

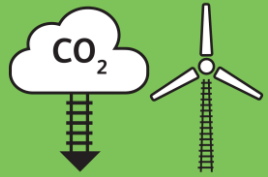
NETWORK RAIL

Environmental Sustainability Strategy

2020–2050



To serve the nation with the greenest, cleanest mass transport



A low-emission railway



Improved biodiversity of plants and wildlife



A reliable railway service resilient to climate change



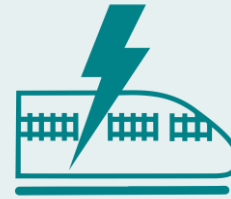
Minimal waste and sustainable use of materials



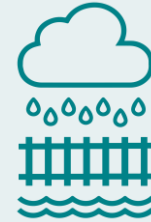
What people are telling us

We talked to passengers and the public about their views on the railway and environmental sustainability

Many people believe the railway is making a positive contribution to society and identified the following area where we could do more



Use electric train to reduce carbon emissions



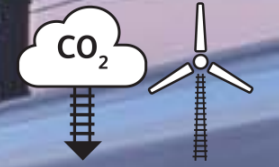
Make stations, tracks and trains more resilient to extreme weather



Plant more trees to offset carbon emissions



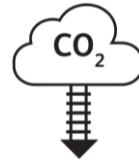
Send zero waste to landfill



A low-emission
railway

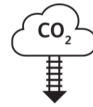


A low-emission railway



We will achieve net zero carbon emissions by 2050 (and 2045 in Scotland) and deliver continual improvements to air quality so that our passengers, neighbours, and employees breathe healthier air.

GREENER TRAINS



2020

Science based targets for Scope 3 emissions (including traction diesel emissions) approved by 2020

2020

Traction Decarbonisation Network Strategy completed and discussed with funders and approved by 2020

2024

Widespread trials of bi-mode, hydrogen and battery trains will have begun by 2024

2030

Harmful pollutants have been reduced by 25% in Network Rail managed stations by 2030

2029

Final investment decision for electrification of main line routes by 2029

2024 – 2029

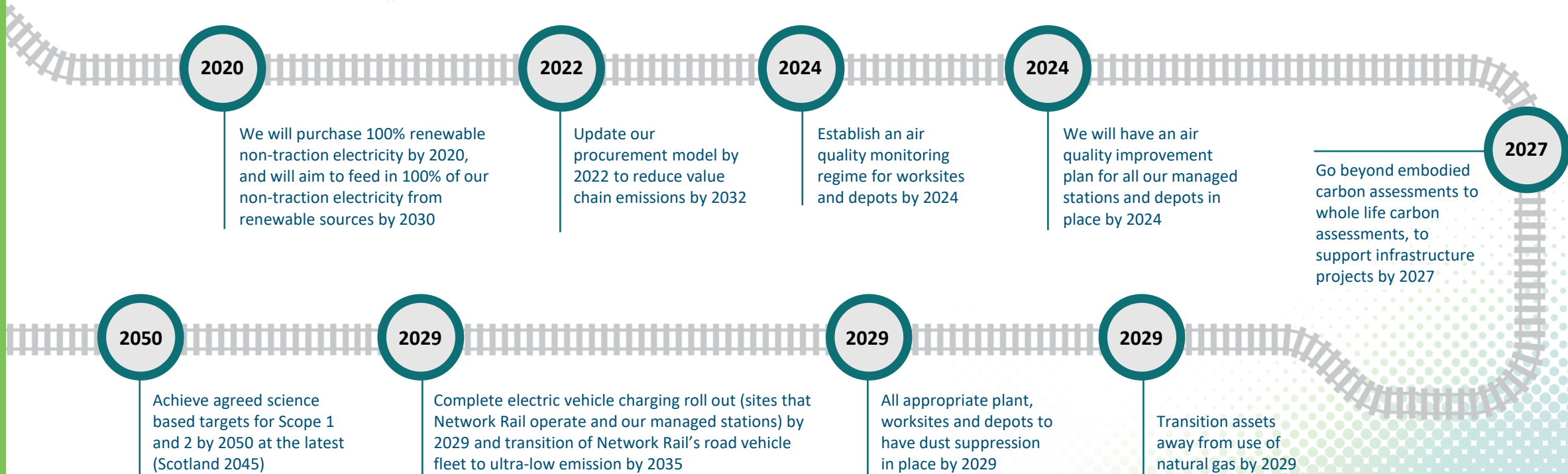
Timetable options for carbon efficiencies developed 2024-2029

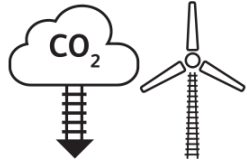
A low-emission railway



We will achieve net zero carbon emissions by 2050 (and 2045 in Scotland) and deliver continual improvements to air quality so that our passengers, neighbours, and employees breathe healthier air.

GREENER ASSETS





Quick wins

Scope
1,2 & 3 targets –
net zero **2045**
(Scot), **2050**
(Eng&Wales)



EV charging
(2029)
and
Fleet **(2035)**

Hydrogen &
Battery Trains –
widespread
trials **by 2024**

Timetable
options
for carbon
efficiencies
2024-29

Renewable Energy
– Non-traction:
REGOs **2020**, PPA
& Direct Wire **by**
2030 Traction:
from nuclear

Electrification –
investment
decision
by 2029



Traction
Decarbonisation
Network Strategy
by 2020

Air Quality –
monitoring and
Management
plans **by 2024**



A reliable railway service that
is resilient to climate change





A reliable railway that is resilient to climate change

We will prepare the railway infrastructure to minimise the impacts of climate change by 2050.

PRIORITIES

AMBITIONS

KEY MILESTONES

2024

Asset polices and standards updated to reflect long-term climate change projections by 2024

2024

Review criticality and vulnerability mapping of all assets for climate change across the network by 2024

2029

Regions develop long term adaptation pathway strategies and identify level of investment required for different scenarios by 2029

2027

Agree level of service in extreme weather conditions with Government and regulators by 2027

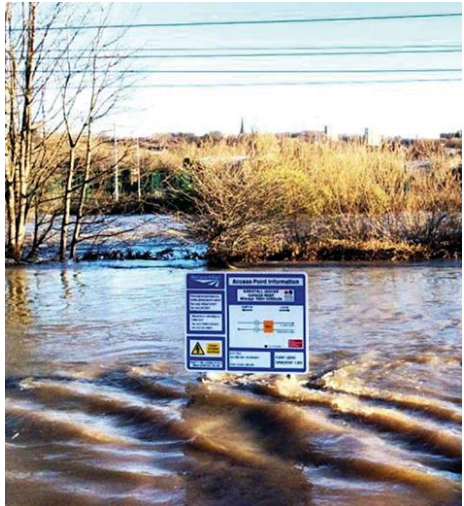


Quick wins

Climate Change Projections Guidance Update by 2020



R&D: Vulnerability and Prioritisation Mapping and Real Cost of Weather and Climate Change by 2024



Route and Asset Weather and Climate Change Adaptation Plans Implemented by 2024

Policies, standards and procedures updated to include climate change



Long term regional adaptation pathways strategy and investment plans by 2029



**Improved biodiversity
of plants and wildlife**

Improved biodiversity of plants and wildlife



We will continue to look after nature and protect, maintain and enhance biodiversity across the railway landscape by 2035.

2021

Publish national biodiversity standard by end of 2021

2024

Establish the biodiversity baseline, map all relevant data and make available to our supply chain by 2024

2024

Increase ecological capability in Network Rail and in our supply chain to 2024

2030

Be recognised as a leader in land management by 2030

2035

Use the outputs to inform guidance to Network Rail asset managers on optimal habitat management interventions for biodiversity and train performance.

Achieve no net loss of biodiversity across the network by 2024 and net gain by 2035



Quick wins

No-net biodiversity loss **2024**
 Net biodiversity gain **2035**

Increased ecological capability **by 2024**

Sustainable Railway Design Guide and Standard **by 2021**

Species-rich Habitats **(2020-35)**
 Biodiversity Protection **(from now)**

Biodiversity Action Plan **by 2020**

Biodiversity Baseline **2020/21** – updated frequently to measure change

Demonstrator Projects

100 miles of lineside trials (in prep)

Network Rail Routes and Regions

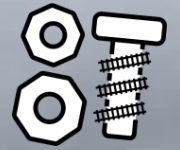
- Eastern Region
 - East Coast Route (to be delivered in the next year)
 - North East Route
 - East Midlands Route
 - Anglia Route
- London North Western (LNW) region
 - LNW North Route
 - LNW South Route
- Scotland Region
 - Scotland Route
- Southern Region
 - East Route
 - High speed rail Route
 - Sussex Route
 - Wessex Route
- Wales and Western Region
 - Wales Route
 - Western Route

Invasive species & habitat creation (in prep)

Hedgerows Dangerous Trees Ecology Support (started)

Ash dieback Habitat creation (in prep)

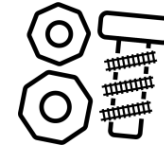
Kent Pilot (started)



Minimal waste and the sustainable use of materials



Minimal waste and the use of materials



We will reuse, repurpose or redeploy all surplus resources, minimise use of resources, design out waste and embed waste life-cycle/ circular economy thinking into the rail industry by 2035.

PRIORITIES

AMBITIONS

KEY MILESTONES

2021

Map and prioritise materials and waste streams within supply chain by 2021

2022

Circular economy policy in place for reducing resource use and waste by 2022

2023

Adapt standards to include circular economy aspects by 2023

2029

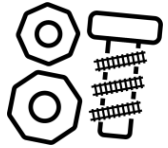
Reuse, recycle, or redeploy all our non-hazardous infrastructure materials by 2029

2024

Embed circularity metrics into decision making by 2024

2024

Embed material re-use and redeployment systems and tools into procurement process by 2024



Quick wins

Map and prioritise waste streams by 2021

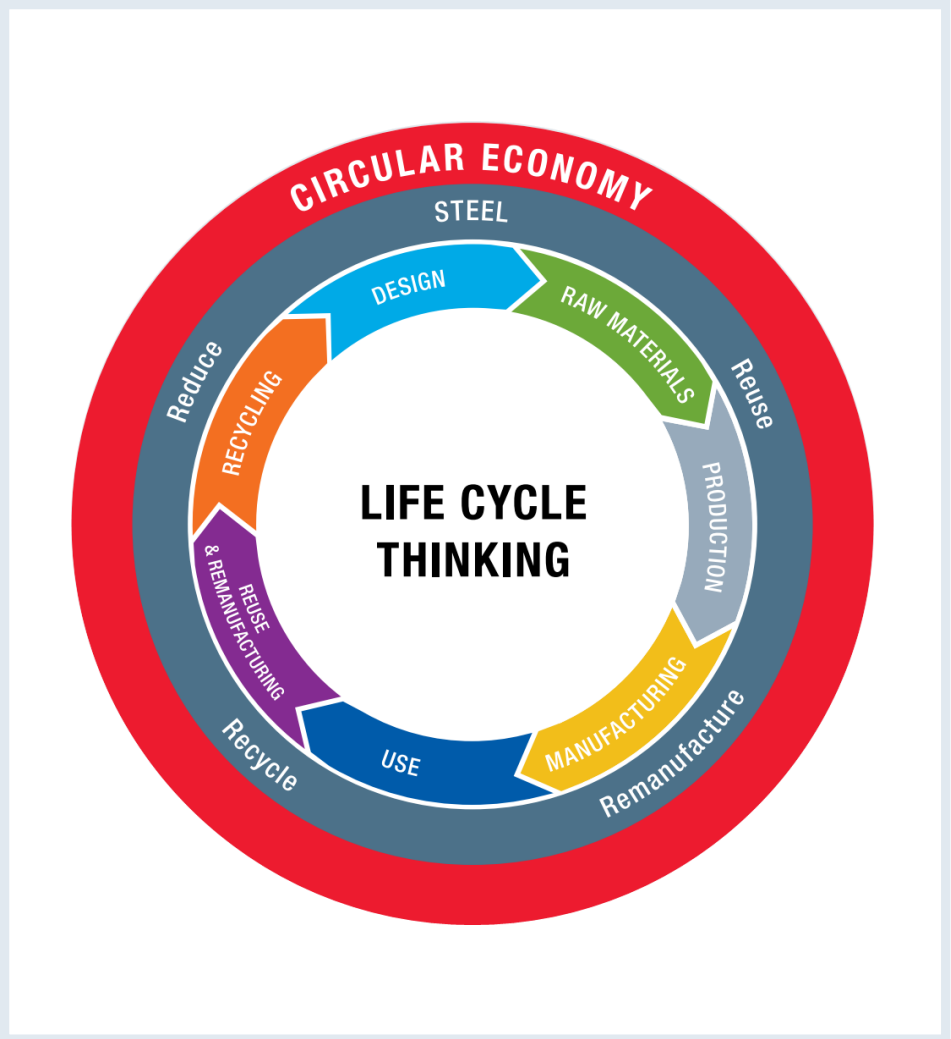


Reduce waste – zero waste to landfill by 2024

Adopt circular economy principles by 2024

Work with supply chain to buy low environmental impact materials by 2024

Re-use, recycle or redeploy by 2029





An organisation
enabled to succeed

A organisation enabled to succeed

Successful delivery of this strategy will rely on integrating environmental sustainability into everything we do. Delivering our commitments against the six key enablers below will help us to make sure our strategy is a success.



People

How we will communicate with our employees, increase their capabilities and create the culture we need to enable change.



Engagement

Communications, partnerships with external organisations, working with our neighbours and engaging with our stakeholders to support change.



Funding and planning

How we will integrate environmental sustainability into the planning and funding process, which is vital for the delivery of our ambitions.



Technology

How we will approach research and innovation to support the delivery and acceleration of our programmes.



Systems and processes

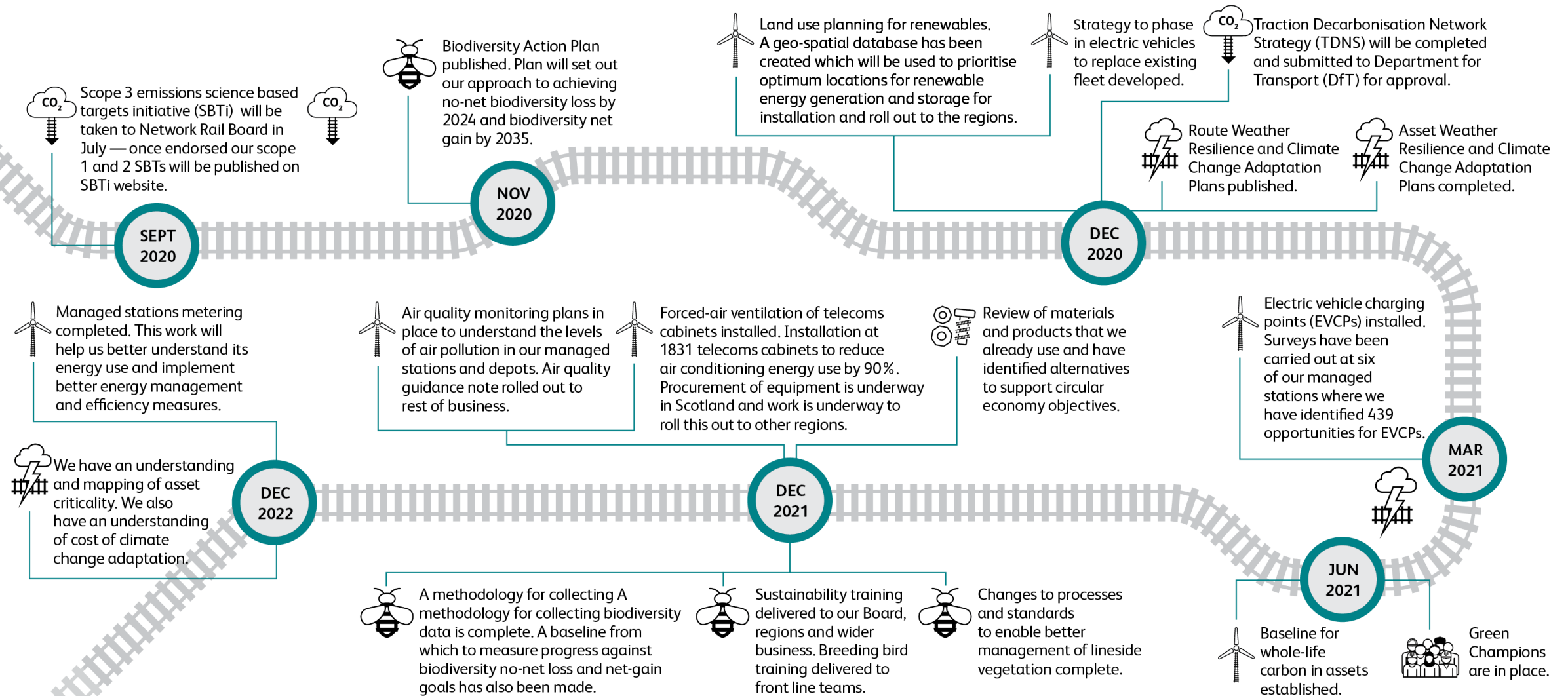
What changes to company-wide processes and systems need to be made to support change (including procurement and partnerships with our supply chain)



Measurement

What information, data and measures need to be in place to monitor and demonstrate change.

Keeping Momentum



GREENER TRAINS, HEALTHIER AIR
GREENER ASSETS, HEALTHIER AIR
CLIMATE CHANGE ADAPTATION
BIODIVERSITY
CIRCULAR ECONOMY
PEOPLE

A photograph of railway tracks receding into the distance towards a bright sun on the horizon, creating a lens flare effect. The tracks are flanked by dense green foliage and trees. The sky is a mix of orange and blue.

Thank you

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