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Scottish Trunk Road Network Road Asset Management Plan 2026

Foreword

I am pleased to present the Scottish Trunk Road Network Road Asset Management Plan 2026. This plan highlights our commitment to maintaining and enhancing Scotland's trunk road infrastructure, and to the ongoing improvement of our asset management practices.

As the national transport agency, Transport Scotland is dedicated to delivering a safe, resilient, sustainable, and accessible transport system that supports economic growth and improves the quality of life for all who live, work, and travel in Scotland.

Our trunk road network is a critical asset, connecting major cities, towns, rural communities, airports, and ports. It plays a pivotal role in enabling economic activity, facilitating trade, and ensuring the efficient movement of people and goods.

This plan outlines our strategic approach to managing trunk road infrastructure assets and explains how we deliver on customer requirements. It sets out our approach to spending taxpayers' money as effectively as possible to provide a safe network that remains reliable and resilient to evolving challenges, including climate change and changing demand.

We are committed to transparency and accountability in our operations. This document provides a comprehensive overview of our asset management practices, including our objectives, risk management strategies, and investment plans. It also highlights our efforts to support the Scottish Government's broader goals, such as achieving net zero emissions, supporting the health and wellbeing of our citizens, enabling a fairer and more equitable society, adapting to climate change, improving biodiversity and promoting sustainable travel.

We invite everyone to engage with this plan and support us in creating a road network that meets the current and future needs of our communities.

Alison Irvine

Chief Executive

February 2026

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Introduction

About Transport Scotland

Transport Scotland is the national transport agency, delivering the Scottish Government's vision for transport, and accountable to Parliament and the Public through the Scottish Ministers. Our vision, outlined within our National Transport Strategy, is to have a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors.

Scottish Trunk Roads Supporting Economic Growth

The importance of an effectively managed and efficiently maintained transportation system is a key enabler of the Scottish Government's objective to create a more successful country.

The trunk road network connects Scotland's major cities, towns, rural communities, airports, and ports. The network is one of the largest assets managed by Scottish Ministers, with a value of £33 billion[1]. It serves as a vital artery for the movement of people, goods, and services across the country, critical to our economy and the daily lives of our people. The trunk road network provides the foundation for economic, social, and environmental wellbeing that Scotland relies on.

Trunk roads represent 7% of Scotland's total road length but carry around 40% of all traffic and 70% of heavy goods vehicle traffic. Supporting at least £1.84 billion of value to our economy annually[2], this connectivity is both essential for economic growth, and socially crucial for Scotland by providing more equitable access to employment and services.

Trunk roads also play a crucial role in tourism, with many visitors relying on them to access Scotland's scenic and cultural attractions. Efficient trunk roads reduce travel times and vehicle carbon emissions, contributing to the Scottish Government's environmental goals and improving the quality of life for the people who live near the network.

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[1].Net asset value. Annual Report and Accounts 2024-25.
[2] TRL Report (transport.gov.scot). Figure based on Gross Value Added (GVA) is an economic metric that measures the value of goods and services produced in an area, industry, or sector of an economy. It is a component in calculating Gross Domestic Product (GDP).

The Scottish Government and Transport Scotland have a long-term commitment to ensuring that the trunk road network is maintained in a manner that supports its vision, aims and objectives, creating opportunities for sustainable economic growth, and the prosperity that follows.

About the Road Asset Management Plan

Within Transport Scotland, the Roads Delivery and Operations Directorate is responsible for road asset management[3]. The Roads Delivery and Operations Directorate produces this Road Asset Management Plan (RAMP). Alongside our Asset Management Policy and Strategy, the RAMP sets out our approach to managing road assets to deliver the objectives of Transport Scotland and the Scottish Government.

Transport Scotland was the first national UK roads authority to achieve ISO 55001 certification, demonstrating our alignment with good practice in asset management. This third edition of the RAMP continues our progressive approach to improving our asset management capabilities and provides transparency in asset decision-making.

The RAMP is available on the Transport Scotland website. It is used by Transport Scotland staff and supply chain teams to provide visibility of trunk road management and maintenance activities, and to drive continual improvement. It may also be of interest to those who wish to learn more about the service we deliver and how we intend to do so.

[3] Asset management is the coordinated activity of Transport Scotland to manage our road assets to maximise customer satisfaction, maintain high levels of safety, improve journey time reliability, manage risks (including the impacts of climate change), and enable delivery of our outcomes and priorities in the most efficient and sustainable manner.

1. Our Organisation

This section provides the following information:

- Transport Scotland's purpose, responsibilities and funding
- Our customers, their needs and how we meet them
- Our internal structure, governance, and functions
- Our focus on road safety
- The importance of our network, its assets, and our contracts to maintain them

1.1. Transport Scotland's Purpose

Transport Scotland's purpose is to deliver the Scottish Government's vision for transport. We support and advise Scottish Ministers on strategy and policy options for transport, so that Scotland can increase sustainable economic growth, with opportunities for all to flourish through the development of national transport systems.

The Scottish Government sets the overall policy framework for roads and road transport, including trunk and local roads policy, road safety policy, and bus and taxi policy. The Government also sets an investment hierarchy outlined in the Infrastructure Investment Plan.

We aim to help create an accessible Scotland, with a safe, integrated, cost effective and reliable transport network, helping to deliver a healthier, fairer, and more prosperous Scotland for communities, businesses, and visitors.

Our vision is outlined within our National Transport Strategy (NTS2), and we seek to create a more successful country with opportunities for all of Scotland to flourish through increased wellbeing, sustainable and inclusive economic growth, and equal opportunity for all. We oversee:

- The operation and improvement of the trunk road, ferry, canal, and railway networks in Scotland
- Highlands and Islands and Prestwick airports
- The provision of rail and ferry services
- Enabling local authorities, operators and delivery partners to deliver sustainable, accessible bus services
- The promotion of walking, cycling, and wheeling

- The decarbonisation of Scotland's transport system
- Securing air routes for Scotland
- The National Concessionary Travel Bus scheme
- The provision of network traffic and travel information services

As an agency within the Scottish Government, we follow the SG In the Service of Scotland values:

- We act with integrity
- We are inclusive
- We are collaborative
- We are innovative
- We are kind

We have a responsibility to uphold these values in everything we do. They are reflected in our approach to asset management, described in this document and in our Asset Management Policy and Strategy.

1.2. Transport Scotland's Legal Authority and Key Obligations

Transport Scotland is an executive agency of the Scottish Government and is directly accountable to Scottish Ministers. The Chief Executive is the Accountable Officer for the Agency, appointed by the Permanent Secretary to the Scottish Government. They are supported by a senior management team comprising ten Directors. Further information is available in our current Corporate Plan.

Under the Roads (Scotland) Act 1984, local roads authorities and Transport Scotland have a statutory duty to maintain and manage all roads within their jurisdiction. This includes delivering repairs and improvements.

The Transport (Scotland) Act 2019 aims to make Scotland's transport network cleaner, smarter, and more accessible.

The Climate Change (Emissions Reduction Targets) (Scotland) Act 2024 introduced five-yearly carbon budgets and will help us on our journey to net zero by supporting a credible pathway to net zero in 2045.

1.3. How Transport Scotland is Funded

The UK Government provides funding to the Scottish Government through an annual block grant – a share of funds raised through UK-wide taxes. The block grant is added to by funds raised from taxes in Scotland, and borrowing the Scottish Government has undertaken.

Transport Scotland receives funding from the Scottish Government on an annual basis, as specified in the governmental annual Budget. The annual Budget is developed for a multi-year period in which key spending priorities are identified in a spending review.

Spending is divided between different policy areas, or ministerial portfolios, of the Government with Transport Scotland included in the Transport portfolio. Within the financial year, the Budget is subject to revision through the Autumn Budget Revision (ABR) and Spring Budget Revision (SBR) processes.

Investment scenarios specifically for roads are developed by the Roads Delivery and Operations Directorate. Examples are shown in Section 5. Together with information from other Transport Scotland Directorates, such as Rail, and Ferries and Ports, these scenarios support the Scottish Government spending review and budgets.

In the financial year 2026-2027, the Scottish Government is investing nearly £4.3 billion in Transport from a total of £67.8 billion funding allocated across all portfolios. The breakdown of the Transport portfolio's funding is shown in Figure 1-1 below[4].

The safety, adaptation, maintenance and improvement of the Trunk Road Network has been allocated £1.15 billion for the financial year 2026-2027 (**green** segment of Figure 1-1).

The £1.15 billion sum includes £611 million for critical safety, maintenance and infrastructure, and incorporates other costs, including major project delivery and asset depreciation. A breakdown of this budget is also shown in Figure 1-1. Further information about historical and budgeted spend breakdown can be found in Section 5 Investing in our Network, and Appendix A to Appendix D. Section 2 details our asset management approach which ensures we spend taxpayers' money to deliver value for them.

[4] Funding allocations - Scottish Budget 2026 to 2027 - gov.scot

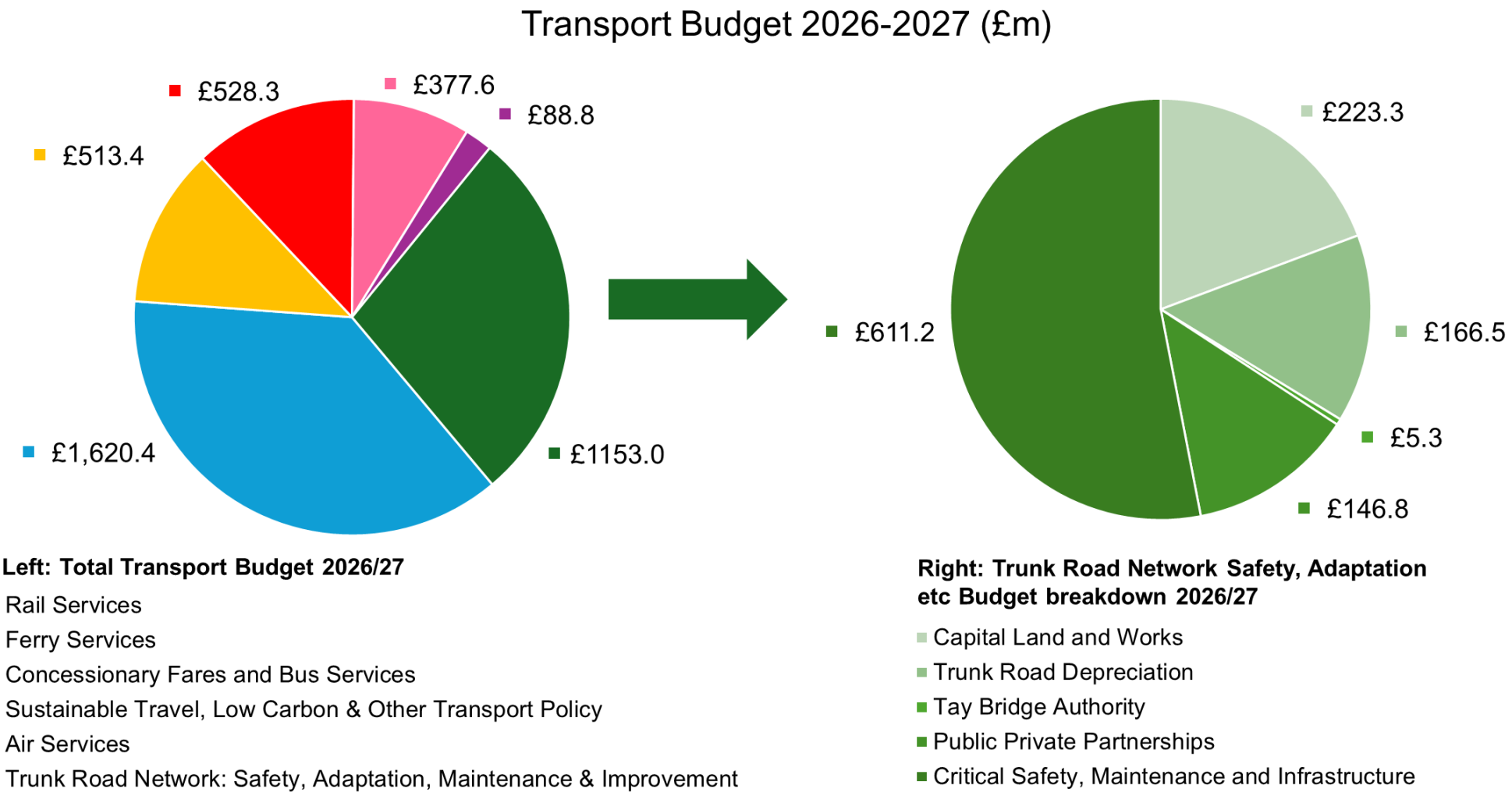


Figure 1-1: Transport Scotland Transport Budget 2026-2027

1.4. Our Customers

We have an extensive range of customers. These include road users, but also all those living, working in, and visiting Scotland. Our road users include pedestrians, cyclists, drivers and passengers, through to communities living close to our network, businesses that rely on and interact with our network, and ultimately the Scottish Government.

Our customers have a broad range of needs and expectations from our management of the nation's trunk roads. For example:

- Road users require a safe, accessible and reliable trunk road network, with reliable information to plan their journeys
- The Scottish Government requires delivery of our committed National Transport Strategy (NTS2)
- Neighbouring road authorities require collaboration so that we achieve joint outcomes (in such areas as safety, environmental improvements and planning)
- The emergency services require collaboration to manage public and national safety and security
- The public requires accountability in spending and delivery, with care for biodiversity, sustainable decision-making and reductions in carbon emissions

We recognise that the needs and preferences of our customers are varied and that they have many different demands. We have undertaken annual customer surveys for many years to understand what customers think of our service. Survey results are published on the Transport Scotland website. We use this information to inform our maintenance approaches and the information we provide to customers about our work.

Our Customer Care Strategy explains the importance of our customers to everything we do, and explains how we will deliver what customers want from us. The approach set out in the Customer Care Strategy informs our asset management planning and delivery, which incorporates customer requirements and feedback to deliver value.

Additional information about our customers' requirements and how they are addressed in this document can be found in Appendix E.

1.5. Transport Scotland Directorates

To deliver the functions described in Section 1.1, Transport Scotland is organised into nine Directorates. These are shown in Figure 1-2 below.

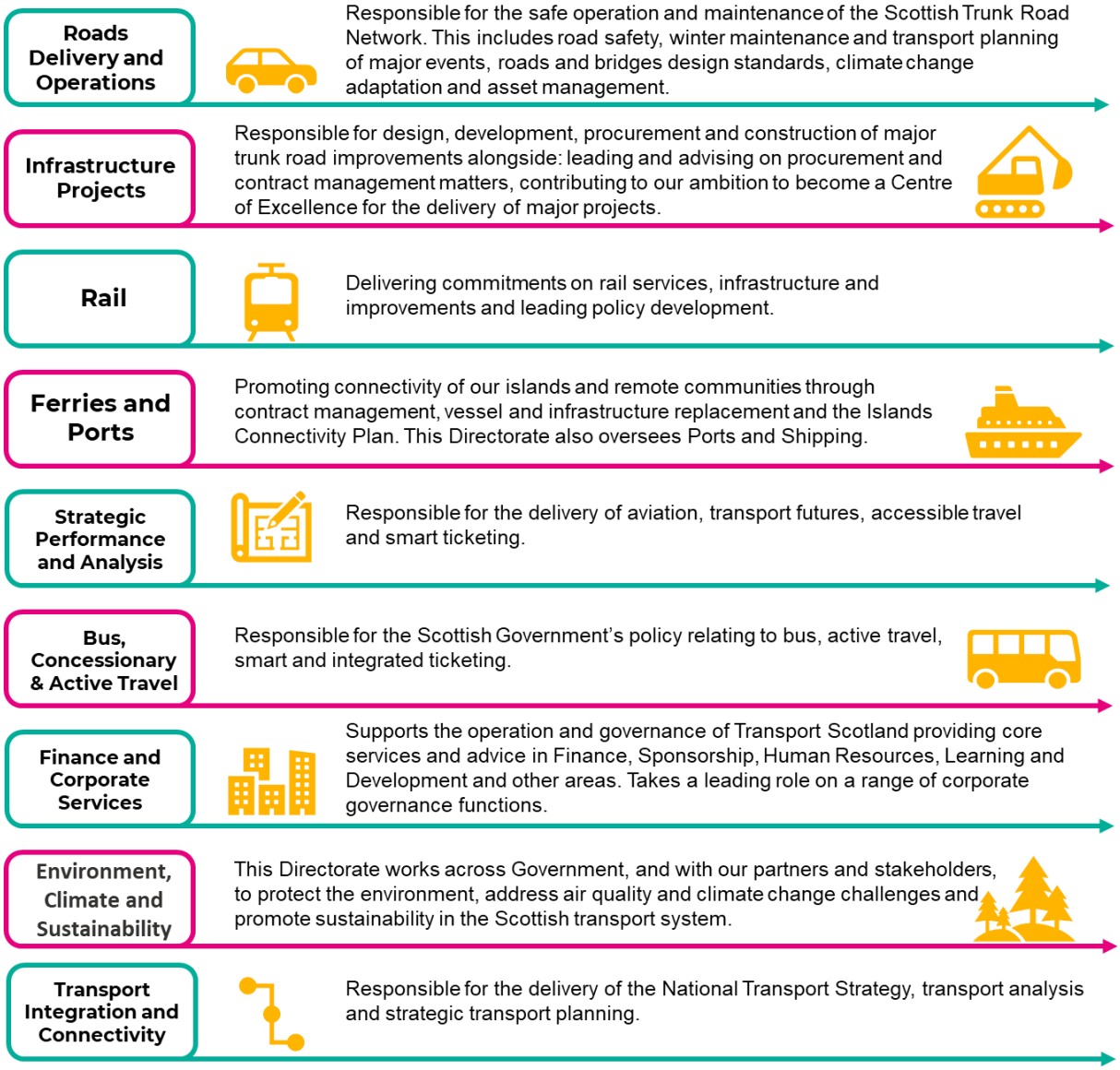


Figure 1-2: Transport Scotland Directorates

1.6. Roads Delivery and Operations Directorate Purpose

Within Transport Scotland, the Roads Delivery and Operations Directorate is responsible for the efficient, sustainable operation and maintenance of the trunk road network. This includes responsibility for:

- Asset management and technical standards
- Procurement, contracts and commercial management
- Roads policy
- Road safety casualty reduction
- Intelligent Transport Systems
- Transport resilience, winter service, incident response and planning for major events
- Roads and structures design standards

1.6.1. Importance of Road Safety

Managing road safety is one of the Roads Delivery and Operations Directorate's core functions and is incorporated into our Asset Management Objectives (see Section 2.3). Transport Scotland's vision is to have the best road safety performance in the world by 2030, and as such, a holistic 'safe system' approach is embedded into all our activities and those of our supply chain.

Figure 1-3: Safe System approach to road safety

You can read more about the Scottish Government's approach to road safety in Scotland's Road Safety Framework to 2030 document. As well as defining the 2030 target, it sets out new strategic outcomes for road safety and challenging targets for the years ahead, with a 50 per cent reduction in fatal and serious injuries and a 60 per cent reduction in child fatal and serious injuries by 2030.

As a result, this document includes references to the implementation of the framework and the safe system approach in our maintenance, improvements, and operations activities. The safe system approach is summarised in Figure 1-3 above.

1.7. Scotland's Road Network

Scottish roads are divided into two types for the purpose of management by public bodies. This Road Asset Management Plan relates to the Trunk Road Network. Figure 1-4 explains the differences between the two road types.

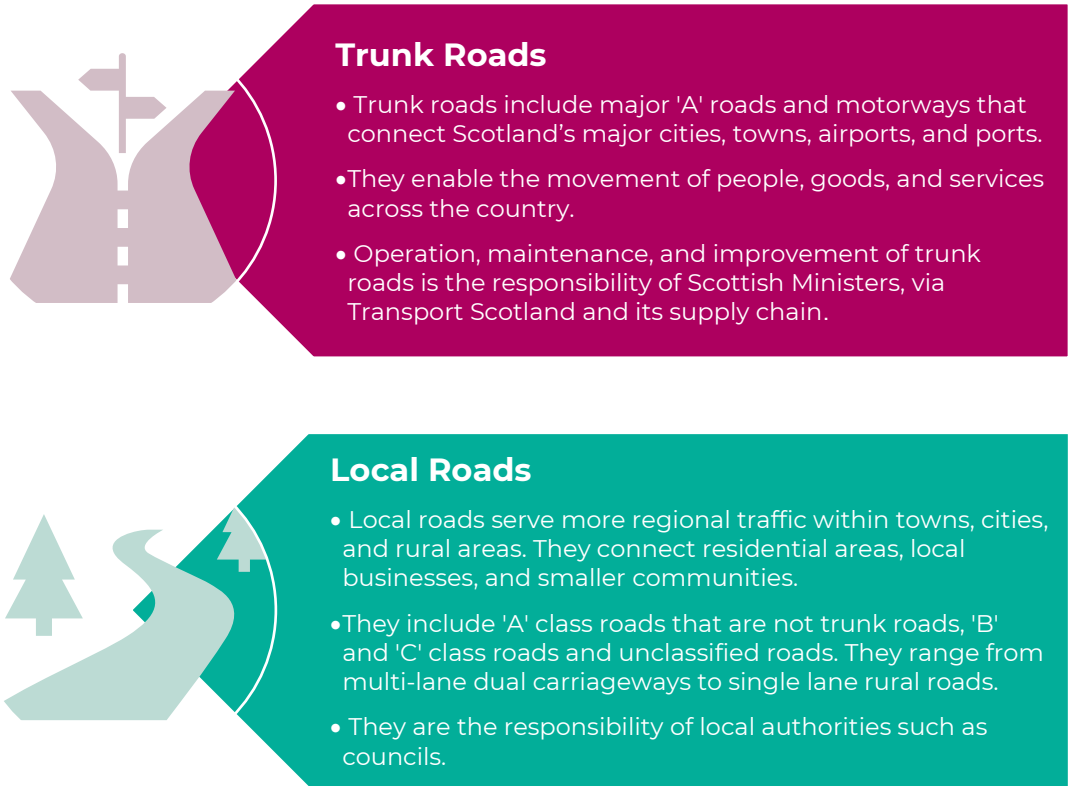


Figure 1-4: Trunk Roads and Local Roads in Scotland

The Trunk Road Network is shown on the map in Figure 1-5 below. The map includes information about the roads which are managed by our four Operating Companies and other contractors (see Section 1.9.1 for further information).

An official list of trunk roads can be found on the Transport Scotland website.

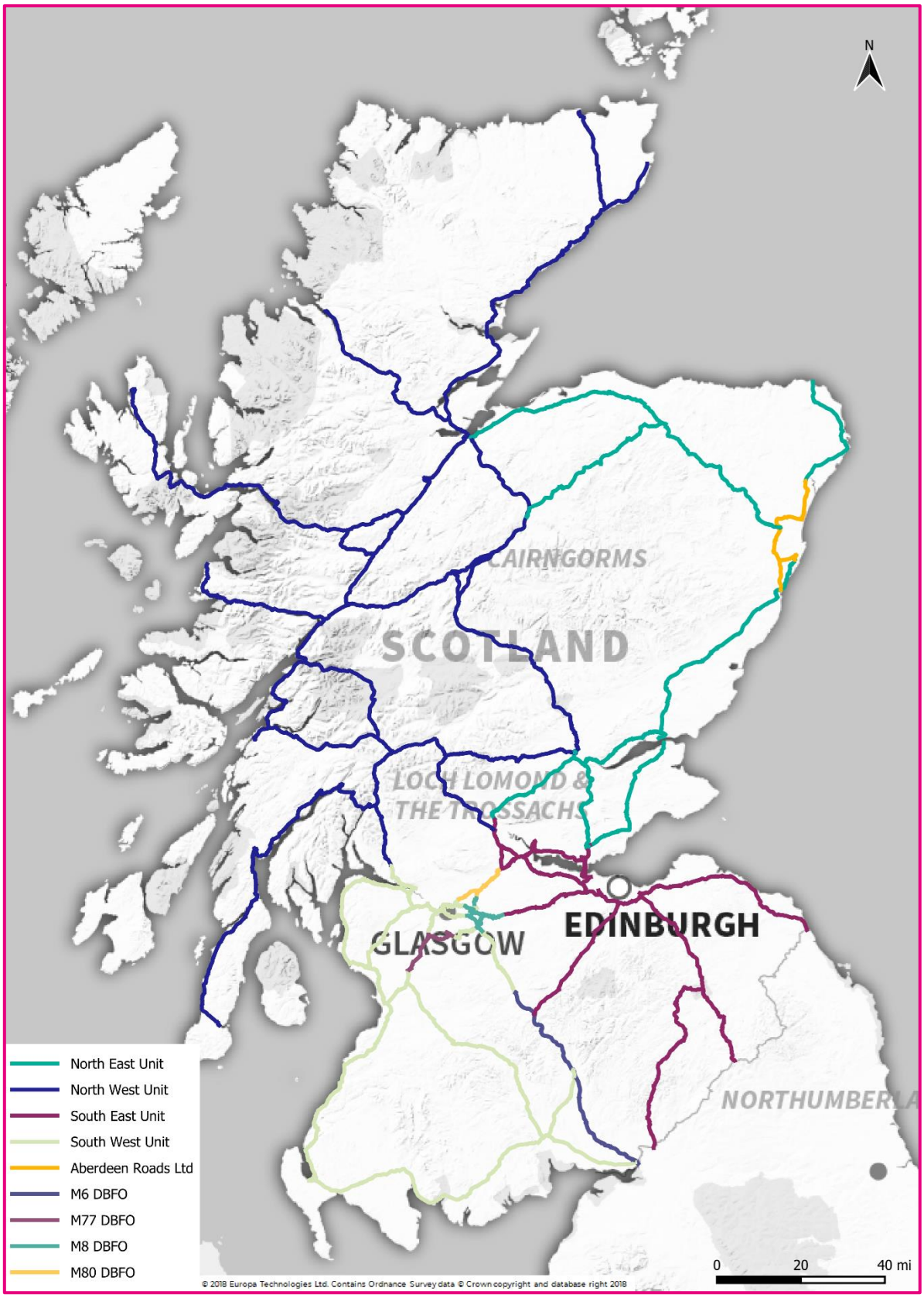


Figure 1-5: Scottish Trunk Road Map

1.8. Our Assets

The assets that comprise our trunk road network are varied and numerous, with hundreds of thousands of assets supporting the 3,745 km (2,327 miles) of carriageway.

This section provides detail of the assets we manage and the role they play in keeping Scotland moving. It also provides the important information to explain what we do to keep our assets functioning effectively and mitigate risks on our network. In line with our 'safe systems' approach, managing safety risk is our priority – but the work of our teams and supply chain is also critical to network availability, resilience, and performance. Further information on Risk Management and Maintenance is provided in Sections 3 and 4 respectively.

The information about our assets referred to in this section comes from our Asset Management Performance System (AMPS), which is described in more detail in Section 6. We developed AMPS as the primary software suite for managing trunk road network data, so that it is accurate and accessible, supporting decision-making and reporting. Specific detail about the use of AMPS can be found in the box below, and throughout this plan.

AMPS underpins our day-to-day delivery of the operation and maintenance of the trunk road network, and successful application of our Operating Company contracts.

1.8.1. Carriageways

Providing a comfortable surface for road users, carriageways bear the load of personal vehicles, alongside heavy goods vehicles, and sustainable travel modes such as public transport. Carriageways include motorways, dual carriageways, single carriageways, and slip roads providing access to the trunk road network and roundabouts.

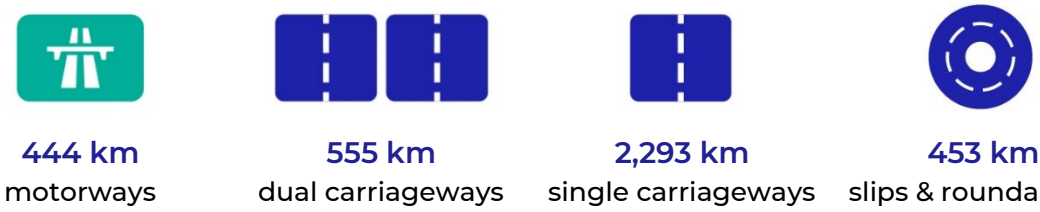


Figure 1-6: Carriageway Assets

Our work on carriageways: mitigating risks	Risk theme	Safety	Condition and Ageing Infrastructure	Budget	Data	Network Resilience	Traffic Information	Climate Change Resilience	Biodiversity	Carbon	Customer Satisfaction
Developing and communicating long-term plans to maintain carriageway assets.		✓	✓	✓			✓				✓
Maintaining carriageways so that they are resistant to the weather, including flooding, and the risk of vehicles skidding is reduced.		✓	✓	✓			✓				✓
Resurfacing so that deterioration does not cause potholes or structural damage, prolonging the life of the asset and ensuring customer satisfaction.		✓	✓	✓							✓
Keeping carriageways as free of ice and snow as far as possible, so that people can travel safely during the winter months.		✓									✓
Managing incidents and obstructions, allowing more reliable journeys and reducing carbon emissions from vehicles.		✓				✓				✓	✓
Modifying carriageways so that they are more resilient to the effects of climate change.								✓		✓	✓
Inspecting the carriageway to establish its condition and check for wear or damage, so that defects can be prioritised and fixed in a timely manner.		✓	✓		✓				✓		✓

Table 1-1: Carriageway Risk Mitigation

Further information about the management of our carriageways can be found in Section 4 and more detailed information in Appendix A.

1.8.2. Structures

Structures are essential infrastructure on our road network. They provide connectivity for vehicles and pedestrians by safely crossing water, roads and other transport lines, such as railways, and allow for technology such as lighting and messaging signs to be installed, making the roads safer to use. Figure 1-7 summarises the structures assets, further detail can be found in Appendix B.

Figure 1-7: Structures Assets

Our work on structures: mitigating risks	Risk theme	Safety	Condition and Ageing Infrastructure	Budget	Data	Resilience	Traffic Information	Climate Change Resilience	Biodiversity	Carbon	Customer Satisfaction
Developing and communicating long-term plans to maintain structures assets.		✓	✓	✓			✓				✓
Responding to incidents which might affect a structure's performance – e.g. vehicle impacts, fire, fly-tipping, vandalism and flooding, so that defects can be fixed.		✓	✓			✓	✓				✓
Cleaning the bridge deck, drains, and expansion joints on the structure to ensure they function effectively.		✓	✓								✓
Maintaining the lighting on a structure to allow visibility for drivers and pedestrians.		✓	✓							✓	✓
Managing vegetation around the structure so that vehicles can pass freely, and other assets are not obstructed or damaged.		✓	✓						✓		✓
Delivering scour protection works to ensure the ongoing safety of structures and increase resilience to climate change.		✓	✓			✓		✓			✓
Replacing or strengthening structures or their components that have deteriorated over time, or to ensure they meet evolving standards.		✓	✓	✓		✓		✓		✓	✓
Inspecting structures to establish condition and check for wear or damage, so that defects can be prioritised and fixed in a timely manner.		✓	✓	✓	✓	✓				✓	✓

Table 1-2: Structures Risk Mitigation

Further information about the management of our structures can be found in Section 4 and more detailed information in Appendix B.

1.8.3. Ancillary Assets

Ancillary assets are a collection of assets adjacent to the main carriageway and provide essential functions:

- Draining water from the carriageway
- Providing vehicle restraint systems (VRS)
- Lighting the network
- Providing direction through our many traffic signs and bollards
- Enabling active travel by the provision of footways and cycle facilities
- Integrating roads into the natural environment and promote biodiversity through the trees, woodland, and other natural assets

The ancillary group contains a wide variety of assets, which include the following:

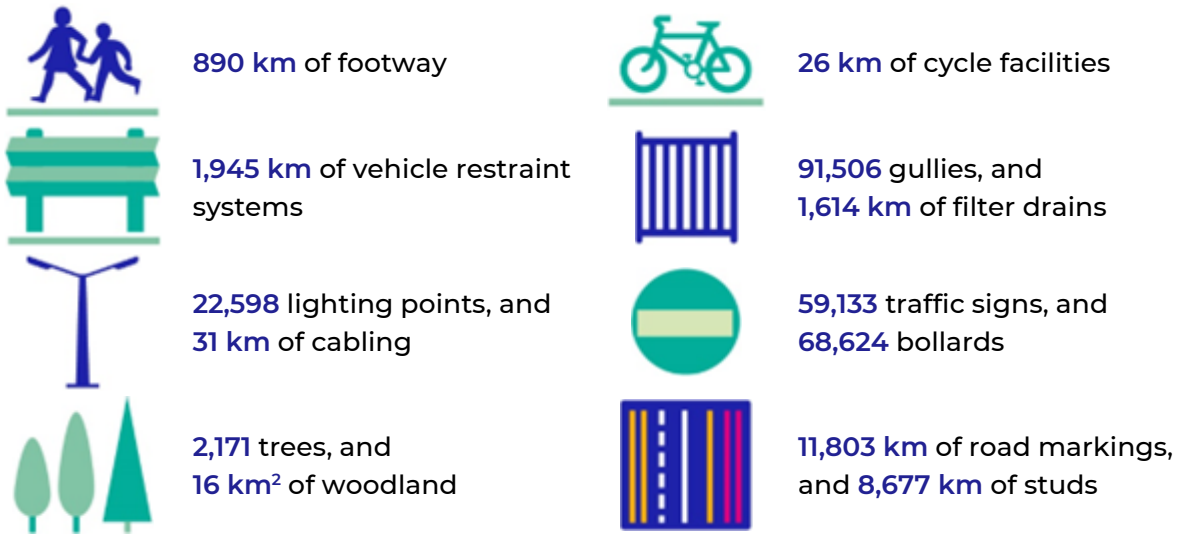


Figure 1-8: Ancillary Assets

Our work on ancillary assets: mitigating risks	Risk theme	Safety	Condition and Ageing Infrastructure	Budget	Data	Resilience	Traffic Information	Climate Change Resilience	Biodiversity	Carbon	Customer Satisfaction
Developing and communicating long-term plans to maintain ancillary assets.		✓	✓	✓			✓				✓
Patching footways and cycleways and renewing their markings so that they are suitable for active travel.		✓	✓					✓		✓	✓
Renewing road studs and markings so that road users are aware of hazards and regulatory information and are directed effectively.		✓									✓
Maintaining lighting columns and lit signage to ensure comfort, visibility, and safety for road users.		✓	✓							✓	✓
Cleaning drainage channels and gullies to ensure water can drain effectively, helping the safe passage of traffic, reducing flooding, and prolonging the life of the carriageway.		✓	✓			✓					✓
Replacing and upgrading drainage systems to reduce flooding, adapting to climate change, and asset resilience.		✓	✓	✓				✓			✓
Inspecting ancillary assets to establish their condition and check for wear or damage, so that defects can be prioritised and fixed in a timely manner.		✓	✓		✓						✓
Cleaning and replacing road signs so that speed limits and directions are visible.		✓	✓								✓
Re-tensioning and replacement of vehicle restraint systems, to enhance safety and reduce the consequences of collisions.		✓									✓
Maintaining plants, trees and landscaping, helping to manage drainage, increase biodiversity, reduce pollution, and create aesthetic environments.		✓						✓	✓	✓	✓

Table 1-3: Ancillary Risk Mitigation

Further information about the management of these assets can be found in Section 4 and more detailed information in Appendix C.

1.8.4. ITS Assets

ITS assets support the functions of Traffic Scotland, facilitating the monitoring, capturing, and communication of traffic and travel information to road users 24 hours a day. The effective operation of ITS assets improves safety, minimises disruption, and strengthens the resilience of the transport network. Analysis of vehicle data also supports our planning for future network enhancements. ITS assets include the following in Figure 1-9:

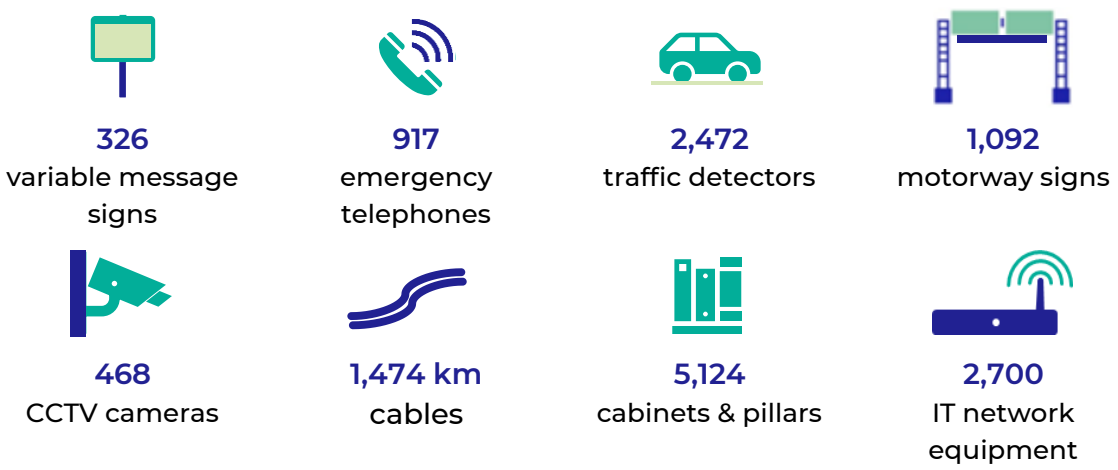


Figure 1-9: ITS Assets

Our work on ITS assets: mitigating risks	Risk theme	Safety	Condition and Ageing	Budget	Data	Resilience	Traffic Information	Climate Change Resilience	Biodiversity	Carbon	Customer Satisfaction
Developing and communicating long-term plans to maintain ITS assets.		✓	✓	✓			✓				✓
Maintaining emergency roadside telephones so that road users can access emergency help.		✓	✓								✓
Replacing technology components, hardware, and software to manage obsolescence and deliver ongoing service.		✓		✓						✓	✓
Testing electrical supplies so they are safe and can consistently provide power.		✓	✓								
Inspecting the cabinets, pillars, and poles to establish condition and check for wear or damage, so that defects can be prioritised and fixed in a timely manner.		✓	✓		✓	✓		✓			✓

Table 1-4: ITS Risk Mitigation

Further information about the management of our ITS assets can be found in Section 4 and more detailed information in Appendix D.

1.9. Contracts to Maintain Our Assets

Transport Scotland has contracts in place with private sector suppliers to ensure that the trunk roads and the systems that support them are safe, efficient, and well-managed on our behalf.

These contracts include those with:

- Operating Companies (OCs), which are responsible for delivering maintenance programmes on the trunk road network, and Design, Build, Finance and Operate contracts (DBFOs) which maintain specific routes
- Intelligent Transport System (ITS) specialists who maintain our ITS assets and deliver our Traffic Scotland service

1.9.1. Our Operating Companies

Operating Companies oversee cyclic and routine maintenance, winter service, emergency response, structural road maintenance, bridge strengthening, and safety inspections. They also deliver schemes to improve and adapt the network, to increase resilience to climate change, and allow integration with other transport modes to assist active travel choices (see Section 4 for further details on Maintenance activities).

Operating Companies collect data about their own activities and the condition and performance of the network, which enables evaluation and planning of the interventions required to maintain it (see Section 6 for further information on data management).

Day-to-day work involves:

- Inspection, maintenance, and repair of carriageways, bridges, and other infrastructure
- Grass cutting and weed/vegetation control
- Gully and drainage system cleansing
- Salting and snow clearing

- Repairs to street lighting and traffic signals
- Overseeing works carried out by supply chain and utility companies
- Managing data associated with the assets to ensure accurate records are maintained in AMPS

DBFOs carry out similar functions for the routes they manage. DBFO contracts require that the Concessionaires take responsibility for all maintenance activities over a 30-year concession period. Consequently, all DBFO activities are excluded from the life cycle plans presented in this RAMP.

The Operating Company contracts for the four regional units have evolved over time. The current Network Management Contracts are the 5th Generation of the contracts. The two South unit contracts commenced in 2020, and the two North contracts commenced in 2022. These contracts have a duration of eight years, with the option to extend up to a maximum of a further four years at the sole discretion of the Scottish Ministers.

These contracts are operated as follows:

- North West – operated by BEAR Scotland since 16 August 2022
- North East – operated by Amey since 16 August 2022
- South East – operated by BEAR Scotland since 16 August 2020
- South West – operated by Amey since 16 August 2020

Their primary objectives include sustainable delivery, reliable journey times, continuous improvement, value for money, and flexibility to accommodate network changes and policy updates. The objectives of the Operating Company contracts are directly aligned with Transport Scotland's asset management objectives and are embedded within them (see Section 2.3 for further information).

These contracts employ around 1500 people directly, 150 more through subcontracts, and generate further employment through the supply chain for professional services and seasonal work.

To ensure these contracts deliver value for money, Transport Scotland has in place a Performance Audit Group (PAG) who audit, monitor, and report on the financial, technical, and performance aspects of the Operating Companies to an agreed strategy. Further information about PAG is included in Section 1.10.2. Further information about managing Operating Company performance can be found in Section 9.

1.9.2. ITS Contracts

Our contractors provide services for the management and maintenance of the ITS assets (see Section 1.8.4 for asset information). The day-to-day work of ITS supply chain includes:

- Inspecting and repairing faults on ITS equipment
- Delivering planned maintenance
- Ensuring that Traffic Scotland data collection systems are available
- Managing data associated with the assets to ensure accurate records are maintained

The relevant contracts last for five years and are operated as follows:

- Traffic Scotland Operations Contract (TSOC - Traffic Scotland (national travel and traffic information service)) – operated by MOBIIE since 2022
- Traffic Scotland Infrastructure Contract (TSIC - inspection and maintenance of ITS assets) – operated by Amey since 2022
- Together, these two contracts are sometimes referred to as the Traffic Scotland Operations and Infrastructure Service Contract (TSOISC) as this is the overall framework under which they operate.
- Traffic Scotland Systems Contract (TSSC2 – maintenance of software and hardware associated with the Traffic Scotland Service) – operated by Cubic since 2022.

The Traffic Scotland service operates the Traffic Scotland National Control Centre, providing communication of traffic and travel information by radio, digital, and social media. It manages and operates the variable message signs for pre-planned events and reactive events, such as major incidents and severe weather.

The inspection and maintenance contract also includes the design, installation, and commissioning of new, and replacement assets.

1.10. Governance and Assurance

1.10.1. Asset Management

Information about Transport Scotland's overall governance and accountability can be found in our Corporate Plan and on our website. This information is updated annually through our Annual Report and Accounts[5]. This section of the RAMP explains governance specifically in relation to trunk road asset management.

The Roads Delivery and Operations Directorate's Senior Management Team is responsible for:

- Setting and periodically reviewing the AM policy, strategy, RAMP and AM objectives
- Planning and delivering services described in the RAMP
- Managing the performance of staff and supply chain to deliver asset management services
- Identifying and implementing improvements to asset management delivery

Further information on how we apply asset management is detailed in Section 2.

1.10.2. Performance Audit Group

Since our supply chain is responsible for delivering many of our asset management activities, additional governance is focused on ensuring the performance of those contracts.

Transport Scotland employs the Performance Audit Group (PAG), an independent private sector organisation, to monitor the performance of the Operating Companies and our ITS contracts. PAG audits and monitors the financial, technical, and performance aspects of these organisations according to a plan agreed with Transport Scotland. PAG also reviews payment requests from the Operating Companies, carries out inter-unit comparisons, and investigates if they are providing value for money when asked to do so by Transport Scotland

[5] For example, 2024-25 information can be found here: Accountability | Transport Scotland

The latest performance reports relating to Operating Company performance can be found on the Performance Audit Group website. There is further information about the way we manage supply chain performance in Section 9. The partnering ethos between Transport Scotland, our supply chain and PAG enables a mature and constructive working relationship between the parties.

1.11. Delivering Aligned Asset Management

As well as implementing effective governance for roads asset management, the Roads Delivery and Operations Directorate is more generally responsible for managing the trunk roads asset management activities and Asset Management Framework (see Section 2.2 and Figure 2-2 for further information about the Framework). This ensures that activities across the life cycles of our assets are efficiently co-ordinated to deliver value to our customers.

Delivering the activities to plan, deliver, manage, and improve our assets is the responsibility of many of the Transport Scotland Directorates and teams described in Section 1.5 as well as our Operating Companies and supply chain. These activities include hands-on maintenance and construction, and long-term planning and managing information about our assets in AMPS, allowing effective decision-making.

Figure 1-10 below summarises the role of our Directorates and supply chain partners in delivering asset management activities across the life cycle of our road assets.

Their roles cover the development of strategic approaches to Roads management, such as the National Transport Strategy (NTS2) and Second Strategic Transport Projects Review (STPR2) (see Section 2.1 for more information), as well as a wide variety of operational and maintenance planning and delivery detailed in the rest of this document.

Building new assets

- **Strategy, Performance and Analysis Directorate** develops the STPR2, setting the direction for our delivery and identifying the need for significant new assets.
- **Infrastructure Projects Directorate** designs the assets and manages their construction by our supply chain partners.
- **Environment, Climate and Sustainability Directorate** ensure that our projects minimise carbon emissions, support our sustainability targets and improve biodiversity.
- **Roads Delivery and Operations Directorate** sets the standards for new assets and takes on their management once they are built.

Maintaining assets

- **Roads Delivery and Operations Directorate** establishes the standards for maintenance delivery, manages our Operating Company contracts and operates the Asset Management Performance System (AMPS).
- **Operating Companies and ITS supply chain** deliver routine maintenance including defect repairs, and safety and condition inspections. They also collect data about the condition of assets in AMPS.
- **Performance Audit Group** monitors the performance of our Operating Companies in all their functions (maintenance, operations, improvements and renewals) to ensure the best value is delivered for Scottish taxpayers.

Improving assets

- **Bus, Concessionary and Active Travel Directorate** enables local authorities, operators and delivery partners to improve sustainable, accessible local transport options.
- **Environment, Climate and Sustainability Directorate** advises on environmental protection, sustainability, landscape and biodiversity improvements.
- **Roads Delivery and Operations Directorate** sets the standards for how asset improvement schemes should be delivered on trunk roads.
- **Operating Companies** deliver schemes to improve walking and cycling amenities, journey time reliability or make the network safer.

Our teams and suppliers collaborate to deliver our asset management objectives throughout the asset lifecycle.

Operating assets

- **Roads Delivery and Operations Directorate** operates our network to keep people and goods moving safely.
- This includes delivering winter service, planning works, managing incidents and providing real-time traffic information through Traffic Scotland.
- **Roads Delivery and Operations Directorate** is supported by our supply chain partner **Operating Companies** which manage incidents on the network.
- **ITS supply chain** ensure that traffic information is available to the public.

Replacing and renewing assets

- **Roads Delivery and Operations Directorate** establishes the standards for how and when assets need to be replaced and manages our Operating Company contracts.
- **Operating Companies** deliver asset replacement schemes, such as road structural maintenance, bridge strengthening schemes and drainage upgrades.
- Our **ITS supply chain** replace communication equipment when it reaches the end of its life.

Figure 1-10: Directorates and supply chain roles in delivering asset management activities

2. Our Approach to Asset Management

This section provides the following information:

- Our long-term, sector-leading approach to improving asset management
- Explaining how we use asset management in our planning, decision-making, and delivery
- Supporting Scottish Government outcomes and priorities
- The scope of activities necessary for effective asset management - the Asset Management Framework
- Our continuous improvement programme

We maintain and operate our trunk road network in the most effective way by consistently balancing:

- The investment needs of our assets (Section 5)
- What our customers would like (Appendix E)
- The funding which is available (Section 1.3)

We achieve this by implementing an asset management approach which helps us deliver value to our customers.

Asset management is a systemic way of enabling us to undertake the right activities, at the right time, for the right reason. For a long time, we have adopted an asset management approach to managing our network, based on international best practice, and learning from other asset owners in the transportation sector. Our approach was certified to the ISO 55000 Asset Management standard in 2019, becoming the first UK national road operator to achieve this.

Our recognised good practice in asset management is achieved through formally setting out our aims and priorities in a way that is understandable for our customers and provides direction and guidance for our teams to develop the appropriate process, capability, and support tools. We do this by defining the following key items which we will explain in the following sections:

- **Alignment with Strategic Outcomes** – how we align with the values, aims, priorities, and objectives of Scottish Government
- **Asset Management Framework** – the scope of our activities we do over the life cycle of our assets

- **Asset Management Objectives** – our key aims which enable planning, prioritisation, and delivery of our activities
- **Asset Management Improvement Programme (AMIP)** – a structured prioritised programme of improvements which measures the effectiveness of improvements, and identifies and incorporates lessons learned

2.1. Alignment With Strategic Outcomes

To deliver operations and maintenance effectively for the trunk road, our long-term approach, planning, and the activities that we undertake regularly need to actively support both Scottish Government and Transport Scotland's priorities.

The National Transport Strategy (NTS2) (Section 1.1) sets out a long-term ambitious vision for transport nationally to deliver our priorities of protecting our climate and improving the lives of people in Scotland. This provides the transportation commitments and support to delivering the national policies and objectives.

NTS2 details a range of priorities, commitments, and desired outcomes to enable a sustainable, inclusive, safe and accessible transport system, helping deliver a healthier, fairer, and more prosperous Scotland for communities, businesses, and visitors.

The Second Strategic Transport Projects Review (STPR2) is a long-term plan for transport investment in Scotland. It supports delivery of NTS2 by identifying necessary changes, recommendations, and benefits for the entire transportation infrastructure including the trunk road network.

We use these priorities, commitments, and outcomes from NTS2 and appropriate recommendations from STPR2 to form the basis of our Asset Management Policy and Strategy, setting out a long-term approach to operating and maintaining the trunk road network to consistently support these wider priorities.

Our Asset Management Policy and Strategy details our asset management framework (see Figure 2-2) which defines the scope of our activities, and the asset management objectives which define our key priorities. It provides the approach for the trunk road network to achieve the most efficient outcome possible. This Road Asset Management Plan sets out how the Asset Management Policy and Strategy will be delivered across our trunk road infrastructure assets.

Figure 2-1 below details how we successfully align our trunk road network asset management approach with the governmental policies, and objectives, and strategic direction for transportation.

National purpose and plans to be implemented by governmental departments:

1. Update to the Climate Change Plan 2018-2032
2. Infrastructure Investment Plan 2021-2026
3. Scottish Biodiversity Strategy to 2045
4. Programme for Government
5. Climate Change: Scottish National Adaptation Plan 2024-2029

Transport focused strategies and plans to deliver the National purpose and plans:

1. National Transport Strategy (NTS2)
2. STPR2 – Transport Plan to deliver NTS2
3. Scotland's Road Safety Framework to 2030
4. TS Approach to Climate Change Adaption & Resilience
5. TS Carbon Management Plan 2022-2027
6. Corporate Plan 2024-2027

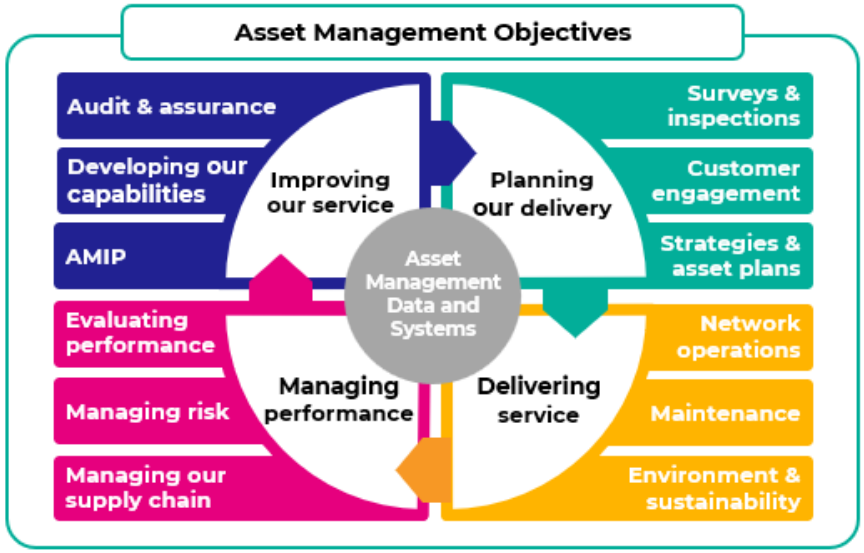
Roads asset management strategies, plans and technical guidance and direction:

1. Scottish Trunk Road Network Asset Management Policy and Strategy
2. Scottish Trunk Road Network Road Asset Management Plan
3. Customer Care Strategy
4. Operations and maintenance contracts
5. Technical guidance

Figure 2-1: Aligned Asset Management Approach for Scottish Trunk Roads

2.2. Asset Management Framework

Our Asset Management Framework outlines the scope of our activities, processes, and procedures required to assess, develop, deliver, and continually improve our asset management approach. It reflects our alignment with Scottish Government outcomes, the requirements of our customers (Appendix E) and our legal commitments (Section 1.2).



Improving our service: We invest in our people and their capabilities and are committed to continual improvement through our overall asset management approach through the AMIP identifying areas, activities, and capabilities for improvement.

Planning our delivery: Our long-term network management and asset infrastructure planning, established through our understanding of the needs, requirements and technical knowledge of our assets through surveys, inspections, and engineering knowledge. This enables us along with our national policies and priorities to determine our strategies and plans to maximise the benefits to our customers.

Managing performance: We manage our risks through a process of identifying, assessing, and prioritising to develop mitigation plans for our planning and delivery. We monitor our performance through targeted measures for our operations and maintenance delivery and wider business support to government policies.

Delivering service: To keep the trunk road network safe, available, its assets in suitable condition, and our customers informed, requires the co-ordination of all our teams and supply chain.
We use established processes, procedures, technical standards, and guidance documents to enable delivery to the highest standard possible. This includes meeting our environmental and sustainability requirements, and minimising disruption to the trunk road network.

Figure 2-2: Asset Management Framework

2.3. Asset Management Objectives

Our Asset Management Objectives reflect our responsibilities and commitments to deliver our Asset Management Policy and Strategy. They are aligned with governmental policies, NTS2 priorities and the Programme for Government commitments.[1] Our objectives enable planning and prioritisation on how we undertake our activities and are as follows:

Category	Objective
Safety	We will provide a network that is safe for all customers, integrating our Safe Systems approach, and seeking to continually reduce risk and casualties.
Resilient Network	We will work to provide a network that is accessible to all. We will enable the movement of people and goods, supporting economic growth, and minimise disruption caused by maintenance, unplanned incidents and severe weather conditions. We will provide up-to-date, reliable travel information.
Sustainable Purpose	We will manage our network sustainably, considering the needs of future generations, through supporting our net zero, climate change adaptation, and biodiversity commitments.
Active and Healthy Communities	We will encourage healthy travel choices and pursue design and maintenance practices which improve the sense of community in cities, towns and villages across the nation, making Scotland a great place to live.
Condition	We will maintain the condition of our trunk road network at an appropriate level: balancing affordability with safety, resilience, sustainability and the promotion of active and healthy communities.

Figure 2-3: Our Asset Management Objectives

The condition of our assets forms the foundation of our service delivery. If our assets are not maintained cost-effectively and kept in an appropriate condition, our objectives cannot be achieved.

[1] The programme for Government Commitments: Programme for Government 2025-26

2.4. Asset Management Improvement Programme (AMIP)

Our AMIP has enabled long-term asset management improvement through a prioritised programme of activities to support operations and maintenance. (Figure 2-4).

This has enabled significant improvements in:

- Publishing our aims, strategies, and plans
- Aligning our operations and maintenance contracts to our asset management objectives
- Development, implementation, and management of our asset management software suite
- Data quality improvement
- Measuring the performance of our activities
- Skills and capability improvement for our teams.

AMPS

AMPS provides access to data to align our activities to deliver the Asset Management Objectives.

We assess our current capability against recognised best practice and any changes in requirements from our customers, organisational structure, or to the policies, aims or objectives our framework supports to determine capability improvements that are needed. Our overall performance against this programme is measured as detailed in Section 9.

We have a regular cycle of audits of our activities within the asset management framework using the requirements of the international ISO 55001 Asset Management standard, best practice in the roads sector, and our asset and technical knowledge. The audits include assessment of the lessons learned from the delivered programme including a benefits assessment from each task delivered within the programme to determine its success or where additional work is required. Our audits identify areas

of improvement to develop a prioritised programme of improvement activities that can be shared with our customers.

The AMIP provides:

- Details of current asset management maturity, including capturing areas of good practice and innovation
- A robust, deliverable improvement programme, that aligns its strategic asset management principles and activities with NTS2

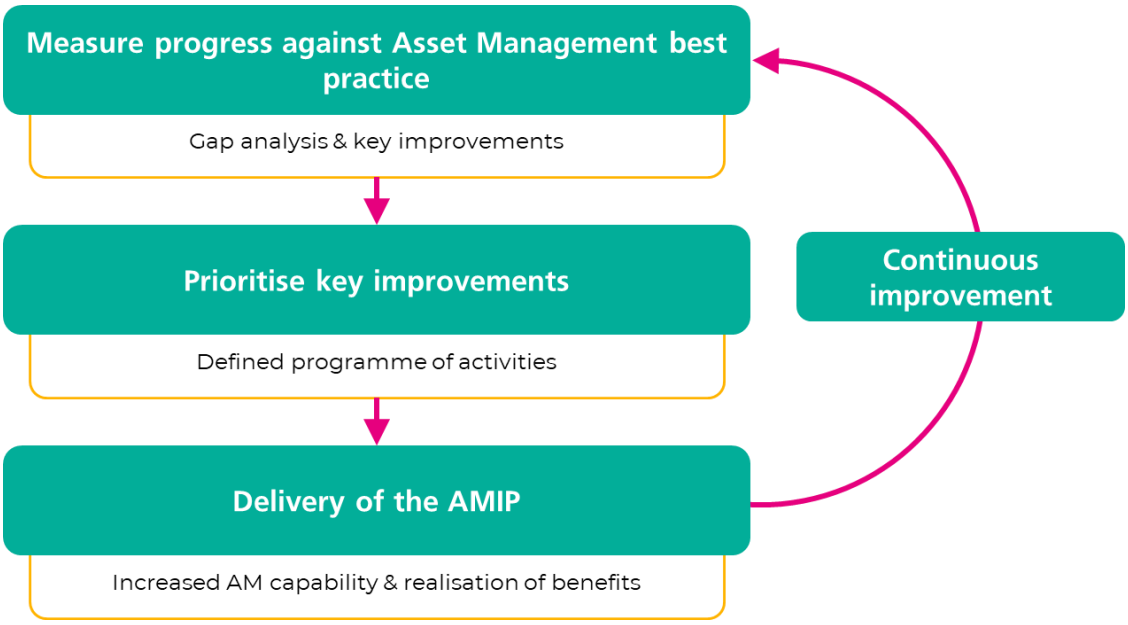


Figure 2-4: Asset Management Improvement Programme

3. Risk Management

This section provides the following information:

- How Transport Scotland continuously manages risks by identifying, analysing, and addressing potential threats to safety and service
- Mitigation of key risks through Transport Scotland's well-established maintenance and operational activities

Risk management is relevant to all parts of our business. Our Corporate Risk Management Strategy aligns with ISO: 31000 (2018) guidelines and provides a framework for consistent and joined-up risk management that is used across all Transport Scotland Directorates. It incorporates a process which applies to our asset management activities and all aspects of our delivery, shown in Figure 3.1 below:

Figure 3-1: Transport Scotland Risk Management Process

The application of this process means that we manage risk continuously by identifying, analysing, and addressing potential risks that could impact safety or the services we provide. We also monitor and review risks through performance reviews and independent audits (for example, those undertaken by the Performance Audit Group as detailed in Section 1.10.2) to assure our ongoing risk management competence. This structured approach provides consistent and effective risk management across our supply chain and all our operational and maintenance activities.

AMPS

AMPS helps manage risks by making inspection and survey data accessible and providing information about asset performance and service delivery. This data helps us evaluate risks, plan actions to mitigate them and assess the effectiveness of our actions.

3.1. Key Risks to be Addressed

The following tables outline our most significant risks and the proactive mitigations in place to safeguard our assets, the network, and our customers. Ensuring these risks are within tolerable levels underpins our asset management decision-making.

Our Key Risks

Risk	How Transport Scotland mitigates the risk
Safety If incidents occur on the network, then there is potential for harm, resulting in injury or fatalities and increased focus on safety measures.	The Scottish Government published Scotland's Road Safety Framework in 2021, which includes an ambitious goal where no one is seriously injured or killed on our roads by 2050. We implement this through our 'Safe Systems' approach which is described in **Section 1: Our Organisation** and supported by a range of actions to maintain our assets, described within this RAMP.
Condition and Ageing Infrastructure If the condition of our ageing network deteriorates more rapidly than expected, this could result in greater investment need, increased maintenance to keep the network safe, reliable and capable of meeting customer expectations.	Through our maintenance contracts, we deliver routine asset condition inspections, surveys, and tests to understand maintenance requirements. Using this asset knowledge, we work with our Operating Companies to develop and prioritise our maintenance activities to reduce the impact of ageing infrastructure. **Section 4: Maintenance** contains details on asset condition and our activities to maintain it.
Budget If funding is constrained, then planned maintenance may decrease and reliance on reactive or emergency works may increase, resulting in potential impacts on network availability, long-term asset condition and overall costs.	Given our constrained funding, we prioritise maintenance programmes based on criteria such as safety, reliability, sustainability, and value for money, as highlighted in **Section 4.6: Scheme Prioritisation**. This allows us to maximise the life of our assets as far as possible within a constrained budget. Investment analysis allows us to articulate the budgets we require to deliver a safe, reliable network. Further details on investment scenarios can be found in **Section 5.4.**

Risk	How Transport Scotland mitigates the risk
Data If accurate and timely data is not available, then decision-making may be compromised, resulting in reduced ability to deliver optimal value and outcomes for customers.	We have developed and implemented an asset management software system (AMPS) which: • Provides a single source of truth for data and information • Improves access, sharing, and auditability of high-quality data • Introduces enhanced analytical and reporting capabilities For further details see **Section 6: Data.**
Network Resilience If severe weather or other unplanned events lead to reduced road availability, then operations may be disrupted, resulting in delays, safety concerns, and lower customer satisfaction.	Working with our Operating Companies to deliver proactive planning activities and implement mitigation measures to make the network safe, reliable, and resilient to unforeseen disruption. These activities are described in **Section 7: Operating Our Network**.
Traffic Information If customers cannot access timely and accurate travel information, then they may be unable to make informed journey decisions, resulting in inconvenience, missed connections, and reduced confidence in the network.	Communicating with our customers forms a large part of how we build resilience into the network. We use a range of different methods of communicating planned events and maintenance activities that could cause disruption, keeping our customers informed and allow them to make better travel decisions. See **Section 7.3: Response and Recovery** for more information.
Climate Change Resilience If climate-related factors persist, then asset and network issues may become more frequent, resulting in impacts	We established the Vulnerable Locations Group in 2021 which plays a crucial role in mitigating the impacts from climate change. It identifies vulnerable locations on the network, driving our strategic approach to climate change adaptation.

⚠ Risk	How Transport Scotland mitigates the risk
on journey efficiency, safety, and long-term maintenance planning.	Please refer to **Section 8: Environment and Sustainability** for further details.
Biodiversity If pollution levels rise and natural habitats are degraded, then biodiversity across the network may decline, resulting in environmental challenges and increased need for mitigation measures.	We are developing a corporate framework to support Scottish Government targets and enhance biodiversity. Our planned actions include a baseline assessment of the ecosystem across our network, a biodiversity strategy, and biodiversity reporting. **Section 8.4: Improving Biodiversity** provides further details.
Carbon If Transport Scotland's activities continue to generate carbon emissions, then environmental impact may increase, resulting in greater need for carbon reduction strategies.	We have created a series of Carbon Management Plans, the most recent being the 4th Edition (CMP4) setting out our corporate carbon emission baseline with associated targets and projects to 2027. Several projects have been initiated to reduce, limit or offset our carbon emissions, including projects to encourage active travel. See **Section 8.2: Supporting Net Zero** for more information.
Customer Satisfaction If technological, economic, or global changes accelerate, then customer expectations may evolve faster than our ability to adapt, resulting in reduced effectiveness in meeting future needs.	We recognise that the needs and preferences of our customers are varied. We deliver frequent detailed surveys for customers feedback of our service. Our Customer Care Strategy explains the importance of our customers to everything we do and explains how we will deliver what customers want. For more information on how we incorporate customer views into our maintenance activities, please see **Section 1: Our Organisation**.

Table 3-1: Key Risks and Mitigation

4. Maintenance

This section provides the following information:

- Explanation of asset life cycles and examples of activities within each phase
- The different types of maintenance activities that we undertake and why
- How we understand our network through asset knowledge
- The process we use to analyse this data to understand network need
- How we prioritise those needs into specific schemes
- Our approach to developing programmes of work

Maintenance of our assets is essential to keep the network in a safe, sustainable, and serviceable condition that delivers customer satisfaction. It is fundamental to managing risks, implementing a 'safe system' approach, and ultimately delivering our Asset Management Objectives.

We manage our network using a life cycle approach, which means we consider all stages of an asset's life – from building new assets, through to maintenance and operation of existing assets, improvements to assets where specific needs are identified, and ultimately renewal or replacement of assets that are coming to the end of their service lives.

We develop life cycle plans for managing an asset, or group of similar assets, with the aim of providing the required levels of service, minimising whole life costs, and focusing on long-term needs. Individual life cycle plans for each of our asset classes are at the core of our approach to trunk road asset management planning and contain the detail that enables good practices, such as long-term cost projection, performance management, and risk management, to be applied consistently.

AMPS

AMPS supports the development and implementation of lifecycle plans, by providing data and analytical tools to support the planning, delivery, and recording of works across all stages of the lifecycle.

Examples of activities across our assets' life cycles are outlined in Figure 4-1 on the following page, with further detail in Section 1.8 and Appendices A to D.

Maintaining assets

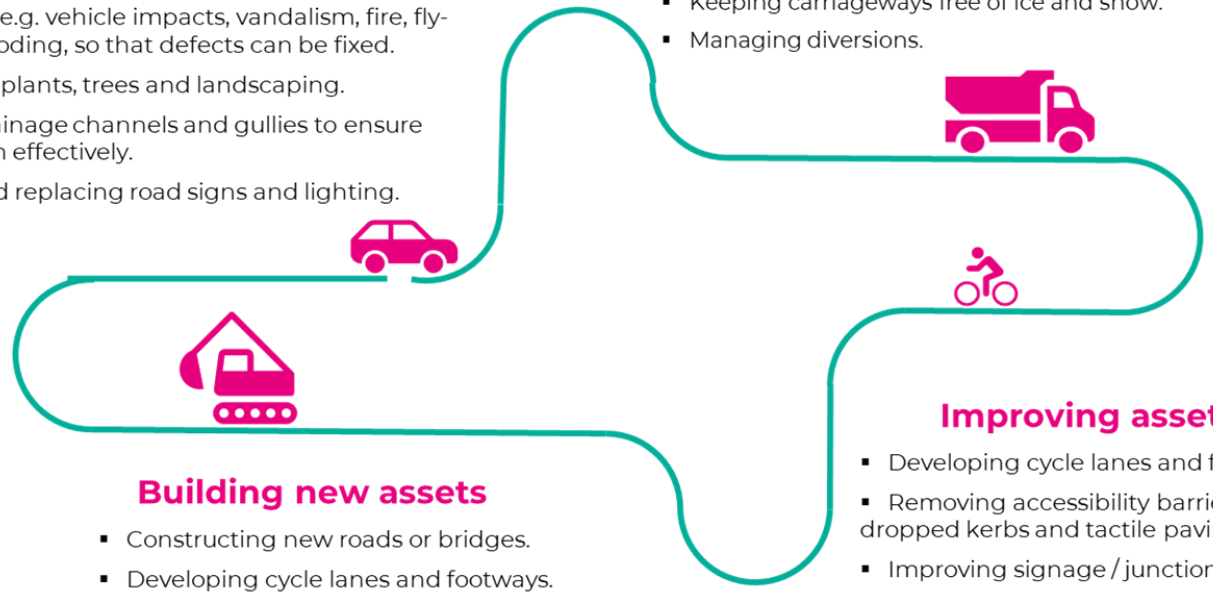
- Developing and implementing long-term plans for managing assets.
- Addressing defects such as potholes.
- Inspecting assets to establish their condition and check for wear or damage.
- Responding to incidents which affect asset performance – e.g. vehicle impacts, vandalism, fire, fly-tipping and flooding, so that defects can be fixed.
- Maintaining plants, trees and landscaping.
- Cleaning drainage channels and gullies to ensure water can drain effectively.
- Cleaning and replacing road signs and lighting.

Operating assets

- Communicating with customers about their journeys through Traffic Scotland.
- Planning to mitigate the risk of disruptions.
- Managing incidents and obstructions
- Monitoring and responding to traffic levels.
- Keeping carriageways free of ice and snow.
- Managing diversions.

Replacing and renewing assets

- Resurfacing roads to maintain their condition.
- Restructuring concrete roads to ensure their ongoing safety and reliability.
- Replacing or strengthening structures or their components that have deteriorated over time.
- Renewing road studs and markings.
- Replacing technology components, hardware and software.



Improving assets

- Developing cycle lanes and footways.
- Removing accessibility barriers, such as installing dropped kerbs and tactile paving.
- Improving signage / junctions for schemes
- Adapting assets such as drainage or embankments, to make them more resilient to climate change.
- Replacement assets such as vehicle restraint systems, to improve safety in the event of collisions.

Building new assets

- Constructing new roads or bridges.
- Developing cycle lanes and footways.
- Installing new signage or lighting points.
- Planting trees and other green assets.
- Installing drainage or technology assets.

Figure 4-1: Asset Life Cycle

4.1. Making Asset Life Cycle Decisions

In each stage of the asset life cycle shown in Figure 4-1, together with our supply chain we make data-driven decisions about the interventions needed to maintain the asset in suitable condition, operate it effectively, or to renew, improve or replace it. Our focus is on extending the life of assets in line with the Scottish Government's investment hierarchy. However, these decisions can also result in new assets being constructed or installed to deliver our objectives and meet customer requirements

Our approach for identifying and prioritising life cycle activities follows the five-step process in Figure 4-2. (our operational activities are detailed in Section 7, Operating our Network). Each step of this process is discussed in this Section, with further asset specific detail found in Appendices A to D.

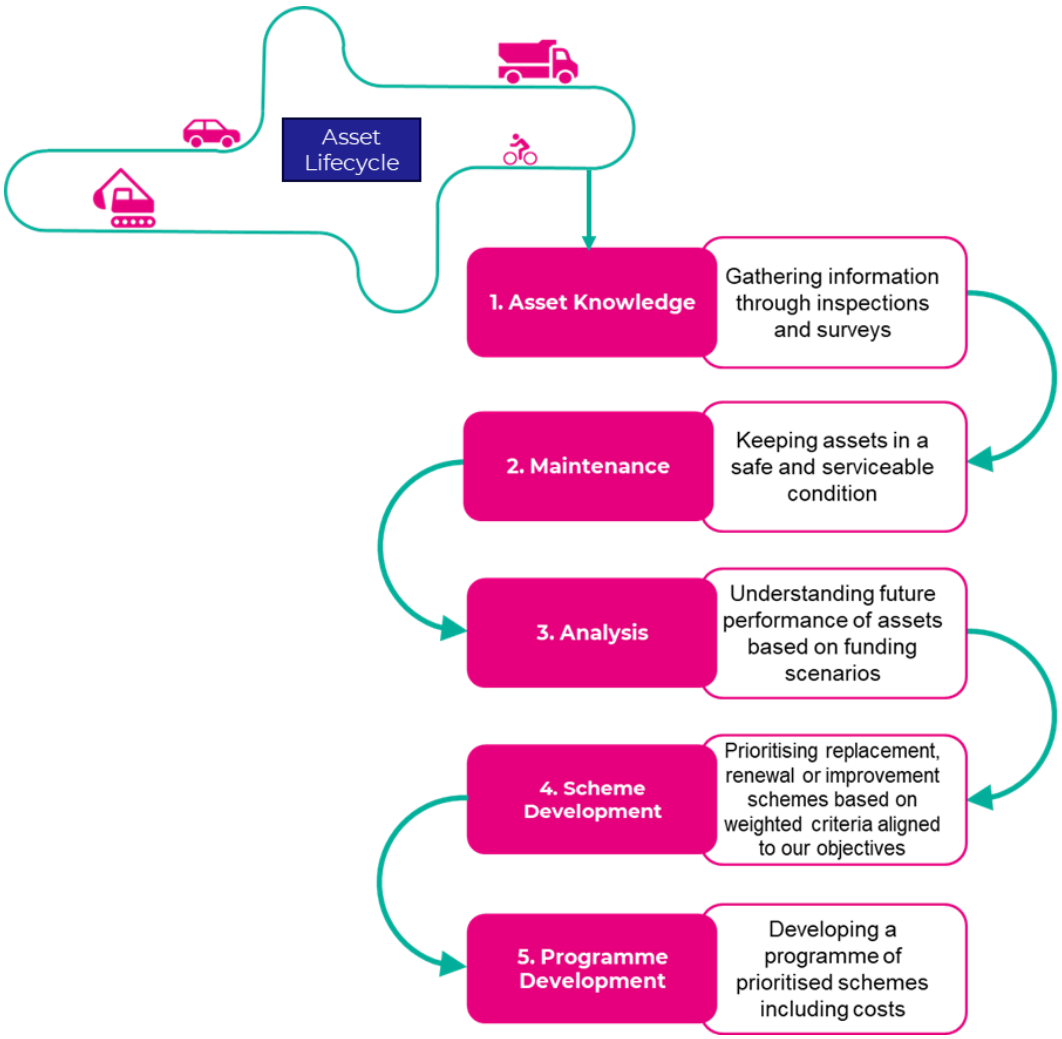


Figure 4-2: Life Cycle Activities

4.2. Asset Knowledge

Understanding our assets enables delivery of a network that is safe and fit for purpose, especially given the scale of the Trunk Road Network, the wide range of assets that comprise it, and the natural deterioration of asset condition. We have developed a strong base of asset knowledge over time, and we continue to update and enhance this on an ongoing basis. To do so, we specify requirements for regular surveys and inspections to gather appropriate asset knowledge to support maintenance planning and decision-making.

The specific inspections and surveys carried out by our Operating Companies are outlined in the Scottish Trunk Road Network Management Contracts, including Transport Scotland Structures Manual (TSSM) and Trunk Road Information Manual (TRIM) and Traffic Scotland Operations & Infrastructure Services Contract providers.

These set out Transport Scotland's requirements for asset data, inspections, maintenance, and competence to achieve both our corporate objectives as well as our asset management objectives. Clear guidance and training is provided to support delivering the required inspections and surveys in line with our requirements and industry good practice.

The following sections outline how we build a full understanding of our assets, through the inventory that makes up our network, the defects that need to be addressed through maintenance, and the inspections and surveys that inform us of safety hazards, condition of assets, and accessibility of the network.

4.2.1. Inventory Surveys

Good quality information is fundamental for asset management, and a detailed trunk road inventory is an essential prerequisite of establishing a cost effective and adequate maintenance regime. It tells us what assets we have and where they are, and it is the foundation on which asset management is built and when analysed in combination with other data, provides crucial decision support information.

Our supply chain is responsible for maintaining the accuracy and integrity of the inventory data within AMPS to meet the requirements set out in our contracts.

4.2.2. Defects

It is natural for any road infrastructure to deteriorate over time. This creates defects on the Trunk Road Network that need to be managed to provide safe and reliable journeys. A defect to an asset is defined as something that:

- Causes an unintended hazard, nuisance, or danger to the users of the trunk road network
- Represents a deterioration from the normal condition
- Prevents the asset from acting in its intended manner
- Is damaged
- Is likely to increase the rate of deterioration of another asset

A defect can cause a potential hazard to network users. The level of risk is dependent on the nature and severity of the defect and the surrounding environment. Defects are divided into two categories (see Table 4-1) to enable prioritisation of budgets and resources, to rectify defects that require prompt attention, and support the implementation of a safe system approach.

Category	Definition	Response Time
Category 1	A defect which due to its nature and location represent an immediate or imminent hazard.	Rectified through temporary or permanent repairs, removing the hazard or by taking any other measures to protect trunk road users within 24 hours of identification, or by 6am the following day for carriageway defects. If a temporary repair has been carried out, the deferred permanent repair period is 28 days, but sometimes longer for specialist assets.
Category 2	A defect which, following risk assessment, does not represent an immediate or imminent hazard or risk of short-term structural deterioration.	Scheduled and prioritised into programmes of work by our Operating Companies. Category 2 defects that should have been resolved as part of cyclic maintenance will be rectified within 28 days of identification.

Table 4-1: Defect categories and response times

4.2.3. Safety Inspections

Safety inspections are generally vehicle-based visual inspections (driven at a maximum speed of 50mph, stopping as necessary) designed to identify Category 1 defects. This includes identifying defects which impact the sightline and visibility of the trunk road network (e.g. vegetation encroaching the visibility of traffic signs). Safety inspections are also undertaken at night-time to identify Category 1 defects associated with illuminated (e.g. lighting point) and reflective assets (e.g. road studs). Structures also have three-monthly on-foot safety inspections to check parts not visible from a vehicle on the trunk road, e.g. debris building up in culverts, barrier damage to piers on the local road below. These inspections are critical to implementing the 'safe roads and roadsides' element of the safe systems approach.

4.2.4. Asset Inspections and Surveys

We use a range of inspections and surveys, with established condition scoring systems, to assess the condition of our assets and facilitate the following:

- Informing our maintenance strategies
- Identifying Category 2 defects to incorporate into future maintenance schemes
- Comparing the performance of assets across the trunk road network
- Providing information on deterioration of assets to support long-term financial planning
- Informing key performance indicators with respect to the safety and serviceability of the network

Visual condition inspections are generally carried out on foot by suitably experienced inspectors using traffic management, where required, to allow the inspectors to safely assess assets. These inspections are designed to establish programmes of routine maintenance tasks not requiring urgent attention (Category 2 defects) and capture condition data to support the identification and prioritisation of renewal schemes. The frequency of these inspections varies according to the asset.

Other methods of collecting asset knowledge include a range of machine surveys for carriageways, and specialist inspections where specific knowledge and/or equipment is required, for example electrical testing or assessment of hidden bridge components.

Further detail on asset specific inspections and surveys can be found in Appendices A to D.

4.2.5. Accessibility Inspections

We are committed to developing a programme to enhance and improve accessibility on the trunk road network.

Accessibility inspections are undertaken to identify any barriers to access, and are required to comply with the Equality Act and the Trunk Road Action Plan document 'Roads for All'. This knowledge is then used to inform inclusive design in the construction, operation and maintenance of road infrastructure.

AMPS

AMPS contains detailed data on our assets, including condition, inspection histories and defects.

4.3. Maintenance Types

There are four types of maintenance that we undertake on the trunk road network, each with a different purpose and a range of different maintenance activities. The four types are outlined below in Figure 4-3.

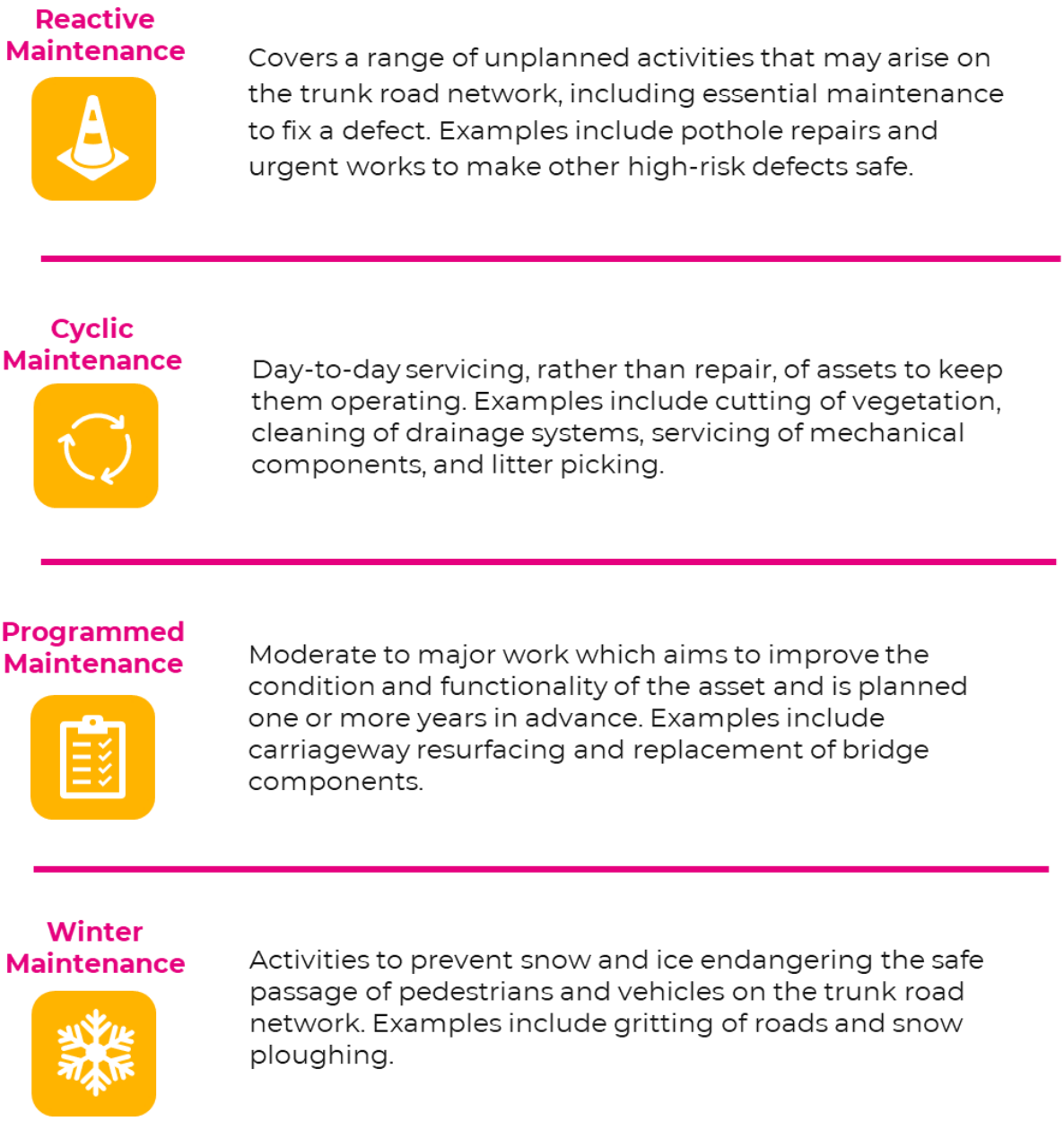


Figure 4-3: Types of Maintenance

Further asset specific detail on reactive, cyclic, and programmed maintenance can be found in Appendices A to D, while winter maintenance is covered in more detail in Section 7.

4.4. Analysis

We have a long-term responsibility to maintain the trunk road network in a way that supports our vision, aims and objectives. As with all infrastructure, the life cycle of

our assets can be maximised by regular maintenance but also requires significant renewal after years of permanent use.

We combine our asset knowledge, gained through delivering the processes outlined in Section 4.2, with well-proven analytical techniques to help us understand the needs of the network and decide how we should invest funds and deliver activities.

This enables the development of appropriate schemes and maintenance programmes which:

- Use our well-established long-term life cycle planning approach considering all key stages of an asset's life – from construction, maintaining, and operating of existing assets, improvements to assets where specific needs are identified, and renewing or replacing of assets as needed. The service life and renewal frequencies for our assets vary by asset class due to the function of each asset and the network risks it mitigates, as detailed in Section 1.8. Appendices A to D provide detailed information on lifespan renewal frequencies for each asset class.

- Aligns with our asset management objectives and our asset management framework detailed in Section 2 ensuring we plan, deliver, maintain, and improve in a consistent and efficient way.

More information on the long-term investment scenarios that we develop is outlined in Section 5.4.

AMPS

AMPS incorporates powerful tools which use asset data to support important decision-making processes and secure future investment. This includes optimisation of budget allocation between asset classes, determination of budget required to deliver specified service levels, and whole life costing of maintenance options.

4.5. Scheme Development

Investment scenarios determine the forecasted funding required at network level, as outlined in Section 4.4, but this then needs to be translated into potential schemes for delivery on the network. This process needs to consider the competing demands both within and across asset classes, and the financial constraints where available budgets may not be sufficient to cover all potential work required.

While most schemes are expected to be focused on maintenance, we also deliver adaptation and resilience schemes and active travel schemes. By considering the network as a whole, we look to combine these types of work where possible, for example addressing defects during adaptation and resilience schemes. This approach will provide greater efficiencies and reduce the impact of network disruption on road users, as repeated visits to the same location are avoided.

AMPS

'Everything is an Asset' approach means the data for adjacent asset classes is readily available when making asset maintenance and investment decisions. As a result, cross-asset activities are more easily identified, bringing opportunities to share traffic management and reduce network disruption.

4.5.1. Maintenance Schemes

Potential maintenance schemes are developed and assessed to identify where funding should be spent on the most deserving sites that offer best value with a demonstrable maintenance need. We develop schemes based upon a range of criteria that is described in asset specific guidance and standards:

- Roads structural maintenance schemes – requirements contained within Transport Scotland's Pavement Maintenance Guidance apply
- Structures maintenance schemes – the results of assessments and inspections are analysed and processed in accordance with the Transport Scotland Risk Prioritisation tool
- Ancillary assets schemes – the requirements within Transport Scotland's Ancillary Assets Scheme Development Guidance apply
- ITS – as defined in the Traffic Scotland Operations and Infrastructure Services Contract

4.5.2. Adaptation and Resilience Schemes

Transport Scotland's Roads Delivery and Operations Directorate is responsible for delivering improvements to the trunk road network, in the form of casualty reduction schemes and climate mitigation schemes.

Casualty reduction schemes support our commitment to the safe system approach and delivering our Road Safety Framework to 2030. Climate mitigation schemes may involve rock slope remedial works, vehicle restraining system replacement, and upgrades as well as layby improvements and upgrades.

The development of schemes considers traffic volumes, length of diversion routes, potential disruption to communities, sustainability factors, road condition, and natural hazards. Larger schemes are undertaken by the Infrastructure Projects Directorate.

Adaptation and resilience schemes can be designed to mitigate a wide range of vulnerabilities, often bringing overlapping improvements to road safety (Section 1), overall network resilience (Section 7), and climate change adaptation (Section 8).

Figure 4-4: A82 Tyndrum – Completed scheme to provide landslip stabilisation

4.5.3. Trunk Road Active Travel

To increase the numbers of people walking, wheeling and cycling, our communities must put people and place before the movement of motor vehicles. New and upgraded infrastructure that makes active and sustainable travel safer, easier and more convenient is essential to meet our 2030 vision that 'Scotland's communities are shaped around people, with walking or cycling the most popular choice for shorter everyday journeys'.

Active travel infrastructure can come in a range of different forms, from footways that are smooth and wide enough for everyone's needs, including wheelchair users and people pushing prams, to cycle tracks that are protected from traffic. Transport Scotland funds new and upgraded active travel infrastructure through a variety of programmes.

Transport Scotland has been working in partnership with the Trunk Road Operating Companies to develop and deliver active travel schemes on the trunk road network since 2021. Funding of over £11 million between 2021-22 and 2023-24 has delivered over 24km of new or improved paths, three signalised pedestrian crossings, and funding to construct more than 26 active travel infrastructure schemes.

Figure 4-5: Cycle path on the Trunk Road Network

4.5.4. Scheme Identification

Our programmed maintenance work plans are developed based on asset condition data including results from inspections and condition surveys. Each asset type has defined thresholds or triggers that when reached indicates that maintenance is required. The actual need for maintenance is assessed through further site inspections and appropriate testing which are used to validate initial findings and refine appropriate treatment options.

For example, our Operating Companies identify assets that with a potential maintenance need through the following sources:

- **Condition data:** data gathered and held in AMPS is used to identify potential areas of maintenance need
- **Defects:** identified through safety and detailed inspections, and are used to inform the timing of maintenance in an area
- **Route tours:** used to identify areas of potential maintenance for consideration
- **Accessibility inspections:** where potential barriers have been identified
- **Data from other surveys and inspections:** the information gathered through other surveys and inspections can inform of locations where maintenance should be considered
- **Other sources:** includes ministerial requests, customer feedback and complaints.

4.5.5. Whole Life Costing

To assist in determining the most appropriate treatment option for an identified maintenance scheme we have developed a whole life costing model. This model is used to assess the economic efficiency of various potential treatment options for an individual scheme to assist us in determining the most advantageous treatment option that delivers the best value for money over the life cycle of the asset.

The use of the whole life cost model provides us with the mechanism to assess how the most appropriate maintenance is delivered at the right time whilst reducing the whole life costs of maintenance.

4.6. Scheme Prioritisation

Transport Scotland operates within the allocated budgets we receive from the Scottish Government as per Section 1.3, and programmed maintenance budgets are unable to fund all activities that we would like to undertake. This means different maintenance needs are competing for the same money. The available budget is spent on the most deserving sites with demonstrable maintenance needs in a manner that is consistent with our maintenance policies and objectives. We have developed and implemented a formal value management process for assessing the benefits of undertaking maintenance and the associated risks of not undertaking maintenance.

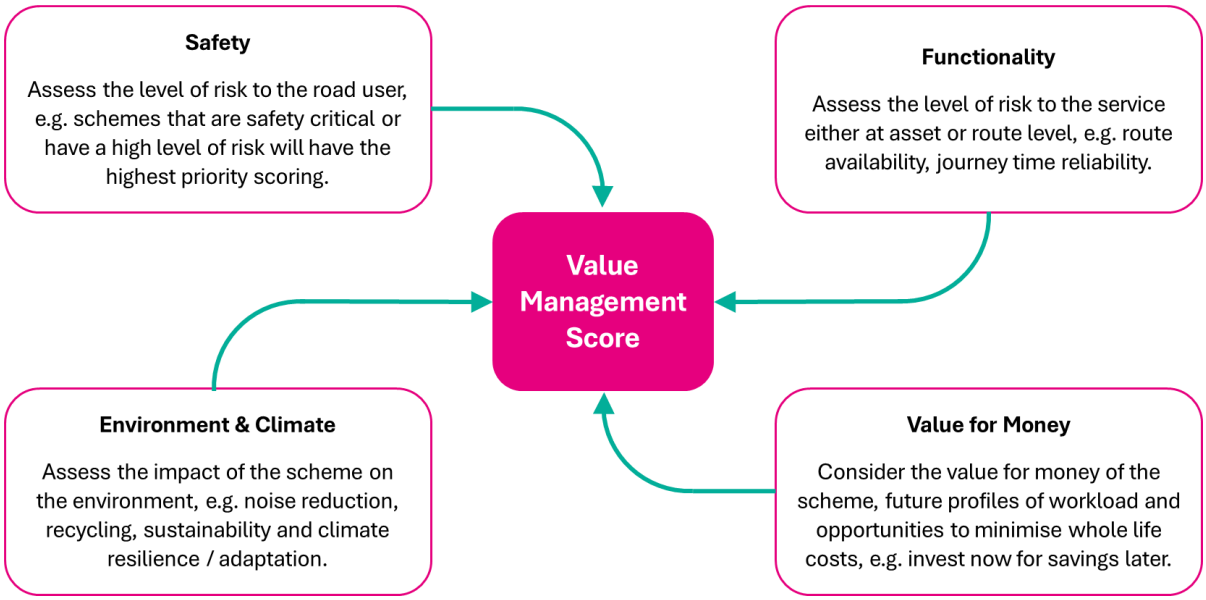


Figure 4-6: Value Management Criteria

We work with our Operating Companies to apply this value management process and help us consider the relative importance of different schemes on a consistent basis. This allows us to make adjustments to our forward programme, so we can deliver schemes earlier where they will provide greater benefits.

The benefit of a rolling value management process is that it enables review and refinements to the network and individual scheme condition throughout the year. This means that available budgets can be used to target the most deserving schemes at the right time, providing the opportunity to reduce risks across our network, reduce potential costs, and reduce network disruption from interim maintenance that may otherwise be required, such as urgent patch repairs.

4.6.1. Programme Development

Programmes of work are required to deliver the maintenance activities that have been described in this Section, including cyclic and programmed maintenance activities. Our Operating Companies use identified future maintenance needs when developing the programmes, building on the schemes identified, assessed and prioritised in Section 4.4.

The analysis of assessments and inspections is presented in sufficient detail to review the proposed programme of maintenance schemes. Further investigations required to clearly define schemes and provide detailed estimates are included as part of the Operating Company's proposed programme.

All maintenance programmes are recorded within AMPS, where the Operating Companies create, and record detailed one-year programmes and financial profiles to allow activity monitoring and appropriate financial control.

5. Investing in Our Network

This section provides the following information:

- How our network has been funded over recent years
- The impact of funding on historical and current condition of our assets
- The scale of our current maintenance backlog
- Future investment levels required for different scenarios

Managing our network to deliver the expected performance requires suitable levels of investment across all our asset classes. Transport Scotland's funding arrangements are outlined in Section 1.3, which provide investment into all our life cycle activities.

As with all public spending, the funds available need to be prioritised for the areas which will provide greatest value and mitigate greatest risks, and we do this through our life cycle approach to asset management as outlined in Section 4.

Our ongoing approach to developing our asset knowledge through surveys and inspections gives us a clear understanding of historical and current condition of our assets.

We analyse this data to provide insight into the current maintenance backlog for the network, along with the required levels of future investment to deliver certain scenarios such as addressing the backlog, maintaining current condition, minimum budgets required, and the impact of committed budgets.

5.1. Historical Funding

Critical safety, maintenance and improvement funding since 2021/22 is outlined in Figure 5-1 below, with the investment for asset renewals shown as a sub-set of the overall sum. Renewals investment contributes significantly to asset condition improvements. An illustration of the corresponding trends in condition across asset classes is shown in Figure 5-2.

For the data in Section 5:

- Percentages shown in the charts may not total 100% due to rounding and differences in the way asset condition categories are defined in source data;

- Formalised data collection and aggregation on ITS assets have been developing in line with our information improvement plans. Historical ITS data (pre-2024) is not available.

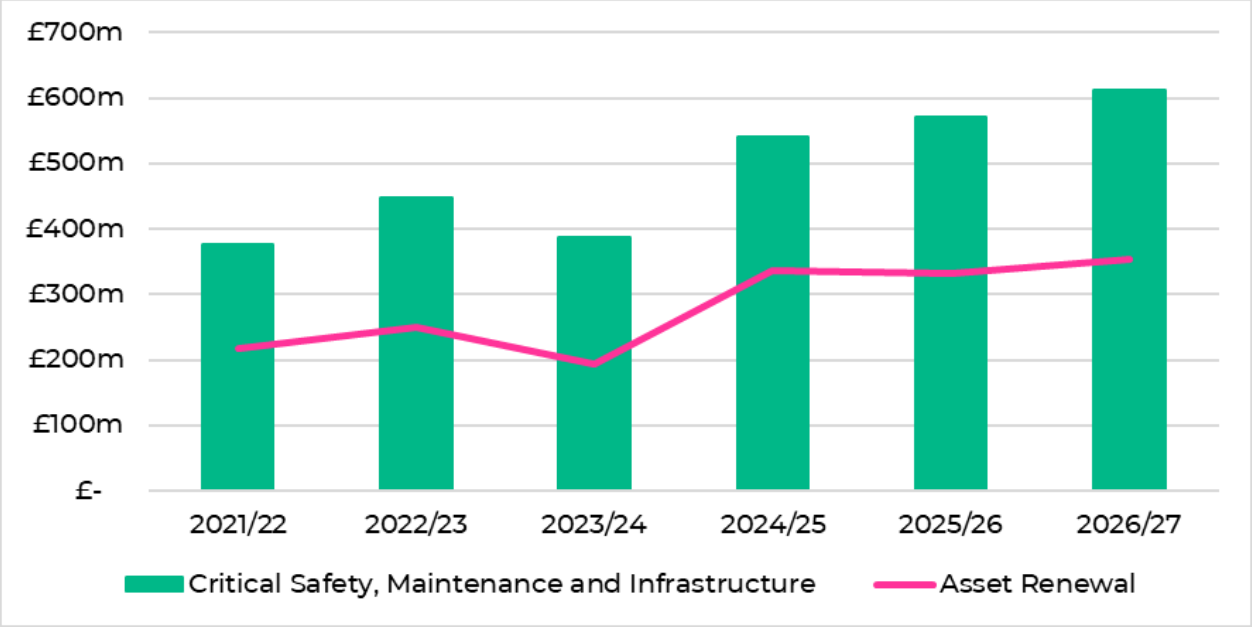


Figure 5-1: Trends in Trunk Road Network Funding since 2021

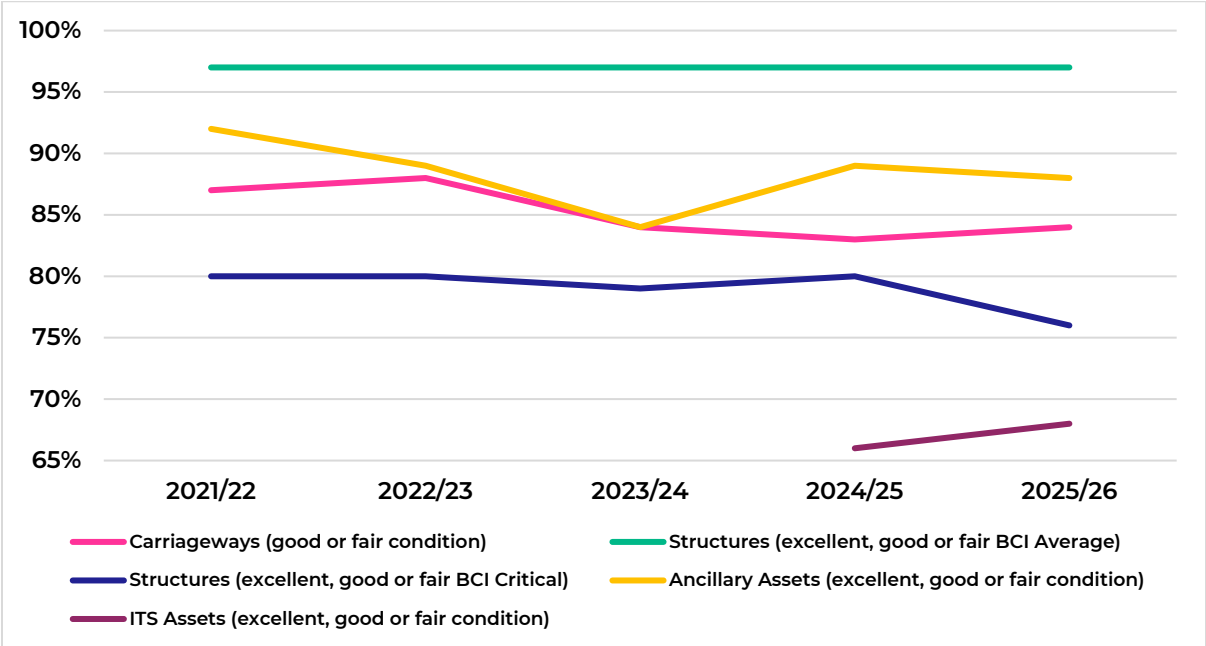


Figure 5-2: Trends in Asset Condition since 2021

5.2. Current State of Our Assets

The data from our range of inspections and surveys allows us to understand the condition of our assets, which is vital to managing the network and delivering a safe and sustainable service to our customers.

5.2.1. Carriageway Condition

Structural condition provides an indication of road strength (ability to carry traffic loads) and is measured using the industry standard method of Road Condition Index (RCI). RCI takes account of both the surface and structural (full depth) condition of each individual road type and is categorised using a three-point condition banding; 'good', 'fair' or 'poor'.

Further detail on RCI and its categories can be found in Appendix A.

The condition of our carriageway assets is presented in Figure 5-3, with 84% of trunk road carriageways, approximately 7,300 lane-km, currently in 'good' or 'fair' structural condition which means they do not currently require structural maintenance.

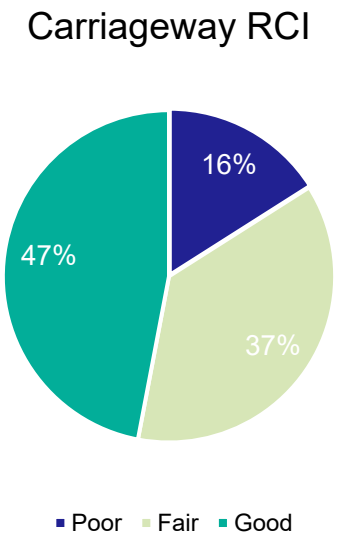


Figure 5-3: Structural Condition of Carriageways

An annual survey of the network also measures the skid resistance of road surfaces, with 87% of trunk road carriageways reporting skid resistance above the required investigatory level. Where the recorded value is lower than the investigatory level, this does not in itself mean that the road surface is deficient, sub-standard or unsafe. It is merely a trigger for a more detailed investigation.

5.2.2. Structures Condition

Transport Scotland has adopted the Bridge Condition Index (BCI) condition standard, which is used by the majority of structures owners in the UK, and calculated from General and Principal Inspection data. Two Bridge Condition Index (BCI) indicators are calculated for each structure. These are defined as:

- BCI Average is the average condition score of all elements of the structure
- BCI Critical is the condition score of the load bearing element which is in worst condition

The BCI values are categorised using a five-point condition banding, ‘excellent’, ‘good’, ‘fair’, ‘poor’ or ‘very poor’. Further detail on BCI indicators and associated categories can be found in Appendix B.

Current indicators for structures assets, as shown in Figure 5-4 indicate that the majority of trunk road structures (97%) have a BCI Average rating of ‘excellent’, ‘good’ or ‘fair’. Additionally, 76% of trunk road structures currently have a BCI Critical rating of ‘excellent’, ‘good’ or ‘fair’.

Figure 5-4: Structures BCI Indicators

5.2.3. Ancillary Assets Condition

The condition of our ancillary assets is assessed during regular inspections and surveys and recorded as being in one of five condition bands: ‘excellent’, ‘good’, ‘fair’, ‘poor’, or ‘very poor’. Further detail on ancillary asset condition and its categories can be found in Appendix C.

The condition of trunk road ancillary assets, aggregated under eight asset groups is presented in Figure 5-5. Currently 98% of lighting assets, 95% of technology assets, 90% of footways, and 90% of road markings are in ‘excellent’, ‘good’ or ‘fair’ condition.

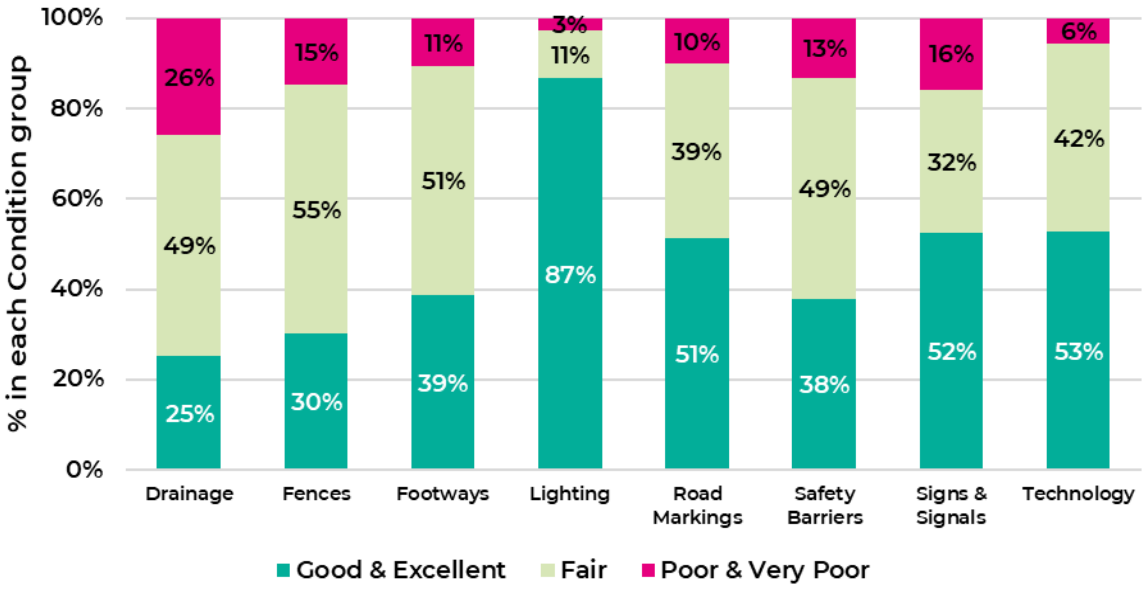


Figure 5-5: Current Condition of Ancillary Assets[6]

[6] Percentages may not total 100% due to rounding.

5.2.4. Intelligent Transport Systems Condition

The condition of our ITS assets is assessed during regular inspections and surveys and recorded as being in one of four condition bands: ‘excellent’, ’good’, ‘fair’ or ’poor’. Assets in ‘excellent’ condition are nearly new, whilst assets in ‘poor’ condition may be obsolete. Further detail on ITS asset condition and its categories can be found in Appendix D.

The condition of our ITS assets, aggregated under eight asset groups is presented in Figure 5-6. Currently 81% of comms assets, 77% of power supplies, 73% of data collection assets, and 66% of cables are in ‘excellent’, ‘good’ or ‘fair’ condition.

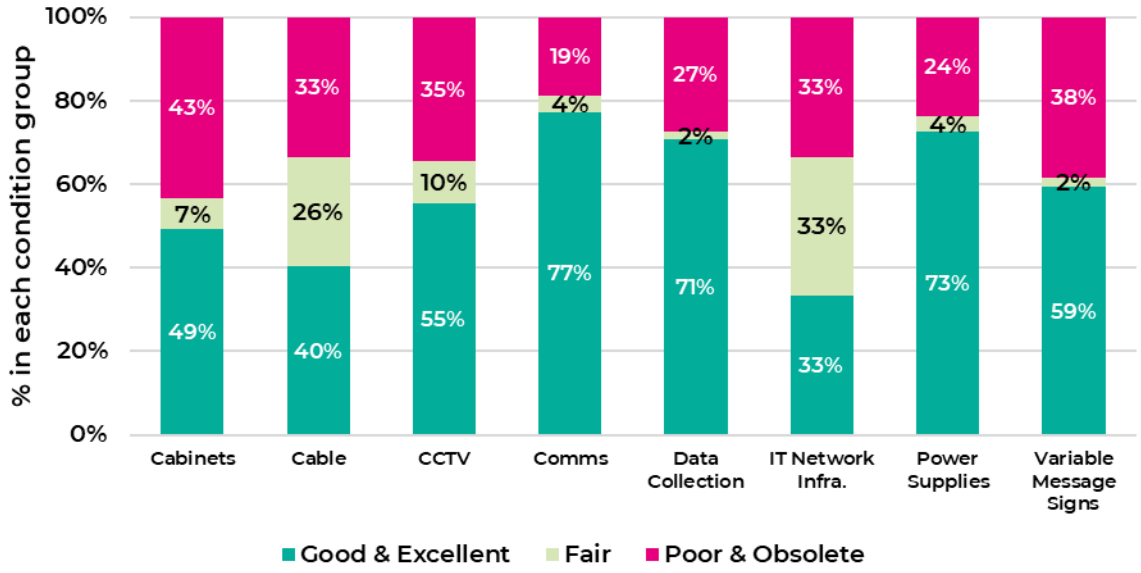


Figure 5-6: Current Condition of ITS Assets[7]

5.3. Maintenance Backlog

The overall maintenance backlog for carriageways, structures, ancillary assets and ITS combined was £3.1 billion in 2025, an increase from £1.2 billion in 2015 as detailed in Figure 5-7. This is due to a combination of deteriorating condition and a sharp rise in construction price inflation.

[7] Percentages may not total 100% due to rounding.

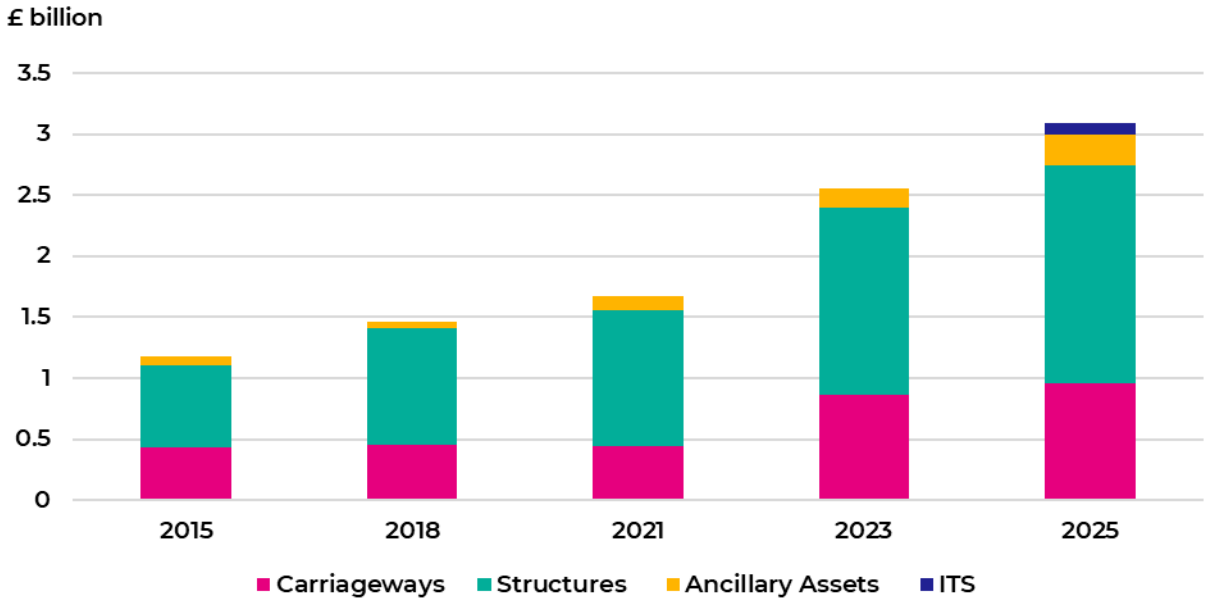


Figure 5-7: Backlog Trend 2015 – 2025

5.4. Investment Scenarios

We assess the future performance of assets based on different scenarios utilising a long-term forecast. This can provide visibility of any significant increases or decreases in funding needs and annual work volumes. We regularly identify, develop, and analyse different investment scenarios for each of our major asset classes, including:

- The budget required to address the maintenance backlog over a 10-year period
- The budget required to maintain current condition
- The baseline budget required to meet core commitments
- The impact of committed budgets on future network condition

Based on the budgets and asset management objectives identified from our policy and strategy, Figure 5-8 summarises each of these scenarios for each asset class.

As noted in Section 1.3: ‘How Transport Scotland is Funded’, the allocated budget for critical safety, maintenance and infrastructure, and operations and maintenance is £611 million in 2026/27. Of this budget, £350 million is allocated to the asset renewal budget.

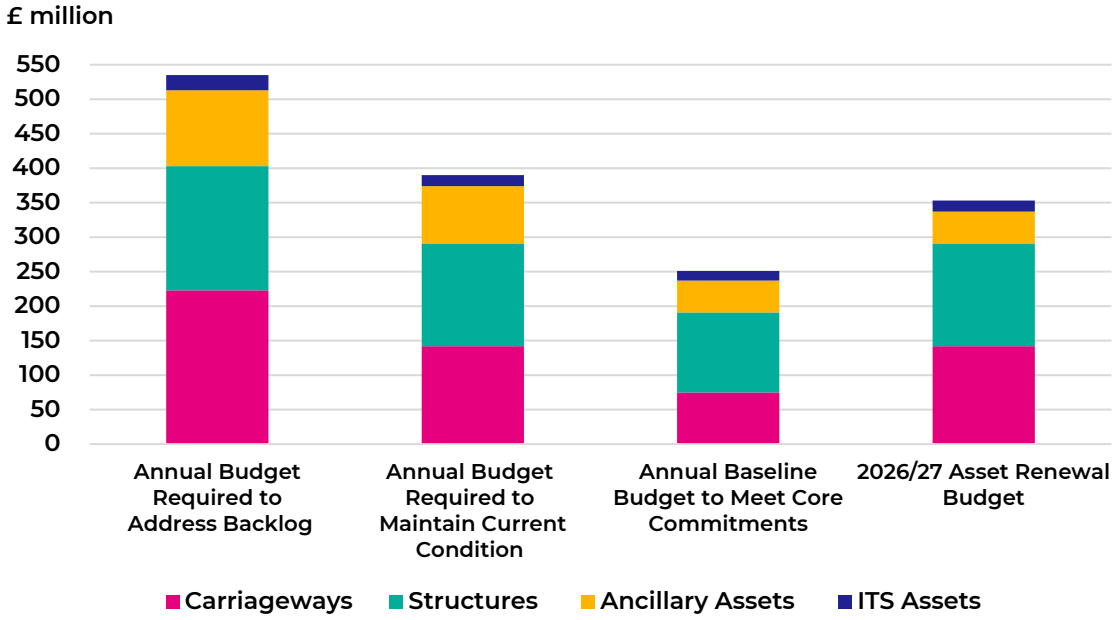


Figure 5-8: Investment Scenarios

6. Data

This section provides the following information:

- How we have been more effective through improving our data and developing our Asset Management Performance System (AMPS)
- The importance of our data and its critical role in successfully delivering our activities
- How we define our data needs to support our decision making
- How we manage data, keeping it accurate and secure

Data enables the successful delivery of our Asset Management Framework (Section 2.2). It informs our planning, through asset knowledge gained through surveys and inspections, and feedback from our customers.

During the delivery of our services, we generate data from the operation and maintenance of the trunk road network. This informs the management of our performance, and risks, and the improvement of our service through audit and assurance.

It needs to be managed effectively and efficiently, stored securely and safely, be of the right quality and coverage, and be up-to-date and complete. We have established processes for the collection, storage, analysis, and assurance of our data, which are reinforced through our contractual agreements. We do this by defining the following key items which we will explain in the following sections:

- **Data types and usage**: The data types that provide the information and knowledge needed to successfully operate and maintain the trunk road network
- **Managing our Data:** Defines our secure, high-quality, and cost-effective data management, including collection, storage, analysis, and responsibilities
- **Systems**: The Asset Management Performance System (AMPS) is the primary tool for managing trunk road network data, supporting decision-making and reporting and has been recognised through numerous awards on its technology transformation. AMPS has been developed with a focus on usability for staff from Transport Scotland and our Operating Companies and supports our commitment to a data-driven asset management approach, with increased levels of consistency and collaboration

6.1. Data Types and Usage

We use a range of data types to provide the information and knowledge to successfully operate and maintain the trunk road network as shown in Figure 6-1 below.

Depending on the usage and access requirements for the data, it is either stored within AMPS (this is the case for physical asset information) or our corporate systems. Our corporate systems include customer data, information requests and feedback on our activities from customers.

Figure 6-1: Our Data Types and Usage

6.2. Managing Our Data

To provide the information we need to make informed decisions for our network and customers, and deliver our asset management objectives, our approach to managing data and information uses our formalised procedures, processes, and contractual arrangements and are based on the following requirements:

- **Management:** suitable collection, storage, use, assessment, improvement, retention, and deletion of asset information including regular reviews
- **Quality:** maintaining data accuracy and completeness required to support asset management activities
- **Costs and Benefits:** balancing data collection, analysis, and storage costs with the benefits to our decision making through regular reviews of our requirements
- **Requirements:** definition of information requirements and alignment of these with our Operating Companies agreements and technical standards
- **Risk:** assessment of risks associated with asset information, including potential gaps, or lack of updates
- **Security and Compliance:** protecting data through information assurance practices maintaining confidentiality, integrity, and availability of data and systems
    - We comply with the Scottish Government Records Management Plan which sets out how we maintain our information and records in an effective manner while complying with key legislative requirements.
    - We store and maintain the data in accordance with Scottish Government policies and relevant legislation such as the Data Protection Act 2018. Our Operating Companies and their suppliers are required to obtain, implement, and maintain cyber security certification for their organisations. Only authorised users can access appropriate data depending on the organisation they work for and the role they undertake.
    - In addition to keeping data secure, we disclose information in compliance with legislation such as the Freedom of Information (Scotland) Act 2002
- **Re-use:** identification of common information needs across our teams and functions, with an emphasis on re-use and re-purpose of our data, and the verification of this data

- **Governance and Responsibilities:** our two key roles ensure that common data policies, procedures and requirements are applied and aligned with Scottish Government policies and guidance are:
    - **Asset Information Custodian**: Accountable for communicating strategic policies, defining and assuring asset information, and monitoring quality of network-level asset data
    - **Asset Information Specialist**: Responsible for defining what each asset class needs are, identifying asset information gaps, and assuring accurate asset-level information

The Operating Companies comply with the data requirements as detailed in the Trunk Road Information Manual (TRIM) and any asset specific standards through the roles of:

- **Asset Manager**: Accountable for governance and performance of assets within their operating area, and compliance with policies and procedures
- **Asset Data Specialist**: Responsible for updating, and achieving data quality, completeness, and compliant with data requirements as detailed in the TRIM and any asset specific standard

6.3. Systems

We developed the Asset Management Performance System (AMPS) as our primary system to record and manage data about the trunk road network for asset management decision-making.

Figure 6-2: AMPS Module Menu Screenshot

By combining data into an integrated dataset from different inputs and formats, it provides a platform for analysis, decisions, and reporting across our various functions. Figure 6-3 below shows one of the decision support tools, Insite, which provides geographic, video, and condition data along a road section to assist with scheme development.

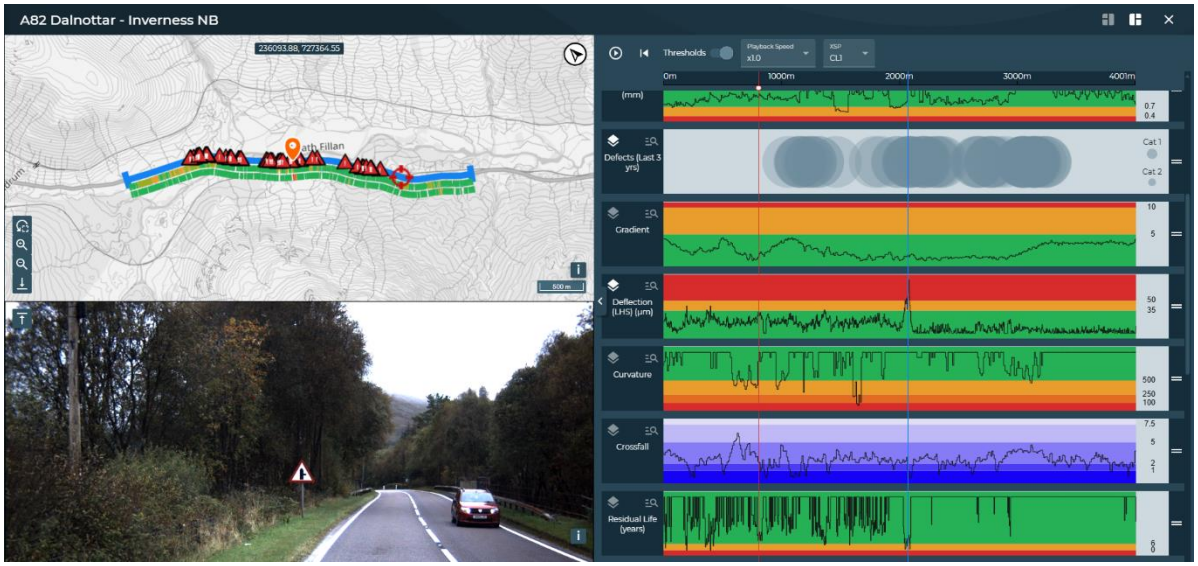


Figure 6-3: Insite Decision Support Tool

Accessible data allows us to plan the investment we require, establish when and where to undertake maintenance across our assets, and schedule works on the network. We can consequently optimise costs, enhance performance, and minimise disruption to users of our network. Figure 6-4 details the inputs, functions and outputs of the AMPS system.

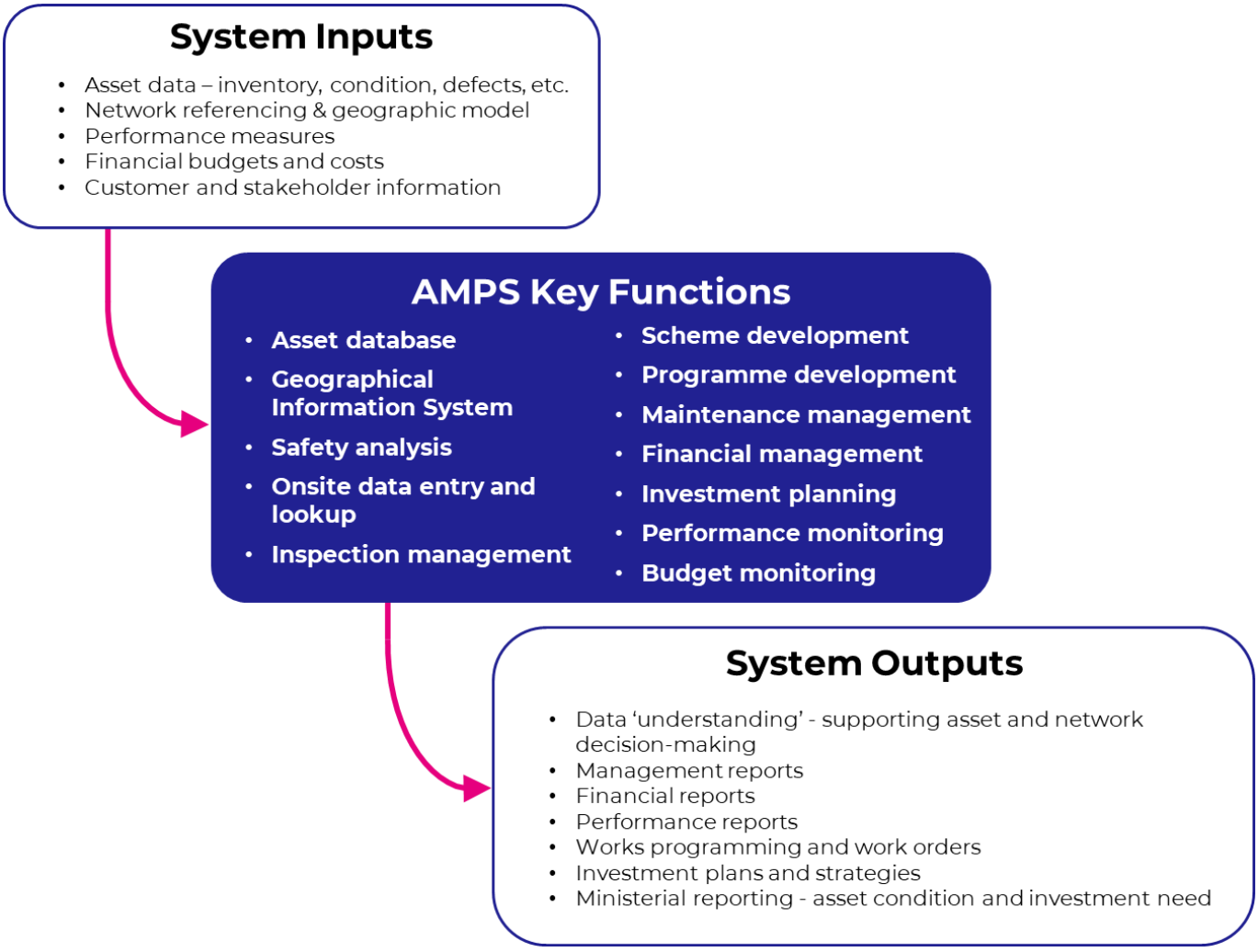


Figure 6-4: AMPS System Diagram

AMPS utilises a web-based front-end. This provides a consistent, accessible interface for all users, with an additional mobile app for on-site workload management. This supports inspections with interactive workflows for recording asset information and capturing defects.

The scope of AMPS covers assets on our network, including carriageways, structures, technology, and ancillary assets such as drainage, geotechnical, lighting and road markings, plus associated data such as, environment, road safety, financial claims, incidents and development management. Users accessing AMPS from office or on-site locations have full access to the information they require to plan and deliver work.

AMPS is scalable to allow a large number of concurrent users to undertake various asset management related activities. Technical support is available to help users in the correct use of the system.

The AMPS System Coordinator for each Operating Company manages the training plan, identifying which users require training, and for which processes and software modules. Structured online training is provided for all required users on the processes they need to undertake. Comprehensive training material is available to support the ongoing use and update of the system, with the contract documentation and the asset specific standards detailing the requirements for the asset register and datasets.

AMPS user group meetings are held to discuss potential developments and inform of future changes to AMPS.

7. Operating our Network

This section provides the following information:

- Outlines our comprehensive approach to ensuring the safety, reliability, and resilience of the Trunk Road Network
- Details proactive planning and preparation for both planned and unplanned events, as well as response and recovery strategies
- Emphasises the importance of effective communication with the public through Traffic Scotland's various platforms

It is important that our network remains adapted and prepared for both current and future impacts of disruptive events. We manage our network so that it is safe for all our customers, reliable for everyday journeys, and resilient to unforeseen disruption through our planning, mitigation, and informing activities.

Planning and Preparation (See Section 7.1)

Describes the proactive activities undertaken to minimise disruption from known events

Response and Recovery (See Section 7.2)

Outlines what we do to provide resilience in the Trunk Road Network

Warning & Informing (See Section 7.3)

How we communicate with customers to aid journey planning and inform of network delay

7.1. Planning and Preparation

We develop and implement robust well-developed plans to minimise disruption from planned major events such as the Commonwealth Games, or unplanned events such as severe weather. Our proactive planning activities that we undertake within our organisation and supply chain to keep traffic safe and moving are detailed below.

AMPS

AMPS helps with prioritising the operation and resilience of the trunk road network for a reliable and resilient network, including safety, incident, disruption, and climate considerations.

7.1.1. Disruption Risk Management

We carefully consider how we manage disruption across our network as well as the speed of recovery. Our Operating Companies prepare and maintain Disruption Risk Management Plans; this is a hierarchical document which sits above a suite of plans such as the Incident Response Plan and Winter Services Plan (See Table 7-1 below). These cover the range of processes, tools, records, and operational plans that collectively describe the activities undertaken to enable timely and effective action to mitigate the effects of disruptions, as they affect the trunk road network.

Disruption Risk Management Plan		
		
Disruption Risk Planning	**Incident Response Plan**	**Winter Services**
• Manual for the Management of the Risk of Unplanned Network Disruption • Incident Records • Disruption Risk Sites Register • Risk Actions Register • Risk Planning Records	• Trunk Road Incident Support Service Plan (7.2.3) • Standard Incident Diversion Routes • Severe Weather Services • Incident Support Plan • Wind Management Plan • Flooding Management • Landslide Management Plan	• Winter Services Plan (7.1.3)

Table 7-1: Disruption Risk Management Document Hierarchy

Disruption Risk Planning combines the details and requirements of all the other management plans and records which contribute to the management of disruption risk under the Network Management Contracts. This includes:

- Identification of risk sites, such as those at risk from landslides or flooding, and maintenance of the Disruption Risk Sites Register
- Assessment of risk levels using the Disruption Risk Assessment Tool
- Developing and bidding for mitigation funding
- Updating risk management plans to record risk mitigation measures developed and actions taken

The Manual for the Management of the Risk of Unplanned Network Disruption provides direction to Operating Companies on managing and mitigating the effects of disruptive events, such as those caused by severe weather events.

The manual defines how Operating Companies develop and implement disruption risk processes, which are informed by the formal recording of all previous events as they occur, in AMPS. This includes severe weather-related events such as high winds, flooding, snow, and ice. The ongoing recording of events and subsequent revisions to the plans provides a platform for early detection of changing conditions that may have an impact on the network.

The manual includes a Disruption Risk Assessment Tool which provides a robust and objective framework within which to analyse patterns of events, and their locations, to support decision-making and identify particularly vulnerable locations and assets, as shown by the incidents heatmap in Figure 7-1.

AMPS

Our Operating companies utilise the Disruption Risk Assessment Tool through AMPS using the assured data.

Figure 7-1: Decision Risk Assessment Tool Incidents Heatmap

This knowledge integrates with the rest of our risk management process and is used to drive investment, to reduce or prevent known disruptive events and prepare for

those which might emerge or increase in frequency and severity in the future. (see Section 3 for more details on our risk management process).

7.1.2. Incident Response Planning

Each Operating Company prepares an Incident Response Plan, which details how they will promptly and efficiently respond to incidents. The plan includes:

- Mobilisation procedures
- Management arrangements and resources available
- Out of Hours arrangements
- Emergency communications
- Mutual aid arrangements
- Details of specific procedures, such as Standard Incident Diversion Routes or Severe Weather Services
- Mitigation of the impacts of severe weather incidents, particularly at known susceptible sites, is the remit of the Vulnerable Locations Operational Group (VLOG) (8.1.1)

7.1.3. Winter Service

From October to May each year, a 24-hour dedicated winter maintenance service operates on all Scotland's trunk roads. During this period, Transport Scotland takes steps to prevent snow and ice endangering the safe passage of pedestrians and vehicles over public roads. Our proactive approach to winter service supports the ‘Safe Systems’ approach to road safety. To safeguard our customers during the winter months we adopt the following key principles:

- We plan ahead and purchase salt stocks in advance of winter season
- Gritting routes are selected to optimise network coverage, and the size of our winter fleet is determined by the number of vehicles need to cover all these routes
- We have strategically located salt storage facilities across the Trunk Road Network to support our winter fleet covering all required routes

- We provide real-time information about the location of our Winter Fleet through our "Live Gritter Tracker", see Figure 7-2 below
- Winter Control rooms operate 24/7 to constantly review conditions and deploy resources when necessary
- We use different materials based on our knowledge of the network and impacts from different weather conditions
- We invest in and utilise new equipment and technologies such as snow blowers and on-board fleet technology

These activities form the foundations of our Winter Service and are detailed within our Network Management Contracts. Our Operating Companies are required to undertake these activities to ensure the trunk road network is safe, efficient and well managed. Each Operating Company produces their own Winter Service Plan, setting out how they intend to deliver winter service operations for the season ahead and then undertakes an exercise to test and challenge the robustness of that plan.

Our Winter Fleet (see Figure 7-3 below) is designed to both prevent snow or ice forming and to clear it in more extreme conditions.

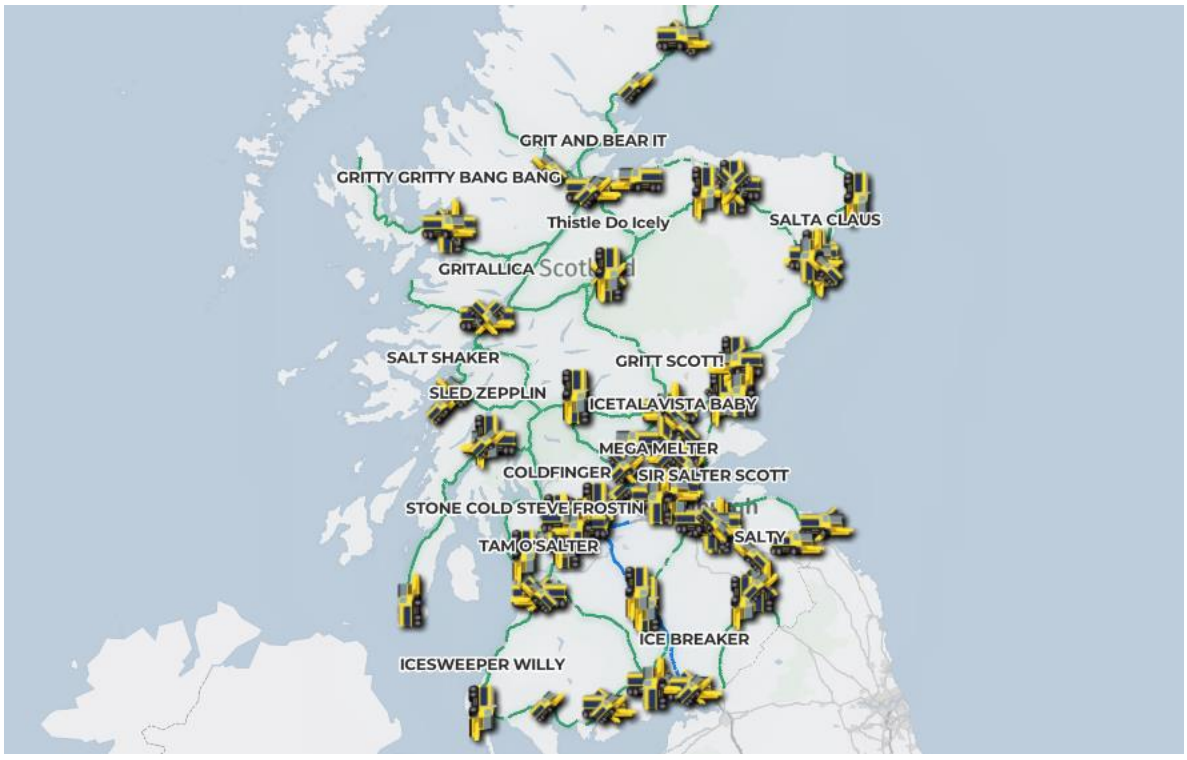


Figure 7-2: Traffic Scotland 'Live' Gritter Tracker

Figure 7-3: Part of the Winter Fleet on display, preparing to treat the Network

We prevent snow or ice forming on the Network through:

- Pre-Wetting: Our gritters spray the Network with brine (a mixture of salt and water) which acts as an anti-icing agent and stops snow and ice from binding to the road surface
- Salt Spreading: Our gritters spread salt across the network which help to melt snow and ice during severe winter weather

We clear snow or ice that has settled on the Network through:

- Snow Ploughs: We attach our gritters with ploughs when snow is forecast in quantities which exceed the effectiveness of salt

From 1st November each year, most trunk roads are covered by winter patrols. Winter patrols are in addition to precautionary treatments undertaken on all trunk roads. They are fitted with both dash-cams and mobile road temperature sensors that provide real-time data on road surface temperatures, which is essential for making timely decisions about when and where to apply preventative treatments, prior to or during snow events.

7.2. Response and Recovery

In addition to our robust planning processes, we also work with our OCs to coordinate and implement a range of physical and organisational measures to enable us to respond to, and recover from, disruptive events, both planned and unplanned. We monitor traffic conditions using a range of tools including detectors in the road, CCTV, and data from various other organisations along with reports from road users.

7.2.1. Incident Management

Our Operating Companies prepare for, and respond to, all incidents in a prompt and efficient manner, making best use of their incident response resources, including Incident Support Unit (ISU) and Trunk Road Incident Support Service (TRISS) vehicles. This is followed by the undertaking of any repair and recovery operations necessary to restore normal operation.

7.2.2. Multi-Agency Response

We work in partnership with other transport operators, for example Scotrail, and agencies such as the Met Office and Police Scotland as part of our Multi-Agency Response Team (MART) arrangements. These can be activated for any event which is deemed to:

- Have a high-risk of severe disruption to road or rail journeys with potential safety risks for the travelling public
- Have a significant potential impact for large parts of the strategic transport network
- Require a multi-agency response

MART enables a more effective response to large-scale trunk road issues and forms part of our wider ‘all modes response’ which also feeds into the Scottish Government’s resilience response arrangements. Our Multi-Agency Response also contributes to post-crash care, one of the five key components in the safe system approach.

Further information on how key agencies across Scotland work together to build resilience can be found on the Ready Scotland website: Multi-agency collaboration | Ready Scotland

7.2.3. Trunk Road Incident Support Service

The Trunk Road Incident Support Service (TRISS) patrols designate strategic routes to detect and respond to incidents. This supports the swiftest possible resolution of incidents by appropriately training staff and equipping them with suitable vehicles to:

- Establish temporary traffic management
- Remove debris
- Assist broken down vehicles
- Provide liaison with emergency services
- Assess the scene, provide communications and arrange the attendance of further specialist support where necessary

Further information on responding to incidents is available in our Network Management Contract.

The Trunk Road Network | Operating Companies | Transport Scotland

7.3. Warning and Informing

Communicating with our customers is an important part of how we build resilience into the network. We use a range of different methods of communicating planned events and maintenance activities that could cause disruption, keeping our customers informed and allow them to make better travel decisions.

We keep the public informed using the most appropriate communication methods and modern technologies. Providing live travel information in advance and throughout severe weather supports effective journey planning. Traffic Scotland provides up-to-date traffic and travel information for the trunk road network through a range of information services including the Traffic Scotland website, X (formerly Twitter), Facebook, live gritter tracker (see Figure 7-2), roadside fixed and electronic variable message signs (VMS), and radio updates.

Traffic Scotland operates 24/7 with the aim of reducing the disruption caused by trunk road closures, congestion, events, roadworks, adverse weather, accidents, and other incidents.

We also monitor traffic conditions using a range of tools including detectors in the road, CCTV and data from various other organisations along with reports from road users. Once this data is collated and analysed, it is distributed to road users through

the Traffic Scotland website, radio service, social media, variable message signs, broadcast media, and other partner organisations such as Police Scotland.

Figure 7-4: Variable message sign informing customers about works ahead

8. Environment and Sustainability

This section provides the following information:

- Highlights the key national environmental concerns
- Details the environmental risks and what we need to do
- Explains the progress we are making in reducing carbon and adapting our network to address climate change
- Demonstrates what Transport Scotland is doing to enhance biodiversity across the Trunk Road Network
- Our key areas of focus to support more sustainable travel

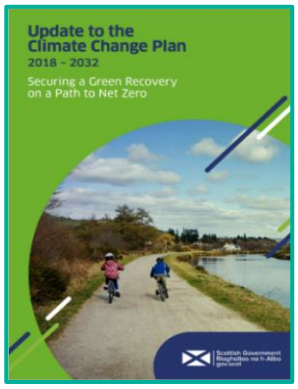
Scottish Government have identified the key environmental concerns that require us as a nation to address and have set ambitious timescales to change behaviours and undertake the appropriate actions to support a sustainable future.

These environmental issues are within four main areas:

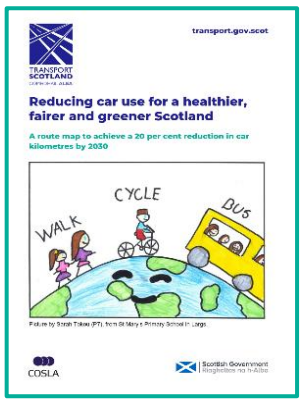
- Adapting to the effects of climate change
- Reduction of carbon emissions
- Sustainable travel
- Improving biodiversity

The published strategies that provide the detail of the issues, timescales and commitments are detailed below:

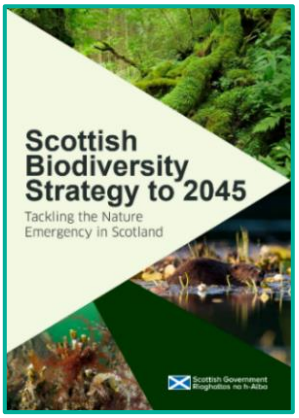
- **Scottish National Adaptation Plan (SNAP)** contains principles and objectives designed to prepare Scotland for the impacts of climate change, including specific commitments for public services and infrastructure.
- See Section 8.1 for more details on how we are responding to the impacts of climate change and addressing SNAP requirements.



- **Climate Change Plan Update (CCPu)** outlines Scotland's strategy for reducing greenhouse gas emissions and achieving net-zero emissions by 2045.
- See Section 8.2 for more details on how we support the reduction of greenhouse gasses through our operational and maintenance activities.



- **Reducing car use for a healthier, fairer and greener Scotland** – Sets out the changes needed to address climate change and improve public health.
- See Section 8.3 for more details on how we are supporting this target.



- **Scottish Biodiversity Strategy** sets out a clear ambition for Scotland to be Nature Positive by 2030, and to have restored and regenerated biodiversity across the country by 2045.
- See Section 8.4 for more details on how we are tackling biodiversity loss through our maintenance activities and integrating the management of land, water and living resources.

How we plan, design, and deliver our operations and maintenance activities in a sustainable and positive way can have significant beneficial improvement on the environment. Through aligning our activities with our asset management objectives, we have integrated environmental factors into our procedures and processes. Our operations and maintenance contracts have defined contract requirements to support our environmental and sustainability targets, and they are measured against the required target performance.

We have a formalised approach to reviewing the way we work, our policies and procedures, the materials we use, and the targets we set, and make amendments and improvements when we identify additional environmental opportunities.

8.1. Adapting to the Effects of Climate Change

The Scottish Trunk Road Network regularly faces challenges from extreme weather events which are only exacerbated through the impacts of climate change. The Climate Change Risk Assessment (CCRA3) has identified the main impacts to the Scottish Trunk Road Network resulting from the increase in extreme weather events as flooding, landslides, bridge scour, high winds, high temperatures, and coastal erosion. See Section 3, Risk Management, for further details on how we manage risks across the Trunk Road Network.

In response to this and the legislative requirements set by the Scottish Government, we have produced The Approach to Climate Change Adaptation & Resilience (ACCAR). The ACCAR outlines the impacts to our network from climate change and sets out the mitigation actions against them. It plays an important role as the primary strategic driver to manage the risks posed by climate change and associated impacts.

In line with the primary risks identified in the CCRA3, and those relevant to Transport Scotland's Trunk Road Network, Table 8-1 sets out the actions to mitigate the impacts of climate change.

Our Trunk Road Adaptation Plan includes an assessment of climate hazards and their impacts on the network, plus recommendations across six themes to support the necessary adaptation required:

- **Safety Enhancement** – e.g. implementation of climate-resilient road design standards, improvement of signage and road markings and integration of weather forecasting systems into current processes

- **Reliability Improvement** – e.g. improvements to diversion planning for the local roads network, update and maintenance of the Disruption Risk Register and Incidents Database within AMPS, and engagement and communication with the supply chain

- **Resilience Building** – e.g. communication and evaluation of different management schemes for specific vulnerable locations, improvement of resilience incident response procedures and processes, and consideration of climate change risks within business cases for future investments

- **Engagement and Partnership** – e.g. collaboration with ACCAR Governance Group, Vulnerable Locations Operational Group, Scottish Road Research Board (SRRB), Scottish Government Global Climate Emergency Board, and implementation of joint working with SEPA, Scottish Water, Network Rail, local authorities, landowners, and environmental organisations

- **Research and Understanding** – e.g. use of geospatial, hazard and asset data to provide more holistic insights into the problem areas of the trunk road, investigation into the wider impacts of climate change on Scotland's economy and communities, and continued collaboration with university and research bodies

- **Monitoring and Evaluation** – e.g. regular monitoring of climate impacts through the Disruption Risk Register and AMPS Incident Data, reporting on adaptation objectives, and development of a monitoring framework of climate impacts and adaptation investment

8.1.1. Vulnerable Locations Operational Group

The Vulnerable Locations Operational Group (VLOG) was established by Transport Scotland's Roads Directorate in 2021 and plays a crucial role with mitigating the impacts from climate change. It is tasked with identifying the vulnerable locations on the Trunk Road Network, driving our strategic approach to climate change adaptation, and delivering robust improvement in the management of their vulnerability. It is also purposed with identifying gaps or limitations in processes, contracts and policies, and delivering strategic options to ensure the Trunk Road Network is well adapted going forward.

Vulnerable location climate change adaptation is identified and planned using factors including the disruption risk register, flooding risk information and network disruption, as well as the recommendations of the Trunk Road Adaptation Plan.

Key Climate Risks	Mitigation Through Our Activities
Flooding: increased risks of river, surface water, and groundwater flooding.	Our Operating Companies regularly inspect and maintain drainage assets, including gully cleansing. When flooding hotspots are identified, we investigate the need for drainage upgrades, including sustainable drainage system implementation. We help develop and implement Local Flood Risk Management Plans for trunk roads.
Landslides: the ongoing effects of climate change have increased the frequency and magnitude of landslides, and the number of locations.	We mitigate landslide risks through engineering solutions like slope stabilisation, drainage improvements, and debris flow barriers. We incorporate nature-based solutions, such as the use of native woodland planting which helps to reduce landslides. Regular inspections, maintenance, continuous monitoring, and early warning systems enhance these measures' effectiveness. We conduct risk assessments and post-event analyses, using remote sensing, drones, weather forecasting, and patrols during high rainfall.
Bridge Scour: increased rainfall and flooding exacerbate the frequency and extent of scour on bridges, culverts and walls, where sediment from around foundations is removed by fast-moving water. This reduces structural capacity which can cause travel disruption, significant repair costs, and isolation of communities.	We are updating the standard CS 469 to better assess bridge substructures, retaining structures and culverts, and help mitigate the risk of structural failure due to scour. We require all Operating Companies to implement the TS Scour Management Strategy and Flood Emergency Plan. This ensures consistent inspection, monitoring, and recording of scour and bed-level changes, improving interventions and mitigations.
High Winds: create dangerous driving conditions, particularly on exposed roads and bridges, leading to safety risks or severe traffic disruption and congestion. As well as damage to vulnerable infrastructure.	Our High Wind Strategy and National Wind Management Guidelines provide detailed plans for managing high-risk areas like the Erskine Bridge. These plans include steps for pre-planning, incident management, and information dissemination before, during, and after wind incidents.
Temperature Variations: accelerate degradation of surface condition through expansions and contraction. It can also destabilise slopes and embankments, increasing the risk of landslides.	We use standardised specifications to specify temperature-resistant material to create durable road surfaces. We understand which areas of our network are vulnerable to temperature variations and regular inspections help us identify and quickly repair defects caused by temperature fluctuations.

Table 8-1: Actions to mitigate the impacts of climate change

8.2. Supporting Net Zero

Transport Scotland plays a pivotal role in supporting the Scottish Government's ambitious goal of achieving net zero emissions by 2045, since transport is Scotland's highest carbon-emitting sector. We are integrating sustainable practices into our operations and maintenance activities which contribute to a greener future.

AMPS

AMPS utilises combined asset datasets to assess carbon 'scores' and impact for planned maintenance schemes supports a more sustainable network and service.

Our commitment to Net Zero is reflected in our Carbon Management Plans and Network Management Contracts as described in this Section. This demonstrates how we deliver efficient upkeep of the trunk road network and work to significantly reduce our carbon footprint.

8.2.1. Carbon Management Through Maintenance

We have created a series of Carbon Management Plans (CMPs) that outlines the key initiatives to reduce carbon emissions and achieve net zero across our own operations and that of the supply chain.

CMPs set out a series of "Scopes" which define the boundaries of different emissions sources, both direct and indirect. Direct emissions originate from activities owned or controlled by Transport Scotland, whereas indirect emissions do not originate from Transport Scotland but are related to our activities.

For the Roads Directorate, "Scope i" emissions are those that we have the greatest impact over. "Scope i" emissions are defined as emissions associated with service providers, partners, supply chain and stakeholders, which do not form part of our corporate function. Although we do not directly control these, and they are not quantified as part of our carbon footprint, we do have the capacity to influence associated processes and actions.

Our performance measures within our operations and maintenance contracts (see Appendix F) contains measures to target reduction of carbon emissions and promote the use of sustainable materials and practices, contributing to our net zero objectives.

8.2.2. Our Net Zero Route Map for the Trunk Road Network

Without major changes to the way we and our Operating Companies plan and carry out our activities, we will not achieve our Net Zero goal. To help unlock the scale of reductions in carbon that are required in our Route Map, we have identified a range of improvement activities:

- **Policy** – review of our policies, processes and specifications to better integrate management of emissions, identify potential implementation challenges, and understand our required actions in line with the standard PAS 2080:2023 'Carbon Management in Buildings and Infrastructure'
- **Asset management** – review and update of our asset management approaches to support the extension of asset life, reduction in maintenance and improvement requirements, and improved efficiency of delivering our work through better planning
- **Data** – improvement of our carbon data and evidence base to help us track our progress, give greater confidence in our data, and strengthen how it is assured and reported
- **Depots** – review of our current approach to depot ownership and use, to inform potential relocation or consolidation of sites, help quantify and manage the emissions from our facilities and enhance our control over the decarbonisation measures we wish to put in place
- **Supply chain & procurement** – enhance how carbon is considered within our Operating Company contracts, whilst collaborating with supply chain to understand the potential impacts of any proposed changes
- **Behaviour change** – training and ongoing engagement of our people within Transport Scotland and supply chain partners, to improve their understanding of the impacts of their actions and decisions and help them feel empowered to make informed low-carbon choices
- **Collaboration & innovation** – collaboration with supply chain, industry bodies and manufacturers to guide research and development, support and incubate innovation, and give confidence that there is demand for net zero products and services

As well as changes to our organisation and behaviours, achieving Net Zero will require substantive changes to the way we operate, maintain, and improve the trunk road network. To support this, we have developed theme-based action plans to transform how we decarbonise our activities:

- **Materials transport** – logistic improvements to reduce transport movements and emissions, and supporting our supply chain with the adoption of innovative technologies that will provide zero-carbon materials transport, e.g. vehicles powered by renewably-generated electricity and green hydrogen

- **Materials** – increased use of warm-mix asphalt, recycled asphalt planings and aggregates, alternative lower-carbon asphalt binders, lower carbon green steel alternatives. and biogenic products for our road markings

- **Depots** – improvement of energy efficiency through measures such as insulation, occupancy sensors and thermostats, installation of air-source heat pumps and solar PV to generate renewable energy, and purchase of certified renewable electricity to meet any demand we cannot generate at our depot sites

- **Streetlighting** – powering of our electrical roadside assets, e.g. streetlighting and signage, by certified renewable electricity

- **Plant & fleet** – transition of our small vehicle fleet to fully electric power and our construction plant and site compounds to low and zero-carbon alternative fuels, plus increased use of drones and other innovative technologies to reduce the miles driven to carry out inspections

- **Offsetting** – maximising the amount of carbon our land sequesters from the atmosphere, with responsible offsetting of residual emissions which cannot be avoided

- **Looking to the future** – continuing to seek new opportunities to further reduce our emissions as technology and society evolves beyond 2045, aiming for as close to absolute zero as we can

8.3. Sustainable Travel

Our systematic approach to delivering our activities though asset management (see Section 2) is aligned with the aims and outcomes in NTS2 which includes reduction in car usage and a greater emphasis on maximising opportunities for active travel.

We are supporting sustainable travel in two key main areas:

- Through investment in active travel infrastructure to plan for the most appropriate locations to support safety and accessibility (see Section 4). This includes considering the maintenance required, so the infrastructure can continue to be usable throughout our operating contracts
- Implementation of our Road Safety Framework which provides focus and emphasis on pedestrians and cyclists

Transport Scotland's Active Travel Framework details strategic objectives that be realised through our commitment to active travel:

- Environmental benefits, through cutting carbon emission and other pollution
- Better health and safer travel to all
- Supporting delivery of sustainable economic growth through active travel

8.4. Improving Biodiversity

We have integrated our biodiversity requirements within our operations and maintenance contracts. These support our biodiversity reporting, which is a legislative requirement, as we can demonstrate how we are delivering our responsibilities to protect and enhance biodiversity across the trunk road network. This is achieved through various projects that have been completed to limit the decline of biodiversity and maintain habitat for wildlife to thrive in.

To further support the drive to improve the natural heritage of the trunk road network we are preparing a comprehensive sectoral Biodiversity Strategy for Transport Scotland that supports the national strategy and the Scottish Government's goal of halting biodiversity loss by 2030 and reversing it by 2045, while aligning with broader climate change initiatives. The strategy will integrate biodiversity considerations across Transport Scotland activities and promote sustainable land management practices.

Some of the key focus areas, as highlighted in our Biodiversity Duty Reports, are summarised below:

- **Habitat Connectivity and Enhancement** – we install green bridges and culverts to mitigate habitat fragmentation and support wildlife movement across the road. We also look to secure areas of land for compensatory planting sites for woodland loss. Integrated woodland planting and habitat restoration has also been included into our contracts.
- **Biodiversity Integration** – we design our schemes with the aim of integrating with surrounding environment. For example, when implementing sustainable drainage systems, we ensure designs support local habitats, implement native vegetation and align with natural watercourses.
- **Species Protection** – we implement measures to protect wildlife located across our network that could be impacted by our maintenance activities. For example, on the A887 Bridge Replacement we installed bat boxes and designed culverts to ensure safe passage for surrounding otter populations.
- **Habitat Creation** – we adjust our maintenance requirements to improve habitats across our network. For example, we have reduced grass cutting to promote wildflower growth and support pollinator biodiversity.
- **Verge Enhancements** – we have been enhancing biodiversity through successfully establishing extensive species-rich seeding and wildflower swards across the network.

Figure 8-1: Example of successful wildflower seeding along verges on the M80

We are currently developing a natural capital baseline assessment across our network to record habitats and the ecosystem services they support, including carbon sequestration, biodiversity, and pollination so we can understand the interconnectivity of the elements that make up the environment, and the benefits they provide. This will provide us with opportunities to further enhance the habitats of the network and a means of measuring how our activities will create positive change for Nature.

9. Managing our Performance

This section provides the following information:

- How we manage the performance of our Operating Company Network Management Contracts (NMCs) and our contract with Intelligent Transport System (ITS) specialists (the Traffic Scotland Infrastructure Contract – TSIC and the Traffic Scotland Operations Contract – TSOC).
- How our performance regime is fully aligned with Transport Scotland's asset management approach
- The performance measure themes and how they are linked to Asset Management Objectives
- How the performance regime will be continually improved

9.1. How We Manage Contract Performance

As a publicly funded organisation, demonstrating value for money in our activities is vital. Our supply chain, including our road maintenance Operating Companies and Intelligent Transport System suppliers, deliver road network and technology maintenance and improvements (see Section 1.9 for details). We monitor their performance against levels specified in their contracts.

Our contracts outline clear performance measures, covering a wide range of maintenance and operational delivery activities. The content of the contracts aligns directly with Transport Scotland's asset management objectives, which are incorporated in them.

Figure 9-1 illustrates the connection from organisational objectives to performance measures.

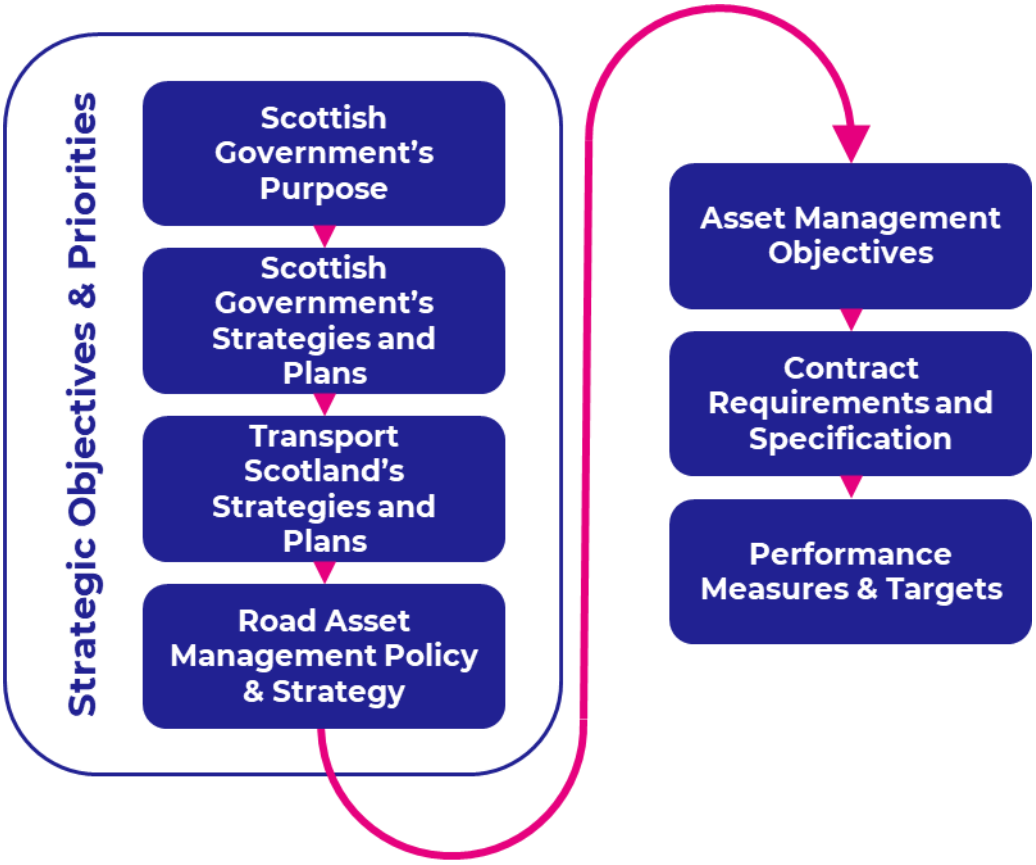


Figure 9-1: Line of sight diagram for setting contractual performance measures

9.2. Our Performance Regime

The performance regime incorporated into our contracts is designed to align with our evolving organisational objectives and continue to drive effective delivery. The management of performance is underpinned by three elements of the contract:

- **Performance Indicator (PI):** A numerical measure of the supplier's compliance with the contractual requirement, covering the most important areas of the contract, and which often have an associated **Payment Adjustment Factor** (see below)
- **Monitoring Indicator (MI):** A numerical measure of service provision which does not have an associated Payment Adjustment Factor
- **Payment Adjustment Factor (PAF):** Payments to suppliers may be reduced through PAFs in the event of underperformance against PIs, creating additional incentive to deliver work effectively. Higher adjustment factors are applied to PIs which reflect the most critical areas of the contract

The contracts include PIs, MIs, and PAFs designed to provide wide coverage of contractual areas and a method for calculating and scaling adjustment factors. The regime is designed to incentivise supply chain behaviours that align to Transport Scotland's Asset Management Objectives. AMPS (see Section 6.3) allows for accurate performance measurement by automating the calculation of measures using the relevant active datasets. The data and measures are independently audited before the appropriate payment adjustments are applied to the OC's payment mechanism. More details of the Performance Measures are given below.

AMPS

AMPS enables measurement and monitoring of Performance Indicators, Monitoring Indicators, and our wider business measures.

9.3. Our Performance Measures

Our performance and monitoring indicators have been established to cover a wide range of requirements in our contracts, which drive compliance by our supply chain, (refer to Section 1.9 Contracts to Maintain our Assets for more information about the contracts).

Each contract incorporates multiple performance and monitoring indicators, the exact number of which may vary over time as contract measures are reviewed and updated, (see Section 9.4 below).

A summary of the themes covered by our performance measures is provided in Figure 9-2 below.

Performance reports for our supply chain are produced annually and can be found on the Performance Audit Group website. The performance of our supply chain connects directly to our Asset Management Objectives (Section 2.3), which in turn are designed to deliver the National Transport Strategy (NTS2). You can read about Transport Scotland's performance in our Annual Report which is published on our website annually.

Asset Management Objectives	Performance & Monitoring Indicator Themes
Safety	• Safety Critical Defect & Fault Repair • Incident Response
Resilient Network	• Network and Equipment Availability • Weather Forecasting
Sustainable Purpose	• Carbon Emissions • Material Usage & Recycling
Active and Healthy Communities	• Minimising Disruption • Winter Maintenance
Condition	• Inspections & Maintenance Activities • Asset Data

Figure 9-2: Performance Indicator and Monitoring Indicator Themes aligned to our contractual objectives

A full breakdown of the PIs, MIs and PAFs can be found in Appendix F. The contracts themselves can be found on our website.

9.4. Continual Improvement of Our Performance Regime

We will continue to evolve our performance regime to reflect the strategic priorities of Transport Scotland and the capabilities of our supply chain. Our contracts incorporate the option to periodically review PIs and MIs in collaboration with our suppliers to allow updates.

As part of the review process, we consider the evolving priorities of Transport Scotland, updated datasets for measuring performance, and elements no longer required for performance management. This review and performance analysis are conducted collaboratively between Transport Scotland and our supply chain.

10. Conclusion

This edition of the Road Asset Management Plan has highlighted the critical role of the Scottish trunk road network in delivering a safe, sustainable, inclusive and accessible transport system, in support of the National Transport Strategy. The extensive activities to maintain our network, outlined in this document and delivered by Transport Scotland staff and supply chain, help us to deliver a fairer and more prosperous nation.

We are committed to maintaining and improving our network and our asset management capability. To ensure the continued relevance and accuracy of this document, it will be reviewed regularly and updated when significant changes to our objectives or our assets make it necessary.

Continual improvement includes incorporating the feedback of our customers. If you would like to offer feedback or suggestions about the RAMP, you are welcome to contact us using the details on the Transport Scotland website. Thank you for your engagement with this plan.

Figure 10-1 – The Queensferry Crossing carrying the M90 over the Firth of Forth

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