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Environmental Sustainability Strategy

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Working towards a low carbon business

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Contents

Foreword

Hello and welcome to our first Environmental Sustainability Strategy, which sets out the Northern Rail approach to this very important agenda.

Northern Rail was justifiably proud to be the winner of Public Transport Operator of the Year 2007 at the National Transport Awards, for its all round approach to providing a good service and a good community asset. However, we want to continue to push ourselves further in every way.

We are all probably aware of the need to prevent unnecessary pollution, use more energy efficient goods, travel in more sustainable ways and recycle as much as possible. There also cannot be many who have not realised that climate change is an issue that needs to be tackled immediately if we are to stand any chance of reducing its impact. We need to plan our services, trains and facilities with this challenge in mind.

We realise that we need to be doing more to minimise our impact on the environment so we have looked at our business and the areas where we make an impact, and then looked at where we can make the biggest changes and improvements. This has resulted in a series of goals and policies that you can read about in the document. They will be valid until the end of the franchise period in 2013, and hopefully beyond that. We hope also to develop some exciting environmental initiatives that can be delivered by our staff, customers and the community.

In addition, we want to lead by example and help to develop consensus among all our partners on the right way forward. We will be open and honest about our environmental achievements and through our experience influence policy makers.

Obviously we are keen to carry on operating the franchise and so the strategy is designed to extend our impact beyond the franchise period, and to leave a legacy of good practice.

This strategy is designed so that all those who have an interest in the way we operate our business will understand our approach. I very much hope that you enjoy reading it. If you have any comments then please return the feedback form at the back of the document.

Heidi Mottram

Heidi Mottram
Managing Director

Executive Summary

Northern Rail has a very clear vision of its future:

"Realising the true potential of local rail as the most sustainable means of connecting people to opportunities".

We intend to achieve this by:

"Delivering local railway services that really work for everyone".

In addition we undertake all our business based on four strategic foundations: Customer, Operational, Cultural and Commercial, and promote the following values: accountable, progressive, ambitious and genuine.

This environmental sustainability strategy will impact on all four strategic foundations. Its implementation will result in projects that demonstrate the practical application of our values and will leave a positive environmental legacy.

The strategy embraces the Social Responsibility goals of our owning companies Serco and NedRailways as well as the sustainability objectives of the UK Government and railway industry as a whole. We aim to make our own contribution to the agenda based on our individual circumstances.

Northern Rail's environmental vision is:

To be recognised as the train operating company making the most positive contribution to environmental sustainability.

We will demonstrate this by showing that in the development of all policies and projects consideration has been given to any environmental implications.

The goals and policy statements contained within the strategy will all be implemented during the current franchise period.

We take our environmental responsibility seriously, and have already committed to developing a wider approach to Social Responsibility. We have already demonstrated a commitment to environmental improvement by having Environmental Management Systems (EMS) at our train maintenance depots accredited to the standard BS EN ISO14001:2004. We intend to develop a corporate EMS by end 2009.

For us, environmental sustainability is about ensuring that the environment in which we operate and the people within it do not experience any worsening of either its quality or their quality of life as a result of our business. Indeed we want to be seen to be making a proactive and positive contribution to that environment.

This strategy pushes us beyond pollution prevention measures and legislative compliance. It identifies areas where we can have the greatest and widest impacts and puts in place actions that will move us toward being a low carbon business.

We cannot do this on our own. Successful partnership is of great importance to our business. The nature of the rail industry means that control over certain elements including infrastructure, rolling stock, and traction types lies in different hands. As an industry we need to work together to deliver a sustainable transport system.

We have the best-developed partnership and community programmes of any rail operator in Britain, and we are keen to extend these to reflect our environmental aspirations. The progress we have already made in this area and our way forward is contained within our community strategy. The environmental sustainability strategy will build on that.

All our relationships have potential environmental impacts, and we need to manage and control these. Our key partner groups are:

- **employees**
- **customers**
- **stakeholders**
- **suppliers**
- **tenants**
- **community**

and for all of these we have a series of goals ranging from awareness raising programmes to the development and delivery of new and exciting initiatives.

Successful partnership working is already helping to deliver some innovative projects such as the ecostations currently being developed at Accrington and Sowerby Bridge, where standards of design are high and environmental impacts are minimised.

Our key strategic themes address areas where we feel we have the potential to make greatest progress. These are:

- **partnership**
- **energy**
- **resource consumption and disposal**
- **pollution prevention**
- **biodiversity and land management**
- **infrastructure**
- **procurement**

The environmental sustainability strategy outlines key policies and a series of targets for each area above. We have taken these and produced an action plan with key projects highlighted. We have made firm commitments for action in 2008, and beyond that indicated where we think action will be taken.

Each year we will report the progress made against our goals and targets, and ensure the report is publicly available. In this way we will be honest and open about our achievements. As part of that report we will publish data against a series of industry-wide key performance indicators that will be used by UK Government to monitor progress.

1.Introduction

Northern Rail is the train operating company serving the north of England. Owned by a joint venture between Serco and NedRailways, the company was formed in December 2004 from the merging of former rail franchises First North Western and Arriva Trains Northern.

The franchise runs to 2013 and is the largest in the UK in terms of train services operated per day ie over 2500. Its 1675 route miles represent 20% of the UK network.

In the first two years of the franchise the company has been very successful in improving its operating performance and growing passenger journeys by 10% each year.

We operate 471 stations and have three principal engineering and maintenance depots in Newcastle, Leeds and Manchester, with satellite depots in Hull, Sheffield, Skipton, Holbeck, Barrow and Blackpool. The depot in Newcastle also services trains from other operating companies. In addition there are a number of offices including York, Leeds, Newcastle and Manchester. All infrastructure is leased from Network Rail.

We operate 283 trains, using 11 types of multiple units with an age range of between 7 and 22 years. Over 85% of the units are diesel and the remaining electric. The trains are leased from either specialist Rolling Stock Companies (ROSCOs) or, for some, West Yorkshire Passenger Transport Executive.

We have a very clear direction in which we wish to take the business and this is fully supported by the owning Joint Venture companies. There is a clear vision of our future:

"Realising the true potential of local rail as the most sustainable means of connecting people to opportunities".

Our mission is to achieve this by:

"Delivering local railway services that really work for everyone".

We develop and conduct our business based on four strategic foundations:

- **customer** - **investment in facilities to increase passenger satisfaction**
- **operational** - **improved performance and reliability**
- **commercial** - **customer knowledge, focused marketing and brand building**
- **cultural** - **improved communication, clear leadership and committed behaviours and values which are:**
  - **accountable: taking full responsibility for getting the basics right every time**
  - **progressive: continuously improving the way we deliver our services**
  - **ambitious: constantly seeking out new ways to realise our Vision**
  - **genuine: the way we choose to conduct ourselves in business**

This strategy will impact on all four strategic foundations and aims to reflect all the values above. Its implementation will result in projects that demonstrate the practical application of those values and will leave a positive environmental legacy.

In addition, the owning companies Serco and NedRailways have specific goals with regard to Social Responsibility and environmental sustainability. We embrace those goals and are aiming to make our own contribution to the agenda based on our individual circumstances.

2.External Drivers

The need to develop a strategic position with regard to environmental sustainability is being influenced by a number of strategies, policies and initiatives arising from international, national and industry-wide arenas. The following section summarises some of the key drivers influencing our approach. References and fuller details for the different drivers can be found in Annex 1.

At an international level the focus has been on tackling the impacts of climate change. The evidence gathered would indicate that the warming of the climate is unequivocal, and that human activity is a contributing factor. Clearly our use of transport is a part of the picture. Emissions from transport are growing faster than any other sector, although rail has been calculated to account for only half the carbon dioxide per passenger kilometre of cars[1].

Environmental policy within the European Union (EU) is delivered through an environmental action programme. The EU has set out its strategic position with regard to climate change and its major priorities over the coming years. The EU has issued a number of Directives that impact on the rail industry concerning emissions from rail vehicles, quality of fuel and environmental noise.

UK Government updated its Sustainable Development Strategy in 2005. Since that time, environmental sustainability and specifically the challenge posed by climate change have risen up the political agenda. It is acknowledged that effective transport policies will play a role in meeting the challenge.

The Government has a number of strategies and policies surrounding traction and non-traction energy and carbon emissions, and has been looking at the role transport can play in developing a more sustainable future. The strategic approach to the industry is summarised in the rail White Paper published in summer 2007.

In 2006 the Government published two important pieces of work. They looked at the economics of climate change (Stern Report) and examined the long-term links between transport and the economy (Eddington Report). The DfT recently published its responses to these pieces of work 'Towards a Sustainable Transport System', which sets out ambitious plans for the future of transport policy. Clearly rail is an important part of the future transport system of the UK and we need to ensure that we play a full role in the development of the policy.

In recent years progress with regard to environmental sustainability and the wider sustainable development agenda had been relatively slow across the industry. The Railway Forum instigated a Sustainable Development Group to try and raise awareness of the wider issues and to develop an industry wide position. In addition individual train operating companies started to report on their own progress.

[1] ATOC Energy and Emissions Statement 2006/7.

Following on from this work the Railway Safety and Standards Board (RSSB) developed a route map to deliver an industry-wide sustainable rail programme[2]. The work is being undertaken with industry stakeholders including ORR, DfT, Network Rail and the Association of Train Operating Companies (ATOC) and significant progress has been made. An industry-wide approach is expected in 2008.

The rail industry, at international, European and national levels has been involved in research addressing key issues such as reducing emissions from engines, implications of new fuels, impacts of climate change etc. Within the UK, ATOC has a number of work streams focussing on engineering solutions, operations, communications and policy. It is looking at a range of issues such as energy efficiency, determining a carbon trajectory for the industry and the practical issues surrounding implementation of the EU Fuels Directive. In this regard it is leading discussions with HM Revenue and Customs to discuss the issues of duty differential. More recently ATOC has set up a forum specifically focussing on the environment and sustainability.

3.Our Vision

We hope, that through delivering this environmental sustainability strategy we will realise our vision, which is:

To be recognised as the train operating company making the most positive contribution to environmental sustainability.

We will demonstrate this by showing that in the development of all policies and projects consideration has been given to any environmental implications.

4.Environmental Responsibility

Strategic Goals

- **to develop a social responsibility strategy**
- **to ensure all policy development takes account of its potential impact on the environment**
- **to ensure an EMS is implemented across all activities by December 2009**

4.1 Approach

We are committed to developing a wider approach to social responsibility, and are actively working with our joint venture partners to ensure a consistent approach, while recognising unique features of our business. By social responsibility we mean that we need to perform well economically, but we need to give equal weight to the way we interact with both the society we serve and the environment in which we operate. A key part of the development work is defining our position with regard to environmental sustainability.

This strategy goes beyond pollution prevention and legislative compliance. It will identify areas where we can have the greatest and widest impact and move us toward being a low carbon business. As indicated in Section 2 above, the current environmental drivers relate to conservation of resources, reducing our reliance on fossil fuels and considering the global impacts of our actions. The key factor here is that we can no longer be an industry that works in isolation and we must work together to develop solutions.

[2] http://www.rssb.co.uk/national_programmes/sustainable_rail/index.asp

In general the rail industry is acknowledged to be a sustainable mode of transport in terms of emissions per passenger kilometre and is key to linking communities together. This position can only improve with newer vehicles, cleaner fuels and higher levels of patronage. However, the statement 'in general' is key. Each operating company needs to look at what it can do with the resources available to improve the environmental performance across the whole business and not just its operations. We cannot afford to be complacent.

All policy development across the business must take account of the potential environmental implications.

4.2 Governance

Environmental responsibility within Northern Rail rests with the Executive Board. The remit to determine strategic direction lies within the Safety and Assurance Directorate.

We will form an Environmental Sustainability Steering Group to oversee implementation of the strategic goals, to develop work streams, review progress against targets and to determine new objectives.

Various working groups will inevitably form to deliver specific elements of the strategy.

Ultimately it will be for all directorates and locations to be both responsible and accountable for their own environmental performance, embracing the strategic goals within their policies, developing and implementing the Environmental Management System (EMS) and ensuring targets are met. Environmental sustainability will be considered during the development of all business objectives.

4.3 Environmental Management System

In terms of pollution control and risk management, our engineering and maintenance depots each have an Environmental Management System accredited to the international environmental management standard BS EN ISO 14001:2004. An Environmental Management System (EMS) is a structured framework for managing an organisation's significant environmental impacts and if used correctly can be a powerful way of influencing behaviour and promoting change.

We will harmonise the separate systems and implement a corporate EMS by December 2009. Clearly as a train operating company we have a robust safety management system. We will ensure that the EMS is integrated with the safety management system as far as is possible. It is essential that the final EMS is used in a proactive way and is embedded in the culture of the business.

It will be used as a management tool to inform strategy development, help meet changing legislation, and identify opportunities for improving operations. Also it will be used as a vehicle for promoting awareness of environmental sustainability among staff and to drive forward a comprehensive training programme.

We have an Environmental Policy Statement (see Annex 2) that summarises our approach to environmental management.

5. Partnership

For us to successfully operate our business we need to be able to deliver a good product. This success is dependent on a number of partnerships and relationships with employees, customers, stakeholders, shareholders, suppliers of goods and services and society as a whole. All of these relationships have potential environmental impacts. We need to both understand them and control them.

5.1 Employees

Strategic Goals

- **to ensure that all employees are fully briefed about the environmental implications of their jobs and fully understand the organisation's commitment to environmental sustainability**
- **to ensure employees have the opportunity to engage in environmental improvement and community projects and initiatives**

Northern employs 4600 staff in a wide range of roles. These cover all aspects of business delivery from customer facing roles to office support.

Many of our activities at work have a potential impact on the environment. At the start of the day everyone make a conscious choice about how to travel to work. Once there, as a consequence of our roles, we use resources (energy, fuel, materials) and generate waste. We may also be responsible for purchasing goods and services, or managing and overseeing the performance of partners or contractors. At first sight the environmental implications may not be obvious, so education will be key.

All our employees need to be aware of the likely environmental impact of either their actions or decisions, and to ensure that they do all within their power to minimise that impact.

Our employees are key to delivering the environmental sustainability strategy. Therefore communication to and education of employees are cornerstones in our delivery plan. Everyone needs to understand the issues that affect the organisation plus have the relevant skills and competencies to deliver.

5.2 Customers

Strategic Goals

- **to ensure that customers receive information about efforts to minimise our environmental impact**
- **to develop interactive environmental projects to engage with our customers**
- **to work in partnership with key agencies to encourage modal shift using a variety of methods**

  including travel plans

Northern Rail serves 3 main areas in the north of England; the North West, the North East and Yorkshire and Humberside. We serve a population of more than 14 million people.

The range of services we operate extends from those serving large city regions e.g. Leeds and Manchester to very remote rural communities such as the Cumbrian Coast.

We serve all markets with the same level of dedication reflecting our commitment to customer, community and public service. With such diverse markets the purpose for travel of our passengers varies greatly, for example:

- **commuter trips**
- **socialising and shopping**
- **leisure trips**
- **accessing education**
- **accessing healthcare**

We currently carry about 76 million passengers per year across the network. Our customers base is varied and on average travel with us for 15 minutes per trip.

Our existing customers have made a conscious decision to travel by train. We wish to engage with them to ensure that they see that we are doing our best to conduct our business in an environmentally friendly way, and affirm their decision to use the train.

We also wish to attract new customers to use the services by offering a competitive alternative to the private car. For both existing and potential customers we need to capitalise on our inherent advantages over private car travel and demonstrate that we offer the whole package of measures that will appeal to the travelling public.

Our role is to ensure that the whole journey is facilitated in the most sustainable way. This ranges from the information customers require to commence and complete the journey, the interchange facilities at the stations and the environmental performance of the train and the facilities they use. We also want to develop projects to encourage use of more sustainable forms of transport.

We would expect both existing and new customers to behave in a responsible manner when using our facilities and services, and will develop communication and awareness campaigns focused on both the benefits we offer and the way in which customers can help deliver improvements.

5.3 Stakeholders

Strategic Goals

- **to work with all stakeholders to ensure that they understand our commitment to the environmental sustainability agenda**
- **to successfully deliver partnership projects that minimise environmental impact and produce environmental benefits**
- **to seek funding from a wide range of sources to promote our environmental agenda**

Our range of stakeholders is wide and includes our six clients. The franchise was awarded by the Department for Transport (DfT), and is also co-signed by the Passenger Transport Executives (PTE) for the five areas which we serve, namely Greater Manchester (GMPTE), South Yorkshire (SYPTE), West Yorkshire (Metro), Tyne and Wear (Nexus) and Merseyside (Merseytravel).

Other key stakeholders include the Office of Rail Regulation, Network Rail, Rail Safety and Standards Board, ATOC, other train operating companies and local authorities across whose areas we run services. Others include the EU, other Government departments, regional development agencies etc.

As outlined in Section 2 there are many drivers for environmental improvement arising from Government. We are committed to developing our strategic approach in line with these. Plus we wish to ensure that our strategy is aligned with those of our other key stakeholders. In cases where the stakeholders do not have a defined approach then we want to encourage them to develop their approach in line with our own, and to build consensus that appropriate action must be taken.

Stakeholders need to have similar values and beliefs if successful partnerships are to be built, and projects delivered.

We have been successful in working with our key stakeholders to jointly fund and deliver a number of projects and initiatives. The intention is to develop this further with regard to environmental issues.

5.4 Suppliers

Strategic Goal

- **to inform all suppliers about this strategy and develop a series of workshops to encourage engagement**

We procure goods and services from many suppliers. They range in terms of the size of organisation, the frequency of purchases and the amount spent. Each supplier will also vary in terms of its commitment to environmental sustainability. We wish to develop a sustainable approach to procurement, so that each purchase meets certain defined criteria, for example, sustainable provenance, embodied energy, (ie the energy required to manufacture and supply to the point of use) and that the suppliers can demonstrate their own environmental probity to our satisfaction.

However in advance of that work, we wish to make all suppliers aware of our own commitment to the agenda.

5.5 Tenants

Strategic Goal

- **to improve the environmental performance of all our tenants by including appropriate environmental requirements in all future tenancy agreements**

Currently we sub-lease space at stations to a range of tenants, of which there are approximately 155. The services offered range from kiosks, retail units, restaurants, taxi offices, public houses, railway clubs/societies even a dance school.

Although the relationship could be viewed as merely a business transaction we would like it to be more proactive and encourage all tenants to adopt similar principles as ourselves with regard to environmental sustainability, particularly energy and waste management.

5.6 Community

Strategic Goal

- **to work with key agencies to help us engage with the community at all levels to inform about our work in the area of environmental sustainability and promote more sustainable lifestyles**

Our services operate across a large part of northern England, serving a population of 14 million. We have the best developed partnership and community programme of any rail operator in the UK, and have received a number of awards in recognition of this. We have recently become members of Business in the Community to help us further improve our work in this area and our approach to social responsibility in general. We have a community strategy that outlines our aspirations, and our approach to environmental sustainability will add value to the existing programmes.

We acknowledge that our operations have the potential to impact on the lives of the population we serve and the surrounding environment in both a positive and negative way. We acknowledge the wider impacts of our activities not only on this population but on the wider world. There are many groups actively promoting environmental sustainability and sustainable development across the region and the UK as a whole. We need to develop partnerships to ensure the proactive raising of awareness of what we are trying to do as a business and to promote more environmentally sustainable lifestyles.

6.Energy

Strategic Goals

- **to become an acknowledged low carbon business**
- **to minimise consumption of energy and thereby reduce carbon emissions, across all our operations year on year**
- **to establish a measure of our carbon footprint and reduce it year on year**

6.1 Background

Northern Rail uses energy in the form of fuel, electricity and gas. It is used for both traction and non-traction functions. The rail industry's contribution to climate change relates mainly to direct emissions from diesel engines and through the use of electricity. While these areas account for the majority of emissions (over 90%) there are other areas that should not be overlooked.

The Government through the rail White Paper stated that the rail industry must develop its own carbon reduction targets for traction energy, and plot a trajectory to reduce emissions by 20% by 2020 on a per passenger seat basis. To a certain extent this may not be anymore difficult than business as usual with a gradual increase in patronage leading to that reduction. However, we will not simply rely on growing patronage to reduce carbon emissions.

With regard to non-traction energy, large non-energy intensive businesses such as ours will have to become part of the Carbon Reduction Commitment to drive energy efficiency, thus reducing emissions across the UK by 1.1MtC/year by 2020.

We acknowledge the need to calculate our total contribution to emissions of carbon arising from both direct emissions (energy, fuel use, employee vehicle use and travel for business), and indirect emissions. By indirect impacts we mean those that are embodied in purchases by the business, including all materials, products or services. This full calculation of our carbon emissions would be our carbon footprint.

At present there is no common definition for a carbon footprint, other than it concerns the amount of gaseous emissions considered to be responsible for climate change that are produced as a result of human production and consumption. This leads to confusion, especially as there is no consensus on how to measure or quantify a carbon footprint. This lack of consistency has led to organisations attracting serious criticism of their published figures, something that we would wish to avoid. However, despite these shortcomings the term 'carbon footprint' is continually being used across all media.

From a strategic point of view, the measure of our carbon footprint will be a useful metric for determining trends in our emissions. The intention is, once an accurate footprint is defined, to use it as a management tool to influence our business behaviours and to also influence our customers and other stakeholders.

We intend to grow our business, which will mean potentially more miles being run and therefore more fuel being consumed and carbon emitted. Although difficult to measure there will be a parallel reduction in carbon emissions from the car trips that the new train travel may have replaced. Having said that, it is still our intention to proactively measure, manage and minimise use of energy while still delivering an efficient rail service.

6.2 Traction Energy

6.2.1 Diesel

The majority of our trains are diesel, and we use approximately 36,000,000 litres of fuel per year. The diesel stock ranges between 18 and 22 years old, and it is inevitable that some of the engines are not as efficient as more modern trains. We will ensure that the trains are maintained efficiently, idling reduced and all unnecessary wastage through spillages is prevented. We also want to see accurate and robust data management systems in place.

Looking further to the future we intend that any new trains that are brought into the business will be the most energy efficient available. They will also be capable of running on alternative fuels eg biodiesel at some point in the future, when this may be a more realistic and sustainable option.

6.2.2 Electricity

Approximately 15% of the fleet is electric. However it is not possible to give an accurate consumption figure as the meters on the trains are not read routinely. Payments are made to Network Rail based on an assumed consumption, which is not particularly helpful. By 2012 all units must be fitted with meters that meet Network Rail and DfT criteria. We intend to trial two meters that meet the new standard. It is hoped that if the trial is successful then more will be fitted ahead of the legal requirement, enabling us to start to collate accurate consumption figures.

6.3 Non-Traction Energy

We consumed approximately 48,000,000 kWh (electricity and gas) in 2006 across all infrastructure. This figure is clearly significant, however, it must be caveated. At the moment there is no accurate baseline figure from which to benchmark performance, due to historic difficulties with metering.

As with the traction electricity much of the consumption is an estimated figure. Accurate figures only exist for those facilities that have either half-hourly meters or smart meters. We are currently trialling smart meters in five stations with high usage levels, and if successful will look to roll out across the estate. Smart meters allow us to view our consumption on a daily basis and thus we can identify periods of high use, identify any anomalies and develop clear action plans for reducing consumption.

The source of the energy purchased is also relevant. We are keen to investigate the purchase of energy from renewable and more sustainable sources. This will also contribute to the reduction of emissions of carbon and other air pollutants.

6.4 Internal fleet

We have a small leased fleet of 43 road vehicles that are used by operational and engineering employees. 35 are vans of varying sizes and 8 are pickups.

6.5 Employee Travel

The means by which our staff travel both to work and for business purposes impacts on emissions of carbon. As yet, no measurement of this has been undertaken.

All employes are issued with a free travel pass on Northern Rail services. As we are in the business of promoting rail as an alternative to the car it is hoped that our employees adopt this attitude wherever it is practicable. However, no travel survey has been undertaken and no travel plan exists for the business.

A formal travel plan will allow us to determine a set of measures and establish partnerships to make sustainable ways of commuting more attractive.

The mode of travel for work purposes is generally determined by business need, but should always be undertaken using the most sustainable mode.

6.6 Policies

We intend to deliver our goals by implementing the following policies, and we have indicated some of the means by which this will be achieved.

En1 We will reduce greenhouse gas emissions and related environmental impacts arising from our use of energy by:

- **improved efficiency of trains through engineering solutions**
- **reviewing the applicability of alternative fuels to Northern units**
- **ensuring energy efficiency is included in any new vehicle specifications**
- **continuing trial of meters on electric trains**
- **promotion of eco-driving techniques including reducing idling**
- **adopting an energy conservation policy and promoting energy awareness**
- **adopting energy efficient measures in existing and new infrastructure**
- **ensuring all meters are read routinely and accurate consumption information gathered**
- **ensure tenants are appropriately charged for energy consumption to promote more economical use**
- **reviewing our energy purchasing policy to ensure that greener sources are promoted**
- **investigating the possibilities for onsite generation of electricity from renewable sources**
- **ensuring new road based vehicles are the most efficient models available for the job**
- **developing a sustainable travel plan for the organisation**
- **investigating the use of carbon offset schemes**

En2 We will calculate our carbon footprint annually based on a robust set of measurements relating to both direct emissions and those related to purchase of goods and services.

6.7 Targets

Targets

- **to optimise fuel efficiency of rail vehicles and prevent unnecessary wastage, resulting in savings of £200,000 by end 2008**
- **to adopt energy saving measures that result in a non traction energy saving of £200,000 by end 2008. Areas of the business will be set specific targets**
- **to develop a robust system of measurement of energy consumption to enable carbon emissions to be accurately reported by end 2008**
- **to reduce carbon emissions from both traction and non-traction energy use year on year**

7. Resource Consumption and Disposal

Strategic Goal

- **to minimise consumption of natural resources and to minimise production of waste and its unnecessary disposal**

7.1 Background

Northern Rail requires significant volumes of resources to operate rail services, both in terms of natural resources including water and other materials. As with energy, our strategic approach is to measure, manage and minimise resource consumption and production of waste, while still delivering an efficient service.

Through the Environmental Management System we intend to control usage of resources and minimise waste.

7.2 Water

The largest consumers of water across the estate are the engineering depots. Water is used to wash trains and for on-board services (basins, toilets).

Water is also required in all staffed offices/buildings. Although not necessarily resulting in a reduction in water consumption, we recently implemented a programme of installing mains-fed water coolers for drinking water. This has led to a reduction in the space needed for stockpiling water, as well as cost savings.

7.3 Resource Consumption

We purchase many goods to undertake our business including stationery, printed materials, white goods, engineering parts, chemicals, paints, oils etc. Our approach will be two-fold. To ensure that the goods sourced are the most sustainable from the point of view of their origin and distribution, plus only the right amount is purchased to reduce unnecessary stockpiling and wastage. Clearly this links to our intentions with regard to infrastructure design (Section 10) and procurement (see Section 11).

7.4 Waste

We generate a range of waste types associated with our operations.

In offices the wastes tend to be electronic goods and associated materials, paper and packaging. Paper recycling has recently been introduced, and this is being rolled out across the estate.

At stations the picture is similar to offices above, with the exception of the large amount of general litter waste left by customers, including a high volume of free newspapers.

At the depots the wastes are those associated with engineering, train cleaning and maintenance such as oils, chemicals, metals, packaging, newspapers, general litter waste, plastics, glass and batteries. These waste arisings are measured and managed via the Environmental Management System. Many of the materials are either re-used or recycled. However, there is always scope for improvement.

With the exception of the depots we do not have accurate figures for the volumes of waste produced.

7.5 Land use/contamination

Due to the historic nature of the railway industry, many sites have the potential to be contaminated by previous on-site activities. Plus, as a result of our own day-to-day operations, contamination may still occur. As stated before, within the depots pollution prevention is addressed within their Environmental Management Systems, but these do not address other sites. Network Rail is responsible for clearing contamination at other locations, but we must make sure that we prevent pollution from our activities and operation of our services eg fuel leaks, toilet discharge. Work is underway to prevent unnecessary discharge of toilet waste onto the tracks.

We need to be aware of the environmental liabilities associated with contamination, and certainly needs to understand our obligations as set out in the depot access conditions (agreement with Network Rail).

7.6 Policies

Res1 We will proactively measure and minimise water consumption, through better detection and reporting of leakages, introduction of technological solutions to recycle water and raised awareness campaigns.

Res2 We will review all materials purchased to identify whether more sustainable alternatives exist.

Res3 We will develop a set of criteria for sustainable products

Res4 We will minimise waste production, optimise opportunities for re-use and recycling and consolidate waste disposal contracts.

Res5 We will ensure that environmental liabilities associated with contaminated land are minimised

7.7 Targets

Targets

- **to reduce water consumption on an annual basis**
- **to undertake a waste audit across the estate, establish baseline figures for waste production and produce a waste strategy by end 2008**
- **to increase the amounts and types of material that are recycled**
- **to investigate the potential for recycling facilities at stations for public use**
- **to review Depot Access Conditions and ensure Northern has no environmental liabilities regarding land contamination by end 2008**

8.Pollution and Nuisance Prevention

Strategic Goals

- **to minimise and control pollution and nuisance arising as a result of our operations**
- **to actively seek alternative operational and technical solutions to reduce levels of emissions**

8.1 Background

Northern Rail operations have the potential to pollute, by emitting to air (exhaust emissions from trains and other vehicles, solvents and dust), and to both land and water (spillages of chemicals, oils, fuel, toilet effluent, litter and waste). In addition our operations can give rise to nuisances such as noise and light levels that adversely affect the quality of life of our neighbours.

Many of the areas above are addressed elsewhere in the document under the various strategic themes, such as Section 7 - Resource consumption and disposal and Section 10 - Infrastructure.

Our highest risk areas are the engineering and maintenance depots and the day-to-day operation of our trains. As outlined in Section 4.3 the control of pollution from the depots is managed via Environmental Management Systems. As stated the intention is to have one Environmental Management System that covers all operations by December 2009. In this way levels of pollution will be managed and minimised with new solutions being investigated to ensure continual improvement.

However, one area that is not adequately addressed elsewhere is that of exhaust emissions from diesel trains.

Annex 1 outlines the European Directives pushing for tighter emissions from new diesel trains, plus the introduction of low sulphur fuel that will affect all diesel trains. Any new rolling stock will have to meet the standards. So, our main concern is very much our existing fleet. The majority of the diesel units are pre-1990, and these older engines emit more pollutants.

The Government has a National Air Quality Strategy that sets limits and timescales for the amount of pollutants that are in the air. These pollutants are known to be harmful to health. In many urban areas the air quality does not meet the standards set out in the national strategy, and so the local authorities have declared Air Quality Management Areas. Very often within these areas there are so called 'hotspots' where the air quality is particularly poor. Air Quality Action Plans for each of these areas are being put in place to reduce the levels of pollutants. The major cause of the pollution in most cases has been found to be road traffic (eg Liverpool and Greater Manchester), and the pollutants of concern are oxides of nitrogen and particulate matter. However, that does not mean that emissions from diesel trains are not part of the picture. There is still a need to reduce emissions as much as possible, especially where rail is being actively included as part of the solution to environmental problems associated with road traffic.

A study by AEA Technology[3] concluded that at busy rail terminal stations where there is a high amount of diesel activity, idling trains could be potentially significant contributors to traffic related air quality hot spots.

Solutions can be either operational or technical and the final approval will depend on a number of factors.

A selection of actions including energy efficient improvements, driver training, reduced idling, better planning of units used and engineering modifications have already been referred to in Section 6 – Energy. More efficient fuel combustion plus reducing the use of fuel not only affects emissions of carbon but will have a positive impact on exhaust emissions.

The one technical solution not referred to elsewhere in the strategy is the use of some form of exhaust after-treatment. However, there is very little experience throughout the rail industry of this technology being used, and little data on the reliability, applicability and ultimately costs.

One reason that experience is limited is that with high levels of sulphur in fuel, technologies such as selective catalytic reduction (SCR) and diesel particulate filters (DPF) could not work. However, the introduction of low sulphur diesel will mean that these technologies can start to be used.

8.2 Policies

Pol1 We will establish the levels of emissions at busy stations where the majority of the rolling stock is diesel.

Pol2 We will proactively test exhaust after-treatment technologies on our units following the introduction of low sulphur fuel

Pol3 We will ensure that all future rolling stock procured emits the minimum pollutant levels.

8.3 Targets

Targets

- **to measure or model pollutant levels at key rail stations by mid-2009**
- **to test some form of exhaust after-treatment on a range of our units by 2010**

[3] Rail Diesel Study – Management Summary. ED05010. AEA Technology (for UIC). March 2006

9.Biodiversity/Land Management

Strategic Goal

- **to protect and enhance the biodiversity value of our land and infrastructure, comply with all legislation and promote awareness**

9.1 Background

On a national scale the rail network is a valuable resource for wildlife and vegetation, due to the fact that most of the lineside areas have been left to develop naturally with minimal interference. However, that particular resource is managed by Network Rail, which has developed a Biodiversity Action Plan for its own land holdings.

We have no land holdings. We manage areas of land on lease from Network Rail. However, that does not mean that there are not things that can be done.

There are areas of land, albeit small, at stations and depots that have the potential to be developed further. Clearly any such work must not affect operations or engineering work.

9.2 Policies

Bio1 We will operate a 2-for-1 replacement policy when trees have been removed. This may take the form of a contribution to a local sustainable forestry scheme eg The Mersey Forest, Red Rose Forest or The Woodland Trust.

Bio2 We will work with Wildlife Trusts and other agencies including Network Rail to develop areas of land as a wildlife resource

Bio3 We will promote the value of enhancing the natural landscape to schools and communities

9.3 Targets

Targets

- **to identify relevant pieces of land for further development**
- **to develop at least one scheme in each area by end 2008**
- **produce accompanying literature to enable sites to be managed successfully**

10.Infrastructure

Strategic Goal

- **to ensure that environmental sustainability will be considered in the design, construction, maintenance and operation of all our facilities producing low carbon buildings**

10.1 Background

In partnership with other stakeholders we wish to see improvements in all infrastructure, either through refurbishment of existing facilities or the provision of new facilities. Indeed, we have recently been successful in gaining funding under the Network Rail Station Improvement Programme (NSIP)

We take the lead on station and depot refurbishments that are non-structural, but large-scale improvements and new builds are not financed by us.

Whatever the scale of work, we want to see designs of the highest environmental standards, and in the case of new build assess their impact using the tools devised by the Building Research Establishment (BRE).

BRE have developed a range of assessment methods and tools designed to help construction professionals understand and mitigate the environmental impacts of the developments they design and build. The tools can be used at all stages of the project from design through to post-construction. The assessments look at a range of environmental impacts: management, health and wellbeing, energy, transport, water, material and waste, landuse and ecology and pollution. Credits are awarded according to performance. A set of environmental weightings then enables the credits to be added together to produce a single overall score. The building is then rated on a scale of: Pass, Good, Very Good, Excellent, and Outstanding.

We want to ensure that the specifications take account of:

- **visual impact of the design**
- **provenance of materials used (accredited sustainable sources)**
- **effects of climate change**
- **environmental impact of materials used**
- **minimal resource consumption (energy, water)**
- **minimal nuisance from noise and light**
- **highest insulation standards**
- **onsite electricity generation**
- **potential for re-use and recycling materials**
- **sustainable access to the facilities (walking/cycling/public transport), where appropriate**

All construction activities should have minimal impact on both the environment and surrounding community.

All infrastructure should be designed so that the impact of operations on the neighbouring community is minimal, and where possible become an asset for the community. The facilities should also be simple to operate and manage resource use efficiently.

10.2 Policy

Inf 1 We will work with all stakeholders to develop the optimum environmentally sustainable design specification for infrastructure, to produce low carbon buildings

Inf2 We will ensure that all new buildings are assessed using the Building Research Establishment Environmental Assessment Method, and achieve a minimum of an 'excellent' rating.

Inf3 We will work with partners to fund and develop onsite renewable energy generation at facilities

Inf4 We will ensure that contractors adhere to Codes of Construction Practice and are aware of and adhere to our Environmental Management System

10.3 Targets

Targets

- **to develop a checklist for use by our employees responsible for refurbishment and new build projects**
- **to initiate discussions on sustainable design criteria with Network Rail during 2008**

Case Study

Accrington Eco Station – Our Vision

The aim of the project is ambitious – 'To develop a demonstration project to show how new sustainable building techniques can be incorporated into the design and operation of a railway station'.

The key partners to the project are: Lancashire County Council, Northern Rail, Network Rail, the East Lancashire CRP and Hyndburn Borough Council.

The key objectives of the project are:

- **to promote the innovative use of existing and emerging knowledge, products and services in the design and operation of the new station building that are sustainable and reduce energy consumption and carbon emissions.**
- **to design a building that goes beyond building regulations and will achieve an excellent BREEAM rating.**
- **to use wherever possible locally sourced materials including recycled materials in the construction of the building, including local recycled stone and sheep's wool as insulation.**
- **to use materials that can be recycled should the building be dismantled in the future.**
- **to look at ways to generate sufficient power on site for the station building and car park and/or to use a green electric supplier.**
- **to look at the effect of climate change over the life of the building and to future proof it against weather extremes.**
- **to work with the local community to see if there is potential for shared community use of the new station building.**
- **to link it into other transport networks including pedestrian and cycle routes, the proposed new bus interchange and local road networks linked to the new park and ride.**
- **in summary this is a 'cradle to the grave' project with all stages of its life being taken into account.**

Progress:

Lancashire County Council has commissioned a detailed design and is in the process of acquiring the Eagle Street site from the British Rail Property Board where the new station building will be constructed. Planning permission for the scheme has been obtained although further discussions with the Planning Department are required to discuss the implications of some of the conditions applied to the permission.

Discussions have taken place with the North West Development Agency (NWDA) to seek their support for the project and to look at funding opportunities. Any funding from the NWDA could be useful in matching against other sources (especially EU) as well as demonstrating a regional commitment to the initiative which would add considerable credibility in the eyes of other fund holders.

Estimated cost:

The estimated cost of the project is about £1.2m although this includes platform works, new shelters, demolition costs and the new car park. Of this the new station building is estimated to cost £400,000/£450,000.

Benefits:

The new station is forecast to generate above average growth in patronage and revenue of up to 12% and 7% per annum respectively.

11. Procurement

Strategic Goal

- **to ensure that our supply chain meets the highest environmental standards through the development of an overarching sustainable procurement policy**

11.1 Background

Northern Rail has a responsibility to ensure that all suppliers of goods and services can demonstrate their environmental probity and as a minimum ensure that they are legally compliant. However, we wish to go beyond that and will seek to include additional environmental criteria as part of our purchasing contracts, with appropriate performance measurement built in.

In addition the goods purchased and services delivered must be of the highest environmental standards. It is not always the case that there will be a premium to pay for additional environmental criteria. However, when such cases arise, a judgement will be made on whether the goods or service meet other policy objectives.

We also wish to proactively engage with our suppliers to raise awareness of the importance we place on environmental issues.

Improving the performance of the supply chain enables the positive messages to be cascaded far and wide.

11.2 Policies

Pro1 We will review procurement practices and develop an overarching sustainable procurement policy that reflects our environmental sustainability principles.

11.3 Targets

Targets

- **identify environmental requirements and criteria (for both goods and services) for inclusion in contracts**
- **review current supplier list and divide into sectors, determining environmental risk of each**
- **calculate carbon emissions allocated to each sector to feed into calculation of carbon footprint**
- **to develop a sustainable procurement policy by 2009**

12. Measuring and Reporting our Success

12.1 Key Performance Indicators

To determine the success of the implementation of this environmental sustainability strategy and to demonstrate our ongoing improved environmental performance it will be necessary to measure outputs to determine trends.

New initiatives will also be monitored to determine their success, with the relevant criteria being determined at the outset.

In this way we will be able to demonstrate that a continuous effort is being made to improve and that if necessary, projects or initiatives can be modified to maximise their impact.

The rail industry has agreed to report two environmental indicators immediately to ORR:

- **total traction energy consumption**
- **total carbon dioxide emissions from traction energy**

The indicators will be normalised by passenger km and net tonne km. As stated in section 6, we can more readily provide data on diesel consumption, but electricity consumption will have to be provided by Network Rail. The data will be handled in a way that has already been agreed with RSSB on an industry wide basis.

Other short to medium term indicators include:

- **air emissions (carbon monoxide, oxides of sulphur, oxides of nitrogen and particulates PM10)**
- **traction energy efficiency and carbon intensity (work currently being undertaken by ATOC)**
- **carbon dioxide emissions from non-traction energy**

Data for non-traction energy consumption in the long term will be collected in line with the requirements of the Carbon Reduction Commitment. As stated in section 6 there are difficulties with the accurate measurement of non-traction electricity consumption due to the high proportion of estimated bills. However the intention is to report these data annually while at the same time developing a more robust system of meter reading.

Our own indicators will include:

- **carbon dioxide emissions from business travel (by mode)**
- **carbon dioxide emissions from road based fleet**
- **carbon footprint**
- **water consumption**
- **waste arisings by type plus % recycled**

12.2 Benchmarking

We will benchmark our performance by completing the Business in the Community Environmental Index Survey. This is the UK's leading corporate environmental benchmark.

12.3 Reporting

We intend to publish an annual statement that outlines the progress made in delivering environmental initiatives, and to provide data as outlined above.

13.Action Plan

This plan identifies the key areas of work to take place over 2008-2013. We can make firm commitments for 2008, but beyond that we have indicated our medium and longer term aspirations. The annual report referred to in Section 12 will outline the action plan for the following year.

13.1 Setting the agenda

To become a proactive member of:

- SERCO and NedRailways environmental and social responsibility networks
- Rail Sustainable Development Group
- ATOC Environmental and Sustainability Forum and Energy Experts Group
- Passenger Transport Executive Group (PTEG) Environmental Sustainability Group

To actively engage with DfT and Network Rail to discuss issues such as sustainable railways, environmental sustainability and sustainable design.

13.2 Short term actions – 2008

Governance

- to convene an environmental sustainability steering group, and meet on a quarterly basis

Environmental Management

- to harmonise the environmental management systems within engineering

Partnership

- to develop an internal communications campaign targeting all staff
- to develop an environmental awareness training package for staff from induction through to job specific
- to develop awareness raising campaigns to engage new and existing customers
- to work with local TravelWise campaigns and others to develop travel behaviour programmes to encourage modal shift
- to work with GMPTE on climate change campaign
- to study the feasibility of introducing car clubs at key stations
- to develop a campaign with Manchester is My Planet to engage with the community at all levels to inform about our work in the area promoting modal shift and reducing carbon emissions
- to actively seek funding from appropriate bodies, both European and national to support our environmental improvements

Energy

- to define an energy conservation policy and develop an energy awareness campaign, which includes focused audits at sites, and checklist of actions
- to identify small scale projects for immediate implementation and identify larger scale projects for the medium to long-term
- to measure fuel consumption of all units under different conditions. Establish fuel measurement system. Identify engineering solutions to improve efficiency
- to continue trial of meters on electric trains
- to develop an ecodriving programme
- to develop a system to ensure all meters are read routinely and accurate consumption information gathered
- to ensure tenants are appropriately charged for energy consumption
- to collect all information to ensure accurate calculation of our carbon footprint

Resource Consumption and Waste

- to measure water consumption, identify projects to minimise consumption and develop awareness raising campaigns
- to undertake a waste audit across the estate and produce a waste strategy
  - to determine efficiency resulting from consolidating waste contracts

Biodiversity

- to survey existing areas of land and identify potential for development. To work with Wildlife Trusts and schools/communities to develop and manage

Infrastructure

- to develop a checklist for sustainable elements to be included in refurbishment and new build (design, construction and operation)

Procurement

- to develop an energy procurement hierarchy and ensure new contracts follow guidance

13.3 Medium term aspirations – 2009/10

Environmental Management

- to develop a corporate Environmental Management System

Partnership

- to develop a corporate staff travel plan
- to continue to identify appropriate communication programmes and initiatives with other stakeholders and community groups
- to develop a specific anti-litter campaign

Energy

- to implement an ecodriving programme
- to ensure refurbishment projects include energy efficient equipment etc
- to publish our carbon footprint

Resource Consumption and Waste

- to review all materials purchased to identify whether more sustainable alternatives exist
- to implement more recycling schemes across the estate
- to review depot access conditions and ensure Northern has no environmental liabilities regarding land contamination, and undertake surveys if appropriate

Pollution and Nuisance Prevention

- to commission air quality monitoring or modelling study at key stations

Procurement

- to identify key suppliers and determine environmental risks from each sector
- develop a sustainable procurement policy and guidance for budget holders
- develop supplier workshops or other form of communication to raise awareness of Northern's principles

13.4 Longer term aspirations – 2011 and beyond

- widespread use of renewables at facilities
- alternative fuel trials
- trials of exhaust after-treatment on units
- establish carbon offsetting schemes
- more ecostations

External Drivers

1. International/European

The work of the Intergovernmental Panel on Climate Change (IPCC) has done much to raise awareness of the issue of climate change. A synthesis report was published based on assessments undertaken by three working parties of the IPCC, which provides an integrated view of climate change in 2007[4].

Greenhouse gas emissions resulting from human activities have increased 70% between 1970 and 2004. Even with mitigation policies and improved practices in place, emissions will continue to grow. The resultant warming will lead to global and regional impacts.

Related specifically to transport, major future impacts may include:

- **reduced risk of disruption to transport from snow/ice but increased risk due to flooding/storm damage**
- **changes in transport demand due to new settlement patterns and population movement, plus related movement of infrastructure**

The European Union (EU) has a strategy for sustainable development which is complemented by the principle of ensuring that when decisions are taken on other key policy areas eg agriculture, fisheries, transport, energy, trade, development, etc., consideration is always given to the environmental implications.

The current environmental action programme will take the EU through to 2012. It has four priorities:

- **climate change**
- **nature and biodiversity**
- **environment and health, and quality of life**
- **natural resources and waste.**

Some of these priorities are included in seven 'thematic strategies' which consider soil protection, conservation of the marine environment, sustainable use of pesticides, air pollution, the urban environment, the sustainable use and management of resources, and waste prevention and recycling.

The EU sees climate change as a major challenge for this decade and beyond. The EU's long-term objective is to prevent the global temperature from rising by more than two degrees above the level of the pre-industrial era. The EU has played a key role in the development of the two major treaties addressing the issue, the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol, agreed in 1997.

In January 2007 the European Commission set out proposals and options for achieving its long-term objective in its Communication "Limiting Global Climate Change to 2 degrees Celsius: The way ahead for 2020 and beyond". This is a key part of the EC's climate change and energy strategies.

The first commitment period of the Kyoto Protocol expires in 2012. Therefore the UNFCCC convened a ministerial conference on climate change in December 2007 to try and develop more ambitious global action against climate change post 2012. It has yet to be seen whether all nations can agree on the right way forward.

The EC European Climate Change Programme has led to the adoption of a wide range of new policies and measures. Among these is the EU Emissions Trading Scheme (ETS), which currently does not cover rail transport. However, political focus would appear to be moving towards inclusion of surface transport. This could leave rail disadvantaged, particularly if allowances were allocated on a historical basis and where emissions from rail were expected to grow. Therefore the rail industry needs to take proactive steps to avoid any disadvantage.

In addition there are Directives aimed at reducing emissions to air from trains, for both environmental and health reasons ie minimising emissions of oxides of nitrogen and sulphur and sooty particulates.

The Non-Road Mobile Machinery Directive as amended (2004/26/EC) proposed a tightening of emissions limits from new rail traction engines. The increasingly tighter limits were to be introduced in stages, with the first stage limit values being in place at the beginning of 2006. The second stage, whereby emissions limits for particulate matter are particularly stringent will come into force in 2012.

The Fuel Quality Directive (2003/17/EC) proposes diesel with a maximum sulphur content of 10pm by January 2010. This is highly likely to become legislation, although there may be some delay in its implementation.

The implications for the rail industry are that after that date, due to supply issues, the diesel supplied to operate trains will be Automotive Diesel Oil (ADO) containing 5% biodiesel ie road quality diesel. Across the rail industry the additional costs of switching fuel are said to be in the region of £20m per annum due to differences in duty.

The European Environmental Noise Directive (2002/49/EC) specifies how noise should be assessed and managed, and thus develops a common approach throughout the European Union. The Directive covers noise associated with rail.

The process involves the development of noise maps which will be used to assess numbers of people adversely affected by noise, as it is acknowledged as both an environmental and health issue. It also has the objective of providing better information to the public about noise and its effects and finally it proposes the development of action plans to reduce noise. It has been transposed into UK legislation. For rail, it requires noise maps for major railways ie more than 60,000 trains per year.

2. UK Government

UK Government updated its Sustainable Development Strategy in 2005[5] which set out 5 guiding principles:

- **living within environmental limits**
- **ensuring a strong, healthy and just society**
- **achieving a sustainable economy**
- **promoting good governance**
- **using sound science responsibly**

With 4 shared priorities:

- **sustainable production and consumption**
- **natural resource protection and environmental enhancement**
- **climate change and energy**
- **sustainable communities**

Since that time, environmental sustainability and specifically the issue of climate change has risen up the political agenda, so that now UK Government acknowledges climate change as one of the greatest long-term challenges facing the world today and that effective transport policies will play a role in meeting that challenge. All Government departments and

[4] Intergovernmental Panel on Climate Change AR4 Synopsis Report – November 2007 (http://www.ipcc.ch/)

[5] Securing the Future - Delivering the UK Sustainable Development Strategy DEFRA March 2005 (www.defra.gov.uk)

agencies were charged with developing focussed action plans based on this strategy.

The Government produced an Energy White Paper in 2007[6]. It stated that the Government is working to tackle emissions from transport by: reducing the carbon content of fuel; reducing the carbon emissions of vehicles; encouraging moves towards more environmentally friendly transport and, where appropriate, using emissions trading. As stated above rail is not yet included in the EU ETS.

It also announced the Carbon Reduction Commitment[7] which is a new scheme which will apply mandatory emissions trading to cut carbon emissions from large commercial and public sector organisations by 1.1 MtC / year by 2020. This will affect most Train Operating Companies.

The Office of Rail Regulation (ORR) published a report on sustainable development[8] which was developed following an extensive consultation with the industry. It states how significant the work is that is currently being done within the rail industry on identifying the best ways to contribute to sustainable development. The ORR intends to work with the industry to develop industry-wide key performance indicators to monitor environmental performance.

The DfT annually publishes a Sustainable Development Action Plan in which the priorities are aligned with the Government's guiding principles for environmental sustainability. The 2007 report outlines the key priorities for the department whose key aim is 'Transport that works for everyone'. It outlines a number of challenges when tackling climate change such as encouraging low carbon transport alternatives, behavioural change, carbon pricing and trading. In addition it lists challenges focussed on improving quality of life such as improved journey experience, minimising impact on townscape and heritage, biodiversity, landscape and water, minimising noise pollution and promoting health and well being through transport.

The Government published a rail White Paper in summer 2007[9]. With regard to the environmental impact of railways, it acknowledged that they would play a part in helping the UK meet its carbon reduction target of 60% by 2050, as enshrined within the Climate Change Bill. It stated that the rail industry should act to reduce its own carbon footprint, with the industry determining its own carbon reduction targets in 2008. Although carbon reduction is of paramount importance, the paper stated that the industry would be expected to minimise other environmental impacts such as those on air quality, noise, water, waste and biodiversity.

It acknowledged that air quality will be enhanced by the delivery of new diesel trains that will meet the new stringent emissions limits, whilst also stating that all refurbishments must result in cleaner, more efficient engines being fitted. In addition, exhaust after-treatment technologies should be able to be used once low sulphur fuels start to be used widely.

With regard to noise, the Department for Environment, Food and Rural Affairs (DEFRA) is producing noise maps using data provided by Network Rail as part of the implementation of the Environmental Noise Directive. The White Paper says that the Government will work with the industry to help it respond to noise concerns and support the development of the necessary noise action plans.

The Paper acknowledged that the biggest contribution that rail could make to reducing carbon was to carry more passengers. Clearly the Government has a role with regard to strategic decisions that affect the whole railway, such as increasing capacity and further electrification. In addition they are committed to including environmental requirements in franchises, promoting cleaner and quieter trains and supporting research on technological improvements and minimising environmental impacts. Every five years the Secretary of State for Transport presents ORR with a specification of the high level outputs (HLOS) that the Government wants the railway to provide, plus the amount of money available. The Government has said that the HLOS in 2012 will include an environmental output.

In 2006 two important pieces of work were published by the Government. The Chancellor asked Sir Nick Stern to lead a major review on the economics of climate change[10] to understand more comprehensively the nature of the economic challenges and how they can be met, in the UK and globally. Also Sir Rod Eddington led a joint HM Treasury and DfT project[11], which examined the long-term links between transport and the UK's economic productivity, growth and stability, within the context of the Government's broader commitment to sustainable development and the environment.

In November 2007 the DfT published its response[12] to the recommendations made in the Eddington Report to improve transport's role in delivering economic growth and increased productivity, while at the same time contributing toward a reduction in carbon emissions, as outlined in the Stern Report .The report sets out ambitious plans for developing future transport policy and makes it clear that economic growth and carbon emission reductions are not mutually exclusive. It states that the most potential for carbon reduction will arise from changing travel behaviour, technological improvements and more intelligent investment decisions. It states a number of high level goals that it would like its various proposed networks to help meet (ie cities and regional networks, national networks and international networks):

- **climate change**
- **equality of opportunity**
- **productiveness and competitiveness**
- **quality of life**
- **safety, security and health**

Government is currently looking to stakeholders for input into the development of the DfT transport strategy. At the same time Government is looking to refresh the way it currently appraises proposals for transport schemes. It uses an analytical framework known as the New Approach to Appraisal (NATA). The document 'Towards a Sustainable Transport System' is a catalyst for the new look at the NATA process. Recommendations arising from both the Eddington Study and Stern Review have shown that there needs to be improvements made in the appraisal tools used.

Both these consultations have the potential to impact on future funding that the rail industry and Northern Rail in particular receives.

[6] Meeting the Energy Challenge – A White Paper on Energy DTI May 2007 (http://www.berr.gov.uk/files/file39387.pdf)
[7] http://www.defra.gov.uk/environment/climatechange/uk/business/crc/index.htm
[8] ORRs Sustainable Development and Environmental Duties April 2007 (www.rail-reg.gov.uk)
[9] Delivering a Sustainable Railway DfT 2007 (www.dft.gov.uk)

[10] Stern Review on the Economics of Climate Change HM Treasury 2006 (http://www.hm treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm)
[11] The Eddington Transport Study DfT 2006 (http://www.dft.gov.uk/about/strategy/transportstrategy/eddingtonstudy/)
[12] Towards a Sustainable Transport System – Supporting Economic Growth in a Low Carbon World DfT 2007

Environmental Policy Statement

Northern Rail is a rail public transport operator in the North of England dedicated to providing safe, clean and reliable trains that meet our customers' requirements and expectations. Northern Rail recognises it has a moral and legal responsibility to minimise the adverse effects of its activities and that certain aspects of its operations interact with the environment.

Northern Rail is developing an Environmental Sustainability Strategy which will outline its objectives to minimise its impact on the environment, contribute towards an enhanced quality of life and deliver a continual environmental improvement.

As part of this strategic approach, Northern Rail has implemented and successfully maintained Environmental Management Systems (EMS) in accordance with ISO14001:2004 at the train maintenance depots. Through this process Northern Rail has undertaken an environmental review of its activities at these locations, set appropriate objectives and targets and established procedures for their measurement, audit, control and review.

To continually improve Northern Rail's impact on the environment, it is committed to:

- **implementing and maintaining the international standard for environmental management systems (ISO14001:2004) across the whole organisation by December 2009**

In this way Northern Rail will be able to control pollution and minimise resource use from all its activities, including emergency situations. Environmental performance will be measured and monitored, and the system reviewed on an annual basis.

- **complying with all relevant environmental legislation, regulations, approved codes of practice and guidance and railway group standards**

Northern Rail wishes to be proactive in its approach, so where appropriate will adopt standards in advance of any legal requirements. It will maintain a register of environmental legal requirements.

- **working in partnership to ensure that new infrastructure projects and vehicle specifications are designed to improve overall environmental performance**

Such projects will aim to minimise the environmental impact resulting from use of utilities, fuel and other material resources and the resulting waste, and increase opportunities for recycling and using new technologies.

- **promoting awareness of our staff and those working on our behalf on the impact of their activities on the environment, through structured communications and training.**

Such programmes will enhance the understanding of Northern Rail's environmental sustainability strategy and result in increased participation by staff in initiatives that will have a benefit both to themselves, the organisation and the wider environment

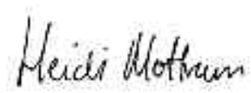
- **developing environmental programmes that focus on the wider community**

Northern Rail will actively engage with the wider community to both debate the key environmental issues arising from our activities and to develop innovative projects.

- **publishing a publicly available annual environmental report**

Northern Rail is committed to publishing progress made against its environmental objectives.

This policy, which will be made publicly available, will be reviewed and revised annually to ensure that our environmental objectives are met



Heidi Mottram

Managing Director,
Northern Rail Ltd
January 2008

Feedback Form

1. Our vision is **"to be recognised as the train operating company making the most positive contribution to environmental sustainability"**.
   To what extent do you think this Strategy, if implemented, will help us achieve this vision?

2. Are there any priority issues missing from the seven themes in the Strategy (Sections 5-11)?
   If there's anything you think we should be including in the future, please let us know!

3. How do you feel our aspirations within the Strategy should be communicated?

4. We'll be contacting our stakeholders shortly to ask them to get involved in our strategy.
   How do you feel your organisation could contribute to helping us achieve our goals?

Please tear out the questionnaire, fold and stick, then return to the address on the back:

If you would like to receive further information on our progress, please give your details below:

Name: Title:

Address:

Tel No: Email:

Feel free to contact our Environmental Manager directly with any specific comments or queries:
email: karen.booth@northernrail.org
Tel: 01904 568327

Moisten here

No stamp required

Dr Karen Booth
Northern Rail
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York
YO24 1ZX

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