



Environmental Sustainability Strategy

October 2024

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Guided by our environmental sustainability pillars, every one of us can make East West Rail greener for the environment, making the right choices for the community the railway will serve for generations to come.

Neil Sachdev MBE, EWR Co Chair

River Great Ouse, Bedford

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About us

East West Rail is a project of national significance which aims to deliver much-needed transport connections for communities between Oxford and Cambridge by:

- Upgrading an existing section of railway between **Oxford and Bicester**
- Bringing back into use a section of railway between **Bicester and Bletchley**
- Refurbishing the existing railway between **Bletchley and Bedford**
- Building a brand new railway between **Bedford and Cambridge**

The new railway presents a once-in-a-generation opportunity to connect people and businesses by opening up new journeys, cutting travel times, easing congestion on local roads and bringing more jobs within reach of people living locally.

What we aim to achieve

We aim to deliver a railway which is a reliable part of people’s daily lives – simple to use, easy to access, where customers can get where they need to be and on time.

EWR also needs to be cost effective and delivered in an environmentally sustainable way, so that the taxpayer can invest with confidence in the first place.



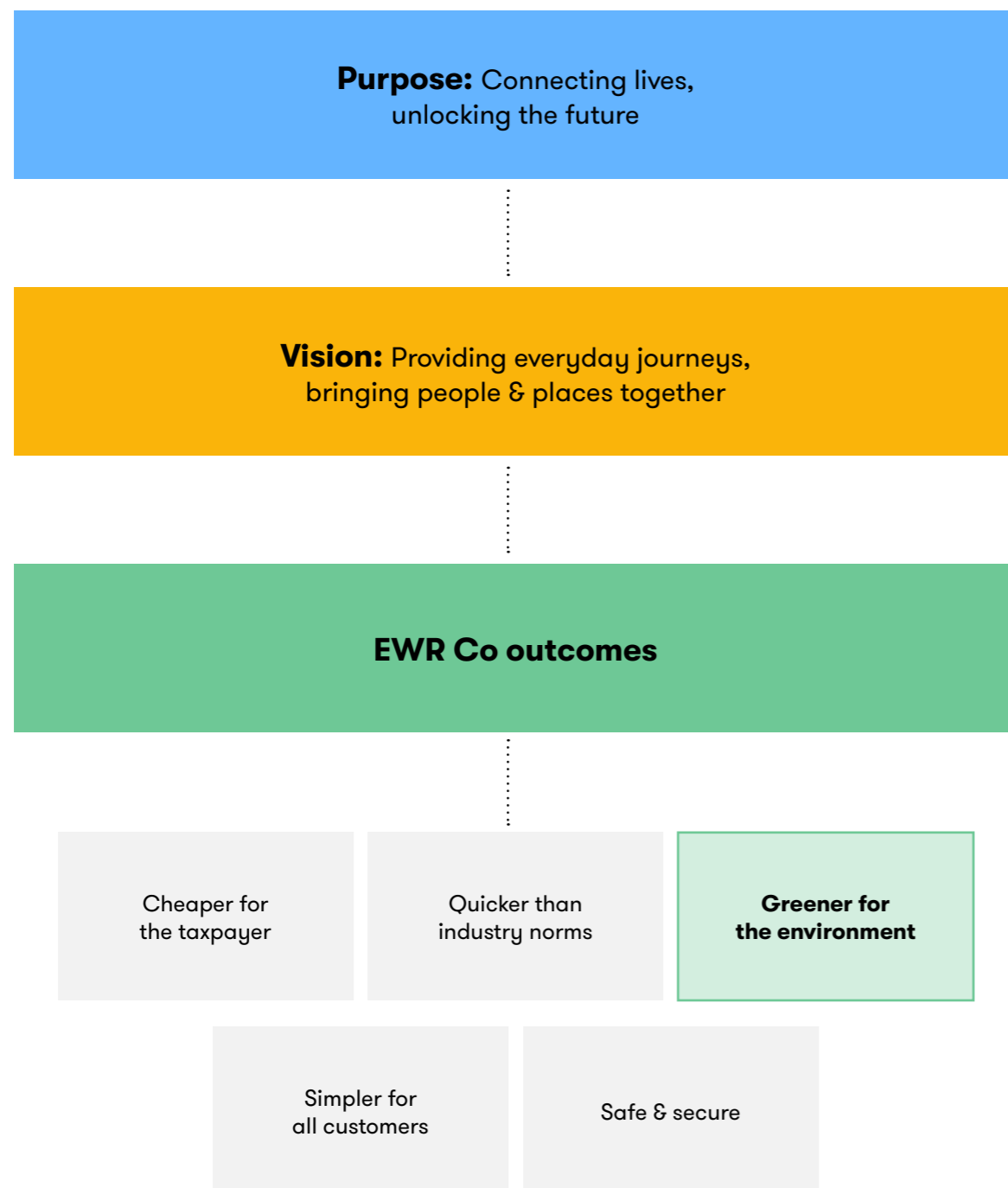
We will deliver a railway that is:

- Simpler for customers
- Cheaper for the taxpayer
- **Greener for the environment**
- Quicker than industry norms
- Safe and secure

Foot bridge, Bedford



Our outcomes, which include **greener for the environment**, are the foundation of our decision making and will be considered in a balanced way.



We have already been putting our approach into practice between Bicester and Bletchley on Connection Stage 1, creating twenty ecological compensation sites and recreating habitats for protected species of wildlife such as barn owls, great crested newts, badgers, bats and otters. We will take this approach along the route to Cambridge.

This strategy focuses on the **greener for the environment** outcome and sets out the strategic objectives we are putting in place to support this, plus how we intend to deliver these as the Project progresses.

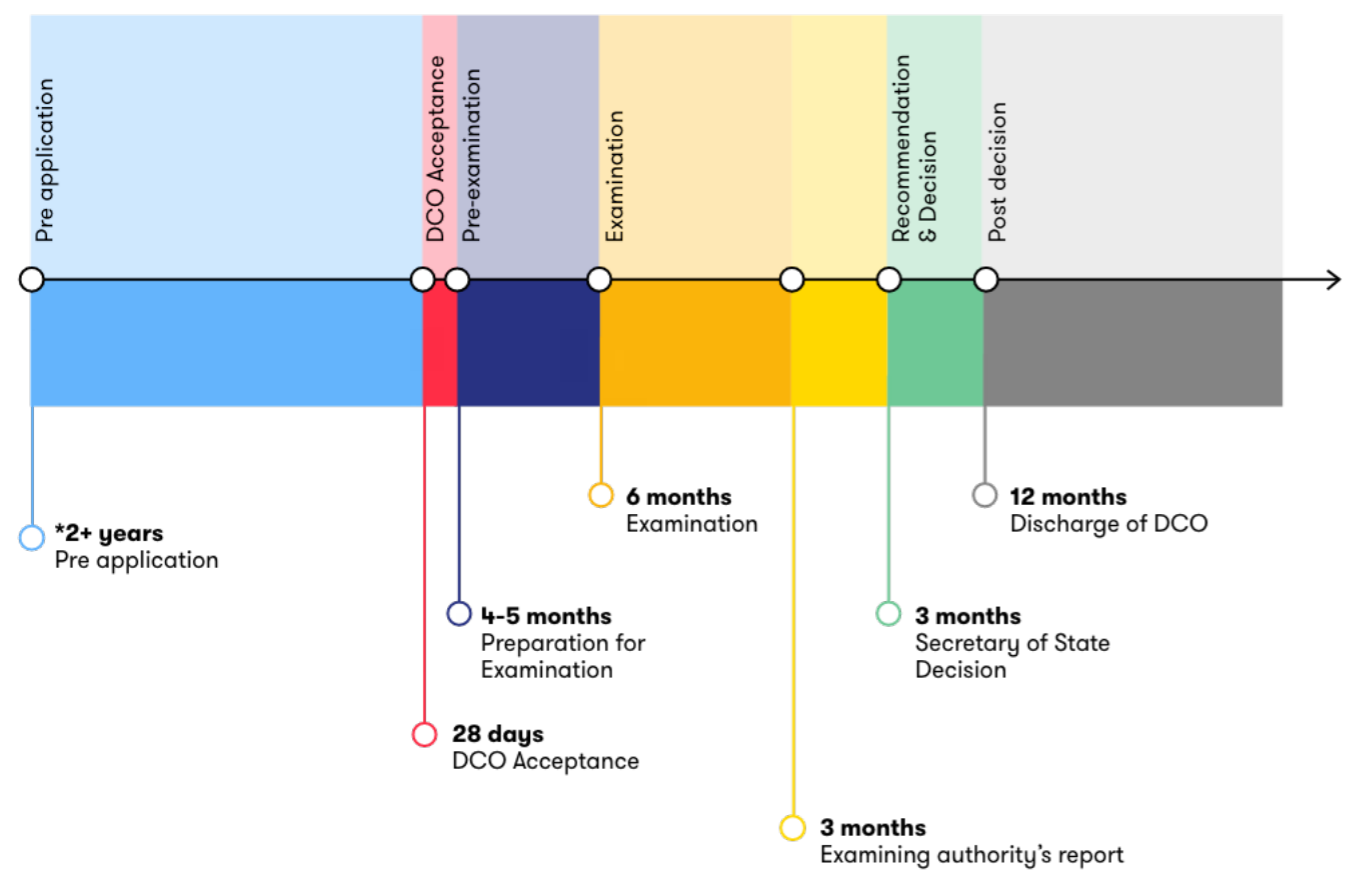
At each stage of planning and developing East West Rail, we aim to make sure people, nature and the environment are at the heart of our plans. We're listening to, and working closely with, local community groups, environmental bodies, statutory and planning authorities to assess the environmental impacts of our plans.

More importantly, we're working with them to deliver shared environmentally sustainable assets via our Project proposals.

Our Project timeline

We're currently in the pre-application phase of the planning process, where we present design options for consultation and explore which options meet the vision and objectives of the Project.

Our environmental objectives are accounted for and integrated throughout this process, helping us to make decisions and develop our proposals for the Project in way that considers the environment.



*The pre-application period will vary depending on the scale and complexity of the Project but they are generally a minimum of 2 years.

We will submit the Development Consent Order (DCO) application with an environmental statement, along with supplementary documents that outline the Project's environmental effects and our proposals to mitigate them, either through design enhancements or additional measures used during construction.

Throughout the Project lifecycle, our **greener for the environment** outcome, underpinned by our strategic objectives, will be embedded through good design principles and considered technical requirements.



Greener for the environment

Millennium Country Park, Bedford

The context

There has never been a more important time to act sustainably. Eight of the nine councils that the railway will pass through have declared a climate emergency and the UN are reporting that nature is declining globally at rates unprecedented in human history.

In recognition of the scale of the challenge, the government has made the environment one of the four areas of focus in the Oxford to Cambridge Pan-Regional Partnership. The mission of the regional partnership is to secure a future in which our communities prosper from the very best in environmentally sustainable ways of living and working. At EWR Co, we support that ambition by protecting and enhancing the natural environment.



Putting environmental sustainability at the forefront of East West Rail presents opportunities that will benefit our natural environment and the health and wellbeing of the customers and communities we serve.

A railway can be more than just transport connectivity and this is why we have made **greener for the environment** one of our five outcomes. By making environmental sustainability central to our decision making, we believe the railway can improve and enhance the environment we live in.

Central to our approach are our six environmental sustainability pillars, and each pillar has an associated ambition and definition. These set our environmental aspirations and the legacy we want to leave. These ambitions will help keep us focused on our **greener for the environment** outcome at every stage of the Project.



Market Square, Cambridge

Our six environmental sustainability pillars:




Natural environment

A railway that:

Supports a thriving and diverse natural environment.

Ambition & definition:

Through ensuring the maintenance of healthy ecosystems (wildlife, habitats, soil, land and water resources).



Carbon

A railway that:

Enables operational net zero carbon by 2050.

Ambition & definition:

Through robust carbon management, during design and construction, delivering sustained reductions in whole life carbon emissions.




Climate resilience

A railway that:

Is prepared for a changing climate.

Ambition & definition:

Through ensuring our design, construction and operation is resilient in the long term.



Historic environment & landscape

A railway that:

Responds to its surroundings, protects views and celebrates our heritage.

Ambition & definition:

Through sensitive integration into the existing landscape valuing our historic environment.




Circular economy

A railway that:

Supports a circular economy.

Ambition & definition:

Through minimising waste, promoting materials efficiency and turning waste into a resource.



People and community

A railway that:

Protects the health and wellbeing of our communities, customers and colleagues.

Ambition & definition:

Through managing impacts and providing opportunities for cycling, walking and the use of open space.

The mitigation hierarchy

Butterfly Bridge, Bedford

The adoption of the mitigation hierarchy is fundamental to sustainable infrastructure and this is applied to all pillars within the Environmental Sustainability Strategy. The mitigation hierarchy is described below:

Avoidance

Measures taken to avoid creating impacts from the outset.

Minimisation

Measures taken to minimise as far as reasonably practicable the duration, intensity and/or extent of impacts that cannot be completely avoided.

Rectify

Measures taken to improve degraded or removed ecosystems following exposure to impacts that cannot be completely avoided or minimised.

Compensation

Measures taken to compensate for any residual, adverse impacts after full implementation of the previous three steps.



Our objectives




Natural environment

The natural environment continues to be one of the highest priorities with our stakeholders and is valued in all sustainable placemaking.

However, across the globe ecosystems are under pressure from human activity, in particular biodiversity from habitat loss, healthy soils and water resources. Biodiversity relates to the variety of plants and animals and other living things in a particular area or region on land, including soil micro-organisms and in water. It encompasses habitat diversity, species diversity and genetic diversity. Globally, there has been a significant decline in biodiversity for the last hundred years, with damaging implications for future wildlife. Increased pressure on biodiversity from human activity and disturbance has led to what is currently considered to be a biodiversity crisis, with global biodiversity declining at the highest rates ever recorded.

What we are doing:

Our ambition is to deliver a railway that supports a thriving and diverse natural environment through ensuring the maintenance of healthy ecosystems (wildlife, habitats, soil, land and water resources).



To support this aim we have four strategic objectives for the natural environment:


- Deliver a biodiversity net gain legacy ensuring it is lasting and resilient to future pressures.
- Create, enhance and restore habitats to benefit ecological connectivity and create connected green networks.
- Protect and enhance the function of the water environment.
- Protect the function of soils and agricultural resources.

These objectives establish the importance of the natural environment within the Project and the approach we will take through design development. We understand the value of our natural environmental assets, particularly those assets which are of an international or national designation, and the need to protect, avoid and identify opportunities to enhance these assets. These deliver on UK legislative and policy drivers, aligning with the expectations of stakeholders such as the Oxford-Cambridge Pan Regional Partnership who seek to protect, restore, enhance and create new nature areas and natural capital assets. Our natural environment objectives set the basis for practical, value for money and affordable environmental design.



Fenlake Meadows, Bedford

Our objectives



Carbon

Our Project is being developed against the backdrop of the global climate emergency. Urgent action is needed to prevent warming beyond 1.5°C to avoid the worst climate impacts.

In the UK, the government has passed legislation that means the UK economy must achieve net zero carbon emissions by 2050. The DfT’s Transport Decarbonisation Plan sets out the commitments and actions needed to decarbonise the entire UK transport sector. The UK government sees rail as an integral part of a low carbon end-to-end transport system critical to reach net zero. Whilst rail is an inherently lower carbon form of transport than many alternatives, and this forms an important EWR business case drive, it is also subject to a decarbonisation trajectory to reach net zero by 2050. EWR forms part of that trajectory, and EWR represents an opportunity to lock in low carbon transport for the region.

Providing low carbon transport is one component, but equally important is how we build and maintain the railway. Therefore, we will consider whole life carbon emissions associated with the materials we use to construct and maintain the railway, the transport of those materials and any wastes, and how they are installed on our construction sites.

What we are doing:

Our ambition is to deliver a railway that enables operational net zero carbon by 2050 through robust carbon management during design and construction, delivering sustained reductions in whole life carbon emissions.



To support this aim we have four strategic objectives for carbon:

- Enable net zero carbon emissions from passenger services by 2050.
- Enable zero emission door to door journeys.
- Deliver a railway which reduces whole life carbon emissions in line with the UK net zero carbon trajectory.
- Deliver new depots and stations capable of being net zero carbon from day one of operations.



Bicester station

Our objectives



Climate resilience

2022 was the warmest year in the UK series from 1884, 0.9°C above the 1991–2020 average. It was the first year to record a UK annual mean temperature above 10°C.


The UK is already experiencing increased frequency and severity of extreme weather events which impact on the operation of the transport system and these are events are projected to continue to increase in frequency and severity. Whilst it is vital that we put in place measures to reduce our impact on climate change and drive towards net zero we must ensure that the railway is resilient to future impacts of climate change.

Building in adaption measures will improve the railway's resilience to such extreme weather events and ensure the system can anticipate, absorb, adapt to and rapidly recover from climate impacts.

Increases in the severity of flooding (both of the infrastructure itself and communities and receptors downstream) represents the most significant threat to East West Rail, but there are other impacts such as earthwork instability, extreme heat affecting equipment, staff and passengers, and storms damaging the built environment. Each of these must be taken into consideration in the way the Project is designed, constructed and operated.

What we are doing:

Our ambition is to deliver a railway that is prepared for a changing climate through ensuring our design, construction and operation is resilient in the long term.



To support this aim we have two strategic objectives for climate resilience:

- Deliver a railway whose operation is resilient to future climate.
- Deliver environmental mitigation that is resilient to future climate and contributes to wider climate resilience.



Woburn Sands allotments

Our objectives



Historic environment & landscape

Our landscapes and environments have constantly shifted and altered throughout time. The places we live, work and visit tell us how people have shaped our landscapes in response to changing demands from society.


The historic environment gives our urban and rural landscapes their unique character and sense of place; it enables people to understand the past use of our land and to build a future that respects our landscape and heritage.

EWR will bring landscape change, in which local communities will see a further evolution of their local environment.

We want to deliver a railway that understands and responds to its surrounding landscapes, protects views and celebrates our heritage through sensitive integration into the existing landscape, valuing our historic environment.

What we are doing:

Our ambition is to keep people at the heart of the delivery of EWR in providing a means for communities to engage with their history and present their own stories throughout the design and delivery of the Project.



To support this aim we have two strategic objectives for historic environment and landscape:

- Sensitive integration of the Project with the existing local landscape character, visual context and historic places.
- Connect local communities and users of the railway with the local history.



Fenlake Meadows, Bedford

Our objectives

Circular economy

The global ‘material footprint’ has reached around 100 billion tonnes of natural materials extracted each year and is expected to continue increasing^{1 2}.


At a global, regional and local level, resources are finite, and their extraction, processing and use has a direct impact on climate change, pollution, biodiversity and water resources. By reducing the use of resources through design, reusing existing resources and recycling wastes, these impacts can be reduced.

These steps are fundamental in transitioning to a circular economy where products and materials are kept in use.

What we are doing:

Our ambition is to deliver a railway that supports a circular economy through maximising the value of materials and designing out waste.

¹ United Nations Department of Social and Economic Affairs.
² The Circularity Gap Report (2022), Circle Economy.



To support this aim we have four strategic objectives for circular economy:

- Adopt circular economy practices to maximise the value of materials.
- Embed the efficient use of resources in project delivery.
- Procure and use responsibly sourced construction materials.
- Sustainably manage waste produced throughout the Project.

The circular economy has emerged as a core concept by which environmental impact of infrastructure projects can be reduced (for example Circular Economy is one of the five ‘road maps’ within Network Rail’s Environmental Sustainability Strategy 2020-2050).



Our objectives



People and community

East West Rail is a once in a generation opportunity to connect communities between Oxford, Milton Keynes, Bedford and Cambridge and act as a catalyst for regeneration and economic growth.

The railway we build is an investment in our community’s future. We envision a railway that seamlessly connects people to places and opportunities, fosters social interaction, reduces inequalities and reduces reliance on cars for generations to come.

According to the World Health Organisation, improving air quality and reducing noise pollution can result in significant benefits to public health and wellbeing including reduced levels of chronic conditions and increased life expectancy. We also know that providing access to high-quality public open space encourages people to be physically active and supports good mental and physical health. By prioritising air and noise pollution and providing opportunities for physical activity and connection with nature, this strategy aims to create a healthier environment for local people.

What we are doing:

Our ambition is to deliver a railway that protects the health and wellbeing of our communities, customers and colleagues through managing impacts and providing opportunities for cycling, walking and the use of open space.



To support this aim we have three strategic objectives for people and community:

- Maintain pre-existing operational noise levels in Noise Important Areas*.
- Protect local air quality.
- Improve access to open spaces, National Trails and Public Rights of Way.

Ensuring the Project minimises community amenity impacts is central to the community-first philosophy.

Additionally, amenity impacts have been a central theme coming through non-statutory consultation responses and is therefore an area that we need to pay due regard to through the design development.

There are a number of drivers relating to protection of amenity including the EIA Directive, the Air Quality Directive, the Environment Act, Air Quality Standards Regulation and Clean Air Strategy.

In relation to noise, national guidance aims to protect the area within which new development takes place, but it also accepts that a balance needs to be found between the need for development and the desire to protect the environment.

*Noise Important Areas are noise “hotspots”. They have been identified by Defra through computer modelling, not measurement, as required by the Environmental Noise (England) Regulations 2006 (as amended), as locations experiencing the highest noise levels as part of noise action planning.



Midsummer Boulevard, Milton Keynes



Delivering on our objectives

Priory Country Park, Bedford

It is possible to improve environmental sustainability at any point in a project, but the opportunities are greatest the earlier you start.

Our existing approach has already made some excellent progress in shaping the proposed routes. The alignments presented in the 2021 non-statutory consultation were developed using an integrated design approach and consequently, all alignments consulted on in 2021 avoided directly impacting some of the most important environmental sites in the area, such as ancient woodland and Sites of Special Scientific Interest (SSSI). Our updated strategy will continue on this journey and be implemented through all the delivery stages of the Project through to the operation of the railway.

We will use our strategic objectives to guide our design choices, the materials we use, the way we construct the railway, and the operation and maintenance of the railway.

As legislation and best practice develops and evolves, so will our strategy. This will enable continual improvement and ensure we continue as an industry leader on environmental sustainability.





Millennium Country Park, Bedford

How we plan on making everyday journeys greener.



Find out more

Up to date information and links to latest stories can be found on our dedicated environmental sustainability webpage:
eastwestrail.co.uk/our-approach-environment-sustainability.

Greener for the environment is one of our five outcomes, and an ethos we encourage all our colleagues to live by every day – embedded into our internal processes and front of mind at every opportunity.

If you'd like to learn more about how to contribute to East West Rail as a colleague, head over to our careers page:
<https://careers.eastwestrail.co.uk>



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