NetworkRail

2018 guide to the Responsible Railway Plan

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The Responsible Railway Plan projects sit within five key areas of Environment and Sustainable Development:

Introduction

Dear colleagues,

At Network Rail we have a sustainable approach to what we do and we are keen to always understand how our activities affect the environment locally as well as globally. At the same time, we drive social responsibility and actively seek to reduce community risks and maximise opportunities to create social value. The Responsible Railway Plan which has just been introduced plays a key role in this journey and in our aim to achieve our vision of a "Railway Fit for the Future".

In January 2018, the Government released its 25 year environment plan, outlining its commitment to having an infrastructure that has Environmental and Sustainable Development Principles at its heart. Network Rail, through our Strategic Business Plans for CP6, has committed to being a 'green' organisation that plays a major role in sustainable travel. I am very keen to help ensure we fulfil our commitments with regards to environment and sustainability and to demonstrate this commitment both internally to our employees and externally to our key stakeholders.

We are continually working to integrate sustainable development into business processes and, although we are making progress, our overall environmental and social performance needs to improve significantly. We are one of the largest power consumers in the UK and one of the largest land owners. This places a big responsibility on the company and I am keen that, through our activities and continued sustainability work, we leave a positive legacy for future generations which we can be proud of.

The Responsible Railway Plan is the national portfolio of key projects that will most effectively help us to responsibly manage our natural environment and add social value to the communities we serve to help us achieve our vision of a "Railway Fit for the Future". These projects are aligned with key improvement programmes identified in Network Rail's Sustainable Development Strategy and have been selected through a process involving a risk impact assessment; financial benefit and improvements in legal compliance. Our plan plays an important part in delivering measureable environment and sustainability benefits for the business.

The Responsible Railway Plan has been created using the same LEAN principles and governance structures as The Home Safe Plan, and is driven from the central Environment and Sustainable Development team in the QHSE Department. Business engagement and cross-collaboration is essential to delivering an ambitious programme of works.

I hope you will all support a successful delivery of the projects in the Responsible Railway Plan and take part in placing environment and sustainability just as high on the agenda as Health and Safety. Please do not hesitate to contact me or one of the team members if you have any questions to the plan.

Best regards

Lisbeth Fromling
Chief Quality, Health, Safety and Environment Officer

What do people say about the Responsible Railway Plan?

"The Responsible Railway Plan is our commitment to building and managing a railway fit for the future. This plan is essential to ensuring that we manage our impact on the environment responsibly, that we maximise opportunities to create social value, and that we drive responsible business best practice across all our routes and functions."

Mark Carne,
Chief Executive, Network Rail

"The Responsible Railway Plan is about joined up working between Network Rail, our supply chain and the industry as a whole. We are becoming 'greener' all the time, and the new sustainable procurement process ensures that every £1 of tax payers money that is spent on railway works can be traced back to one of our sustainability themes. We know our suppliers are doing some great work, but we need to be better at managing our supply chain against sustainability KPIs. As sustainability leaders, we need to identify, share and promote best practice. Through the Responsible Railway Plan we have the ability not only influence 40,000 people within Network Rail, but to influence our supply chain and society as a whole. We are, after all, building a railway fit for the future."

Susan Cooklin,
Route Services Director, Network Rail

"The Responsible Railway Plan is crucial to designing and delivering infrastructure projects that will benefit this country for years to come. With unprecedented investment going into our railways, ensuring that the needs and aspirations of the British public are at the forefront of this development is key to it delivering maximum value. I fully support this plan and I am confident that, in partnership with the Environment and Sustainable Development team, we can address the challenges identified in this plan and succeed in building a railway fit for the future."

Francis Paonessa,
Managing Director, Infrastructure Projects, Network Rail

a railway fit
for the future

(Right) Mural produced under one of Network Rail's arches on Stoney Street, Southwark by street artist Jimmy C. Forming part of our social value framework, dedicated to the victims of the London Bridge terror attacks in June 2017.
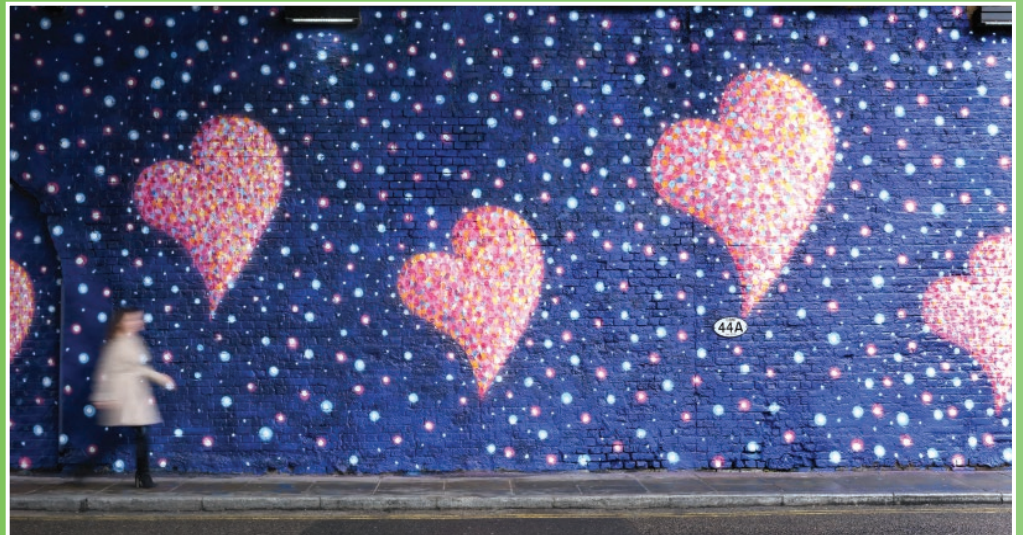
(Above) Birmingham New Street Station uses heat and electricity from a Combined Heat and Power (CHP) system, linked to a district heating scheme through Birmingham. The new CHP plant is located on the station roof and is much more efficient than conventional forms of heat and electricity provision.

(Above) Dawlish, February 2014 showing how important our weather resilience and climate change adaptation plans are at preventing incidents like this

(Left) Consideration of animals and plants, including the habitat they live in is vital when we plan vegetation clearance and undertake work on our infrastructure

Project Name: Environment and Social Management System ISO14001

For Network Rail to make effective continual improvements to its environmental and social performance, having a management system in place is key. This project seeks to integrate and align environment and social management system content with ISO14001 into Network Rail's Integrated Management System (IMS). The project is closely linked to the IMS programme in the Home Safe Plan.

ISO14001 is an internationally recognised Environmental Management System standard and we are committed to managing both environmental issues and social performance in alignment with ISO14001. This project aims to develop the appropriate framework to provide an efficient and consistent approach to implementing our new Environment and Social Management System (ESMS) Standard.

The main deliverables are:

- *Environment and Social Performance Strategies.*
- *Framework aligned with ISO14001:2015 and Network Rail's Integrated Management System.*
- *Compliance evaluation framework.*

In order to meet the requirements of Network Rail's ESMS standard and its objectives of being environmentally and socially responsible, this project looks to develop the framework and supporting tools. This will enable different elements of the business to maintain or establish local management system content in a standard manner and drive a consistent message, enhancing our management of environment and social issues in everything we do.

The project will begin with a gap analysis of the existing systems and procedures in all business areas and will determine the work required to bring all elements together into a consistent approach. Key areas being addressed are, aspects and impacts, compliance obligations; evaluation of compliance, operational control, assurance and management review.

To ensure alignment with the IMS, many of the requirements will feed into IMS common requirements where collaboration and more efficient ways of working can be sought. IMS project timescales will be factored into the development of this project.

What are the business benefits?

- *Improved compliance leading to improved environment and social performance.*
- *Improved regulator perception.*
- *Improved public perception and reputation on environmental and social performance issues.*
- *Greater buy-in to environmental and social performance issues by all employees.*
- *Reduced probability of environmental incidents.*
- *Better understanding of environment and social issues and more effective planning and decision making as a result.*

Who will benefit most from the project?

Integrating environment and social management into IMS will create a more informed workforce, benefitting all Network Rail employees and contractors. It will also benefit planners and decision-makers in determining their responsibilities and help guide environmental and social compliance. The environment and social management system content will also provide ExCom and senior managers with an assurance and management review process that will highlight risk, drive continual improvement and commitment to the system and meet the requirements of ISO14001.

Project Name: **Creating a Social Value Framework**

Running Britain's railway is not just about transporting passengers from 'A' to 'B'; it is a vehicle for connecting communities, creating jobs, regenerating areas of social deprivation and driving socio-economic growth. Network Rail's social performance strategy aims to create social value through design, be a considerate constructor during railway works and leave a positive legacy for future generations.

By improving our impact on society, we improve our social performance. The only way of knowing how successful we have been is to measure the amount of social value we have created as part of our decisions and operations. Network Rail does not currently have a social value measurement framework, which means the impact of our works on social value cannot be captured, measured, or used to improve practices. This project will address this gap and create a framework that will enable the business to identify opportunities to create social value and evaluate the impact of this work.

This project has been created to provide the business with a comprehensive social value framework that will have the capacity to inform, and direct, investment decisions to consider how social value can be built into the delivery of projects. The framework will be supported by tools and guidance that will enable social data to be captured and the impact of social value measured.

The main deliverables are:

- *Create a comprehensive and auditable framework for the management of social value across Network Rail.*
- *Build the tools needed to capture social data and measure the impact and value created.*
- *Create a defined process for the reporting of social value, including benchmarks, metrics and targets for business units.*
- *Define a process for building social value into investment decisions.*

What are the business benefits?

A structured social value framework will be embedded across all business units. As a result, there will be a defined process for integrating social value into investment decisions, which will improve Network Rail's reputation, customer confidence and satisfaction scores. It will demonstrate increased value for every £1 invested in Britain's railways, and will improve individual understanding of community risks, and how to mitigate these through the delivery and legacy of projects. The impact of works on social value will be captured, measured, and evaluated to feed best practices from across the business into decision making processes.

Who will benefit most from the project?

Business units will be able to identify, assess and maximise opportunities for improving the impact that Network Rail has on social value, whilst mitigating community risks. There will be widespread improved business understanding of both quantitative and qualitative social benefits that accompany railway works. The needs of local communities interacting with Network Rail's works will be effectively taken into consideration at all stages of a project's lifecycle, creating opportunities to maximise social value for passengers and the wider community.

Project Name: **Energy Management System ISO50001**

Energy usage in Network Rail is a significant part of our expenditure and our environmental footprint. Consequently, its effective management is key to our corporate responsibility. New ambitious financial and environmental targets are in place and reducing consumption and costs is needed to meet these targets. The development, implementation and maintenance of energy management as part of the Network Rail Integrated Management System (IMS) will include standards, processes, strategies and plans to help the business achieve effective energy, carbon and cost savings.

ISO50001 is the internationally recognised Energy Management System standard and this project aims to develop the appropriate framework to guide all areas of the business through a structured process devised specifically to achieve effective and sustained energy, carbon and cost reductions and reach published targets.

The main deliverables are:

- *A delivery framework aligned to both ISO50001 and Network Rail's IMS.*
- *Completed elements within the framework, for those items of a corporate nature – for example overarching policy and strategy.*
- *A guidance manual to assist business units to complete the remainder of the framework.*

Operational energy use costs Network Rail around £60m each year and results in over 300,000 tonnes of carbon dioxide (CO_2) emissions into the atmosphere, contributing to global warming and climate change. Many opportunities exist to reduce energy use but these are, on the whole, unexploited. Implementing the Energy Management System will provide the necessary tools and drivers to achieve significant savings in energy, cost and CO_2.

What are the business benefits?

- *Improved compliance.*
- *Improved regulator perception.*
- *Reduced energy use and carbon emissions.*
- *Reduced cost.*
- *Improved regulator perception.*

- *Greater buy-in to energy awareness by all employees.*
- *Better and wider understanding of energy management and more effective planning and decision making as a result.*

Savings on energy costs of around 15-20 % could be achieved and the benefits increase as energy prices rise as the increases are avoided.

Additional benefits exist, for example improved knowledge of energy assets and availability of information bring safety and business efficiency benefits by avoiding site visits.

Who will benefit most from the project?

Routes will benefit by reducing their energy costs, and staff in buildings where energy efficiency measures are introduced will benefit from improved environmental conditions. There are also benefits to the taxpayer in terms of minimising Network Rail's costs in relation to energy use.

Project Name: **Managing Carbon in Infrastructure**

There are a wide range of well understood carbon emissions associated with the creation, operation and eventual decommissioning of infrastructure assets. Carbon emissions provide a good indicator of efficiency so looking at ways to reduce carbon will often reveal opportunities to improve efficiency and reduce costs.

The purpose of this programme is to enable Network Rail to achieve life-cycle carbon efficiency and value for money benefits from the creation, operation and decommissioning of rail infrastructure, and to demonstrate the business's contribution to Government climate change commitments.

In 2014, the RSSB selected a carbon accounting platform on behalf of the rail sector. Since then, relatively few Network Rail development projects have actively considered carbon efficiency during the design or construction. The slow uptake of carbon assessment in projects is believed to be linked to; absence of stated client requirements, limited resources, limited familiarity/competence and failure to appreciate carbon efficiency as an attribute of project value management. There are also complex challenges in defining the baseline carbon figures against which carbon reduction achievements can be benchmarked.

The main deliverables are:

This programme will:

- *Align Network Rail's carbon management approach to the PAS 2080:2016 standard.*
- *Embed carbon accounting into core project management processes.*
- *Establish a framework for collating, reporting and targeting infrastructure carbon reduction achievements, including establishing an agreed baseline.*

What are the business benefits?

The project will enable carbon reduction and related cost savings through good design and construction logistics and will enhance Network Rail's reputation for responsibly managing greenhouse gas emissions.

Who will benefit most from the project?

Infrastructure project teams will be able to demonstrate enhanced environmental benefits and cost savings. Routes will benefit from reduced operational energy costs once projects are fully delivered.
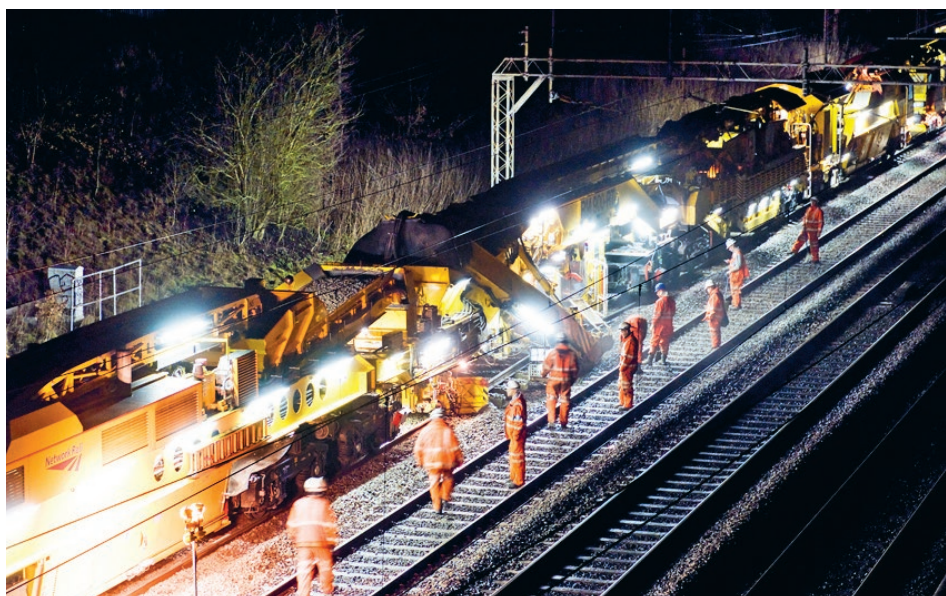
Project Name: **Managed Station Recoveries and Metering**

Utilities usage in our managed stations is complex. Numerous users, both internal and external to Network Rail, rely on the supply of utilities to undertake their operations. These include retail tenants and Train Operating Companies (TOCs). The organic changes to the managed stations over the years have led to a spaghetti of wiring, supplies and sub-supplies which have become difficult to trace and monitor. This means that recovering costs from third parties for utilities that they have used is inaccurate and very little exists in terms of documentation or even accurate meter labelling in order to establish a correct charging regime.

The Managed Stations Recoveries and Metering project aims to tackle this issue through a series of in-depth surveys, establishment of a robust meter/tenant management system and alignment of Network Rail's utility billing system to assure accuracy. In addition, the project will appraise options for a long-term sustainable solution which will minimise the risk of utilities knowledge and cost recovery becoming untenable again once the project is finished.

The main deliverables are:

- *Surveys of all managed stations to establish liability for utilities use, initially in retail tenant areas and then broaden out to encompass other areas of each station, including Quantitative Expenditure (QX) areas.*
- *Align Network Rail's tenant billing system (a module of Energy-Link) to accurately reflect liability for utilities to enable correct recovery of costs – this will increase income from tenant billing for the Routes.*
- *Establish and implement a sustainable solution to this long-standing issue through the installation of automatic meter readers (AMR) to the sub-meter estate in all managed stations.*

What are the business benefits?

The business will be enabled to maximise recoveries for costs spent on utilities in managed stations, and will achieve a vastly improved understanding of utilities use in each station. As automatic metering is enabled and rolled out, business efficiencies will be realised as the numerous meters in the managed stations will not need to be read manually, which will also bring safety benefits as many meters are in restricted or dangerous areas.

Retail tenants will also benefit through improved billing and information, with AMR enabling detailed information to be available to them which will, in turn, encourage energy reduction throughout the retail tenant areas, reducing energy consumption and carbon emissions across the managed stations estate.

Who will benefit most from the project?

Routes will benefit by maximising cost recoveries, reducing their overall utility costs and by better managing utilities use in all managed stations.

Project Name: Update Route Weather Resilience and Climate Change Adaptation Plans

Adverse and extreme weather conditions significantly impact the reliability of our assets and the performance and safety of the railway. Weather related delays cost £50-100m per year with the cost rising to £200-300m when the impact of cancellations, repairs and socio-economic impacts are accounted for. Climate change will affect our understanding of risk by shifting weather patterns and our historic records of likelihood and severity, thereby amplifying the impact of adverse and extreme weather on the railway. It will become increasingly more challenging to become resilient and to manage potentially catastrophic safety risks.

This project will enable Routes to update the Weather Resilience and Climate Change Adaptation (WRCCA) Plans which outline methods for enhancing resilience in CP5. The aim is to ensure that the updated strategies align to the new WRCCA policy, reflect CP6 business plans, are based on the latest science and analysis and enable enhanced prioritisation and investment planning.

Through a series of facilitated workshops and provision of data and analysis, Routes will develop long term strategies for managing weather resilience and adapting the railway to climate change.

The main deliverables are:

- *Clear long term strategic direction for each Route in managing WRCCA.*
- *Framework for updating plans including a template and analysis on climate change impacts in each Route.*
- *Approved, measurable plans with prioritised WRCCA investment requirements for each Route for CP6, CP7 and beyond.*

The project will also enable better sharing of information and best practice between different parts of the business and engage a wider audience in the WRCCA discussion which has typically focussed on the Geotechnics and Drainage asset functions in the past. The plans will feed into an update of the national WRCCA Strategy and Network Rail's third Adaptation Report to Defra under the Climate Change Act (2008).

What are the business benefits?

Proactively managing the risks weather and climate change pose to our assets, safety and performance will have significant business benefits. The strategic management of WRCCA will be better integrated into business planning enabling a much more proactive approach to managing the risks to feed into planning for CP7 and beyond. It will also improve our ability to track and report our level of resilience and WRCCA investment activity which will provide assurance to regulators and the public that we are effectively managing the risk.

Who will benefit most from the project?

Route Businesses will benefit from the ability to make more effective and informed investment decisions that account for weather and climate change and will see the associated financial, safety and reputational benefits. As the plans are implemented, the travelling public will experience reduced delay and disruption due to adverse and extreme weather as the railway becomes more resilient.

Project Name: Biodiversity Information and Risk Management

Network Rail has widespread scope for interacting with biodiversity through infrastructure development, asset renewals and maintenance schedules, placing biodiversity management as a high risk to the business. The risks relate primarily to unexpected costs or delays if ecological constraints are inadequately planned into works, possible legal action if allegations of legal non-compliance are brought, and reputational consequences from perceptions of not managing biodiversity responsibly in line with the regulatory framework or government objectives.

The Biodiversity Information and Risk Management project has been created to improve the planning and management of biodiversity impacts before works (development projects, asset renewals and maintenance) and reduce risks. Network Rail's ability to manage biodiversity across the network is dependent upon access to, and interpretation of, information, making that a central focus of this project.

The main deliverables are:

- *Processes to capture and collate biodiversity data from internal and external sources.*
- *Projection and visualisation of historic and contemporary biodiversity records through an approved geospatial mapping platform.*
- *Biodiversity risk management and accounting embedded into GRIP and equivalent maintenance processes.*

The resultant improvements in works planning will also demonstrate implementation of Network Rail's revised Environment and Social Policy (NR/L1/ENV/100) which states "We will manage our land sustainably including consideration of our impacts on biodiversity". Enhanced project and maintenance planning and decision-making around biodiversity will also demonstrate commitment to support the Government's 25 year environment plan 'A Green Future: Our 25 Year Plan to Improve the Environment', published in 2018.

What are the business benefits?

The enhanced data capture and mapping solutions will enable improved decision-making, risk awareness and resource planning for constraints, risks and opportunities. The revision of GRIP and allied maintenance processes will clarify roles and responsibilities and the phasing of risk management activities through all stages of project or maintenance works.

The successful delivery of this project will enable improvements in the efficient planning of work, use of resources and cost predictability. Risk of legal non-compliance and adverse reputational impacts will be reduced. Relationships with lineside neighbours will be improved, and regulator and stakeholder confidence in Network Rail's response to government biodiversity targets will be enhanced.

Who will benefit most from the project?

Project and maintenance teams will more easily take account of biodiversity constraints and opportunities when planning works which cannot currently be done. Appropriate biodiversity mitigation measures will be anticipated and planned before work begins which will strengthen the efficiency of works delivery, avoid unexpected costs and delays, and reduce legal risks.

Project Name: **Waste Management**

Waste management costs are very high and rising. We currently spend an estimated £60m on waste management each year. Waste often causes land/water pollution and can have negative reputational impacts, especially if waste is managed incorrectly which can incur large fines and clean-up costs. The lack of focus and understanding around waste handling means that the business regularly incurs avoidable costs, often due to time constraints and poor planning. Inconsistent compliance assurance on our waste contractors has led to legal breaches; fines, clean-up costs and negative reputational impacts.

This project aims to reduce waste costs for the business with several key focus areas including; reduce waste to reduce management costs; maximise reuse/recycling rates, create a consistent approach to using existing waste frameworks across the business, improve verification that our contractors are complying with relevant waste legislation and to improve waste data for assurance purposes.

The main deliverables are:

- *Optimised use of SCO waste/material facilities which will give us the opportunity of reducing costs and keeping that expenditure within the company rather than expending it outside of Network Rail.*
- *Improve our waste data to have an accurate baseline for analysis and identification of trends and opportunity areas.*
- *Improve waste assurance activities so Network Rail, our contractors and subcontractors can prove they are legally compliant.*

This project will enable Network Rail to achieve the commitment in the Environment and Social Policy (NR/L1/ENV/100) which states 'We will reduce the amount of material we use and minimise the amount of waste we produce.'

What are the business benefits?

- *Reduced waste costs.*
- *Reduced risk of fines and legal prosecution.*
- *Enhanced reputation and trust in the railway's ability to manage its estate and its wider environmental impacts.*
- *Improved accuracy and assurance of waste data.*
- *Reduced risk of land/water pollution.*
- *Increased reuse/recycling rates (including maximising opportunities to create recycled products which can be sold to generate revenue for Network Rail).*

Who will benefit most from the project?

Network Rail employees and contractors will be able to make more efficient decisions regarding waste, as well as having the ability to "advertise" surplus materials/equipment to the wider business. Through this, there will be more robust assurance mechanisms that can be used by the business as a whole. As a result, employees will have access to improved waste and cost data to enable more informed decisions.

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