

OFFICIAL



# Scotland's Railway Delivery Plan

2024-2029

March 2024

## Foreword



*Foreword by Alex Hynes, Managing Director, Scotland's Railway*

Today we're sharing our delivery plan for the next five-year business planning period (April 2024 – March 2029) that sets out how we'll achieve our vision of building the best railway Scotland has ever had.

We're very proud of what we've achieved across the last five years;

- By working with our industry partners, we kept the railway running during the Covid-19 pandemic, ensuring key workers could get to their places of employment and businesses could move their goods to market.
- We're responding to make the railway more resilient to the effects of increasingly extreme weather, with unprecedented challenges being presented by storms in the most recent autumn and winter period.
- We've worked in partnership with the freight industry to grow the volume of goods moved by rail. This included the development of several new traffic flows which will replace the requirement for hundreds of thousands of lorry journeys each year.
- We've improved the reliability of our train services, with more trains arriving at their destination on time, and the Public Performance Measure (PPM) increased by two percentage points over the period.
- We've delivered £349 million efficiencies across operations, maintenance, support and renewals over the past five years.

However, the railway has also faced challenges, many of which have shaped our approach to business planning for the next five-year period. These include changing commuter habits and a range of global and domestic events which have resulted in high inflation rates not experienced for a generation.

The Carmont derailment in August 2020 and the tragic loss of our passenger Christopher Stuchbury and colleagues Donald Dinnie and Brett McCullough was a terrible day for everyone on Scotland's Railway. We've worked hard to learn the lessons from that event to further minimise the risks of similar accidents in the future.

We're also proud to continue growing the railway in Scotland and have great ambitions for the improvements that we can make over the next five years and the plans we'll develop to build on that in the future.

We're encouraged that, in these challenging financial circumstances, the Scottish Government has continued to emphasise its ambition for the railway. Scottish Ministers have committed to invest over £4 billion in the operations, maintenance and renewal of the railway over the next five years, a settlement similar in size to the previous business planning period.

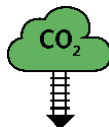
Our plans are ambitious but achievable and the delivery of them is underpinned by our people, who are empowered to do their best work to deliver for our passengers. We'll continue to put passengers and freight first by delivering upon our five key strategic themes:



**Everyone home  
safe every day**



**Reduce the net  
cost of the  
railway**



**Taking climate  
action**



**Run a reliable  
railway**



**Track and train  
working together**

We understand the importance to our passengers and freight customers that trains run on time. Right now, almost nine out of 10 passenger trains are arriving at their destination on time, but we need to get better. Improving the reliability of the railway by working in partnership with passenger and freight operators is therefore our number one priority, after safety.

To meet the wider financial challenges the rail industry faces, we're focused on delivering more for less, with a plan to deliver over £400 million of efficiencies in the next five years. We've been entrusted with public money and have a responsibility to spend it wisely and work more efficiently to deliver the best value possible. So, whilst we've had to prioritise our spending more than ever, we'll never compromise on activity that will get everyone home safe every day.

We're making great progress on our contribution to the Scottish Government goal of being net zero by 2045, through decarbonising our network. We'll continue to work closely with stakeholders, including our supply chain, to further deliver a green, decarbonised, and climate-ready railway for the people of Scotland.

To achieve all these ambitions, we'll need to work in a whole system approach with our industry partners across track and train. We'll therefore work more collaboratively with passenger and freight operators to identify opportunities for further efficiencies, drive down the net cost of the railway, and improve the reliability of services.

I'm confident that if we work together, we can deliver the improvements we've set out in our business plan to deliver a safer, better performing and more efficient railway.

Best wishes,

Alex

**Alex Hynes, Managing Director, Scotland's Railway**

## Executive summary

**In May 2023, we shared our Strategic Business Plan with our regulator, Office of Rail and Road (ORR), and our funder, Transport Scotland, which set out our plan to deliver the best railway Scotland's ever had.**

The plan outlined our ambitious agenda for the future of Scotland's Railway and was [published](#) on 27 July 2023.

In this document, we build upon that work, setting out our delivery plan for our next five-year business planning period – which begins in April 2024.

This is the final step in the process that determines the outputs that Scotland's Railway will deliver in exchange for funding received from Scottish Ministers, and rail network access charges and other income.

We've developed an ambitious plan that prioritises continuous improvement in safety and delivery of our punctuality and reliability targets.

We've taken a market-led approach to developing our plans – segmenting Scotland's Railway into geographical 'corridors' based on socioeconomic, commercial and sustainability factors – and prioritised delivering the greatest safety and performance improvements at the lowest possible cost.

This approach has allowed us to reduce costs, by investing in fewer full renewals and more life extending interventions in our infrastructure.

Our plan has been the result of consistent engagement with Transport Scotland, ORR, and our customers, to ensure we've a plan that delivers for our industry and the communities we serve.

**Since the submission of our plan, high inflation has continued to erode the real value of our funding.**

Due to the impact of continuing higher inflation, the total funding provided by Transport Scotland is now expected to be similar to the current business planning period, after adjusting for the latest inflation forecasts. Although around half of that funding is protected from inflation changes, this continues to be the biggest risk to delivering our plan.

**In addition to the impact of inflation, ORR allocated more funding to train performance in its Final Determination for the next five years.**

We're committed to driving improved performance on the rail network in Scotland and are supportive of developing a targeted whole industry performance fund which will deliver initiatives across the railway. We've therefore incorporated this funding into our plans, but it's important to recognise that it has been diverted from providing further inflation protection, placing greater financial risk on our overall plan. We'll work closely with ORR, Transport Scotland, and other stakeholders to make sure that this money is spent efficiently and effectively and assess the impact on performance forecasts as proposals come forward, after the scheme opens.

**Even in a challenging financial environment, our plan is clear that we'll never compromise on safety.**

Getting everyone home safe every day is fundamental to everything that we do in Scotland's Railway, and we acknowledge that in the previous business planning period we didn't meet this priority. Tragically, a colleague died in a workplace accident in Glasgow and three people – two ScotRail colleagues and a passenger – lost their lives in the accident at Carmont. We've learned from these tragic incidents and our delivery plan continues to embed important changes across Scotland's Railway.

Scotland's climate is changing as a result of the factors that are affecting climate change generally. As a result, we're experiencing more frequent and extreme weather events which require action to provide a safe and reliable service for our passengers. We've set up programmes, such as the Weather Risk Task Force, to undertake critical work to improve our understanding of the impact of extreme weather on our network.

**We're focused on delivering against Scottish Ministers' requirements for the railway>**

As part of the business planning process, Scottish Ministers shared detailed requirements for the railway to deliver. We're confident that this plan will deliver upon those requirements over the next five years in so far as it is possible within the funding available.

**In particular, we'll continue to work towards Scottish Ministers' performance ambitions in every year of the next business planning period.**

In our planning, we prioritised delivering the Scottish Ministers' requirement for 92.5% of trains to reach their destination within five minutes of their scheduled arrival time (unless disrupted by speed restrictions due to severe weather or delayed connections).

We know that delivering this in every year of the business planning period will be significantly challenging, particularly in the early years, given the performance challenges that we've faced in 2023/24 due to the impact of severe weather on our infrastructure. That's why we committed to delivering 92.5% by the end of year four (2027/28) in our Strategic Business Plan last year. Our latest assessment features as part of this Delivery Plan.

As a whole industry outcome measure, improved performance will only be achieved by track and train working together, including funding specific rolling stock fleet initiatives within ScotRail. We therefore acknowledge and welcome ORR's commitment to measuring us against our contribution to that target. We'll continue to liaise with ORR on how this measure will be monitored and will assess the impact of the targeted performance improvement fund on forecasts, as proposals come forward.

**Delivering transformational efficiencies within our business will be a key enabler of success in the next five years.**

The availability of funding to help manage financial risks across the next five years is reliant on us delivering our ambitious efficiency target of £444 million across the five-year period (£389 million of direct efficiencies and £55 million enabled or delivered through network-wide functions). Previous CP7 / PR23 publications have been presented in real (2023/24) prices, setting out our overall funding requirement in today's prices. Now that we have finalised our plans for CP7, we have moved to present our plan in cash prices (i.e. the money we expect to

pay out during the control period). This has resulted in the efficiencies target to increase from £410 million to £444 million.

We expect around half of our total efficiency target to be realised by transforming our business – making co-ordinated changes across our functions to transform how we plan and deliver work on the railway.

**Working with train and freight operators, we hope to deliver the best railway that Scotland's ever had, while supporting Scotland's transition to net zero.**

We'll work with both train and freight operators to encourage more people and businesses to choose rail as part of their sustainable journey. This will continue to support Scotland's commitments to deliver net zero by 2045.

We continue to identify opportunities to further decarbonise our railway. In the next five years, we plan to deliver an energy efficiency programme to minimise emissions from our own operations and phase out the use of fossil fuel heating in our buildings. We'll also continue to drive forward our plans to transition our road vehicle fleet in Scotland to electric vehicles.

**To help achieve all these ambitions, we've launched a transformation programme called 'Better in the Making'.**

This programme will deliver improvements across our five strategic priorities:

- Everyone home safe every day
- Reduce the net cost of the railway
- Taking climate action
- Run a reliable railway
- Track and train working together.

The 'Better in the Making' programme is focused on delivering improved ways of working within our organisation as well as transforming how we operate as a business in the future.

Through Better in the Making, we'll use the next five years as an opportunity to make our business more effective and efficient through enhancing our customer focus and working more closely with passenger and freight operators and our wider stakeholders.

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## Our 2024-29 plan on a page

| Our outcomes  | Our commitments   |
|---|---|
|  <p>Everyone home safe every day</p>       | <p>We'll continuously improve safety outcomes for our passengers and workforce.</p> <p>We'll continue to embed our safety framework, demonstrating we're in control of, and managing potential risks that could impact our colleagues, customers, and the public.</p> <p>We'll focus our investment in key risk areas such as earthworks and drainage systems to improve our network's resilience to extreme weather.</p>   |
|  <p>Reduce the net cost of the railway</p> | <p>We'll deliver a safe and reliable railway, investing £4,815 million in network, national and local infrastructure over the next five years.</p> <p>We'll deliver £444 million of efficiencies over the course of the next five years.</p>  |
|  <p>Taking climate action</p>             | <p>We'll encourage more passengers to choose rail as part of their sustainable journey, by demonstrating our green credentials.</p> <p>We'll encourage more businesses to choose to move their goods by rail, targeting a freight growth increase of 8.7% net tonne kilometres. This would be equivalent to 35,000 fewer lorry moves a year.</p> <p>We'll continue to support the Scottish Government's legal requirement for net zero by 2045.</p> <p>We'll deliver a programme of climate resilience asset interventions.</p>   |
|  <p>Running a reliable railway</p>       | <p>We'll improve the reliability of the network, so that:</p> <ul style="list-style-type: none"> <li>• Unless disrupted by speed restrictions caused by severe weather or connections to other services and ferries, we enable 92.5% of ScotRail trains to arrive at their final destination within five minutes of the timetabled arrival time by the end of 2027/28.</li> <li>• Caledonian Sleeper are able to deliver their Right Time target.</li> <li>• Our cross-border operators deliver their punctuality targets.</li> <li>• Our freight operators have reliable train paths and meet our Freight Cancellations and Lateness (FCaL) target of 5.5% by the end of 2025/26.</li> </ul> |
|  <p>Track and train working together</p> | <p>We'll work even more closely with train and freight operators to deliver better value for money:</p> <ul style="list-style-type: none"> <li>• Through joint performance initiatives.</li> <li>• Through our market-led planning approach to better understand specific needs in different parts of Scotland and how to deliver them.</li> </ul> <p>We'll also explore ways to access the tracks when it least disrupts our customers.</p>  |



## Who we are

Scotland's Railway serves people, businesses and local communities from the borders in the south, to Wick and Thurso in the far north east of Scotland. We manage a diverse network including busy intercity lines between Scotland's eight cities, as well as more remote lines in the Highlands. For the purposes of this document, we refer to Scotland's Railway as the devolved part of Network Rail in Scotland.



Passenger rail services in Scotland are operated primarily by ScotRail Trains Limited (ScotRail), the publicly owned passenger operator. Other passenger operators running cross border services into and out of Scotland include Caledonian Sleeper, London North Eastern Railway (LNER), Avanti West Coast (AWC), Lumo, CrossCountry and TransPennine Express (TPE). Our freight operators including Colas, DRS, DB Cargo, Freightliner, GB Railfreight and Varamis also run services within Scotland and between Scotland and England.

Scotland's Railway provides substantial benefits for the people of Scotland and those who visit. In 2022/23 there were 69.4 million passenger journeys for Scotland, of which a total of 9.2 million were journeys made to or from regions outside of Scotland. The total number of passenger journeys in 2022/23 was higher than the 52.5 million journeys in 2021/22 but remains significantly lower than the approximately 100 million that were undertaken in 2019/20. Rail journey statistics are published [here](#).

Scotland's Railway also provides vital, sustainable route to markets and supports our nation's economy. The railway is a major contributor to sustainable economic growth and is part of an integrated public transport network in Scotland. We've a strong focus on the development of freight in Scotland as a key contributor to delivery of Scottish Ministers' net zero ambitions.

We're proud to continue growing the railway in Scotland and have great ambitions for the difference that we can make to businesses and communities over the next five years as we make this the best railway Scotland's ever had.

## Our strategy and outcomes

In the next five years, we'll put passengers and freight first by delivering upon our five key strategic themes:

- Everyone home safe every day
- Reduce the net cost of the railway
- Taking climate action
- Run a reliable railway
- Track and train working together.

Those strategic themes support us in delivering the requirements set out by Scottish Ministers in their High Level Output Specification (HLOS), published [here](#).

Figure 1 shows how our objectives are supported and aligned to the wider Network Rail strategic themes (Safety, Efficiency, Sustainable Growth, Train Service Delivery, Customer & Communities and People).

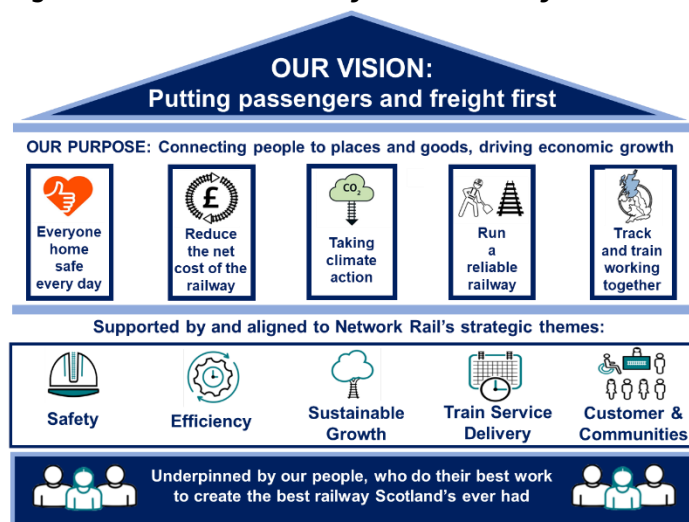
The delivery of our objectives is underpinned by our people, who make up a highly skilled workforce, fully committed to delivering a successful, safe railway that is fit for the future.

Key to our strategy for the next five-year funding period has been our market-led approach. This has allowed us to align our investment more closely with our strategic objectives, leading to us making more targeted and proportionate interventions to deliver greater value for money.

It has also allowed us to focus on delivering our ambitions for each strategic rail corridor across our network. This has enabled us to deliver less disruptively, more efficiently, reduce net cost, and deliver reliable performance day after day.

For each of our five strategic themes, this section sets out what we, alongside our industry partners, plan to deliver in the next five years.

Figure 1: Scotland's Railway vision and objectives





## Everyone home safe every day

Our safety vision is to get everyone home safe every day.

### Objectives

Within a challenging funding environment, we've developed an affordability-driven plan for the next five years. This has meant we've had to prioritise our spending more than ever, but we'll never compromise on activity that will support the safety of our passengers, colleagues and the wider public. In the last five-year period, an average of 144 colleagues were injured each year, with 35 of those colleagues requiring time off to recover from their injury. Tragically, a colleague lost their life in a workplace accident in Glasgow and three people – two ScotRail colleagues and a passenger – lost their lives in the tragic accident at Carmont. As a result, we know that we did not deliver upon our safety vision.

We'll therefore focus on our five health and safety objectives:

- Reducing passenger and public safety risk
- Reducing safety risks to our workforce
- Mitigating threats to railway security
- Continuing to improve workforce health
- Improving our understanding of the impact of extreme weather on our network.

### Stakeholder impacts

We've engaged with ORR on potential safety risks throughout the development of this plan, providing frequent progress updates at a Scotland level and whole-industry updates at network-wide level.

We've worked closely with local councils and other authorities as we continue to focus on ways to further reduce train accident risk. We've focused investment in key risk areas to improve earthworks (the slopes and embankments around our railway) and our drainage systems to improve weather resilience and combat the impact of climate change on our infrastructure. In addition, our level crossings risk control strategy aims to improve safety by taking steps to reduce suicide and trespass while tackling the causes of serious events that affect our infrastructure.

We've launched our safety framework across the company, which focuses on locally led improvements, driven by our central vision of getting everyone home safe every day.

We'll continue to work with our Technical Authority (a network-wide function) to improve fire safety with a particular drive to improve workforce safety in our buildings, and public and passenger safety in our stations and tunnels.






### What we'll deliver and our key initiatives

#### [Safety framework](#)

We're creating a culture where there's no doubt about the care we have for our colleagues, passengers and the public. We want behaviours that match our vision to get everyone home

safe every day. That's why we've included £3 million in our plan for improvements in safety culture and leadership, communications and engagement, safety capability and risk and assurance through the implementation of our safety framework.

**Figure 2: Our safety framework**

|  |  |
|--|--|
|  <b>Safety Culture</b>        | Scotland's Railway will create a culture where there's no doubt you're cared about, where the behaviours you see match up with our vision to get everyone home safe every day - and, where that's missing, you know it's your responsibility to challenge and that speaking up is both expected and welcome. |
|  <b>Safety Leadership</b>     | Scotland's Railway will deliver strong safety leadership that provides consistent messages, direction, and examples at all levels of our organisation.   |
|  <b>Communication</b>         | In Scotland's Railway, safety communications are always robust, simple, and in real time. Our teams value and prioritise safety conversations above everything else. Frontline leaders possess effective communication skills to help promote and foster good working relationships at all levels.           |
|  <b>People and Capability</b> | Scotland's Railway recognises that people, not just process, deliver safety. Being healthy, well and fully equipped is fundamental in developing and delivering arrangements and processes to enable health and safety.  |
|  <b>Risk and Assurance</b>    | Scotland's Railway will put the assessment of risk and the line of sight to controls at the centre of our decision-making process. We'll deliver effective assurance arrangements and demonstrate we're in control of and managing risk to our colleagues, customers, and the public.                        |

### [Health strategy](#)

We've included £3 million in our plan to develop occupational health and wellbeing initiatives to reduce occupational health risk and to promote wellbeing. We're doing this so that the work we do and the processes we follow do not negatively impact colleagues' current or future health and wellbeing.

This strategy includes a range of focused initiatives such as:

- Improving how we collect data and analyse performance of current initiatives.
- Identifying roles at risk of exposure to ballast dust which can cause long-term health problems.
- Development of our hand-arm vibrations management programme to help with recovery.
- Identification of roles where there is exposure to diesel engine exhaust emissions.
- Continuing our manual handling improvement programme to help reduce slip, trip, and fall accidents and subsequent musculoskeletal conditions.
- Investment in technology to improve track worker safety.
- Insourcing of our occupational health service.
- Management of fatigue caused by prolonged working, heavy workload, insufficient rest, and inadequate sleep.
- Monitoring of health conditions to drive an improvement in mental health and wellbeing.

We understand the need to become more mature in our management of fatigue and recognise that continued improvement is required. We’re developing detailed plans for continued improvement in this area.

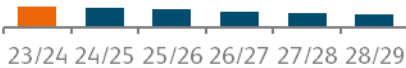


[Weather Risk Task Force](#)

The Weather Risk Task Force was set up in January 2021 to undertake critical work to improve our understanding of the impact of extreme weather on our network. This includes understanding the operational changes that need to be made to continue to run a safe and reliable railway. Action plans following recommendations made after the tragic accident at Carmont are being delivered directly by Scotland’s Weather Risk Task Force. Investments will include the rolling out of more remote monitoring equipment on our earthworks, to provide early warning of earth movements to reduce risk from landslips and improve the overall safety of the railway. In addition, we’ll invest in more people for inspections and maintenance of our drainage systems.

**Outcome measures**

Our forecasts for key regulatory measures are included below. The full definitions for these measures can be found in the glossary.

**Table 1: Key regulatory measures: everyone home safe everyday**

|  | 23/24* | 24/25 | 25/26 | 26/27 | 27/28 | 28/29 |   |
|--|--------|-------|-------|-------|-------|-------|---|
| <b>Fatalities and Weighted Injuries (FWI)</b>    | 0.103  | 0.096 | 0.086 | 0.078 | 0.070 | 0.063 |  |
| <b>Train Accident Risk Reduction (TARR)**</b>    | 95 %   | 95 %  | 95 %  | 95 %  | 95 %  | 95 %  |  |
| <b>Personal Accountability for Safety (PAFS)</b> | 19     | 26    | 26    | 26    | 26    | 26    |  |

\*CP6 exit positions are based on a forecast as at February 2024.

\*\*TARR is a leading indicator that measures the activities we’re delivering to reduce train accident risk (as measured by the Precursor Indicator Model). Internally, we’re introducing a new approach to measuring our inputs to reducing train accident risk reduction through Passenger Safety Milestones.



## Reduce the net cost of the railway

Our vision is to deliver a safe, robust, and reliable railway whilst managing down the net cost of the railway, delivering value for money, and achieving year-on-year growth in revenue.

### Objectives

Rail services in Scotland are subsidised by taxpayers through the Scottish Government, and with costs greater than revenues, our focus is on reducing the net cost of running the railway.

Scotland's Railway has five objectives in relation to achieving this. These are:

- Delivering more for less with 10 % efficiencies on operating costs and 15 % efficiencies on capital expenditure
- Transforming how we work to be more efficient, supported by our 'Better in the Making' programme
- Achieving our ambitious efficiency target of £444 million (£389 million in Scotland, £55 million from network-wide savings)
- Supporting annual growth in rail usage and revenue from passengers
- Developing a more whole industry, financial view covering both the costs to Scotland's Railway and train operators for each line of route and use that to drive better financial decisions.

### What we'll deliver and our key initiatives

The railway industry has experienced a significant reduction in revenue since the Covid-19 pandemic. Steps have already been taken to attract passengers back and leisure travel has recovered well but, at least in the short-term, changes to working patterns have seen a shift to hybrid working, resulting in fewer commuters and fewer business trips, with virtual meeting technology now proving to be a key source of competition for the railway.

This means that we must work even harder with train operators to build confidence in the railway across several areas:

- Demonstrating to passengers that the railway is the safest and most convenient way to travel
- Improving journey times where we can, and having a strong performance regime that gets trains to their destinations on time – Annex A sets out more detail on how we'll achieve that
- Reducing the carbon footprint of the railway, reinforcing our position as the most environmentally sustainable way to travel and move goods
- Delivering value for money for passengers, freight customers and the taxpayer.

We're also targeting an additional £19 million in revenue from increased income growth within our existing property portfolio, such as income from rent from our commercial and retail property estate, in addition to selling surplus land and development sites.

We also need to focus on cost. The railway is made up of many different organisations, all of which have revenue and cost challenges. To be successful, we need to ensure that decisions are

taken in the best interests of the whole industry overall, rather than focus on individual organisations.

For the next business planning period, we'll focus on reducing both the net cost of Scotland's Railway, but also by investing where it could support increased revenues across the industry. Reducing our net cost will be achieved through our market-led corridor-based approach to asset management, as well as increasing our variable income from our commercial and retail property assets.

We're also taking steps to improve service quality and revenue protection, especially at the major stations we run at Glasgow Central and Edinburgh Waverley.

We've recognised the scale of challenge in the public finances and have set ourselves an ambitious efficiency target of £444 million to deliver.

Since the development of our Strategic Business Plan, we've continued to progress our efficiency programme to deliver our target, which is centred around two strategic workstreams:

- Our market-led strategy is an outcome-based, collaborative, and data driven approach to investment planning across the defined corridors of our network. This has allowed us to align our investment more closely with our strategic objectives, leading to us making more targeted and proportionate interventions to deliver greater value for money.
- Our access strategy aims to maximise the amount of productive time that staff will spend on site to optimise safety and effectively deliver our plans. To achieve this, we'll use data to better forward forecast.

Ultimately, our ability to sustainably reduce the net cost of the railway will depend most significantly on delivering and continuously improving these two linked, core strategies. Harnessing the full power of our data and technology systems will underpin our asset and access strategies and enable us to adopt more efficient processes and make better decisions.

This programme to reduce the net cost of the railway is supported by a transformation programme called 'Better in the Making'. The programme has been launched since the publication of our Strategic Business Plan to support the delivery of the strategic objectives detailed in our plan and provide an effective vehicle for cultural change. Our structured approach, with a clear process to move efficiencies from idea through to realisation, will help ensure delivery of our efficiency plan.

Through the 'Better in the Making' programme, we're:

- Identifying and delivering conventional efficiency opportunities. For example, we've tested our ability to deliver additional efficiencies within our maintenance function through delivering more risk-based maintenance. This means that we'll utilise better information on the condition of our assets to conduct the right maintenance activities at the right time. The majority of these will be managed through established management and governance arrangements and monitored through our efficiency reporting framework.
- Delivering efficiencies from network-wide functions. We'll continue to work with these functions, including Route Services and the Technical Authority, to identify and implement opportunities from network-wide led programmes, such as research,

development and innovation (RD&I), to understand how new technology can best support the delivery of our safety targets, workforce reform and modernisation.

- Streamlining and optimising our business model across our organisation, including our supply chain and property footprint.

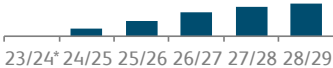

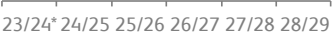
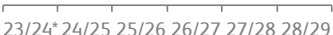
### Outcome measures

Our forecasts of key regulatory measures are included below. The full definitions for these measures can be found in the glossary.

ORR accepted our efficiency proposal of £444 million across the five-year business plan (£389 million delivered by Scotland’s Railway and £55 million allocated from the network-wide functions). The efficiencies trajectory shown below for the five-year period include the £55 million allocated from the network-wide functions.

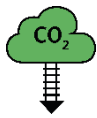
It’s important to recognise that our £444 million efficiency challenge over the five-year period continues to be more ambitious than our usual planning assumptions. In addition, the delivery of these cash-releasing efficiencies is critical to the overall delivery of the plan, and this is why we’ve set out the programme detailed above. Previous CP7 / PR23 publications have been presented in real (2023/24) prices, setting out our overall funding requirement in today’s prices. Now that we have finalised our plans for CP7, we have moved to present our plan in cash prices (i.e. the money we expect to pay out during the control period). This has resulted in the efficiencies target to increase from £410 million to £444 million.

**Table 2: Key regulatory measures: reduce the net cost of the railway**

|   | 23/24* | 24/25 | 25/26 | 26/27 | 27/28 | 28/29 |   |
|---|--------|-------|-------|-------|-------|-------|---|
| <b>Efficiencies - Opex (annual, £m)</b>                       | -      | 10.5  | 21.7  | 33.5  | 41.0  | 46.6  |  |
| <b>Efficiencies - Capex (annual, £m)</b>                      | -      | 20.2  | 50.8  | 67.2  | 71.5  | 80.8  |  |
| <b>Financial Performance Measure (FPM) - Opex Split</b>       | -      | 0     | 0     | 0     | 0     | 0     |  |
| <b>Financial Performance Measure (FPM) - Capex Split (£m)</b> | -      | 0     | 0     | 0     | 0     | 0     |  |

\*CP6 exit positions are based on a forecast as at February 2024.





## Taking climate action

Our vision is to contribute to Scottish Government's sustainability commitments by delivering net zero across our network by 2045.

### Objectives

This priority covers our Climate Action Plan under the following five themes: climate ready, net zero, biodiversity, environmental management and social value.

Other sustainability objectives, focused on encouraging the public to choose rail as part of their sustainability journey (also known as modal shift), are covered in the track and train working together section of our delivery plan.

Our Climate Action Plan covers the following objectives:

- Deliver a sustainability strategy that makes progress towards net zero
- Improve data accuracy on carbon emissions, in particular, data associated with our indirect emissions from our supply chain, to enable continuous carbon emissions reductions across our network
- Deliver a programme to improve the resilience of our railway against extreme weather and longer-term changes in climate
- Support the Scottish Government's legal requirement for net zero by 2045.

### Stakeholder impacts

In developing our delivery plans, we've considered stakeholder objectives within:

- Transport Scotland's [National Transport Strategy 2 \(NTS2\)](#) and [Strategic Transport Projects Review 2 \(STPR2\)](#).
- Network Rail's [Environmental Sustainability Strategy](#).
- Scottish Ministers' [HLOS requirements](#).
- ORR's [Independent Reporter review](#) of Scope 1 and 2 carbon emissions forecasts for the next business planning period.

We've developed detailed targets for carbon reduction using the Science Based Targets methodology, which has enabled us to understand where our highest emissions sources are and how to reduce them, to achieve net zero by 2045. We'll report on our progress towards these targets annually and will continue to improve our data accuracy associated with those emissions embedded in our infrastructure and indirect emissions from our supply chain. This reporting will give our stakeholders the confidence that we're addressing the net zero challenge.

We'll work closely with stakeholders, including our supply chain, to collaborate on projects with mutual benefits and embed sustainability into existing processes to further deliver a green, decarbonised, and climate-ready railway for the people of Scotland. We're working with our suppliers to design carbon out of projects by, for example, selecting lower carbon materials, minimising construction waste, or making more use of renewable energy on worksites.

## What we'll deliver and our key initiatives

We'll deliver our Climate Action Plan through specific initiatives under the following five themes:

### Climate ready

Scotland's climate is changing. It's warmer than it once was, rainfall patterns are more unpredictable and weather extremes are becoming more severe and occurring more frequently as we've seen through the major storms in the most recent autumn and winter period.

This introduces climate-related impacts to our railway that require action to provide a safe and reliable service for our passengers. Our plan, therefore, includes investment in our assets to improve their resilience, as well as developing additional climate science and adaptation capabilities to underpin and strengthen our decision-making processes. We'll also develop a long-term climate change adaptation strategy for Scotland's Railway that's based on the results of a novel adaptation pathways project – an approach that will allow us to resolve the uncertainty that exists in the extent to which our climate will change, and to prepare and plan for multiple future climate scenarios.

### Net zero

As part of our approach to decarbonisation across the network, we'll specifically target investment towards reducing the emissions we directly control. This includes emissions that we produce directly (Scope 1 emissions) from use of fossil fuels and those we produce indirectly (Scope 2 emissions) from the energy that we buy.

Specifically, we'll deliver an energy efficiency programme which includes the development of a plan to phase out the use of fossil fuel heating in our buildings by March 2029.

We'll continue to drive forward our plans to transition our road vehicle fleet in Scotland to zero emission vehicles, including the provision of the necessary electric charging infrastructure to enable this change to meet the road fleet decarbonisation targets set out by Scottish Government. In addition, we're continuing to review our transition programme to ensure a cost-effective roll-out. This includes reviewing the leasing profile, the availability of vehicles and infrastructure standards for charging points, as well as considering alternative zero emission solutions, such as hydrogen.

We've embedded circular economy workstreams into our net zero delivery plan, combining circularity objectives with whole life carbon reduction. Actions include building the methodology for measuring circularity, setting a circularity baseline and improvement targets, and developing the technical advice that will be needed to guide our teams to improve circularity in design and operation, thereby reducing overall emissions.

Part of our investment will be to offset those residual emissions left after our opportunities to reduce Scope 1 (direct energy emissions) and Scope 2 (indirect energy emissions) have been exhausted, by working in partnership with schemes that capture carbon, for example by planting trees or restoring peatland. We intend to work with Scottish organisations to develop arrangements for offsetting within the Scottish economy.

Given the level of funding available, we've focused our investment on reducing carbon emissions to Scope 1 and 2 emissions, but we acknowledge the much wider carbon impact from the railway. We'll therefore continue our work to measure Scope 3 emissions (emissions that we

don't directly control) and improve our data accuracy, range, and availability in this area. Although many of the emissions categories in Scope 3 are outside of our control, there are some in which we can influence reductions, such as supply chain emissions, business travel and waste.

Most of the expected reductions in our emissions for the next five years will be in areas within our direct sphere of influence. Some limited reductions in the carbon emissions from our wider value chain are possible, but we don't expect significant reductions in emissions that we can only influence and don't directly control. We've provided forecasts for Scope 3 emissions based on a subset of categories which we've some level of control or influence over. Further, reductions in Scope 3 emissions will require additional investment in future years.

We've been working hard to improve our energy and carbon data and will continue to do so. ORR's independent reporter review in 2023 provided useful further actions for us to undertake, and we're committed to closing out these actions swiftly.

### Biodiversity

The biodiversity priorities in our Climate Action Plan will build on our previous efforts in delivering nature positive initiatives. The Climate Action Plan will identify the necessary capabilities and operational process changes required to manage invasive non-native species, enhance habitats, and promote biodiversity.

Our lineside vegetation management strategy is the most cost effective and efficient initiative to achieve our biodiversity targets by the end of 2028/29. Biodiversity improvements can be delivered by carrying out this core activity in a different way. Biodiversity requirements, for example, ecological surveys, data collection, and biodiversity enhancements such as habitat creation, can be combined into the scope of works for vegetation management. We can co-ordinate activity and work with our lineside teams to manage vegetation differently, resulting in better biodiversity outcomes.

### Environmental management

Our plan will deliver improved environmental management to reduce environmental incidents. Using intelligence from the air quality monitoring network as part of the Rail Safety and Standard Board's (RSSB's) CLEAR programme (which undertakes research into air quality in enclosed railway stations), we'll refresh and implement risk-based air quality improvement plans at managed stations and develop bespoke action plans for frequent noise pollution areas. We'll also further develop our assurance programme to better manage environmental risks. This is important to make sure we're minimising environmental impact in our everyday operations – reducing waste at our sites, preventing pollution to land and water, and limiting noise and nuisance impacts to our neighbours and communities.

### Social value

We'll enhance our work on sustainable procurement and work closely with stakeholders, charity, and community partners to collaborate on projects with mutual benefits. In addition, we'll embed sustainability throughout existing delivery mechanisms.

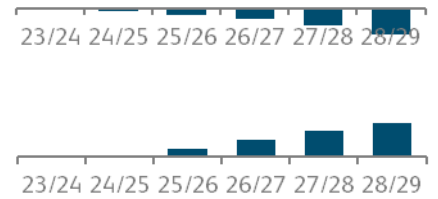
### **Outcome measures**

Our forecasts of key regulatory measures are included below. The full definitions for these measures can be found in the glossary.

Carbon Scope 1 and 2 targets are set nationally, towards the aim of achieving net zero by 2050. However, the Scottish Government has committed to reaching net zero by 2045, so our plans above set out how we plan to go further than the national targets, to remain aligned with Scottish Government ambition. Following an independent review of our carbon reduction plans, we’ve acted on a recommendation to review the phasing of our forecasts. Specifically, national Carbon Scope 1 and 2 trajectories have changed due to a reporting lag and uncertainty of investment timing. We’ve updated our forecasts to reflect new phasing and will work with ORR on how this will factor into their monitoring against regulatory baselines.

**Table 3: Key regulatory measures: taking climate action**

|  | 23/24* | 24/25 | 25/26 | 26/27 | 27/28 | 28/29 |
|--|--------|-------|-------|-------|-------|-------|
| <b>Carbon Emissions - Scope 1 &amp; 2 Reduction (CP7 change % pts)</b> | -      | -2%   | -5%   | -9%   | -14%  | -21%  |
| <b>Biodiversity Units Net Gain (CP7 change % pts)</b>                  | -      | 0%    | 1%    | 2%    | 3%    | 4%    |



\*CP6 exit positions are based on a forecast as at February 2024.



## Run a reliable railway

Our vision is to manage our network to drive improvements in train performance and enable us to run a more reliable railway.

### Objectives

Scotland's Railway will continue to prioritise performance and focus on improvements to rail services by working in partnership with passenger and freight operators.

In addition to this key objective we'll:

- Aim to provide a consistently high level of performance for the benefit of freight users
- Maintain the network to enable all operators to meet their performance targets for the next five years
- Continue to focus on improvements to rail services by working in partnership with ScotRail and cross-border operators.

### Stakeholder impacts

The level of performance we deliver across the network is one of the biggest drivers of customer satisfaction in our passengers and freight users. As the rail infrastructure owner across Scotland, we recognise that we play a critical role in enabling trains to arrive at their destination safely and reliably.

We'll therefore continue to focus on improvements to rail services by working in partnership with passenger and freight operators, who form an integral part of the rail business in Scotland. We're jointly focused on embedding a culture of continuous performance improvement. We're also working to improve the experience for our customers by reducing journey times, reducing delays to train services, and supporting key lifeline services to far reaching areas of the Scottish network, where it's safe to do so. At the same time, we're improving reliability by reducing cancellations.

We understand that Scottish Ministers' primary target is for 92.5% of ScotRail services arriving within five minutes of their scheduled arrival time, unless impacted by speed restrictions due to severe weather or delayed due to connections to other late running services or ferries. In its Final Determination, ORR has defined this performance outcome as the Scotland train performance measure. As train performance is a whole industry outcome, we'll continue to liaise with ORR on how our contribution to this measure can be monitored and regulated.

The delivery of this measure relies on track and train working together in a whole system approach and Scotland's Railway and ScotRail both being focused on achieving the target.

In our plans, we've included a range of initiatives and investments to deliver 92.5%. In addition to the initiatives (which are described below) ScotRail also requires urgent, significant, and sustained funding for rolling stock fleet initiatives. Without this investment, achieving the performance target earlier in the business planning period will be extremely challenging. We therefore acknowledge and welcome ORR's commitment to measuring us against our contribution to that target. We'll continue to liaise with ORR on how this measure will be monitored.

Scottish Ministers require us to enable Caledonian Sleeper to meet its performance targets for the next five years. We're committed to delivering reliable services to our cross-border operators and support them in meeting their targets, particularly working with our industry partners to sustain current levels of performance for the Caledonian Sleeper.

### What we'll deliver and our key initiatives

We've prioritised delivering the Scottish Ministers' HLOS requirement for us to achieve a Scotland train performance measure of 92.5% when developing our plan. However, we know that delivering this whole industry performance measure target in every year of the business planning period will be difficult, particularly in the early years. There has been a performance benefit of two percentage points realised throughout the previous five-year period, improving our reliability for passengers across Scotland. However, 2023/24 has been extremely challenging for train performance on Scotland's Railway and severe weather continues to cause significant disruption to our network. These events have had an adverse impact on where we expected the Scottish train performance measure to exit from 2023/24 in our Strategic Business Plan, and we now forecast the measure to exit at 89.75%.

We remain committed to delivering this target by 2027/28 but it will only be achieved by track and train working together.

We also have specific performance improving investments planned, including droids which are used to deter trespassers on the network. We've also planned to invest in drones, which we use during times of disruption. We're investing in forward-facing CCTV on some trains to provide insights to incidents before our teams arrive on sight. The installation of a new traffic management system will also allow us to improve our data use across the network. We've also included significantly more de-vegetation funding than in the previous business planning period and expect this to result in a reduction in performance failures attributed to vegetation.

In addition, we'll look to reduce the impact of extreme weather-related events, manage external events such as trespass, fatalities and route crime and improve the planning process to reduce conflicts between operators' timetables. ORR's Final Determination allocates additional funding for a targeted performance fund to support the delivery of our performance targets, only possible because its estimates for the effects of inflation are lower than our own. We're currently working with our stakeholders to develop performance improving initiatives that can be delivered through the fund in an efficient and effective manner for Scotland's Railway. The performance improvement benefits of proposals will be assessed against our existing forecasts.

We plan to provide a consistently high level of performance for freight users. This means reducing cancellations and lateness and Scotland's Railway becoming, right across our business, a more reliable and dependable partner for freight customers. We've also developed specific initiatives to be delivered in collaboration with Freight Operating Companies (FOCs).

Some of the initiatives underpinning our plan include improving weather resilience by working with asset management and maintenance teams for targeted infrastructure interventions to reduce weather related delays and improved focus on freight customer requirements during weather related incidents. We'll also continue to promote freight growth and reliability on the network, with this forming a key part of our decision-making process. To keep the network flowing we'll also target the removal of high impact temporary speed restrictions.

## Outcome measures

Our forecasts for our key regulatory measures are included below. The full definitions for these measures can be found in the glossary.

In its Final Determination, ORR has stated that it will hold us to account on our contribution to delivering 92.5 % of the Scotland train performance measure in each of the next five years. Whilst we acknowledge this as a target and will strive to deliver it as early as possible, we do not believe it's feasible given current levels of performance. Historically, the largest improvement which has been made to PPM (of which the Scotland train performance measure is based) in any given year has been 1.1 percentage points. A step change in train performance is not easy to achieve and maintain and will take whole industry alignment and effort to improve.

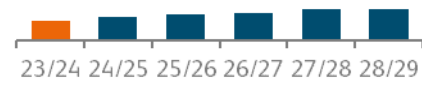
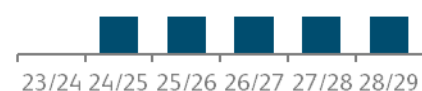
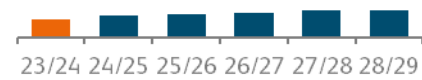
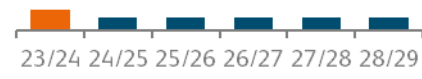
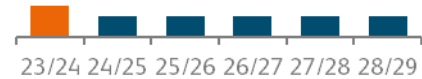
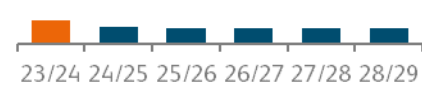
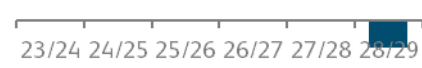

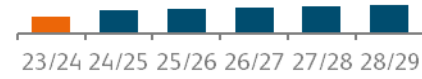
Instead of restating a target which we don't believe is deliverable, we've proposed a different forecast to reaching 92.5 % which we believe is still ambitious but achievable, given the increasingly challenging weather context in which it's being delivered. We've presented both our regulatory target and our forecast, as we believe that setting an unachievable target for the early years of the next business planning period will likely lead to reputational damage to all parties, including ORR, Transport Scotland and ScotRail. We acknowledge and welcome ORR's commitment to measuring us against our contribution to that target. We'll continue to liaise with ORR on how this measure will be monitored.

We recognise that our delivery plan does not meet the Scottish Ministers requirement of 92.5 % of the Scottish train performance measure in every year of the funding period. This whole industry target relies on input from both Network Rail and ScotRail Trains and current business planning cycles do not align in order to commit to joint performance improvement beyond 2024/25. Annual joint improvement plans will be provided throughout the funding period to show dedicated and ambitious but realistic improvements. Our plan currently includes joint performance improvement for 2024/25 and Network Rail only led performance improvement from 2025/26 to 2028/29. We understand the requirement to have more ambitious performance improvement within our plan and have revisited the potential improvements that can be considered in light of emerging and potential funding streams.

There is an inherent uncertainty with forecasting performance improvement over a long period of time due to varying factors and, in particular in Scotland, the increasing impact of climate change adds to the uncertainty. However, if we assume optimised usage of the Targeted Performance Fund, sustained funding for fleet at the levels required to improve performance and the continuation of the plan to fill traincrew vacancies then we've a medium level of confidence that 92.5 % could be achieved by the end of 2026/27. Given the delayed benefits realisation of many proposed schemes and improvement plans there can only be low confidence that the delivery of 92.5 % could be accelerated and achieved by the end of 2025/26. We remain committed to the delivery of 92.5 % and will work with industry partners to utilise all avenues possible to improve performance across Scotland's Railway as quick as reasonably practicable and our plans will be continuously updated to reflect latest developments over the funding period.

In its Final Determination, ORR also stated that it will hold us to account on delivering 1.4 % of Freight Cancellations in every year of the next business planning period. We're working hard to deliver this target as early as possible in the next five years, and our current trajectory estimates that we'll reach this baseline in year 1.

**Table 4: Key regulatory measures: run a reliable railway**

|   | 23/24* | 24/25 | 25/26 | 26/27 | 27/28 | 28/29 |   |
|---|--------|-------|-------|-------|-------|-------|---|
| <b>Scotland Train Performance Measure**</b>                     | 89.8%  | 90.7% | 91.2% | 91.6% | 92.5% | 92.5% |    |
| <b>Scotland Train Performance Measure (Regulatory baseline)</b> | -      | 92.5% | 92.5% | 92.5% | 92.5% | 92.5% |    |
| <b>Passenger On Time***</b>                                     | 68.5%  | 70.6% | 71.4% | 72.0% | 73.0% | 73.0% |    |
| <b>Passenger Cancellations***</b>                               | 2.5%   | 2.3%  | 2.3%  | 2.3%  | 2.3%  | 2.3%  |    |
| <b>Freight Cancellations</b>                                    | 1.5%   | 1.4%  | 1.4%  | 1.4%  | 1.4%  | 1.4%  |    |
| <b>Freight Cancellations and Lateness (FCaL)</b>                | 6.3%   | 5.7%  | 5.5%  | 5.5%  | 5.5%  | 5.5%  |   |
| <b>Composite Sustainability Index (CSI) (CP7 change % pts)</b>  | -      | 0.0%  | n/a   | n/a   | n/a   | -2.1% |  |
| <b>Composite Reliability Index (CRI)</b>                        | -      | -1.6% | -1.9% | -2.2% | -2.5% | -2.9% |  |
| <b>Service Affecting Failures (SAFs)</b>                        | 1,978  | 2,012 | 2,020 | 2,025 | 2,030 | 2,038 |  |

\*CP6 exit positions are based on a forecast as at February 2024.

\*\* If we assume optimised usage of the Targeted Performance Fund, sustained funding for fleet at the levels required to improve performance and the continuation of the plan to fill traincrew vacancies then we’ve a medium level of confidence that 92.5% could be achieved by the end of 2026/27.

\*\*\* ORR’s final determination sets firm passenger train performance targets for the first two years of the business planning period and indicative targets for the subsequent three years. There will be a regulatory reset of indicative targets during 2025/26, which we’ll work closely with stakeholders on to agree.





## Track and train working together

Our vision is to deliver better outcomes for our customers, reduce industry cost and increase industry revenue.

### Objectives

Scotland's Railway has three objectives to deliver under the priority of track and train working together. We'll continue to develop:

- Our understanding of our existing and future passenger and freight markets so that we can support our industry partners to encourage more people and goods to choose rail more often
- Whole industry strategies and plans that focus on delivering better outcomes for our customers
- Whole industry investment decisions for Scotland's Railway and for Scottish Ministers.

### Stakeholder impacts

Our plan is based on supporting the level of train service our industry partners have told us they want to run – which directly drives our market-led approach.

We've restated our commitment to collaborate with ScotRail so that our key objectives are aligned, and we work together to deliver joint workstreams such as reducing journey times and the introduction of more sustainable trains to our network.

We continue to work with the freight operators and freight customers through the Freight Joint Board, considering the whole door-to-door journey for goods, including the non-rail elements to improve our offering to freight customers.

By continuing to develop trusted relationships with all our industry partners, we're sharing industry data with each other, resulting in the creation of whole industry strategies, plans and investment decisions which deliver for all our customers.

### What we'll deliver and our key initiatives

We'll continue to adapt our offering to encourage more passengers and businesses to actively and frequently choose rail as part of their sustainable journey of choice, improving the net cost of the railway and reducing the cost of the public service we provide.

#### Customers and markets

We'll continue to focus on improving our understanding of what our existing and future customers want from Scotland's Railway. We've identified 10 passenger profiles (see Figure 4 below) using improved understanding of what drives different groups' satisfaction. This will allow us to better understand how investments and contingency plans will impact upon our passengers' experience of the railway.

We've also developed our customer and passenger experience principles, categorised into the three main drivers of passenger satisfaction (comfort, ease and speed) which help us to test the impact of different interventions from the customer's perspective.

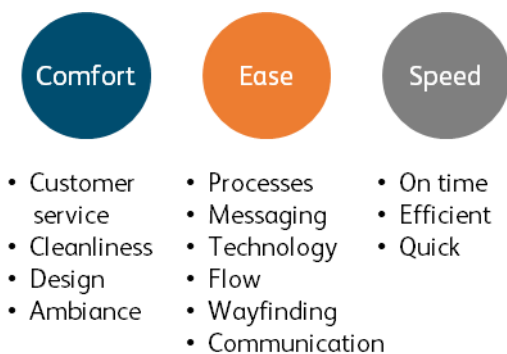
We’ve also developed six passenger experience pillars. These outline the types of considerations and data which we need to collect when making decisions, to be a more evidence-led, passenger focused organisation. We’ll continue to utilise and develop these tools (detailed further below) to achieve this goal.

**Figure 3: Passenger Profiles**

|               | Commuter | Leisure | Business |
|---------------|----------|---------|----------|
| Youth (16-25) |          |         |          |
| (26-49)       |          |         |          |
| Over 50       |          |         |          |
| Family        |          |         |          |

We’ve identified 10 passenger profiles for Scotland’s Railway and will use our data and insight intelligence to better understand how they use the railway, their key satisfaction drivers as well as the modal shift opportunity.

**Figure 4: Passenger Experience Principles**



There are three passenger experience principles which help us to identify the priorities and expectations of our customers across all we do. In addition, whilst not mentioned explicitly by our passengers, safety is our main priority.

**Figure 5: Passenger Experience Pillars**



In addition to our principles, there are six defined passenger experience pillars which identify the considerations we must make and the requirement we need to have in place to support the delivery of an excellent passenger and customer experience.

Working better together

We’ll continue our Customer Service Academy (delivered jointly with ScotRail) to help our people develop the essential skills required to put service at the heart of everything they do to support us becoming a customer centric organisation.

We’ll create spaces at stations that reflect the needs of the customers to make journeys easier, while getting them where they need to be on time. This will be achieved in partnership with our train operators through a ‘one-team’ approach.

Our new Strategic Timetable Steering Group for Scotland’s Railway will include representatives from every part of the rail business in Scotland, with the aim of improving how we develop our timetable in line with Scottish Ministers’ strategic objectives.

We’ll use our knowledge of our customers and markets to develop access options to deliver our maintenance and renewal works at a time that minimises disruption to our customers. We’ll assess our options via a framework we’ve developed to identify the optimum access strategy that balances the impact to our customers and the affordability to the railway.

In addition, through collaboration with our freight partners, we’ll aim to deliver freight growth of 8.7 % net tonne kilometres as described in our Freight Delivery Plan.

Whole industry strategies and investment

As part of our broader industry leadership, we’ll continue to work with all our customers to develop whole industry plans for the introduction of new trains to Scotland’s Railway, and the development and delivery of whole industry strategies.

We’ve already established our Railway for Everyone strategy; our approach to door-to-door accessibility, which provides a passenger-focused framework through which station investment will be viewed.

We’ve also been working with our industry partners to deliver Scottish Ministers’ requirements on improving journey times, the Signalling Scotland’s future strategy and gauging. Further details on these have been included as annexes to this document.

Where appropriate, these strategies and plans incorporate whole industry investment decisions for Scottish Ministers.

**Outcome measures**

Our forecasts of key regulatory measures are included below. The full definitions for these measures can be found in the glossary.

**Table 5: Key regulatory measures: track and train working together**

|  | 23/24* | 24/25 | 25/26 | 26/27 | 27/28 | 28/29 |
|--|--------|-------|-------|-------|-------|-------|
| <b>Freight Growth (Net tonne kilometres)</b> | -      | 3.8 % | 4.3 % | 5.7 % | 8.7 % | 8.7 % |
| <b>Passenger Satisfaction (Wavelength)</b>   | 8.05   | 8.10  | 8.10  | 8.10  | 8.10  | 8.10  |

\*CP6 exit positions are based on a forecast as at February 2024.

## People

Our vision is to create an environment where everyone does their best work to enable the delivery of our plan and to create the best railway Scotland's ever had.

### Objectives

The delivery of our plans is underpinned by our people, who are working hard to create the best railway Scotland's ever had. There are four main ambitions within our people vision:

- Building a modern and flexible organisation that's safe, high performing, efficient, sustainable, and truly service led
- Investing in the development of our leaders and managers with a focus on collaboration, enabling change and effective engagement
- Transforming the value of work and fostering a culture that encourages collaboration and belonging, one where everyone feels valued, safe, and able to realise their potential
- Taking a consistent approach to workforce planning to build a high quality, trained and diverse and committed workforce that enables the business to consistently achieve its objectives.

### What we'll deliver and our key initiatives

Beneath these four priorities sit individual interventions, such as the creation of a more agile working culture, organisational design and structure, headcount efficiency, diversity and inclusion, leadership development, management capability and recruitment and selection. Our stakeholder priorities have been fully considered and reflected in the development of our plans. We're also working with partners across Scotland's Railway including ScotRail – with a notable joint programme being the 'Scotland's Railway Academy – Together in the Making' – to grow talent with a focus on whole railway system learning.

#### Organisational Design and Development

Our people strategy recognises the opportunities of our modernisation change programmes by seeking to support implementing and embedding a new organisational structure within maintenance, 21<sup>st</sup> Century Operations and modernising management structure. Modernisation provides opportunity for greater devolved ability, and to set out an agenda that's more closely aligned with the needs of Scotland's Railway taking account of the policies and drivers that are specific to Scotland.

#### Upskilling

We recognise our leaders must be enabled to support their teams through challenging periods of change, which have potential to impact on safety, performance, employee wellbeing and engagement. As we continue to face a period of significant change, both within Scotland's Railway and the wider industry, one of our biggest challenges is to ensure that our leaders have the capability to support our people through that change, drive cultural transformation and help grow our business. We'll train all our people managers through a 'Leader in Me' initiative, to equip them with the skills to meet our business needs, fostering ambition and empowering our people managers to become effective leaders for tomorrow. We need to improve the effectiveness of our talent and succession planning, to ensure that we maximise the potential

within our workforce and better plan for critical roles. We’ll further enhance our engineering capability through focused upskilling via our apprenticeship and graduate schemes.

Competence

Competent people are central to achieving our vision and strategy. Competence management in Scotland’s Railway supports the development of people working in or for our business to meet current and any future business needs. It provides assurance that those individuals are competent and continue to be competent to deliver their work activities, roles, accountabilities, and responsibilities. Through the development of the safety risk assessment framework and the assessment of the alignment of our maintenance and renewals plans, we recognise that we need to do more to strengthen our competence management plans. We plan to update our competence development plans and share these with ORR.

Industrial Relations

We’ll work collaboratively with the trade unions to agree the introduction of appropriate mechanisms for achieving organisational change and modernising working practices.

Strategic Workforce Planning

Industry, organisational and funding uncertainty present a risk to strategic workforce planning outcomes. Our remuneration limitations also present a challenge as we try to attract, retain, and develop a workforce to meet the needs of our business. Our resourcing strategy will ensure the right people and structures are in place to continue to sustain our railway into the future, whilst ensuring best use of funding in a challenging economic climate.

Equity, Diversity and Inclusion

We aim to be an inclusive community that recognises the potential, talents, and contribution of all people regardless of background. We know there’s opportunity to improve diversity within our workforce, to make it more reflective of the communities we serve. This will help us to realise the benefits it can bring to employee engagement and business performance.

Mental Health and Wellbeing

We’re supporting our people through innovative interventions such as providing wellbeing ambassadors, a range of webinars, promoting meetings, creating safe space for colleagues, and training our managers to recognise, identify and support our people with mental wellbeing. In addition, we’re supporting agile and hybrid working by investing in accommodation for our people and smart technology.

**Outcome measures**

Our forecasts of our key measure are included below. The full definitions for this measure can be found in the glossary.

**Table 6: Key measure: people**

|                            | 23/24* | 24/25 | 25/26 | 26/27 | 27/28 | 28/29 |
|----------------------------|--------|-------|-------|-------|-------|-------|
| <b>Employee Engagement</b> | 59.0%  | 60.0% | 61.0% | 62.0% | 62.0% | 62.0% |

\*CP6 exit positions are based on a forecast as at February 2024.

## How we've developed our plans

This section sets out how we've developed our plans for the next five years. It covers:

- Our approach to stakeholder engagement and how that's informed our plans.
- Our market-led approach to asset management.
- Our plans for operations functions that keep the railway moving.
- Our supporting functions which help to support the daily operation of the railway.
- An overall financial summary of the plan.

### Our iterative planning approach

Over the past three years, we've been developing our business plan, which has been focused on Scottish Ministers' requirements and wider stakeholder priorities, within the funding available. We've done this alongside network-wide functions and the regions in England & Wales, developing our plans within a network-wide framework.

Throughout the planning process we've continued to work closely with Transport Scotland, ORR, as well as our wider stakeholders, such as our passenger and freight customers.

We shared our Strategic Business Plan with Transport Scotland and ORR on 26 May 2023 which was a major milestone in this process. It set out our plan to deliver Scottish Ministers' requirements and the best railway Scotland's ever had, within the funding that is available. Since then, our Strategic Business Plan has been published and can be accessed on Network Rail's [website](#).

We've developed our plans at a time of economic and fiscal challenge for the rail industry, as well as the Scottish Government. The financial challenge we face is further increased by the impact of continuing high inflation. The total funding provided by Transport Scotland is now expected to be similar to our previous business planning period after adjusting for inflation. Although around half of our funding is protected from inflation changes through the Scottish Government, this continues to be the biggest risk to delivering our plan.

We plan to continue with the collaborative and agile approach we've taken so far throughout the five-year period as priorities evolve and the true extent of inflation is realised.

## Stakeholder engagement

At the heart of our approach is a commitment to work transparently, inclusively, and effectively with our stakeholders – including but not limited to our funders, customers, suppliers, elected representatives and local communities.

We've worked closely with our stakeholders to develop our delivery plan, but we realise that its successful implementation is dependent on these relationships becoming further embedded across the business.

We're looking to build upon the successful structures and joint plans already in place with our passengers and freight customers. Meeting the Scottish Government's targets will require a greater degree of efficiency and collaboration across industry, and we'll use these forums and governance arrangements to seek greater efficiencies wherever possible.

Across a variety of joint forums and topic specific industry working groups, we're going to continue to engage with partners like Transport Scotland, ORR, ScotRail, trade unions, and passenger and freight operators. This stakeholder engagement has been particularly influential in establishing our plan to deliver Scottish Gauge (how we provide a safe clearance between trains and rail structures), the development of Signalling Scotland's Future Strategy, and advancing our Charter and Heritage Strategy.

We're already consulting on access arrangements for 2027/28 with our passenger and freight customers, in-keeping with our market-led approach. The five-year view we've taken on access for maintenance and renewal plans provides better visibility for our customers. In addition, this approach provides a standardised and repeatable process which will lead to more consistent passenger handling plans and better outcomes our stakeholders.

Working closely with our supply chain partners will be essential to delivering efficient investment. We'll continue to work collaboratively with them to achieve outcome focused solutions and deliver better value for money.

We'll continue to utilise and improve our regular stakeholder engagement workshops with business groups and elected representatives. Scotland's Railway will continue to:

- Host a standing stakeholder panel chaired by the Confederation of British Industry in Scotland three times a year.
- Visit Scotland's regions quarterly to engage with local stakeholders about our plans for the future.
- Convene a quarterly drop-in session for Members of Scottish Parliament (MSPs).

Our plans receive constructive challenge from stakeholders during these sessions. We'll continue to refine our approach to stakeholder engagement to make sure that these forums deliver high quality opportunities for stakeholders to provide input to our plans.

We'll also ensure that local communities continue to have their say. We work hard to build positive relationships with the communities and neighbours we serve. We want to ensure their voices are embedded in what we deliver. Our approach to integrating community views into our Perth and Inverness masterplans is a way of working we want to see embedded across the business.

However, we recognise that our approach needs to be underpinned by good governance. Strengthening our governance will result in better coordination across Scotland's Railway and therefore will improve engagement with our stakeholders. We're developing a stakeholder strategy to improve governance and coordination across the organisation. This will help to embed our approach to the transparency, inclusivity and effectiveness of our engagement, delivering improvements in how we engage with our stakeholders.

## Our asset management approach

Our asset management approach is focused on an affordability driven, customer-led railway that delivers Scottish Ministers' requirements. We've undergone an iterative planning process where we've added further detail and assurance at each version of our plan. As we've gone through this process, we've reduced costs and developed our approach towards prioritising infrastructure asset investment. We reduced costs to acknowledge the financial challenges facing the industry and wider economy and we've applied even stronger focus to developing a more cost-conscious plan than in previous business planning periods.

This has involved reducing our costs through additional efficiencies and transitioning our investment mix to a targeted blend of fewer full renewals and more life extending interventions in our infrastructure assets. To do this, we've sought to protect safety outcomes and prioritise reliability to provide the most value for our funders and customers. This approach has been supported by work that we've done to update and refine our asset models, capturing improved information on asset condition to allocate investment across all asset classes.

Our plan is underpinned by our market-led planning framework, which incorporates an outcome-based and collaborative approach to prioritisation of infrastructure investment.

**Figure 6: Developing our market-led planning framework**





### Implementing market-led planning

Our market-led planning framework allowed us to undertake a portfolio-wide prioritisation exercise within the available funding. This involved collaboration across Scotland's Railway to:

1. Segment Scotland's rail network into eight strategic corridors based on the passenger and freight markets they serve
2. Develop a value framework, which enables us to test individual asset investments against our strategic priorities
3. Prioritise asset investment across renewals and maintenance to optimise safety and performance outcomes on a corridor and value basis, aligning with our strategic objectives and HLOS requirements.

In our Strategic Business Plan, we identified opportunities to improve management of performance and safety risks compared to earlier plans that we had shared with ORR. We had identified these risks through our own internal assurance processes, and by applying our market-led framework we'll invest an additional £87 million in the renewal and refurbishment of high-risk structures assets, resulting in improvements in our structures' safety risk profile. A further £9 million investment is planned for our electrification and plant assets to address signalling power supply and overhead line equipment resilience, both of which are significant contributors to train performance. To offset additional investment in our asset base, we identified £60 million of renewals funding to repurpose towards the higher priority investments described above, reducing the net impact on our overall funding. We've aligned these changes to our maintenance investment plans, to improve the delivery of strategic outcomes and the management of risk.

In preparation for our delivery plan, we conducted a minimum viable product review on a proportion of our workbank, which generated an additional £20 million in market-led savings. Further reviews will remain ongoing throughout the five-year period to identify further opportunities for efficiencies.

Implementing these changes to our renewals investment portfolio has enabled greater alignment with our core maintenance activity plans, improving the delivery of strategic outcomes and our management of risk. As a result of our work, we now have a stable investment portfolio that provides greater confidence around the deliverability of our plan.

Our market-led planning framework will continue to develop and mature, strengthening our planning capability for future business planning periods. This will allow us to manage the impact of performing fewer asset renewals more effectively by better predicting and responding to failures, monitoring our assets more closely using technology, and undertaking more targeted interventions.

### Our renewals and maintenance activity expenditure

We've revised our asset management approach, moving away from full system renewals and cyclical maintenance planning to more risk-based investment prioritisation. We've prioritised our asset renewals and refurbishment investment against safety and performance of the network. This allows us to respond to the industry cost challenge by maintaining or improving safety across our asset base with fewer full system renewals and a greater number of mid-life refurbishments and maintenance activities.

We've specifically protected renewals investment in structures, earthworks and drainage assets to maintain safety and performance of critical infrastructure across Scotland's Railway. This investment means we'll protect safety outcomes and prioritise the reliability of our railway for our passengers.

We've reduced our renewals investment in track, signalling and electrification and plant assets through finding efficiencies in our renewals plans. In response, we've increased our maintenance spending to support more targeted interventions to extend the life of the assets.

**Table 7: Renewals and Maintenance Activity Expenditure (cash prices, post efficient)**

| <b>Asset</b>                             | <b>Priorities</b>  | <b>Volume</b>  | <b>Expenditure</b> |
|--|--|--|--------------------|
| <b>Track</b>                             | Life extension, targeted interventions with lower upfront cost.  | 640km plain line<br>376 Switches and<br>Crossing Units | £502m              |
| <b>Off Track</b>                         | Focus on lineside, boundary and safe worker access.  | 702km  | £44m               |
| <b>Signalling</b>                        | Life extension and development of line of route strategies via 'Signalling Scotland's Future'.   | 3,724 Signalling<br>Equivalent Units                   | £286m              |
| <b>Level Crossings</b>                   | Realising closure opportunities and delivering condition-based targeted renewals.  | 43 volumes   | £23m               |
| <b>Structures</b>                        | Recovery of 2019-24 deferred work; scour drainage programme; parapet/spandrel wall stabilisation; culvert renewals.                                | 96,805m  | £413m              |
| <b>Earthworks</b>                        | Implement a whole systems earthworks approach.   | 3,970 volumes  | £207m              |
| <b>Drainage</b>                          | Increased activity on drainage in response to Network Rail Earthworks Review, using a whole system drainage approach.                              | 68,821m  | £122m              |
| <b>Buildings</b>                         | Safety related platform, footbridge, canopy, and mechanical and electrical interventions.  | 182,933m <sup>2</sup>                                  | £101m              |
| <b>Electrification &amp; Fixed Plant</b> | Commencement of Mark 1 Overhead Line Equipment (OLE) renewals programme; condition-based signalling power, fixed plant, and distribution renewals. | 232 volumes  | £86m               |

| Asset                 | Priorities   | Volume        | Expenditure |
|-----------------------|--|---------------|-------------|
| <b>Telecoms</b>       | Management of obsolescence, condition-based component renewals.  | 5,700 volumes | £37m        |
| <b>Other Renewals</b> | Electrical safety improvements; climate action plans; safety and security investments; retail and property renewals; on-track plant. | n/a           | £128m       |
| <b>Maintenance</b>    | Inspection, maintenance and operational preservation of our infrastructure assets.   | n/a           | £1,142m     |

### Vegetation Management

We’ve developed an updated vegetation strategy for the next five years, which will provide a lineside environment that reduces risk and fits our biodiversity agenda, within the funding envelope. Interventions throughout the next five years will be targeted based on route criticality and the risk profile of each line of route. This will consider hazardous trees, overhead line equipment issues, autumn issues and encroachment. Our strategy will also focus on train service delivery, and we’ll continue to work towards gaining compliance with the lineside vegetation profile in our standards.

### Safety

During the past six months, we’ve worked with our Technical Authority and the England & Wales regions to develop a safety risk assessment framework that enables us to more thoroughly and consistently understand the detail of the asset and safety risks that we’re likely to experience over the next five years.

To date, we’ve used this framework to assess the shift in risk profile for specific asset types. We’ll continue to complete further risk assessments for other asset categories, using the findings to inform further iterations of our plans, as well as our plans for the next business planning period. Further work is being planned to bring the outputs of this work together by asset class, so that we can form judgements on the overall impact on system safety.

### Deliverability

Our delivery strategy prioritises integrating our supply chain and closer collaboration to reduce the duplication of scarce and costly resources. We’ll continue to foster a partnership approach between Scotland’s Railway and the supply chain to deliver affordable and efficient outcomes.

We’ll monitor the resources available through Network Rail’s Supply Chain Operations (SCO), a Route Services function that manages the supply, operation, and maintenance of our rail fleet, along with the procurement and delivery of a wide variety of railway materials and components. It’s essential that critical resources align to our plan, especially key commodities including rail, sleepers and ballast, which have the potential to deliver performance efficiencies for Scotland.

The deliverability review of our plan didn’t identify any gaps in critical resources that would adversely impact our delivery plan, but this will be an area which we’ll review on an ongoing

basis. Regular integration with the SCO team helps us identify any critical resource gaps and resolve conflicts early, for example in relation to clashes in demand for specialist railway machinery, such as Kirow cranes, or for signalling testing resources. We'll continue to engage with the consolidated national planning process as our workbank matures.

Managing access will remain a key priority to ensure our plan is deliverable. We'll drive efficient use of any access granted with the operators through our Integrated Planning Office, and by specifying efficiency arrangements for engineering access to the rail network in the Engineering Access Statement process.

### Climate change resilience

We're committed to embedding climate change resilience across our network and recognise the requirement to react and plan against more frequent and severe weather events. The impact of climate change, and in particular increasing rainfall, is affecting the rail network in Scotland more significantly than in England & Wales. Our teams have worked collaboratively to identify critical drainage and earthworks assets that will benefit from increased investment to manage the resilience of the network.

A longer-term climate change adaptation strategy and pathway for Scotland's Railway is being developed alongside improvements in how we assess and understand the impacts and risks associated with climate change on our railway.

## **Operations and support**

This section provides a summary of our support and operations plans, with a focus on any key changes and specific initiatives.

### Operations

Operations expenditure covers the diverse range of signalling, electrical control, mobile operations, and station functions required to keep the railway moving.

Our operations strategy is aligned with the objective of better enabling our railway operational teams to deliver train services for the benefit of our customers, and to grow and develop skilful and effective railway operating people.

To operate the network, we currently employ over 500 signallers. For operations to remain safe and efficient, we'll optimise our staffing levels so that the reliance upon overtime is minimised. Our priorities are to improve our capability to manage the train service and respond to adverse weather events. A key enabler for this will be the implementation of the Luminat traffic management system and our 21<sup>st</sup> Century Operations programme. 21<sup>st</sup> Century Operations has been designed to build the skills and capabilities of our people to respond to incidents and recover train service performance after delays. We'll also work towards implementing a competency management plan in line with ORR expectations.

Operations costs have seen an increase in investment compared to the previous business planning period. We've planned separate additional funding for performance (£22 million), and increased spend on health, safety and customers and communities (£7 million) in line with our strategic priorities.

In its Final Determination, ORR included additional funding for the proposed targeted performance fund within our operations expenditure. For transparency, we've included that funding as a separate line item within our financial summary. This is separate to the £22 million performance funding noted above.

We'll deliver a Security, Crime and Resilience Strategy that protects our passengers, freight users and railway workers so that everyone gets home safe every day, whilst safeguarding continuous business operations, assets, and our reputation. Our plan also includes £8 million of capital expenditure to take forward important security initiatives. These include:

- Upgrades at our critical national infrastructure level one and level two sites, and at our major stations
- Designing out crime initiatives
- Route crime prevention
- Implementation of new technical security control
- Upgrades to cyber systems based on new regulations
- Security communications, culture, and competence programmes.

### Support

As a devolved business of Network Rail, we benefit from a number of supporting functions that help to support the daily operation of Scotland's Railway. These functions include human resources, finance, legal, property, communications, investment and business development.

Our plan includes £154 million to be spent on support costs. Our direct support costs cover a range of staff costs in important strategic planning and management roles as well as office costs, and a variety of other materials and contract costs. These costs have been chosen to complement the network-wide teams, and to provide support either where it is more efficient or enables us to respond to specific local requirements.

### **Income**

We receive income from:

- Government grants – network grants are agreed with Transport Scotland through the periodic review, in lieu of access charges (defined below).
- Access charges paid by train operators for using our infrastructure, which include track, stations, and depots, as well as charges for traction electricity required to move trains.
- Other commercial income, which is largely from property rental and property sales.

The commercial income is deducted from the costs of running the railway to leave a net income requirement. Higher commercial income reduces the need for taxpayer contribution, so we've worked hard to maximise recovery post-Covid-19. The net income requirement is comprised of the government grant along with access charges paid by train operators. Both are based on assumptions about the number and types of trains that will operate over the five years of the business planning period. It's possible that our access charge income could vary during the next five-year period compared to our forecast if the number or type of trains operating on the network are different to what we've assumed.

## Financial overview

The following tables show our forecast operations, maintenance, support and renewals expenditure and income.

**Table 8: Financial table – expenditure (post-efficient)\***

| £m in cash prices  | 2023/24<br>Exit | 2024-29 Baseline |             |             |             |             | Total<br>Expenditure |
|--|-----------------|------------------|-------------|-------------|-------------|-------------|----------------------|
|  |                 | 2024<br>/25      | 2025<br>/26 | 2026<br>/27 | 2027<br>/28 | 2028<br>/29 |                      |
| Support and Operations                                       | 102             | 113              | 110         | 106         | 107         | 111         | 549                  |
| Maintenance  | 217             | 226              | 226         | 224         | 230         | 237         | 1,142                |
| Industry costs and rates (excl. British Transport Police) ** | 35              | 39               | 40          | 45          | 46          | 47          | 218                  |
| Renewals   | 415             | 423              | 416         | 398         | 381         | 401         | 2,019                |
| Risk Funding   | 0               | 21               | 22          | 42          | 60          | 89          | 234                  |
| Targeted Train Performance Fund                              | 0               | 10               | 21          | 21          | 0           | 0           | 53                   |
| Allocated Expenditure  | 118             | 135              | 122         | 118         | 110         | 114         | 600                  |
| Electricity for Traction (EC4T)                              | 74              | 83               | 76          | 83          | 83          | 83          | 408                  |
| <b>Total Expenditure (excl. EC4T)</b>                        | <b>887</b>      | <b>968</b>       | <b>958</b>  | <b>956</b>  | <b>934</b>  | <b>999</b>  | <b>4,815</b>         |

\* As part of finalising this delivery plan, as agreed with ORR, there has been a reclassification of some expenditure between operations, maintenance and support which means that these categories cannot directly be compared to our Draft Determination response or our Strategic Business Plan.

\*\* Industry costs and rates include Cumulo Rates, ORR subscription, Rail Delivery Group subsidy, etc.

**Table 9: Financial table – income**

| £m in cash prices                | 2023/<br>24 Exit | 2024-29 Baseline |             |             |             |             | Total<br>Income |
|----------------------------------|------------------|------------------|-------------|-------------|-------------|-------------|-----------------|
|                                  |                  | 202<br>4/25      | 202<br>5/26 | 202<br>6/27 | 202<br>7/28 | 202<br>8/29 |                 |
| Charging Income *                | 389              | 386              | 397         | 403         | 410         | 417         | 2,013           |
| Other Income **                  | 85               | 85               | 87          | 94          | 91          | 98          | 455             |
| Network grant                    | 411              | 488              | 465         | 450         | 424         | 474         | 2,299           |
| Net Schedule 4 & 8 costs         | -33              | -1               | -1          | -1          | -1          | -1          | -7              |
| Allocated Income                 | 35               | 11               | 11          | 11          | 11          | 11          | 55              |
| Electricity for Traction (EC4T)  | 74               | 83               | 76          | 83          | 83          | 83          | 408             |
| <b>Total Income (excl. EC4T)</b> | <b>887</b>       | <b>968</b>       | <b>958</b>  | <b>956</b>  | <b>934</b>  | <b>999</b>  | <b>4,815</b>    |

\* Charging income includes Train and Freight Operator Fixed Track Access, Variable Track Access and Electricity Access Usage Charge etc.

\*\* Other income includes commercial income, property sales and rental income etc.

## Risks and opportunities

### Risks

Over the course of the next five years, there will likely be a number of foreseeable and unforeseeable risks which impact our ability to deliver the plan. Over the course of this planning process, we've sought, where possible, to assess the likely impact of these risks. This will help to quantify the amount of funding required to manage risks, if and when they arise.

The key risks are likely to include:

- Inflation, if it's materially higher than currently forecast. Both general inflation and the impact of input prices add costs to delivering our plan. In its Final Determination, ORR's view on input price inflation was lower than our view, which is reflected in our plan, therefore increasing this risk.
- Train performance, if it's materially lower than forecast. Our train performance targets for the next five years are very challenging. Should train performance be lower than expected, even due to factors which are external to Scotland's Railway, this may impact our ability to deliver our regulatory outcomes. This may also have financial consequences resulting from the performance incentive regime.
- Delays in delivering, or an inability to deliver, our proposed transformational efficiencies. Acknowledging the impact of Covid-19 on the revenues of the rail industry as a whole, we've committed to an ambitious efficiency regime. Delivery of our plan relies on realising these efficiencies to fund the interventions we've committed to in this plan.
- Climate change and extreme weather, which has the potential to impact both safety and performance. In response, we've focused our investment on asset classes that are likely to experience the greatest impact from extreme weather in the coming years.

To support us in managing the risks that materialise during the next business planning period we've developed a risk fund, and we propose to build upon the approach we've used in the current funding period when utilising this funding. We've improved the record-keeping, transparency, and routine reporting of our use of the risk fund during that time. We used this approach as a baseline for the approach that has been agreed with Transport Scotland and ORR for the next five years.

### Opportunities

Over the course of the last five years, both ScotRail and Caledonian Sleeper have come under public ownership. There continue to be opportunities for us to realise greater operational performance and efficiencies as a result of working more closely together.

We'll therefore continue to be agile and flexible to respond to changing circumstances for the next business planning period.

## Governance and assurance

### Assurance

#### Our assurance framework

We've implemented an assurance framework to support and enable the overall delivery of our plan for the next five years. Given the risks and uncertainties we face, it's important that delivery plans are robustly assured. Our framework consists of functional assurance plans, an overall integrated assurance plan that considers all assurance activities from across multiple perspectives, action management and reporting. Assurance plan development, assurance outputs and key findings will drive operational improvements and efficiencies. These outputs will be analysed and reported through our risk and assurance governance framework.

### Governance

#### Our governance framework

To develop a robust plan, we've taken direction from the Scotland's Railway and Network Rail Executive teams throughout the development of our delivery plan and have provided assurance to the Network Rail Board.

To support the development of the delivery plan we've used a governance process that reaches up to Board level. This has enabled us to maintain progressive internal engagement, to have points of escalation, to identify key risks, and to seek decisions on the programme direction when needed. This has been supplemented by a 2023 Periodic Review (PR23) Steering Group for Scotland that brings together Network Rail, Transport Scotland, and ORR to oversee progress and provide a point of escalation.

#### Scotland's Railway governance

In developing our delivery plan, we've iteratively developed and evidenced our planning over the last two years. Our governance process has been central to our submissions to ORR, as well as our contributions to network-wide submissions, with appropriate levels of ownership and scrutiny from the Scotland's Railway Executive.

Scottish Minister's HLOS includes 87 specific outputs Scotland's Railway must deliver, many of which are in collaboration with our industry partners. We've specified whether an output is embedded in "business as usual" or if it is a "measurable outcome", and we've mapped the outputs to existing industry governance forums where progress will be reported. This will make sure our reporting is transparent and efficient. Progress will be monitored via quarterly reporting into the Scotland's Railway Alliance Executive governance forum.



## **Deliverability**

### Project delivery

We continue to strengthen our approach to project delivery, with a focus on building strong partnerships between our internal asset, delivery and maintenance teams, as well as collaboration with our external supply chain. This will help us to deliver our core renewals outcomes within the given constraints of time, cost, and quality.

Scotland delivered some of the lowest network wide unit rates (average cost of delivering renewals) in the last five years, particularly across our earthworks assets. We're confident that, although there will be ongoing challenges and headwinds (factors that make achieving our plan more difficult), including inflation, our focus on outcomes and embedding our market-led delivery approach will help us deliver on budget.

### **Contracting Strategy**

Our procurement programme is on schedule to deliver our core renewals plan. By the start of 2024/25, we'll have renewed our civils engineering and geotechnical frameworks as well as our minor signalling, power and communications frameworks. We already have existing frameworks in place for signalling and track renewals. We're currently building a pipeline of work to identify areas of focus for the next few years to enable efficient delivery.

### Continuous improvement and efficient delivery

More of our network will be electrified in the next five years as a result of our electrification programmes. Closer alignment between our enhancement programmes (including our electrification programmes) and core renewals will create opportunities to maximise network access, minimise disruption to our passengers and deliver more efficiently. Our investment decisions will also be enabled by PACE (Project Acceleration in a Controlled Environment) that will help us define the project outputs at an earlier stage in the design life cycle and help maximise the funding available.

### Driving sustainability into delivery

Driving sustainable outcomes through delivery is a key area of focus and includes areas such as targeted social value initiatives to benefit communities, increased focus on the [Rail Carbon Tool](#) (a tool that allows rail industry partners to evaluate ways to reduce the carbon footprint of rail projects) and the use of solar panels to reduce fuel consumption.

### Improving our cost benchmarking

The last five years saw progressive improvements in our cost benchmarking capability and in the collection of robust cost information at a more granular level for most of our key assets. This will improve our ability to report our direct and indirect construction costs separately, as this method allows us to analyse how efficient a project is.

## **Assumptions**

There are a range of assumptions that we've had to make to develop this plan, listed in Annex D.

## Delivery for the year ahead (2024/25)

We've great ambitions for the impact that we can make over the next five years to make the railway the best Scotland has ever had. This section sets out how we plan to deliver in 2024/25.

### Everyone home safe every day

We're delivering several initiatives to support continuous improvement of safety performance and improving passenger, public and workforce safety. We'll continue to deliver important changes for level crossing safety and take steps to reduce suicide and trespass, tackling the causes of serious events.

Workforce safety will see improvements through maintenance scheduling, intelligent infrastructure, additional increased protection of line blockades and greater use of technology to remove our workforce from the risk of machine and train movements.

### Reduce the net cost of the railway

The availability of funding to help manage risks is reliant on us delivering our ambitious efficiency target of £444 million across the five-year period (£389 million of direct efficiencies and £55 million enabled or delivered through network-wide functions). In 2024/25, we plan to deliver £31 million of efficiencies.

In 2024/25, there are a number of more conventional efficiencies which we plan to deliver, such as specific measures to drive value for money with our supply chain. In addition, as part of our 'Better in the Making' programme, we'll continue to progress and develop business cases which will enable us to optimise our asset planning, operating model, use of technology and approach to access. This will enable us to deliver further efficiencies in later years.

### Taking climate action

We continue to identify opportunities to further decarbonise our railway. Our Climate Action Plan includes a range of initiatives across our five themes that will support us to achieve our targets in 2024/25. Specifically, achieving our net zero targets in 2024/25 will be driven by energy efficiency interventions to our buildings and starting to transition our road fleet to zero emission vehicles. Wider value chain emissions reduction will come from active encouragement to our suppliers to reduce their own carbon emissions and report progress. We'll also establish systems, methodology and guidance for recording reductions in whole life carbon in capital investment projects as a result of low carbon design decisions.

### Run a reliable railway

Train performance varies throughout the year due to seasonal weather. As part of our outcome measures, we've set ourselves challenging targets for 2024/25 including a target of 90.7% for the Scottish Train Performance Measure. Our 2024/25 target will be agreed in conjunction with ScotRail by April 2024. The underlying key to the success of our plan is the delivery of the whole system which will allow us to achieve a reliable timetable.

We're rolling out initiatives that we expect to improve performance in 2024/25, such as the installation of the Luminare traffic management system which will allow us to improve our use of data across the network.

## People

To deliver successfully, we need a quality, skilled, diverse and engaged workforce.

To ensure that we attract and retain our workforce, we measure employee engagement through an annual Your Voice survey. The most recent iteration of our Your Voice survey is planned for the end of March 2024, with results due around a month later. We'll use the results of this survey to understand and commit to changes our teams tell us will improve their working lives.

An overview of the outcomes which we'll deliver in 2024/25 is summarised in Table 10 below.

**Table 10: Delivery for the year ahead**

| Scotland's Railway scorecard for 2024/25         |              |                       |
|--|--------------|-----------------------|
|  | 2023/24 exit | 2024/25 forecast exit |
| <b>Everyone home safe every day</b>              |              |                       |
| Fatalities and weighted injuries                 | 0.103        | 0.096                 |
| Train accident risk reduction (TARR)             | 95 %         | 95 %                  |
| Personal Accountability for Safety (PAFS)        | 19           | 26                    |
| <b>Reduce the net cost of the railway</b>        |              |                       |
| Efficiencies - Opex (annual, £m)                 | £37.6*       | £8.6*                 |
| Efficiencies - Capex (annual, £m)                | £33.0*       | £17.2*                |
| Financial Performance Measure – Opex Split (£m)  | -7.9         | 0                     |
| Financial Performance Measure – Capex Split (£m) | -5.9         | 0                     |
| <b>Taking climate action</b>                     |              |                       |
| Carbon Emissions – scope 1 & 2 reduction         | N/A**        | -2 %                  |
| Biodiversity units net gain                      | N/A**        | 0 %                   |
| <b>Run a reliable railway</b>                    |              |                       |
| Scotland train performance                       | 89.8 %       | 90.7 %                |
| Passenger On Time                                | 68.5 %       | 70.6 %                |
| Passenger cancellations                          | 2.5 %        | 2.3 %                 |
| Freight cancellations                            | 1.5 %        | 1.4 %                 |
| Freight Cancellations and Lateness (FCaL)        | 6.3 %        | 5.7 %                 |
| Composite Sustainability Index (CSI)             | 2.1 %        | 0.0 %                 |
| Composite reliability index                      | N/A**        | -1.6 %                |
| Service Affecting Failures (excluding Telecoms)  | 1,978        | 2,012                 |
| <b>Track and train working together</b>          |              |                       |
| Freight growth (net tonne km)                    | -10.1 %      | 3.8 %                 |
| Passenger satisfaction (wavelength)              | 8.05         | 8.10                  |
| <b>People</b>                                    |              |                       |
| Employee engagement                              | 59.0 %       | 60.0 %                |

\*Efficiency figures between the two business plan periods aren't directly comparable due to having different baselines.

\*\*The 2023/24 exit figure is not comparable with the 2024/25 figures due to the metric being re-baselined every five years.

## Glossary

| Term                                 | Definition  |
|--------------------------------------|---|
| Biodiversity units                   | This metric captures how the management of our infrastructure will change the biodiversity value of our estate.   |
| Carbon emissions                     | Carbon emissions: Decarbonisation will be monitored through our Scope 1 and 2 Carbon emissions outcomes, which capture the emissions we directly control from use of fossil fuels and purchased non-traction electricity and heat.  |
| Composite reliability index (CRI)    | The composite reliability index (CRI) metric will support ORR in monitoring asset performance. This measures asset reliability across the network.  |
| Composite sustainability index (CSI) | ORR will monitor asset sustainability through the composite sustainability index (CSI) metric. This metric captures the percentage change of asset sustainability compared to the end of 2013/14, measured either by remaining life of the asset or by asset condition score, weighted by the replacement value of the asset.   |
| Efficiencies                         | A measure of efficiency savings against our delivery plan. This is split between our operational (Opex) and capital (Capex) expenditure.  |
| Employee engagement                  | An index representing the proportion of employees surveyed who responded favourably to key questions on engagement.   |
| Fatality weighted index              | Fatality weighted index is the standard accepted measure for the value of the incidents prevented on the railway.   |
| Financial performance measure        | Compares actual income and expenditure to a 'post-efficient' baseline (such as budget), adjusted for delivery of outputs. It covers most items of Network Rail's income and expenditure but excludes some that are not as controllable such as network grant, fixed track access charges, traction electricity income and costs, and business rates. All other things being equal, if the expected efficiency is achieved, the target FPM is equal to zero. Outperformance is achieved when more work is delivered for the agreed cost, or the work is delivered at a lower cost than was agreed (underperformance implies the opposite scenario(s)). |

| Term   | Definition  |
|--|---|
| Freight cancellations                                    | For freight services, we'll be monitored by ORR through our tier 1 success measure of freight cancellations. This captures the percentage of commercial freight services that are cancelled by the infrastructure manager or another operator that's not a commercial freight operator  |
| Freight cancellations and lateness (FCaL)                | This is a supporting measure and captures the percentage of commercial freight services in Scotland that are cancelled or are 15 minutes or more late as a result of the infrastructure manager or another operator that is not a commercial freight operator.  |
| Freight growth   | The freight growth metric measures the amount of freight moved on the railway network, taking into account the weight of the load and the distance carried.   |
| On Time  | This measure tracks the percentage of recorded station stops arrived at early or less than one minute after the scheduled arrival time. ORR has also set Schedule 8 compensation benchmarks (measured by On-Time performance) for 2024/25 and 2025/26 at a level higher than proposed in our response to the Draft Determination, representing a very real financial risk of expenditure outflows not currently in our plans. |
| Passenger cancellations                                  | We'll be monitored by ORR through the passenger cancellations metric. This measure tracks the percentage of planned trains which either did not run their full planned journey or did not call at all their planned station stops. The measure is a score which weights full cancellations as one and part cancellations as half.   |
| Passenger satisfaction (Rail Customer Experience Survey) | Passenger satisfaction is a survey-based metric that captures the percentage of customers who were satisfied with their overall journey.  |
| Personal Accountability for Safety (PAFS)                | The number of breaches in 'life saving rules' and high potential events. It is a measure of how Network Rail is improving culture and behaviours to help keep staff safe.   |
| Scotland train performance measure                       | Our train service delivery performance will be monitored by Scotland's Railway and ORR as specified by Transport Scotland through the Scotland train performance measure. The measure scores train punctuality according to their minutes of lateness and cancellations against schedule and includes a   |

| Term                              | Definition  |
|-----------------------------------|---|
|                                   | derogation for delays caused by speed restrictions imposed due to severe weather or delays caused by holding trains to permit connections to other late running trains or ferries.  |
| Service affecting failures (SAFs) | We'll track the impact of asset failures on train performance through the service affecting failures measure. We've excluded Telecoms from this measure. Service affecting failures are linked to public performance measure attainment, so any changes in the performance baselines will influence service affecting failures baselines. |
| Supply Chain Operations (SCO)     | A Route Services function that manages the supply, operation and maintenance of our rail fleet, along with the procurement and delivery of a wide variety of railway materials and components.  |
| Train accident risk reduction     | Train accident risk reduction measures the achievement of the key risk reduction activities planned in a given year   |

## Annex A: Our Plan to make Journey Times faster

Our Plan to make Journey Times faster sets out the following commitments:

### **We'll make journey times faster for our customers**

Across Scotland's Railway, we'll better educate all our teams on the importance of competitive journey times, and how they should prioritise journey times in their day-to-day decision-making.

### **We'll overhaul industry governance and transparently report how we'll make journeys faster**

As described in 'Timetabling: A Proposal to Improve Our Approach', we'll develop a market-led timetable framework which will set out the timetable outcomes (including journey times) for each corridor in Scotland's Railway, based on Scottish Ministers' strategic objectives.

We'll establish our Strategic Timetable Steering Group which will review changes to the building blocks of our timetable through the lens of the market-led timetable framework for each timetable change.

We'll establish a Journey Time Working Group, which will report to the Strategic Timetable Steering Group. It will be responsible for the formal reporting of the following:

- All journey time metrics.
- Key journey times resulting from previous investment projects (such as Borders Railway and the Edinburgh Glasgow Improvement Project).
- Progress against the commitments in this plan.

### **We'll maximise the capability of both track and train**

For each rail corridor in Scotland, we'll review where the infrastructure limits the capability of the current trains, and the potential new trains, where appropriate. We'll then determine if there is an affordable and efficient way of improving the capability at minimal or low cost.

With industry colleagues, we'll review the asset renewal workbank for the whole business planning period, to determine if capability and capacity of the infrastructure can be improved to deliver faster journey times.

### **We'll focus on where reducing journey times will encourage people and goods to choose rail more often as part of their sustainable journey.**

We'll identify where improved journey times would increase revenue by working with our industry partners, utilising new datasets, and analysing our competitors journey times on each corridor.

### **We'll measure the success of our eight commitments using the ScotRail Average Minutes per Mile metric, the Inter7City metric and the Freight Average Speed metric.**

We'll report these metrics, for each timetable change, to the Journey Time Working Group, which reports to the Strategic Timetabling Working Group.

To build confidence and trust that we’re working collaboratively with all our customers and demonstrate our focus on making journey times faster, we’ve developed metrics so that we can transparently measure our progress.

Scottish Ministers’ HLOS for the previous five year period included an average minutes per mile metric which was part of the Abellio ScotRail franchise, shown in Table A1.

**Table A1: Abellio ScotRail Franchise average minutes per mile metric for the previous five year period**

| Timetable Period | Target |
|------------------|--------|
| December 2019    | 1.587  |
| December 2020    | 1.584  |
| December 2021    | 1.582  |
| December 2022    | 1.581  |
| December 2023    | 1.578  |

We’ll use a new software tool to report the average minutes per mile for all ScotRail services. This new software tool uses less time and resource than the previous tool used for the Abellio ScotRail franchise metric. This means that it can also forecast the impact the proposed timetable changes will have on the metric, an activity the previous tool did not allow.

We’ll use the December 2022 timetable as the baseline for the journey time metrics in line with Scottish Ministers’ HLOS.

We’ve forecast what the delivery of the eight commitments included in this plan will have on the metric (see table A2). This means we’ll report the results from this plan, without this being masked by investment projects or business-led train services changes led by ScotRail i.e., reporting on the improvement to the “building blocks” of the timetable, not the timetable construct.

In addition, we’ll report the average minutes per mile for each strategic corridor. This more granular detail will help us to assess journey times at a market level and highlight if any decisions have been taken to trade-off performance, cost/revenue, capacity, or connectivity in any given market.

We’ll also be able to separately report on the effect of both investment projects and business-led train services changes.



**Table A2: ScotRail Average Minutes per Mile**

| Timetable Period         | Minutes per mile (value in seconds) | Total distance / total minutes |
|--------------------------|-------------------------------------|--------------------------------|
| December 2022 (Actual)   | 103.71                              | 1.729                          |
| May 2023 (Actual)        | 103.91                              | 1.732                          |
| December 2023 (Actual)   | 104.03                              | 1.734                          |
| June 2024 (Forecast)     | 104.14                              | 1.736                          |
| December 2024 (Forecast) | 104.11                              | 1.735                          |
| May 2025 (Forecast)      | 104.07                              | 1.734                          |
| December 2025 (Forecast) | 104.03                              | 1.734                          |
| May 2026 (Forecast)      | 103.97                              | 1.733                          |
| December 2026 (Forecast) | 103.91                              | 1.732                          |
| May 2027 (Forecast)      | 103.84                              | 1.731                          |
| December 2027 (Forecast) | 103.74                              | 1.729                          |
| May 2028 (Forecast)      | 103.64                              | 1.727                          |
| December 2028 (Forecast) | 103.50                              | 1.725                          |

Whilst Table A2 shows the forecast for the delivery of the eight commitments included in this plan it also highlights that:

- The December 2022 timetable baseline is worse (by circa 9 %) than at the start of the previous business planning period
- The metric will get worse before it gets better, and
- Although the eight commitments contained in this plan will improve the situation, they will be not in themselves remedy the decline in the metric over the previous business planning period.

Therefore, we’ll use the revised governance, specifically the Strategic Timetabling Steering Group, to further improve journey times in the context of the overall timetable construct to set a new target profile (by September 2024) that will at least restore the metric to the previous business planning period commencement level. We’ll also seek to set a target profile (again by September 2024) that will do more than restore the previous business planning period commencement level (i.e., set a stretch target).

For ScotRail’s Inter7City services between the Central Belt and Aberdeen and the Central Belt and Inverness, we’ve developed a plan to deliver “a mile a minute” journey times by 2030. This

will be delivered partly through the eight commitments in this plan and partly delivered through the enhancement pipeline.

**Table A3: ScotRail Inter7City Mile a Minute**

| Timetable Change         | Minutes per mile | Assumptions                              |
|--------------------------|------------------|--|
| December 2022 (Actual)   | 01:06            |  |
| June 2024 (Forecast)     | 01:07            |  |
| December 2024 (Forecast) | 01:07            |  |
| May 2025 (Forecast)      | 01:07            |  |
| December 2025 (Forecast) | 01:06            | Improvements from hygiene factor reviews |
| May 2026 (Forecast)      | 01:06            |  |
| December 2026 (Forecast) | 01:05            | Improvements from track & train reviews  |
| May 2027 (Forecast)      | 01:05            |  |
| December 2027 (Forecast) | 01:05            |  |
| May 2028 (Forecast)      | 01:05            |  |
| December 2028 (Forecast) | 01:05            |  |

The Inter7City metric has been forecast based on the delivery of our eight commitments in this plan. It will be re-forecast once final business cases have been agreed for investments such as the Aberdeen Route Upgrade and the Highland Main Line corridor enhancement. The delivery of both these investments and the delivery of the eight commitments in this plan will result in mile a minute journey times.

We'll continue to measure the average speed of freight trains using the same methodology and tool as in the previous business planning period.

We'll continue to report the metric through Freight Joint Board, and we'll also report it via the Journey Time Working Group. All the commitments in this plan will contribute towards increasing the average speed of freight trains across the next five year period.

**Table A4: Our eight commitments****Commitment 1:**

By August 2024, we'll have facilitated the co-location of additional ScotRail strategic resourcing with our System Modelling team.

**Commitment 2:**

We'll review all proposed changes to the building blocks of our timetable for each timetable change through the lens of the market-led framework.

**Commitment 3:**

We'll deliver corridor "hygiene factor" reviews by the dates identified in our plan.

**Commitment 4:**

We'll provide a summary report on key timetable production decisions and unused paths for each timetable change.

**Commitment 5:**

We'll deliver corridor "track and train" reviews by the dates identified in our plan.

**Commitment 6:**

For each timetable change, we'll report the journey time metrics at the Journey Time Working Group which reports to the Strategic Timetabling Steering Group.

**Commitment 7:**

We'll share the journey time market assessments undertaken to date with the Journey Time Working Group.

**Commitment 8:**

We'll deliver the journey time market assessments to the Journey Time Working Group by the dates identified in our plan. Once all the reviews are complete, we'll assess the value of changing to market-led journey time metrics.

## Annex B: Signalling Scotland's Future

### Background

The High Level Output Specification (HLOS) from Scottish Ministers for the next five year period includes the following requirement:

“Scottish Ministers require that Signalling Scotland's Future should be used to develop the Scottish signalling strategy by March 2024, which should comprise a programme of signalling plans for each line of route in Scotland, that will maintain safety and operational performance, reduce whole railway system net cost, provide efficiency through integration with enhancement investments, avoid the high unit cost and premature obsolescence issues of recent approaches and at the same time deliver maximum benefits to passenger and freight customers.”

Following extensive industry collaboration, consultation and challenge the strategy document provides an overall narrative of the output and the processes in which Signalling Scotland's Future shall deliver the HLOS requirement. This strategy forms part of a suite that includes individual strategic rail corridors or 'LOR - line of route' business cases for signalling investment over 60 years. These documents align the signalling outputs to demonstrate how the business case element aligns with the wider railway system, which will ensure that we're focusing on reducing whole system net cost and optimising signalling interventions to maximise the opportunities of railway renewal to the delivery of Scotland's railway strategic priorities.

The Signalling Scotland's future strategy summarises and combines the business case outputs and layers these into a 'network level' output of distinct investment profiles for consideration and guidance. This strategy sets the tone and culture for a considered change in the approach to investment in signalling assets in Scotland.

### Responding to the HLOS

**We've comprised a programme of signalling plans and options for each line of route in Scotland.**

Each line of route plan and subsequent business case forms part of the suite of Signalling Scotland's Future documentation. These business cases/plans have formed options which have been analysed extensively using a multi-criteria assessment framework assessment (MCAF) model which encompasses, net cost, safety, climate impact considerations, system integration and other investment opportunities. The MCAF framework and its weightings have been developed and agreed by Team Scotland (Network Rail, ScotRail and Transport Scotland).

**We'll maintain safety and operational performance.**

All line of route plans / business cases seek to improve safety and operational performance levels.

This is a plan which pushes the asset policy renewal dates, recognising that affordability challenges need us to maximise the lifecycle of each element of signalling infrastructure.

The strategy commits to an adaptable signalling output which is proportionate to the present and future operational needs of the line of route. Investing in an appropriate solution to suit the customer needs and supporting constructive engagement about route requirements for

reliability and flexibility in the design of infrastructure. This will ensure that we're delivering the best operational output for the minimum net cost.

**We'll reduce whole railway system net cost and seek to provide efficiency through integration with enhancement investments.**

At its core this strategy has been designed and delivered to reduce whole system net cost by reducing the capital element of signalling and operating costs, whilst evaluating by line of route, opportunities to improving the net cost position for both passenger and freight operations as well as driving integration with known future network enhancements and rolling stock changes.

As an example, the application of the strategy on the Aberdeen to Central Belt corridor has selected a minimum viable product signalling intervention that integrates with enhancement programmes. This reduces journey time (enabling modal shift), thereby creating the opportunity to increase revenue, as well as increasing capacity to accommodate freight growth. This output also creates further efficiencies by incorporating safety related renewals and enabling an electrification ready route that avoids disproportionate signalling costs associated with decarbonisation.

This methodology has been applied to all lines of route plans/business cases and has been informed by the network whole system net cost analysis.

This strategy will avoid the high unit cost and premature obsolescence issues of recent approaches and at the same time deliver maximum benefits to passenger and freight customers.

Scotland currently has the lowest unit rate for signalling renewals in Great Britain. Throughout the creation of this strategy, business cases and plans, we've driven (and will continue to drive) reduction in unit cost for signalling. The business cases have used a combination of this rate for conventional interventions, with in-cab signalling based on Network Rail unit rate data, informed by live schemes.

**This strategy has extended asset lifetime expectations recognising the affordability challenges. We have and will continue to innovate to ensure we achieve the maximum lifespan of each element of signalling infrastructure.**

Where parts of the plan require the ongoing use of legacy technology, we'll appropriately manage the obsolescence risks through appropriate targeted component intervention, testing current and new supply chain partners (national and local) on costs and alternatives technology applications. In addition, we'll evaluate and implement alternative commercial strategies with our supply chain partners to reduce premature obsolescence risks.

The commitment to avoid retro fitment is absolute and can only be considered with the agreement of Team Scotland. It's recognised that forward and backward compatibility is a known issue with existing in-cab signalling applications. When delivering change to this type of system the cost and time to implementation can be disproportionate to the value incurred. we'll positively identify and adopt best practice and drive innovation to ensure an affordable and viable whole life system management.

## Key conclusions – in-cab signalling:

The business case analysis has identified the potential benefits of in cab signalling on some lines of route. However, this work has also identified the scale of transitional cost, risks and operational restrictions that currently would outweigh the potential benefits. The assessment methodology used has provided valuable insights, but it's recognised it doesn't take account of the value of flexibility of deployment of a varied fleet of rolling stock types – for passenger and freight revenue earning traffic, and also the assets required for maintenance and engineering support of the infrastructure. This cost and restrictions imposed by retrofitting of a wide range of existing vehicle types has been an important lesson learned from other in cab signalling projects on comparable networks across Europe. The problem may be summarised as:

- The cost of retrofitting existing rolling stock to the current European Train Control System Level 2 (ETCS L2) specification is disproportionate, and costs more than money saved in signalling assets.
- The cost of overlaying ETCS L2 with existing signalling during a transition phase presently would negate the apparent savings from removing existing lineside signal equipment.
- The alternative transition approach would be to restrict deployment of rolling stock to new fleets only. The average life of rolling stock is around 35 years, and sometimes more. Demand for railway services and patterns of passenger and freight movements change over time, often in unpredictable ways, as recent years have shown. Therefore, flexibility of deployment of different fleets has strategic value. Restricting rolling stock deployment options on key lines of route wouldn't be acceptable at present.

The assessments undertaken have been based on the information on unit rates and technology maturity as is known to date. It's suggested that this may change over time as the signalling market matures and therefore our approach needs to be regularly verified against said variables. Further, it must be noted the cost and system risk of forwards and backward compatibility of ETCS systems as the latest specification evolves over time hasn't been included in the cost estimates of the options profiles in this analysis, though it's clear this can generate material ongoing cost. In balance, additional operational benefits such as the potential for reduced impact of emergency speed restrictions in severe weather haven't been included.

## For onward assessment

To enable the eventual transition from lineside signalling to in-cab signalling technology, for any line of route, the following factors must be true and appraised as part of any future decision making. Team Scotland will commit to robustly exploring options to reduce cost and risk against the following factors which could transform the business case for in cab signalling;

- Transitions must avoid any disproportionately expensive retro fitment to any of the rolling stock which operates on the route; and / or -
- The unit cost and technology application of overlaying in-cab signalling technology with conventional signalling must be significantly improved to allow continued operation of fitted and unfitted traffic during a transition period.
- In the transition towards in-cab signalling, flexibility of deployment of existing rolling stock must be maintained so that Scotland's Railway revenue generating assets retain the ability to maintain their earning potential.

- Management of the overall railway system configuration, and changes of infrastructure state/system upgrades/layout alterations will be required to facilitate progressive change in rail system usage and modal shift. The ability to expedite alterations of the safety critical software and data which describes the railway characteristics over the lifetime of the system must be developed and improved so that it's no longer disproportionately expensive in terms of cost and time.
- Business case assessment must include an Integrated Industry programme(s) delivering operational readiness and business change activities, forming core parts of any transition planning to in-cab technologies (e.g., driver training and changes activities to be considered in appraisal, deployment, and operations).
- Investigate simpler, standard, and improved cost solutions for in-cab technology, for existing rolling stock types, and trackside solutions.
- Further assessments of in-cab technology transition programme informed by the age profiles and capability of the ScotRail and other Train and Freight Operators rolling stock. For example, two thirds of the current ScotRail passenger fleet over the 20 years is likely to be ETCS-ready (subject to forward and backward compatibility issues), leaving only class 380s and 385s, some freight locomotives and charter/heritage trains; and parts of the infrastructure maintenance and on-track plant fleet to be accommodated.

### **Key conclusions – network level planning and cost**

There are three renewals profiles provided at a Scotland 'network level' which depict the modelled investment profiles for signalling over the next 40 years. It needs to be noted that the lowest capital required for signalling over the next 25 years maintains the present conventional asset base through life extension interventions. This however risks creating an unaffordable and undeliverable 'bow wave' of asset renewal following this timeframe and would ignore the need to upgrade signalling capacity and capability on key routes being electrified or otherwise enhanced.

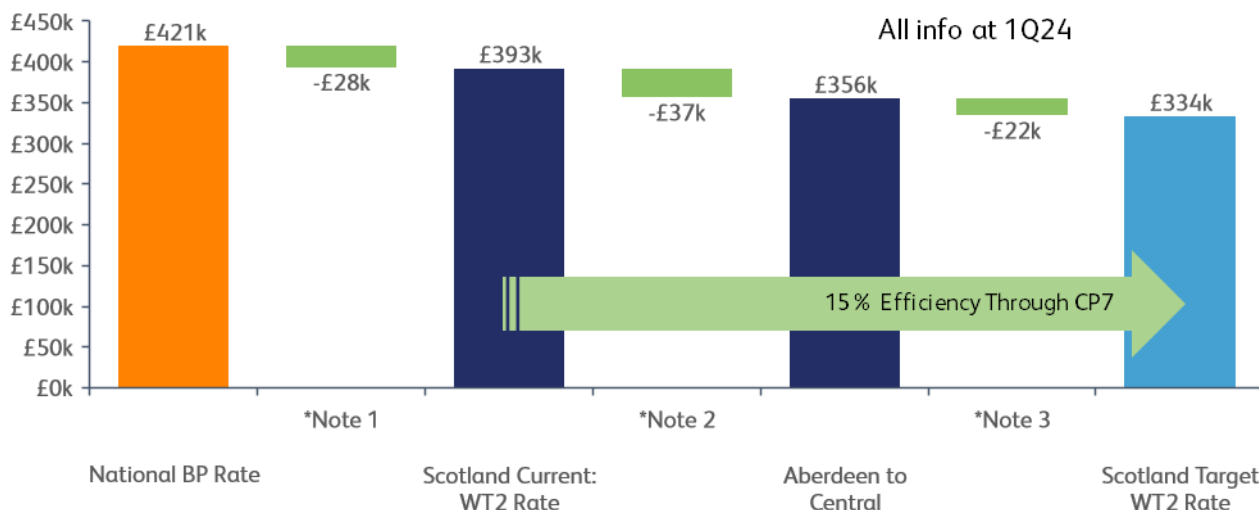
The modelled in-cab options demonstrate a higher capital cost over the next 25 years, but a significantly reduced onward signalling operating cost in the future (post this period) than other options, subject to the additional identified costs and risks above. The hard conclusion is that in any profile the fundamental aspect of signalling unit cost, both conventional or in-cab, is presently too high and needs to be addressed (see waterfall analysis below).

The business case analysis undertaken is based on the information on unit rates and technology maturity as is known to date. It's suggested that this will change over time as the signalling market matures and therefore our approach needs to be regularly verified against said variables. Finally, it must be noted that the cost and system risk of forwards and backward compatibility of ETCS systems during transitions hasn't been included in the cost estimates of the options profiles at this time. This risk will need to be quantified.

The below waterfall outlines the journey to date and our onward commitment in reducing the re-signalling unit rate in Scotland. This continued focus on Signalling Equivalent Units (SEU) cost reduction, building on previous lessons learnt, will assist in avoiding usual SEU cost fluctuation, which we've experienced in previous business plan periods. A key factor in controlling SEUs is the ability to manage, integrate and communicate scope of signalling interventions. Maximising opportunities with other interventions, adopting a minimum viable product ethos and learning where control was lost from previous schemes – both conventional and from in-cab

programmes. A number of focused workstreams will be established as part of the commitments made in the next business planning period. These will seek to determine, in greater accuracy, the opportunities that will provide greater certainty on the costs.

**Figure B1: Our re-signalling unit rate**



\*Note 1: £28k Efficiency - Creation of a new Scotland Work Type 2 (WT2) rate following an extensive analysis of access, actual costs, including rate breakdown of all cost factors. Refer WT2 presentation pack.

\*Note 2: £37k Efficiency – Further efficiency progression including removal of risk from the SEU rate and a further stretch efficiency against line of route delivery including integration with enhancements work.

\*Note 3: £22k Efficiency - Target CP7 rate including further efficiency around Better in the Making workstreams, access alignment opportunities, further subcontractor engagement and collaboration.

**Table B1: Our five commitments to Signalling Scotland’s Future**

1. We won't stand still. We'll continuously challenge the market and demand increasingly efficient processes and innovations to drive down unit and net costs for every intervention.
2. This strategy is not for reference only, it forms the live signalling workbank. We'll revisit the assumptions and financials regularly as Team Scotland to assess the impact of change and reissue the document annually, with a full refresh on the approach and output to Signalling Scotland's Future every business planning period.
3. We'll continue to use all our assets in a sustainable way, delivering maximum value from them ensuring we get every operational hour out of every piece of equipment.
4. Take control of the strategic direction for signalling in Scotland by Scotland. We'll take industry decisions, continue to innovate and provide suitable disruptive challenge to the signalling sector to drive down industry net cost and maximise return on investment.
5. Not to force the agenda. This strategy and corresponding workbank will not demand in-cab signalling capability. It will however force the conversation. The output of the rolling stock strategy will be appraised and will continue to lead our technology options.



## Annex C: Our Gauging Commitments

We’ve set out what we’ll deliver as part of this Delivery Plan in our Scotland’s Railway Control Period 7 Gauge Commitments.

### We commit to maintaining existing gauge capabilities for freight and charter services

We’ll maintain up-to-date asset gauging information and apply our track design process through structures and platforms on all routes in Scotland, in line with the TRK/001/Mod12 standard.

We’ll confirm that the permanent and temporary (RT3973) gauge capabilities of our network haven’t deteriorated, reporting through the Gauging Developments Working Group and Pipeline Integration Board from 1 April 2024.

### We commit to simplifying the annual recertification process for heritage vehicles

We’ll establish a simple process where existing certification can be rolled over, subject to a two-way confirmation of no material change to infrastructure capabilities and vehicles. We’ll work with the rail industry to agree this simple process and implement it from 1 April 2024.

### We’ve defined “Scottish Gauge”

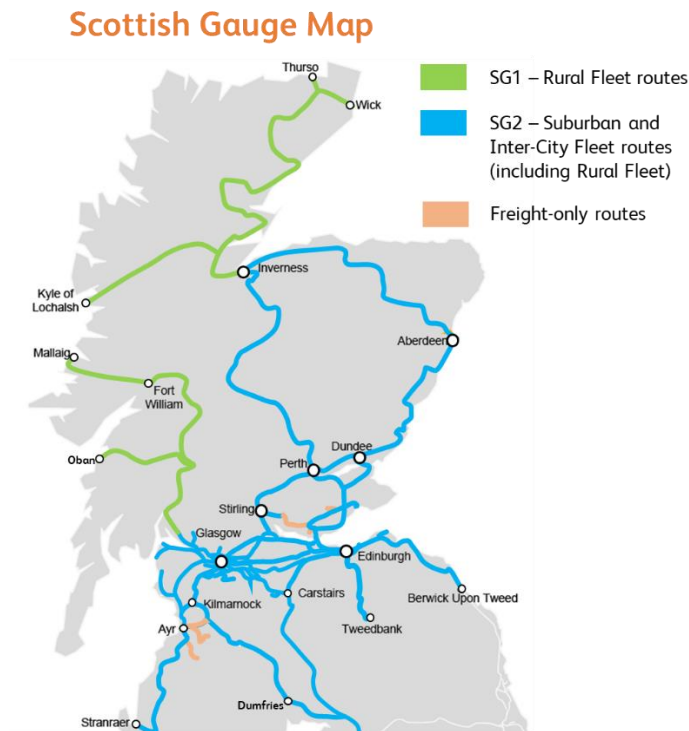
We’ve defined Scottish Gauge based on the type of train fleet (rural, suburban, intercity and freight).

**Table C1: Scottish Gauge Proposals - based on fleet type**

|                      | Rural   | Suburban  | InterCity  |
|----------------------|---|---|--|
| <b>Vehicle Types</b> | Class 150/1, 153/1, 156, 158, 170, 172 ;<br>Coaches – MkI, MkII, MkIII, MkIV, MkV ;<br>Locomotives – Class 33, 37, 43, 47, 50, 55, 56, 57, 59, 60, 66, 67, 68, 69, 70, HSTs | Class 185, 318, 319, 320/4, 321, 325, 331, 334, 350/4, 380, 385<br>Locomotives – Class 86, 87, 88, 90, 91, 92, 93 | Class 220, 221 (non-tilt), 222, 397, 745, 755, 756, 801, HSTs  |
| <b>Routes</b>        | All passenger routes on Scotland’s Railway  | All routes except West Highland Line + Far North + Kyle Line  | Glasgow Queen Street / Edinburgh Waverley routes to Aberdeen & Inverness; also on diversionary routes and routes to depots |

The clearance requirements to achieve Suburban and InterCity are sufficiently similar that we propose to combine.

Importantly, this means we’ll progress the implementation of Scottish Gauge based on SG1, SG2 and Freight-only routes as shown in the Scottish Gauge map in Figure C1.

**Figure C1: Scottish Gauge proposals based on fleet type**

This means that from 1 April 2024, we’ll specify the requirement to provide gauge clearance for SG1 and SG2 vehicle matrices as appropriate, for all enhancement projects, renewals, and maintenance activities on Scotland’s Railway.

From 1 April 2024, we’ll specify freight gauge and decarbonisation requirements for specific locations, routes, and corridors, so all gauge-related scope can be integrated (where cost effective) and delivered efficiently with minimal disruption to customers.

We’ll develop SG1 and SG2 composite vehicle gauges by 30 June 2024.

From 1 July 2024, SG1 and SG2 composite vehicle gauges will be used to specify passenger gauge requirements (superseding the vehicle matrices approach). SG1 and SG2 will be published in the RIS (Rail Industry Standards) so train manufacturers can use them when designing new rolling stock.

For level boarding, we’ll continue to deliver standard height (and Lower Sector Infrastructure Gauge compliant) platforms at new stations, and at existing locations where this can be achieved at no additional cost.

### **We’ll reduce conservatism in how we manage gauge on Scotland’s Railway**

We’re already using a new gauging methodology (based on likelihood) to calculate electrification clearances and for gauge maintenance in Scotland’s Railway, to minimise the cost of enhancements, renewals and maintenance of our network.

We’ll pilot the use of this new methodology in Scotland’s Railway during 2024/25, as part of delivering Scottish Gauge.

We'll work with colleagues in our Technical Authority team to approve the use of this new gauging methodology across the whole rail business.

**We'll deliver Scottish Gauge for the introduction of new ScotRail fleets and vehicle cascades**

We'll deliver Scottish Gauge capabilities in advance of ScotRail fleet changes and vehicle cascades, through improved gauge management and maintenance processes where possible, to minimise the number and cost of infrastructure interventions required. The cost of implementation will range from zero up to £20 million during the next business planning period.

## Annex D: Assumptions

### Financial assumptions

Table D1: Financial assumptions

| Area                  | Assumption  |
|-----------------------|---|
| Price Base            | Cash prices unless otherwise stated   |
| Inflation             | Office for Budget Responsibility (OBR) inflation forecasts from November 2023. CPI inflation is currently at around 4 % , and the Office for Budget Responsibility inflation forecasts predicts 2.82 % in 2025 with inflation below 2 % in 2026, 2027 and 2028 returning to 2 % in 2029 |
| Input Price Inflation | In line with the Final Determination  |
| Headwinds             | Headwinds profile assumption of 0.3 % p.a. for Opex and 0.2 % p.a. for renewals headwinds over the next five years  |
| Income                | PR23 Final Determination price lists  |
| 2019-24 Exit Position | 2019-24 exit position based on business planning submission, FY24 RF9.  |

### Other planning assumptions

Table D2: Other planning assumptions

| Area                        | Assumption   |
|-----------------------------|--|
| Enhancements                | Only assume enhancements past Final Business Case (or equivalent).   |
| Freight Traffic             | We've assumed a net 8.7 % increase in net tonne kilometres in Scotland's Railway based on "bottom-up" knowledge of both the Scottish logistics market and the network capability and capacity of the Scottish rail network.                            |
| Passenger Traffic           | We've identified the assumed train service levels at the end of 2023/24 and the end of 2028/29 for each of the eight corridors across Scotland's Railway.  |
| Passenger Demand (footfall) | Passenger demand (footfall) is expected to enter the next business planning period at 75 % of pre Covid levels with an expected 1.5 % increase for each year of the next business planning period, exiting 2028/29 at around 80 % of pre Covid levels. |