, on a straight-line basis. The balance on the grant after amortisation at 31 March 2023 is £98m (2022: £105m).

17. Borrowings

The borrowings balance is split as follows:

	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
Net borrowings by instrument:				
Cash and cash equivalents	303	477	-	-
Collateral placed with counterparties	141	255	-	-
Collateral received from counterparties	(2)	-	-	-
Bank loans	(608)	(542)	-	-
Lease liabilities	(407)	(420)	-	-
Bonds issued under the Debt Issuance Programme (less unamortised premium, discount and fees)	(27,649)	(24,880)	-	-
Borrowings issued by the DfT*	(30,836)	(30,941)	-	-
	(59,058)	**(56,051)**	**-**	**-**
Movement in net borrowings:				
At the beginning of the year	(56,051)	(54,679)	-	-
Decrease in cash and cash equivalents	(174)	(45)	-	-
Proceeds from borrowings	(2,680)	(7,888)	-	-
Repayments of borrowings**	2,680	8,050	-	-
Capital accretion	(2,876)	(1,497)	-	-
Movement in collateral placed with counterparties	(114)	(114)	-	-
Movement in collateral received from counterparties	(2)	105	-	-
Movement in lease liabilities (see note 22)	13	(34)	-	-
Decrease in DfT collateral facility**	110	10	-	-
Fair value and other movements	36	41	-	-
At the end of the year	**(59,058)**	**(56,051)**	**-**	**-**

	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
Net borrowings are reconciled to the balance sheet as set out below:				
Cash and cash equivalents	303	477	-	-
Collateral placed with counterparties (included in trade and other receivables)	141	255	-	-
Collateral received from counterparties (included in trade and other payables)	(2)	-	-	-
Borrowings included in current liabilities	(4,037)	(2,801)	-	-
Borrowings included in non-current liabilities	(55,463)	(53,982)	-	-
	(59,058)	**(56,051)**	**-**	**-**

* As at 31 March 2023, a collateral facility of £140m (2022: £250m) was included within this balance.

** Included in repayment of borrowings in cash flow statement.

	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
1.085 % sterling index linked bond due 2052	175	154	-	-
0 % sterling index linked bond due 2052	195	171	-	-
1.003 % sterling index linked bond due 2051	33	29	-	-
0.53 % sterling index linked bond due 2051	169	149	-	-
0.517 % sterling index linked bond due 2051	169	149	-	-
0 % sterling index linked bond due 2051	196	172	-	-
0.678 % sterling index linked bond due 2048	166	146	-	-
1.125 % sterling index linked bond due 2047	7,127	6,317	-	-
0 % sterling index linked bond due 2047	127	111	-	-
1.1335 % sterling index linked bond due 2045	68	60	-	-
1.5646 % sterling index linked bond due 2044	366	325	-	-
1.1565 % sterling index linked bond due 2043	76	67	-	-
1.1795 % sterling index linked bond due 2041	93	82	-	-
1.2219 % sterling index linked bond due 2040	358	319	-	-
1.2025 % sterling index linked bond due 2039	102	90	-	-
4.6535 % sterling bond due 2038	100	100	-	-
1.375 % sterling index linked bond due 2037	7,050	6,230	-	-
4.75 % sterling bond due 2035	1,237	1,236	-	-
1.6492 % sterling index linked bond due 2035	544	485	-	-
4.375 % sterling bond due 2030	873	873	-	-
1.75 % sterling index linked bond due 2027	6,763	6,000	-	-
4.615 % Norwegian krone bond due 2026*	40	45	-	-
4.57 % Norwegian krone bond due 2026*	11	13	-	-
1.9618 % sterling index linked bond due 2025	462	411	-	-
4.75 % sterling bond due 2024	749	747	-	-
3 % sterling bond due 2023	400	399	-	-
	27,649	**24,880**	**-**	**-**

* Bonds treated as fair value through profit and loss.

All other bonds are shown net of unamortised discount and fees.

Bank loans are analysed as follows:

	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
Index-linked European Investment Bank	608	542	-	-
	608	**542**	**-**	**-**

At 31 March 2023 and 2022 the group had the following undrawn committed borrowing facilities at nominal value:

	2023 Drawn £m	2023 Undrawn £m	2023 Total £m	2022 Drawn £m	2022 Undrawn £m	2022 Total £m
DfT loan facility	30,696	1,594	32,290	30,691	1,150	31,841
DfT collateral facility	140	60	200	250	50	300
	30,836	**1,654**	**32,490**	**30,941**	**1,200**	**32,141**

The DfT loan facility is shown net of unamortised fees.

Undrawn committed facilities expire as follows:

	2023 Group £m	2022 Group £m
Within one year	-	-
Within two to five years	1,594	1,150
After five years	60	50
	1,654	**1,200**

On 4 July 2014, the Secretary of State for Transport provided the group with a loan facility of £30,875m expiring on 31 March 2019. Following the asset divestment programme, the loan facility was reduced to £29,909m which had been fully

drawn as at 31 March 2019. On 28 March 2019, a new facility was signed which became available for drawing on 1 April 2019 (the '2019 facility'). The 2019 facility has a drawdown limit of £32,329m. Following an asset disposal, this facility was reduced to £31,859m. In the year, the holders of certain bonds within the debt issuance programme had the option to request repayment. As a result, the facility was increased by £444m. This remained undrawn at 31 March 2023 as the option to request repayment of these bonds was not taken. In addition, the Secretary of State for Transport has provided unlimited financial indemnity in respect of borrowings under the Debt Issuance Programme which expires in 2052.

18. Derivative financial instruments

	2023 Group		2022 Group	
	Fair value £m	Notional amounts £m	Fair value £m	Notional amounts £m
Derivative financial instrument assets				
Non-hedge accounted derivatives				
Cross-currency swaps to hedge debt issued under the Debt Issuance Programme	-	-	5	56
Interest rate swaps to hedge debt issued under the Debt Issuance Programme	91	3,905	7	2,010
Forward foreign exchange contracts	2	35	1	30
	93	**3,940**	**13**	**2,096**
Included in non-current assets	72	2,255	9	511
Included in current assets	21	1,685	4	1,585
	93	**3,940**	**13**	**2,096**
Derivative financial instrument liabilities				
Non-hedge accounted derivatives				
Cross-currency swaps to hedge debt issued under the Debt Issuance Programme	(5)	56	-	-
Interest rate swaps to hedge debt issued under the Debt Issuance Programme	(226)	3,905	(261)	11,310
Forward foreign exchange contracts	-	3	-	28
	(231)	**3,964**	**(261)**	**11,338**
Included in current liabilities	(49)	1,668	(55)	3,666
Included in non-current liabilities	(182)	2,296	(206)	7,672
	(231)	**3,964**	**(261)**	**11,338**

See Note 23: Funding and financial risk management for further details on the risk management strategy. Notional amounts above reflect the contractual value relating to the principal instrument (e.g., bond) to which the derivative relates.

The majority of the group's remaining derivative are forward-starting interest rate swaps which were initiated prior to Network Rail's reclassification. The 'pay fixed, receive floating' arrangement had – at hedge inception – the effect of fixing Network Rail's exposure to interest rate movements between the date of entering into the swap and the drawdown of expected future debt issuances. The balance in the hedging reserve represents the cumulative loss on these instruments at the point of debt drawdowns, less amounts reclassified into profit and loss in line with the maturity of the hedged item (debt).

Following the passage of the hedged events (debt issuances), which have all now occurred, movements on these instruments have been taken in full to profit and loss since the economic relationship underpinning the hedge no longer exists. Interest rate swaps included within the derivatives population above also include reversing swaps entered into at the point of debt drawdowns to cancel the floating leg effect of the original swap. Movements in fair value for these reversing swaps are taken against profit and loss throughout the life of these instruments.

19. Provisions

	Restructuring £m	Legal £m	Commercial and other claims £m	Total £m
At 1 April 2022	**-**	**24**	**54**	**78**
Charge for the year	2	-	15	17
Utilised in the year	-	(4)	(3)	(7)
Release for the year	-	(4)	(16)	(20)
At 31 March 2023	**2**	**16**	**50**	**68**

The group has also provided against a number of claims arising from interpretations of legal contracts or past events for which settlement is expected to be achieved in the next year, but could be deferred to future years depending on the legal interpretation of rights and responsibilities under the contracts as well as commercial negotiation.

Provisions are measured at the directors' best estimate of the expenditure required to settle the obligation at the balance sheet date. The nature of these claims means that there is some uncertainty with regard to the value that they will be settled at. If the outcomes of the claims are different to the assumptions underpinning the directors' best estimates then a further liability may arise.

Contingent liabilities

The general nature of contingent liabilities are development indemnities and warranties.

20. Deferred tax

The following are the deferred tax liabilities and assets recognised by the group and movement thereon during the current and prior year.

Group	Accelerated tax depreciation £m	Unrealised Gain on Investment Property £m	Revaluation of railway network £m	Short-term timing differences including retirement benefit obligations £m	Derivatives £m	Tax losses £m	Total £m
At 31 March 2021	**3,271**	**-**	**252**	**(148)**	**(25)**	**-**	**3,350**
Charge/(credit) to income	92	10	-	(94)	34	82	124
Charge/(credit) to other comprehensive income	-	-	461	242	22	-	725
Impact of rate change (income)	1,012	-	-	(121)	(8)	-	883
Impact of rate change (equity)	-	-	80	74	(1)	-	153
Transfer between reserves	-	-	(8)	8	-	-	-
Utilisation of losses previously derecognised	-	-	-	-	-	(82)	(82)
De-recognition of deferred tax asset (income)	-	(10)	-	-	-	-	(10)
De-recognition of deferred tax asset (equity)	-	-	-	-	(22)	-	(22)
At 31 March 2022	**4,375**	**-**	**785**	**(39)**	**-**	**-**	**5,121**
Charge/(credit) to income	(396)	(3)	-	(58)	-	1	(456)
Charge/(credit) to other comprehensive income	-	-	1,201	582	21	-	1,804
Transfer between reserves	-	-	(29)	29	-	-	-
Utilisation of losses previously derecognised	-	-	-	-	-	-	-
De-recognition of deferred tax asset (income)	-	3	-	-	-	(1)	2
De-recognition of deferred tax asset (equity)	-	-	-	-	(21)	-	(21)
At 31 March 2023	**3,979**	**-**	**1,957**	**514**	**-**	**-**	**6,450**

Certain deferred tax assets and liabilities have been offset. The following is the analysis of the gross deferred tax balances:

	2023 £m	2022 £m
Deferred tax liabilities	6,450	5,160
Deferred tax assets	-	(39)
	6,450	**5,121**

Under IAS 12 deferred tax assets can only be recognised where it is probable that taxable profits will be available against which the deferred tax asset can be utilised. Note 9 includes further discussion around the recognition of deferred tax assets. The deferred tax asset on tax losses of £2,297m (2022: £2,305m) has therefore not been recognised.

Additionally, whilst taxable income does not exceed allowable deductions in the year, Network Rail claims only the capital allowances sufficient to make the necessary claims for group relief and available tax credits.

21. Notes to the statement of cash flows

	2023 Group £m	2022 Group £m	2023 Company £m	2022 Company £m
(Loss) / Profit before tax	(1,140)	324	-	-
Adjustments for:				
Property revaluation movements and profits on disposal	11	(51)	-	-
Fair value gain on derivatives and debt	(92)	(157)	-	-
Net interest expense	4,195	2,844	-	-
Depreciation of the rail network and leases under IFRS 16	2,405	2,197	-	-
Amortisation of grants	(306)	(248)	-	-
Amortisation of intangible assets	1	1	-	-
Non cash movement in retirement benefit obligations	226	266	-	-
Decrease in provisions	(10)	(17)	-	-
Operating cash flows before movements in working capital	**5,290**	**5,159**	**-**	**-**
Increase in inventories	(50)	(13)	-	-
(Increase)/Decrease in receivables	(130)	(88)	-	-
Increase in payables	307	220	-	-
Cash generated from operations	**5,417**	**5,278**	**-**	**-**

Cash and cash equivalents

Cash and cash equivalents (which are represented as a single class of assets on the face of the balance sheet) comprise cash at bank and commercial paper, all of which are on call with the exception of short-term deposits. There were £384m (excluding offsetting clearing accounts) of short-term deposits with the government banking scheme (“GBS”) held as at 31 March 2023 (2022: £558m).

22. Leases

Group as a lessee

Property lease payments largely represent rentals payable by the group for certain of its office properties. In addition, rentals are paid for land adjacent to the railway required for maintenance and renewal activities. Non-property leases include the group's vehicles, on track machines and wagons that are leased.

The movement in the period for the lease liability is reconciled as follows:

	Property leases £m	Non property leases £m	Total £m
Lease liability at 31 March 2021	**205**	**181**	**386**
New leases entered into in the period	28	89	117
Leases renewed in the period	-	-	-
Change in assumptions	29	10	39
Interest charged in the period	5	6	11
Payments in the period	(48)	(85)	(133)
Lease liability at 31 March 2022	**219**	**201**	**420**
New leases entered into in the period	14	50	64
Leases renewed in the period	-	-	-
Change in assumptions	11	39	50
Interest charged in the period	5	8	13
Payments in the period	(45)	(95)	(140)
Lease liability at 31 March 2023	**204**	**203**	**407**

The lease liabilities are split between the current and non-current liabilities as shown below:	2023 £m	2022 £m
Current lease liabilities	123	130
Non-current lease liabilities	284	290
Total lease liabilities	**407**	**420**

The movement in the period for the ROU assets is reconciled as follows:

	Property leases £m	Non property leases £m	Total £m
Right of use asset at 31 March 2021	**204**	**177**	**381**
New leases entered into in the period	28	89	117
Change in assumptions	28	2	30
Depreciation charged in the period	(44)	(60)	(104)
Right of use asset at 31 March 2022	**216**	**208**	**424**
New leases entered into in the period	14	50	64
Change in assumptions	11	36	47
Depreciation charged in the period	(41)	(86)	(127)
Right of use asset at 31 March 2023	**200**	**208**	**408**

Expenses relating to short-term lease (included in net operating costs) were £nil. The total cash outflow for leases during the year was £140m (2022: £133m).

The following table details the group's remaining contractual maturity for its financial liabilities. See note 23 for details of how liquidity risk is managed across the group.

Group	Within 1 year £m	1-2 years £m	2-5 years £m	5+ years £m	Total £m
Lease liabilities	123	81	123	137	**464**

Group as a lessor

Minimum lease payments receivable on leases where the group is lessor are as follows:

Group	Within 1 year £m	1-2 years £m	2-5 years £m	5+ years £m	Total £m
Minimum lease payments receivable	492	387	784	1,745	**3,408**

23. Funding and financial risk management

Introduction

The group's funding requirement is met by the Department for Transport via a loan facility and grants. Previously, the group was almost entirely debt financed. Of the total £59.1bn borrowings, £28.3bn debt has been issued through the special purpose financing company Network Rail Infrastructure Finance PLC, which is not a member of the Network Rail Limited group, but is treated as a subsidiary for accounting purposes. This debt has been issued by Network Rail Infrastructure Finance PLC under the Debt Issuance Programme which is rated AA by Standard and Poor's, Aa3 (outlook negative) by Moody's and AA- (outlook negative) by Fitch. The Debt Issuance Programme is supported by a financial indemnity from the Secretary of State for Transport which expires in 2052. The remaining £30.8bn was issued to Network Rail Infrastructure Limited through the Department of Transport (refer to Reclassification of Network Rail below).

Debt has been issued in a number of currencies and a range of maturities which gives rise to interest rate, foreign currency and inflation risk. Financial risk management aims to mitigate these risks.

Reclassification of Network Rail

In December 2013, the Office for National Statistics announced the reclassification of Network Rail as a Central Government Body in the UK National Accounts and Public Sector Finances with effect from 1 September 2014. This is a statistical change driven by guidance in the European System of National Accounts 2010 (ESA10)

As part of Network Rail's formal reclassification to the public sector, an arrangement was agreed whereby funding would be provided by the DfT in the form of a loan made directly to Network Rail Infrastructure Limited, to fund the continuing programme of long-term investment in the national rail network. Network Rail Infrastructure Finance PLC does not anticipate issuing further bonds in the foreseeable future and its debt service obligations would be met through repayments of the intercompany loan by Network Rail Infrastructure Limited.

All of the outstanding bonds under the Debt Issuance Programme, including nominal and index-linked benchmarks and private placements in all currencies, will continue to benefit from the direct and explicit guarantee from the UK Government under the Financial Indemnity Mechanism. In the unlikely event that the DfT withdraws or breaches its obligations on the loan facility to Network Rail the group may issue further bonds or commercial paper to meet funding requirements.

Summary table of financial assets and liabilities

The following table presents the carrying amounts and the fair values of the group's financial assets and liabilities at 31 March 2023 and 31 March 2022.

The fair values of the financial assets and liabilities are recorded at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The following methods and assumptions were used to estimate the fair values where balances were not already held at fair value (see Accounting policies in Note 2):

- Bank loans – based on market data at the balance sheet date and the net present value of discounted cash flows
- Bonds issued under the Debt Issuance Programme – based on market data at the balance sheet date. There are a small number of privately held bonds that are valued by management. Management review comparator bonds and determine an appropriate yield rate based on similar bonds that have available prices.

For cash and cash equivalents, finance lease receivables, trade and other payables and trade and other receivables, fair value equates to carrying value.

Group	2023 Carrying value £m	2023 Fair value £m	2022 Carrying value £m	2022 Fair value £m
Financial assets				
Cash and cash equivalents	303	303	477	477
Other non-derivative financial assets				
Trade and other receivables (less prepayments and accrued income and other taxation and social security)	1,110	1,110	947	947
Collateral receivable	141	141	255	255
Derivatives				
Other derivatives as fair value through profit and loss	93	93	13	13
Total financial assets	**1,647**	**1,647**	**1,692**	**1,692**
Financial liabilities				
Financial liabilities held at amortised cost				
Bank loans	(608)	(752)	(542)	(912)
Bonds issued under the Debt Issuance Programme	(27,598)	(30,172)	(24,823)	(39,473)
Borrowings issued by DfT	(30,836)	(29,308)	(30,941)	(30,092)
Collateral payable	(2)	(2)	-	-
Trade and other payables at amortised cost (less deferred income)	(2,884)	(2,884)	(2,541)	(2,541)
Financial liabilities designated as fair value through profit and loss				
Bonds issued under the Debt Issuance Programme	(51)	(51)	(57)	(57)
Derivatives				
Other derivatives as fair value through profit and loss	(231)	(231)	(261)	(261)
Total financial liabilities	**(62,210)**	**(63,400)**	**(59,165)**	**(73,336)**

The bonds issued under the Debt Issuance programme are all level 2. Financial liabilities designated at fair value, the bank loans, the derivatives and the loan from the Department for Transport are all level 2. For all of the remaining balances, the carrying value approximates fair value and these are level 3.

As shown in the above table, the bonds issued under the Debt Issuance Programme have fair values significantly in excess of their carrying values. These differences are not reflected in the Balance Sheet since the majority of these instruments (See Note 17) were not designated at FVTPL on initial recognition and hence are accounted for at amortised cost under IFRS 9. The size of the difference is driven by the overall decrease in market debt yield rates since the inception of these instruments; debt terms in a higher yield environment resulting in a settlement at par would now attract a premium, assuming no other changes to the instrument or wider environment.

Derivatives

The group (including the group's special purpose financing company, Network Rail Infrastructure Finance PLC) uses derivative financial instruments to reduce exposure to foreign exchange risk and interest rate movements. The group does not use derivative financial instruments for speculative purposes. Derivatives are fair valued immediately through the income statement. The group has a comprehensive risk management process.

The board, through a treasury sub-committee (the treasury committee), has approved and monitors the risk management processes, including documented treasury policies, counterparty limits, controlling and reporting structures.

The use of derivative instruments can give rise to credit and market risk. Market risk is the possibility that future changes in foreign exchange rates and interest rates may make a derivative more or less valuable. Since the group uses derivatives for risk management, market risk relating to derivative instruments will principally be offset by changes in the valuation of the underlying assets, liabilities or transactions being hedged.

Credit risk

Network Rail manages its funds with banks that have high credit ratings; assigned by international credit-rating agencies. The treasury committee authorises the policy for setting counterparty limits based on credit ratings. The group spreads its exposure over a number of counterparties and has strict policies on how much exposure can be assigned to each of the counterparties. Surplus liquidity is invested in the Government Banking Scheme which has low credit risk.

For debt designated as fair value through profit and loss (FVTPL) there has been no change in carrying value as a result of changes in the group's credit risk. The gain in the income statement arising from the remeasurement of FVTPL debt items of £7m (2022: £nil) are all attributable to changes in market risk.

The credit risk with regard to all classes of derivative financial instruments entered into before 1 January 2013 is limited because Network Rail has arrangements in place which limit each bank to a threshold (based on credit ratings), which if breached requires the bank to post collateral in cash or eligible securities. The members of the banking group are required to post collateral on positive mark to market swaps above the threshold. In December 2012 the group entered into new collateral agreements in respect of derivative trades entered into after 1 January 2013. Under the terms of the new agreements Network Rail posts collateral on adverse net derivative positions with its counterparties. The new agreements do not contain a provision for thresholds; as such Network Rail or its counterparties are required to post collateral for the full fair value of net out of the money positions. At 31 March 2023 the fair value of collateral held was £2m (2022: £nil). The group is the beneficial owner of this collateral. The group is free to invest or otherwise utilise the collateral at its discretion, subject to acting within the authority sanctioned by the treasury committee. The balance of collateral posted by the group at 31 March 2023 was £141m (2022: £255m).

The group does not have any significant credit risk exposure to any single counterparty and has considered the creditworthiness of debtors. For further detail on the creditworthiness of customers and suppliers, see Notes 15 (Trade and other receivables) and 16 (Trade and other payables).

The group considers its maximum exposure to credit risk to be the sum of its financial assets, as set out in Note 15.

Foreign exchange risk

Network Rail is exposed to currency risks from its investing, financing and operating activities. Foreign exchange risk for all currencies is managed by the use of forward exchange contracts and currency swaps to limit the effects of movements in exchange rates on foreign currency denominated liabilities.

The group considers a ten-percentage point increase in the value of any currency against sterling to be a reasonably possible change and this would not have a material impact on the group's net profit before tax or equity.

Interest rate and inflation risk

The group is exposed to changes in interest rates as funds are borrowed at both fixed and floating interest rates. The hedging strategy approved by the treasury committee defines the appropriate mix between fixed and floating borrowings. Cross-currency and interest rate swap contracts are used to manage the fixed/floating ratio.

Debt with a carrying value of £7,810m (2022: £13,320m) is arranged at or swapped into fixed interest rates and exposes the group to fair value interest rate risk. Other borrowings were arranged at or swapped into floating rates, thus exposing the group to cash flow interest rate risk.

The group has certain debt issuances which are index-linked and so are exposed to movements in inflation rates. The group does not enter into any derivative arrangements to hedge its exposure to inflation in relation to its index-linked debt, but rather to mitigate the effects of inflation on the group's retail price index-linked revenue streams.

Sensitivity analysis

This sensitivity analysis has been determined based on the exposure to interest rates and inflation for both derivative and non-derivative financial instruments at the balance sheet date. A one per cent increase or decrease represents management's assessment of the reasonably possible changes in average interest rates and inflation.

	Group 31 March 2023	Group 31 March 2022
	Impact on the income statement £m	Impact on the income statement £m
1 % increase in the interest rate	100	196
1 % increase in the GBP RPI on index linked bonds	(214)	(195)

A one per cent decrease in the above rates would have an equal and opposite effect.

Interest rate sensitivities have been calculated by comparing the average rates of the derivative financial instruments to the market rate for similar instruments.

The impact of a change in GBP RPI has been calculated by applying a change of one per cent to the RPI at the balance sheet date to the carrying value of the index linked bonds.

Liquidity risk management

The ultimate responsibility for liquidity risk management rests with the board of directors. The policy manual ratified by the treasury committee includes an appropriate liquidity risk management framework covering the group's short, medium and long-term funding and liquidity management requirements. Treasury provides sufficient liquidity to meet the group's needs, while reducing financial risks and minimising credit risk on surplus cash.

The group manages liquidity risk by maintaining sufficient cash and facilities to cover at least one year's working capital requirement by continuously monitoring forecast and actual cash flows. Included in Note 17 is a description of additional undrawn facilities that the group has at its disposal to further reduce liquidity risk.

The following table details the group's remaining contractual maturity for its financial liabilities. The table has been drawn up on the undiscounted cash flows of financial liabilities based on the earliest date on which the group can be required to pay and, therefore, differs from both the carrying value and the fair value. The table includes both interest and principal cash flows.

Group	Within 1 year £m	1-2 years £m	2-5 years £m	5+ years £m	Total £m
31 March 2023					
Non-derivative financial liabilities					
Bank loans and overdrafts	(8)	(8)	(23)	(720)	(759)
Bonds issued under the Debt Issuance Programme					
– Sterling denominated bonds	(1,300)	(102)	(307)	(2,864)	(4,573)
– Sterling denominated index-linked bonds	(335)	(335)	(8,259)	(20,012)	(28,941)
– Foreign currency denominated bonds	(2)	(2)	(54)	-	(58)
Loan from the Department for Transport	(3,410)	(16,222)	(12,719)	-	(32,351)
Trade and other payables	(1,828)	(28)	-	-	(1,856)
Derivative financial liabilities					
Net settled derivative contracts	(68)	(41)	(32)	-	(141)
Gross settled derivative contracts – receipts	29	29	57	-	115
Gross settled derivative contracts – payments	-	-	-	-	-
	(6,922)	**(16,709)**	**(21,337)**	**(23,596)**	**(68,564)**

Group	Within 1 year £m	1-2 years £m	2-5 years £m	5+ years £m	Total £m
31 March 2022					
Non-derivative financial liabilities					
Bank loans and overdrafts	(7)	(7)	(20)	(641)	(675)
Bonds issued under the Debt Issuance Programme					
– Sterling denominated bonds	(150)	(1,300)	(307)	(2,966)	(4,723)
– Sterling denominated index-linked bonds	(295)	(295)	(1,295)	(23,888)	(25,773)
– Foreign currency denominated bonds	(2)	(2)	(61)	-	(65)
Loan from the Department for Transport	(3,270)	(3,285)	(25,668)	(205)	(32,428)
Trade and other payables	(1,514)	(14)	-	-	(1,528)
Derivative financial liabilities					
Net settled derivative contracts	(120)	(67)	(69)	(4)	(260)
Gross settled derivative contracts – receipts	29	29	88	-	146
Gross settled derivative contracts – payments	-	-	-	-	-
	(5,329)	**(4,941)**	**(27,332)**	**(27,704)**	**(65,306)**

Offsetting financial assets and liabilities

Financial assets

The following financial assets are subject to offsetting, enforceable master netting arrangements and similar agreements. The balances have not been presented on a net basis in the financial statements.

Group	Gross amounts of recognised financial assets £m	Gross amounts of recognised financial liabilities set off in the balance sheet £m	Net amount of financial assets presented in the balance sheet £m	Related amounts not set off in the balance sheet: Financial instruments £m	Related amounts not set off in the balance sheet: Cash collateral received £m	Net amount £m
31 March 2023						
Derivative financial assets	93	-	93	(90)	17	**20**
31 March 2022						
Derivative financial assets	13	-	13	(13)	95	**95**

Financial liabilities

The following financial liabilities are subject to offsetting, enforceable master netting arrangements and similar agreements. The balances have not been presented on a net basis in the financial statements.

Group	Gross amounts of recognised financial liabilities £m	Gross amounts of recognised financial assets set off in the balance sheet £m	Net amount of financial liabilities presented in the balance sheet £m	Related amounts not set off in the balance sheet: Financial instruments £m	Related amounts not set off in the balance sheet: Cash collateral paid £m	Net amount £m
31 March 2023						
Derivative financial liabilities	(231)	-	(231)	90	122	**(19)**
31 March 2022						
Derivative financial liabilities	(261)	-	(261)	12	160	**(89)**

Cash flow hedges

Contractual payments on derivatives designated as cash flow hedges impact the income statement as described in Note 18 and will all have matured by 2027.

Borrowings

Details of the group's undrawn committed facilities and types of debt instrument used can be found in Note 17.

Fair value measurements recognised in the balance sheets

The following table provides an analysis of financial instruments that are measured subsequent to initial recognition at fair value, grouped into Levels 1 to 3 based on the degree to which the fair value is observable:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices)
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

	2023			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Derivative financial assets	-	93	-	93
Assets	**-**	**93**	**-**	**93**
Derivative financial liabilities	-	(231)	-	(231)
Financial liabilities designated at fair value through profit and loss	-	(51)	-	(51)
Liabilities	**-**	**(282)**	**-**	**(282)**
Total	**-**	**(189)**	**-**	**(189)**

	2022			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Derivative financial assets	-	13	-	13
Assets	**-**	**13**	**-**	**13**
Derivative financial liabilities	-	(261)	-	(261)
Financial liabilities designated at fair value through profit and loss	-	(57)	-	(57)
Liabilities	**-**	**(318)**	**-**	**(318)**
Total	**-**	**(305)**	**-**	**(305)**

The fair value of level 2 derivatives is estimated by discounting the future contractual cash flows using appropriate yield curves based on quoted market rates as at the current financial year end.

A review of the categorisation of the assets and liabilities into the three levels is made at each reporting date. There were no transfers between Level 1 and Level 2 fair value measurements and no transfers into or out of Level 3 fair value measurements in the current or prior years.

24. Retirement benefit schemes

Defined contribution schemes

On 1 April 2004 the company introduced a defined contribution pension scheme, the Network Rail Defined Contribution Pension Scheme (NRDCPS). These schemes are offered to all new employees of Network Rail, except those who have the legal right to join the Railway Pension Scheme (RPS). Any employee who wishes to transfer from the Network Rail Section of the RPS to the NRDCPS is entitled to do so.

At 31 March 2023, the NRDCPS had 12,122 active members (2022: 12,960) and the average employer contribution rate in the year was 3 per cent (2022: 4 per cent).

The estimated amounts of contributions expected to be paid by the company and by members to the schemes during the year ended 31 March 2024 are £130m and £83m respectively.

Defined benefit schemes

The principal pension scheme in which the company participates is the Railway Pension Scheme (RPS), which was established by statutory instrument, commenced on 1 October 1994 and is a funded defined benefit arrangement. The assets and liabilities under the predecessor scheme, the British Rail Pension Scheme (BRPS), were transferred to the RPS on that date. The RPS is an industry-wide scheme for all eligible employees within the railway industry. There are different sections within it for different employers. The assets and liabilities of each section are identified separately from those of the other sections. The company has its own section, the Network Rail Shared Cost Section (the Network Rail Section). This scheme, the assets of which are held separately from the company, is contributory and provides pensions related to pay at retirement.

The assets transferred to the RPS from the BRPS on 1 October 1994 were apportioned among the various sections of the RPS in accordance with the methods and assumptions specified in The Railways Pensions (Transfer and Miscellaneous Provisions) Order 1994 (the 'Transfer Order') which effected the transfer. The amount credited to the Network Rail Section included a share of the surplus at that time.

Since 1 April 2004, new members can only join the Network Rail Section of the RPS after completing five years of service. Benefits for existing members and employees joining up to and including 31 March 2004 were not affected by the revised eligibility rules of the Network Rail Section. In addition, the company announced its decision to cap its contribution to British Railways Additional Superannuation Scheme (BRASS) matching at current levels for existing employees and to dispense with matching for new employees. The company will continue to match regular contributions but will not increase them in cash terms in the future.

On 1 November 2008 Network Rail launched a third pension scheme – the Career Average Revalued Earnings (CARE) scheme, which is available to all employees.

Qualified actuaries Willis Towers Watson have valued the schemes on an IAS 19 (revised) basis at 31 March 2023 and 31 March 2022.

The contributions required to fund the RPS and the CARE scheme are reassessed every three years, following completion of actuarial valuations (by the Scheme Actuaries). The last full actuarial valuations of both the RPS and CARE schemes were undertaken by the Scheme Actuaries, at WTW and XPS respectively. These triennial valuations showed a technical combined funding surplus of £1,065m.

Under the terms of the Pensions Act 2004, the Trustee and each employer must agree the methods and assumptions used to calculate the 'Technical Provisions', i.e., assets required to meet the Section's liabilities. The assumptions agreed are typically weaker than those used for IAS 19 purposes in current market conditions, so the minimum funding requirement in itself requires no further adjustment to the IAS 19 obligations below. However, the regulatory regime may, depending on legal advice received at the appropriate time, mean that a future employer's accounting surplus would need to be restricted.

The RPS and CARE schemes are both shared cost in nature, so the cost of benefits being earned and the cost of funding any shortfall in the schemes are normally split in the proportion 60:40 between the company and the members. In practice the contributions are adjusted at each triennial valuation to reflect the funding position of the schemes at that time.

If a surplus or deficit arises, the provisions in the rules mean that the company and members benefit from or pay for this respectively in the proportion 60:40.

	2023 %	2022 %
Key assumptions used:		
Discount rate	4.8	2.7
Expected rate of price inflation and CARE benefit increases (RPI measure)	3.3	3.6
Future earnings increases*		
- after changes to benefits from 1 April 2016	3.3	3.6
Pension increases (CPI measure)	2.9	3.2

* Excluding promotional salary scale. Promotional salary scale increases apply only in respect of service after the date of promotion.

	2023		2022	
	Males	Females	Males	Females
Average life expectancy for mortality tables used to determine defined benefit obligations:				
– Member aged 65	20.8	22.8	21.0	23.0
– Member aged 45	22.4	24.6	22.7	24.9

For Network Rail Section of the RPS the discounted mean term of the defined benefit obligation is 18 years, for the CARE scheme it is 29 years.

Amounts recognised in income in respect of the company's pension arrangement are as follows:

	2023 £m	2022 £m
Current service cost – defined contribution (see note 6)	27	24
Current service cost – defined benefit (see note 6)	324	379
Interest cost	60	60
	411	**463**

The current service cost has been included in employee costs; the net interest scheme deficit has been included in finance costs.

Amounts recognised in the statement of comprehensive income in respect of the company's pension arrangement are as follows:

	2023 £m	2022 £m
Loss / (Gain) on defined benefit obligation due to experience	572	(224)
Gain on defined benefit obligation due to assumption changes	(3,346)	(438)
Return on plan assets (greater) / less than discount rate	444	(304)
Actuarial gain recognised in the statement of comprehensive income	**(2,330)**	**(966)**

The cumulative amount of actuarial gains recognised in other comprehensive income was £2,762m (2022: £432m). In the year the discount rate increased by 210 bps and the RPI assumption decreased by 30 bps. These factors combined have had a significant impact on the defined benefit obligation leading to the £3,346m gain noted above arising from assumption changes. The other movements decrease that gain to £2,330m which is recorded in the statement of comprehensive income.

The amount included in the balance sheet arising from the company's obligations in respect of its defined benefit schemes is as follows:

	2023 £m	2022 £m
The defined benefit obligation is made up as follows:		
Active members	(5,478)	(7,664)
Deferred pensioner member	(1,134)	(1,716)
Retired members	(2,336)	(3,560)
Present value of defined benefit obligation	(8,948)	(12,940)
Fair value of scheme assets	8,590	9,175
Deficit in the scheme	**(358)**	**(3,765)**
Group's share (60%) of the scheme deficit recognised in the balance sheet	**(215)**	**(2,259)**

This amount is presented as a non-current liability in the balance sheet. Cumulative gains or losses are recognised in equity.

Movements in defined benefit plan assets and liabilities (including members' share):

	Asset* £m	Liabilities** £m	Deficit £m
At 1 April 2021	**8,537**	**(13,370)**	**(4,833)**
Current service cost including members' share	-	(650)	(650)
Interest on pension deficit	178	(278)	(100)
Section amendment (Past Service Cost)	-	-	-
Administration expenses	(21)	-	(21)
Return on plan assets greater than the discount rate	508	-	508
Actuarial gain arising from experience adjustments	-	377	377
Actuarial loss arising from demographic assumptions	-	70	70
Gain on DBO – financial assumption	-	662	662
Regular contributions by employer	135	-	135
Contributions by employees	87	-	87
Benefits paid	(249)	249	-
At 1 April 2022	**9,175**	**(12,940)**	**(3,765)**
Current service cost including members' share	-	(568)	(568)
Interest on pension deficit	246	(346)	(100)
Section amendment (Past Service Cost)	-	-	-
Administration expenses	(21)	-	(21)
Return on plan assets less than the discount rate	(742)	-	(742)
Actuarial gain arising from experience adjustments	-	(947)	(947)
Actuarial loss arising from demographic assumptions	-	208	208
Gain on DBO – financial assumption	-	5,371	5,371
Regular contributions by employer	125	-	125
Contributions by employees	81	-	81
Benefits paid	(274)	274	-
At 31 March 2023	**8,590**	**(8,948)**	**(358)**

* Including CARE scheme assets at 31 March 2023 of £240m (2022: £393m)
** Including CARE scheme liabilities at 31 March 2023 of £541m (2022: £959m)
The actual return on scheme assets was a loss of £496m (2022: £686m).

Scheme assets

The following table shows the assets split according to the IFRS 13 Fair Value hierarchy:

	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
31 March 2023				
Total assets RPS scheme	5,184	196	2,970	8,350
Total assets CARE scheme	123	86	31	240
Total scheme assets	**5,307**	**282**	**3,001**	**8,590**
31 March 2022				
Total assets RPS scheme	5,556	411	2,815	8,782
Total assets CARE scheme				393
Total scheme assets				**9,175**

The group is exposed to a number of risks relating to the scheme including assumptions not being borne out in practice. The most significant risks are as follows:

Asset volatility

There is a risk that a fall in asset values is not matched by corresponding reduction in the value places on the defined benefit obligation scheme (DBO). The scheme holds a proportion of growth assets, which are expected to outperform corporate and government bond yields in the long term but gives exposure to volatility and risk in the short-term.

Change in bond yields

A decrease in corporate bond yields will increase the value placed on the scheme DBO, although this will be partially offset by an increase in the value of the scheme's corporate bond holdings.

Inflation risk

The majority of the scheme's DBO is linked to inflation where higher inflation will lead to higher value being placed on the DBO. Some of the scheme assets are either unaffected by inflation or loosely correlated with inflation (e.g., growth assets), meaning that an increase in inflation will generally increase the deficit. The CPI(H) assumption is derived from the RPI assumption. On 4 September 2019, the Government and UK Statistics Authority (UKSA) published correspondence relating to the future of RPI. A consultation on the proposed changes ran from March to August 2020 and a formal response to the consultation was published on 25 November 2020. Given that the UKSA have noted their intention to align RPI with CPIH from February 2030, the post-2030 market-implied RPI assumption should theoretically reflect market expectations for CPI(H). CPIH has historically been closely aligned with CPI, so it has been assumed there is a nil gap between RPI and CPI(H) from February 2030. This calculation assumes the market has not included any compensation or adjustment for the change from RPI to CPI(H) from 2030. The starting point for the RPI assumption is the yield rate curve reflecting the scheme's average duration of 19 years. The rate is then adjusted downwards to reflect the fact that buyers of these instruments are prepared to pay a premium for inflation protection and as such the yield is not a true reflection of market expectations of inflation. This adjustment is consistent in 2023 and 2022. The difference between RPI and CPI(H) is 40bps (2022: 40bps).

Life expectancy

Future mortality rates cannot be predicted with certainty. An increase in life expectancy will lead to an increase in the scheme's defined benefit obligations, whilst a decrease in life expectancy will decrease those obligations. In the year-ended 31 March 2023 life expectancy assumptions have been reduced slightly in line with emerging long-term forecasts and trends. These changes are in line with those proposed for use in the pension schemes ongoing triennial valuation.

Discount rate

The discount rate needs to be based upon yields on high quality corporate bonds at the balance sheet date. A range of bonds are included when calculating this rate. Further, extrapolation of bond yields is required where there is a lack of bonds at long duration.

Actuarial assumption sensitivity

The discount rate is set by reference to market conditions at the reporting date, and can vary significantly between periods.

The earnings increases are linked to inflation and so set by reference to market conditions at the reporting date.

The mortality assumptions used are set by considering the experience of the scheme's members, and by making an allowance for possible future improvements in longevity. Mortality assumptions are difficult to set accurately and forecasting rates of future mortality improvement is inevitably speculative.

Expected future benefit payments from the Network Rail Section, based on data from the 2019 formal valuation and the 31 March 2023 IAS 19 assumptions are as follows:

	£m
Benefits expected to be paid within 12 months	275
Benefits expected to be paid between 2 to 3 years	553
Benefits expected to be paid between 4 to 6 years	954
Benefits expected to be paid between 7 to 10 years	1,519
Benefits expected to be paid between 11 to 15 years	2,239
Benefits expected to be paid in over 15 years	14,122

The following table shows the effect of changes in these assumptions upon the defined benefit obligation:

	2023 £m	2022 £m
Discount rate		
Change in defined benefit obligation at year end from a 25-basis point increase	(379)	(683)
Change in defined benefit obligation at year end from a 25-basis point decrease	404	737
Mortality		
Change in defined benefit obligation from a one-year increase in longevity	349	504
Change in defined benefit obligation from a one-year decrease in longevity	(350)	(501)
Earnings increase		
Change in defined benefit obligation at year end from a 25-basis point increase	113	204
Change in defined benefit obligation at year end from a 25-basis point decrease	(110)	(197)
Price inflation (CPI measure)*		
Change in defined benefit obligation at year end from a 50 basis point increase	571	981
Change in defined benefit obligation at year end from a 50 basis point decrease	(541)	(908)

* Including consistent increases to Retail Price Index, salary growth and Retail Price Index / Consumer Price Index related pensions assumptions.

25. Related parties

The DfT and TS are considered related parties of Network Rail. Network Rail received grant income of £7,038m from the DfT in the year ended 31 March 2023 (2022: £5,988m). Network Rail recognised grant income of £477m from TS for the year ended 31 March 2023 (2022: £525m). The total of this income is “Grant income” in Note 3. At 31 March 2023 the company held £30,836m of loans issued by DfT (2022: £30,941m).

The British Transport Police (BTP), with whom Network Rail has a Police Service Agreement is also a related party. Network Rail incurred £109m (2022: £97m) of costs relating to services provided by the BTP in the year ending 31 March 2023 and received £1m (2022: £1m) in property income from the BTP in the same period.

Network Rail is also a related party of High Speed 2 (HS2). At the end of the financial year Network Rail held £115m (2022: £165m) of capital work in progress relating to works on HS2 and had also received £196m (2022: £199m) of capital grants that was recorded against property, plant and equipment.

East West Rail (EWR) is also a related party of Network Rail. During the year ended 31 March 2023, Network Rail received income of £1.0m (2022: £0.3m) from EWR for the provision of feasibility studies and development activities services.

Network Rail is one of DfT OLR Holdings Limited’s main industry stakeholders, with common ownership through the latter being wholly owned by the Secretary of State for Transport. Transactions between Network Rail and DfT OLR Holdings Limited are at arm’s length. During the financial year ended 31 March 2023 £398m (2022: £507m) for services rendered, net of purchases, was received from DfT OLR Holdings Limited. Capital project funding paid, net of capital costs amounted to £11m (2022: £5m). At year-end balances with DfT OLR Holdings Limited included payables of £16m (2022: £11m) and receivables of £13m (2022: £13m).

26. Post balance sheet events

As at the date of signing these financial statements there have not been any significant post balance sheet events, whether adjusting or non-adjusting.

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