



Performance Audit Group Annual Report 2022/23

Performance Audit Group
Transport Scotland



making the **difference**

Foreword



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The Performance Audit Group (PAG) supports Transport Scotland in monitoring, auditing, and reporting on the companies, Operating Companies, responsible for maintaining Scotland’s Trunk Road Network. Our goal is to ensure these companies meet their contract obligations, supporting safer roads, better service, and value for taxpayer money.

This report covers the extensive work we carried out over the 2022/23 year. Our team—composed of experts in project management, engineering, and finance—works diligently to ensure Scotland’s roads are maintained efficiently and responsibly.

Our focus is to assist to:

- Deliver safe and reliable **journeys**;
- Continuously improve service **quality**;
- Ensure value for public **spending**;
- Promote sustainability in all operations.

In addition to our monitoring services, we also support Transport Scotland in securing future maintenance contracts and providing commercial support for ongoing projects, like maintenance work on the M8 Woodside Viaduct in Glasgow.

Through collaboration and independent assessments, we help drive meaningful improvements and accountability. We hope you find our latest report clear and informative, reflecting our commitment to Scotland’s Road users.

Facts and Figures

Overview



Total length of road
3,248 km



Total number of structures
4,704

Renewing



680km / 20% of the network
of new road surfacing lanes



42km of safety fence installed/
renewed



0.4km of carriageway drainage
constructed/renewed



4.5km of filter drain
constructed



76.4km of filter stone
replaced



265 bridges and structures
schemes delivered

Facts and Figures

Maintaining



21,732

Category 1 defects identified and repaired

This included:



9,143

potholes



1,331

items of electrical defects



4,440

items of debris removed



2,046

road signs/road marking defects



2,746

items of broken or blocked drainage



867

safety fence defects



£127.3m

spent on road pavement surfacing and deeper inlay schemes



£28.4m

spent on renewal/replacement of various non-pavement trunk road assets (safety barriers, drainage schemes, road markings and signage)



£107.2m

spent on maintenance of road bridges and structures (such as renewing waterproofing layers to protect the structure, renewing worn expansion joints)

Facts and Figures

Maintaining (cont.)



£9.2m

spent on network roads cyclic maintenance including 98,419 gullies, 85,361 manholes and catchpits, 69,499 traffic signs, and 28,090 lighting points



£3.4m

spent on landscaping and vegetation maintenance including tree felling, branch removal, scrub and vegetation clearance



£1.5m

spent on structures cyclic maintenance including cleaning drainage, bridge joints, clearing vegetation and graffiti, checking safety fences

Operating



185,757 tonnes

of salt spread in winter season



20,669 incidents

incidents responded to on the trunk road network

PAG



53

audits delivered



92

monitoring reviews completed



92

operations sites visited

Executive Summary

In August 2022, the North West and North East 4th Generation (4G) Term Maintenance contracts concluded. These were replaced with the Network Management Contracts (NMCs), bringing the northern units in line with the South West and South East units, which transitioned to the NMCs in 2020.

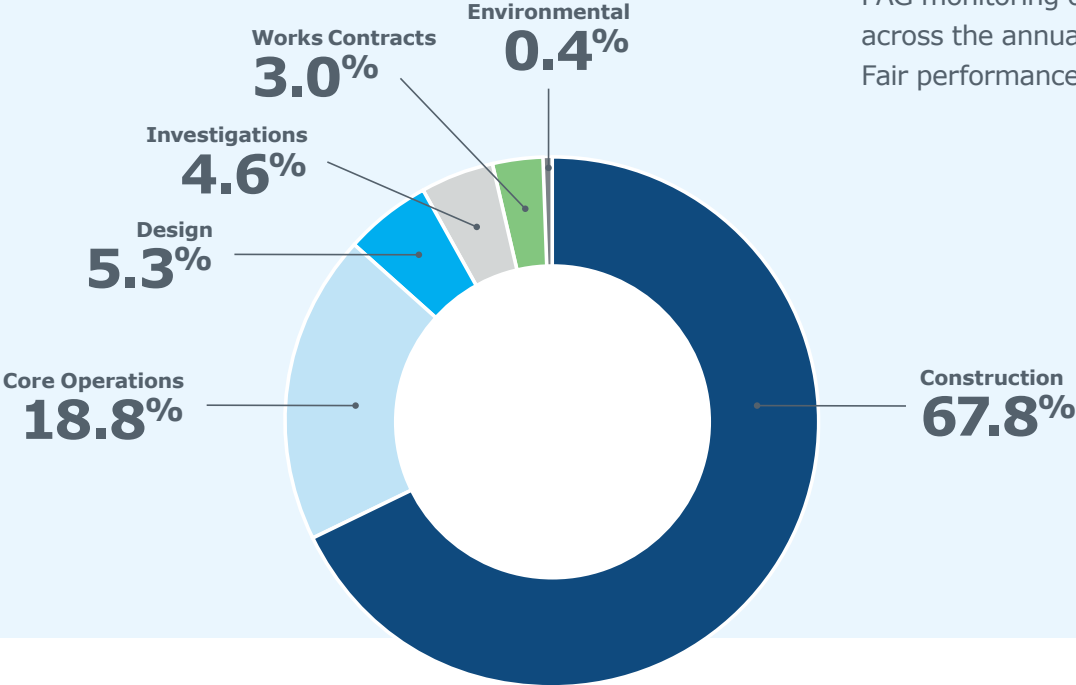
PAG conducted audits, monitoring, and reporting on the performance of Operating Companies across various areas. Our ratings, presented in this report, are based on two factors: measurable performance indicator percentages outlined in the contracts; and the quality of operations observed. The criteria for these ratings differ based on the specific area of service delivery.

Finance

The budget for **2022/23** was **£330m**

an increase of **↑ £9.5m**
from the previous year (£320.5m)

2022/23 Budget spend split was:



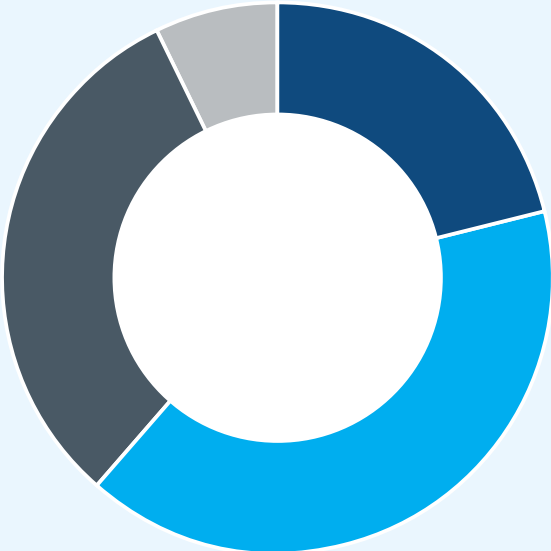
Budgetary Control

PAG monitoring of budget v spend across the annual period found a Fair performance in all units.

Executive Summary

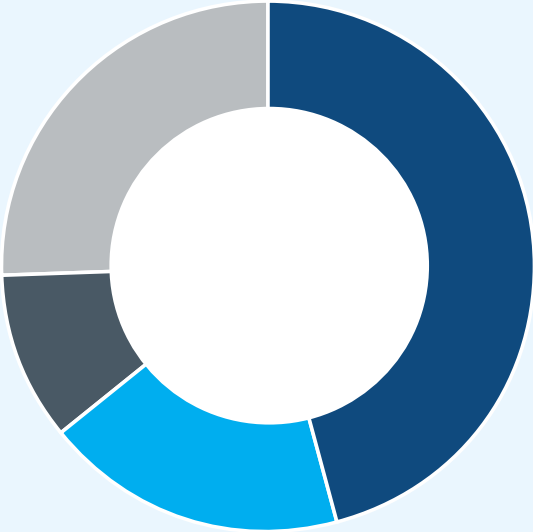
Network Maintenance

Overall PAG found the Operating Companies broadly performed well in 2022/23:



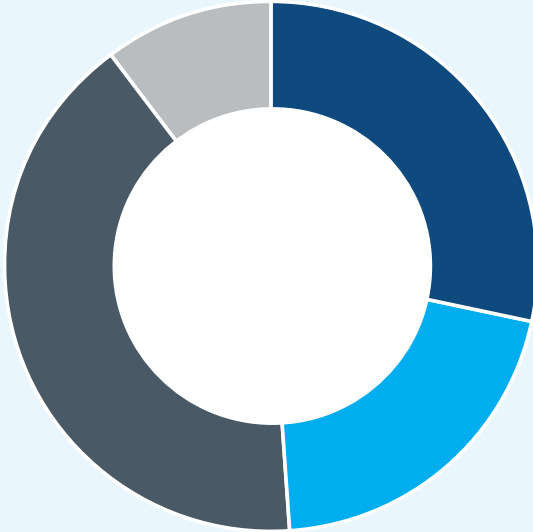
99 Technical Performance Quality Ratings:

21 Excellent
40 Good
31 Fair
7 Poor



98 Performance Indicators:

45 Excellent
18 Good
10 Fair
25 Poor



49 Financial Performance Quality Ratings:

14 Excellent
10 Good
20 Fair
5 Poor

Executive Summary

Strong performance was observed across all units in the delivery of network maintenance schemes. In the final months of the 4G contract, structures maintenance schemes performed exceptionally well, utilising 85% of the annual budget to replace life-expired assets. Site visits confirmed that the work was of high quality and met all contractual specifications.

Cyclic maintenance on the road network, including grass cutting and drainage system cleaning, was excellent in most units. Performance in the North West 4G and South West NMC units was rated as good.

The quality of structures cyclic maintenance remains an issue, with work frequently not meeting the required standards.

Operating Companies frequently missed identifying Category 1 defects during route tours, causing safety inspections to fall below the required standard earning a Fair rating in all units, except for the South East NMC, which achieved an Excellent rating.

Timescales to repair Category 1 defects also fell below the required standards, particularly in NE and NW NMC units where the percentage of defects repaired within contractual timeframes was low and the number of defects that have gone beyond repair timescales and remain unrepaired had grown to significant numbers by the end of the annual period.

Comprehensive inspection reviews showed performance in the North West and North East units was improving as their 4G contracts ended. In the NMC units, PAG has not yet fully reviewed this aspect of delivery due to the new Asset Management Performance System (AMPS) not having full reporting functionality.

Reviews of drainage assets in the South East unit and electrical installations in the South West unit revealed that defects were not being recorded in AMPS.

Winter Service reviews found that Operating Companies were delivering appropriate precautionary treatments based on weather forecasts. However, issues were observed in the North West, and North East NMC units, where some treatments and patrols were completed outside of the contractual timeframes. Additionally, issues with record-keeping were noted across all units.

Audits of the Journey Time Reliability Coordinator role showed a strong understanding and effective execution of responsibilities. Traffic management installations observed during monthly route tours of the trunk road network were well-organised and maintained, minimising the impact on travel times during essential maintenance operations.

Performance in meeting Environmental and Sustainability requirements was good, with many sites visited by PAG showing effective environmental safeguard measures. However, more attention is needed for the secondary containment of hazardous liquids to prevent spills, as this remains a recurring issue.

Record-keeping remains a concern in many areas of the contract, particularly in documenting completed work or providing testing records to confirm constructed assets meet the required specifications. Several Non-Conformance Notices (NCNs) were issued for poor record-keeping in the Winter Service.

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Introduction

The PAG contract undertakes auditing and monitoring of Operating Company performance to check compliance in delivering Transport Scotland's term contracts for management and maintenance of the Scottish trunk road network.

A key aspect of the PAG contract is collaborating with Operating Companies to address areas needing improvement. Audit and monitoring programs are developed based on delivery risks identified in the PAG Risk Register. Performance reports are created with input from the Operating Companies, and PAG provides recommendations for improvement if necessary. When performance does not meet contractual standards, PAG issues Notices of Non-Conformance, which are tracked through the Operating Company's Quality Management System until resolved. If standards continue to fall short, Transport Scotland may issue a Remedial Notice, and financial deductions may be applied when appropriate.

During the 2022/23 annual period, two companies operated six Term Maintenance contracts. In August 2022, the 4G Term Maintenance contracts in the North West and North East units ended and transitioned to the new NMCs. As a result, two different types of contracts were in operation during the reporting period.

- **NW 4G** – BEAR Scotland Ltd
- **NW NMC** – BEAR Scotland Ltd
- **NE 4G** – BEAR Scotland Ltd
- **NE NMC** – Amey OW Ltd
- **SW NMC** – Amey OW Ltd
- **SE NMC** – BEAR Scotland Ltd

Report Structure

This report follows the objectives outlined in Transport Scotland's Scottish Trunk Road Network Asset Management Strategy – November 2018, with each chapter addressing a specific objective. The contract delivery areas discussed align with the Performance Indicators mapped in the NMC contract.

The Performance Audit Group contract is included in Transport Scotland's Network Asset Management Strategy playing a key role in Transport Scotland's strategy by monitoring the performance of Operating Companies, contributing directly to achieving these objectives.

Introduction

Performance Ratings

PAG employs a risk-based approach to assess contract performance, updating a risk register quarterly to address current issues. Audit and monitoring programs are derived from this register and core activities, with adjustments made throughout the year as circumstances change.

Based on PAG reporting, Operating Companies receive ratings of Excellent, Good, Fair, or Poor, guided by PAG performance criteria. Generally, achieving an Excellent rating requires over 95% compliance, while less than 85% results in a Poor rating.

These are colour coded in the tables throughout this report:

Excellent

Good

Fair

Poor

There are two key areas in which these ratings are applied:

- **Performance Indicators:** the term maintenance contracts include Performance Indicators (PIs), typically numerical percentages derived from data in AMPS or held by Operating Companies. These PIs are largely quantitative, focusing on program completion rather than the quality of operations. Rating thresholds for Excellent, Good, Fair, and Poor vary depending on the specific PI.
- **Quality of Operations:** The audit and monitoring programmes undertaken by PAG focus on the quality of operations with ratings based on performance observed.

Achieving higher ratings in these areas requires a high standard of performance. Ratings in the report reflect the annual average of an Operating Company's performance across all aspects. They are based on PAG's individual reviews, including areas with Notices of Non-Conformance (NNCs), Remedial Notices (RNs), and responses to PAG-identified quality improvement opportunities.

Asset Management Performance System (AMPS)

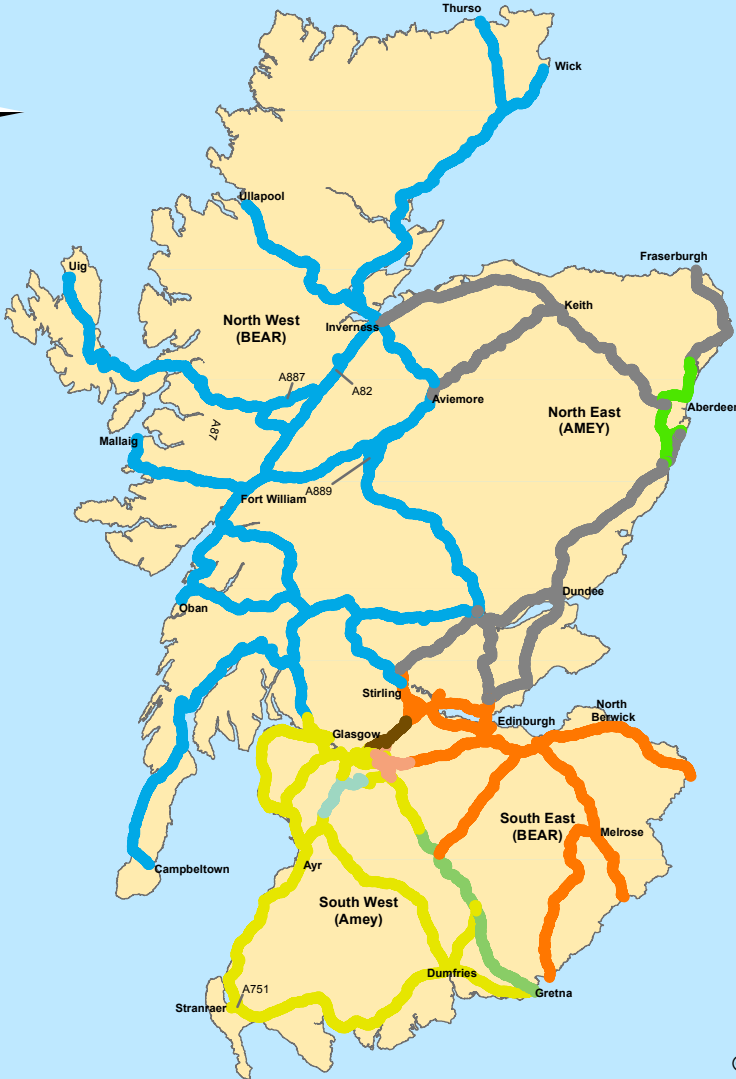
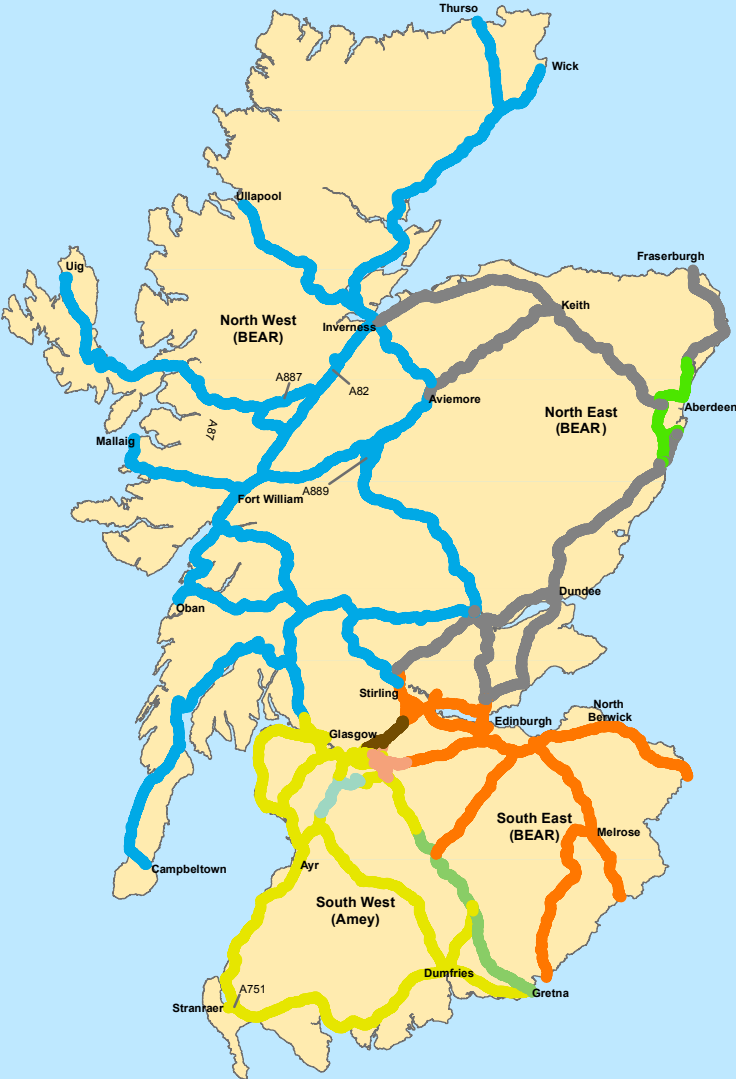
Transport Scotland launched its new asset management system, AMPS, on April 1, 2022, replacing the IRIS system. AMPS was implemented for the SW and SE NMC contracts from April 2022 and for the NW and NE NMC contracts from their start in August 2022. The 4G NW and NE contracts continued using IRIS until they ended in August 2022.

Since the introduction of AMPS, efforts have been ongoing to resolve issues that arose around the contractual Performance Indicators that are based on data in AMPS. As of the end of the annual period this report covers the AMPS' based reports finalised for PIs 02 Repair of Structures Category 1 Safety Defects, PI 03 Repair of Category 1 Safety Defects (except Structures), PI 29 Timely Upload of Construction Phase Plans and PI 30 Timely Upload of Final Health and Safety Files.

Scottish Trunk Road Map

April 2022 – August 2022

August 2022 – March 2023



Trunk Road Network

- North East Unit
- South West Unit
- South East Unit
- North West Unit
- Aberdeen Roads Ltd
- M6 DBFO
- M77 DBFO
- M80 DBFO
- M8 DBFO

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 The extent of the trunk road network is shown in this map, therefore Orkney and Shetland are not included.

“ To provide a road network that is safe for all users, seeking to continually reduce risk and casualties

Operating Companies perform various essential activities to ensure the trunk road network operates safely. Tables 1 to 3 present PAG’s quality performance ratings for these areas, alongside the average values of the corresponding contractual Performance Indicators.

Routine Monitoring Inspections

The quality of performance in undertaking Routine Monitoring Inspections is measured by PAG through two aspects; shadow inspections undertaken by PAG where any Category 1 defects missed by the Operating Companies are noted, and performance by the Operating Company in resolving Observations Resulting from Inspection (ORIs) raised by PAG for missed defects. In 2022/23 the performance of SE NMC was Excellent with all other Operating Companies noting a Fair performance. A Fair rating indicates a ratio of between 5% to 10% of Category 1 defects missed by the Operating Companies.

PI 05 showed a high percentage of inspections undertaken on time in the last months of the 4G NW and NE contracts. There is no contractual measure yet available in the new AMPS system to provide a PI 05 report for the NMC Operating Company performance.

With regards to Structures Safety Inspections NNCs were issued to NE, NW and SW NMC units for not submitting required reports related to structures safety inspections, all remained open at the end of the annual period.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Routine Monitoring Inspections (NMC) / Safety Inspections (4G)						
PI 05 Routine Monitoring Inspections (NMC) / Safety Inspections and Patrols (4G)	100.0%		98.7%			
PI 02 (NMC) Repair of Structures Category 1 Safety Defects	N/A	0.0%	N/A	0.0%		50.0%
PI 03 Repair of Category 1 Safety Defects (except Structures)	92.6%	66.5%	94.3%	76.9%	95.2%	93.5%
PI 11 (NMC) / MI 01 (4G) Well Lit Network	96.3%		91.8%			

Table 1

Category 1 defect Repair

PIs 02 and 03 indicate performance in repairing Category 1 defects in the required timescales. The AMPS report for PI 03 was made available in January 2023 whilst the report for PI 02 was made available in February 2023, as such the PI figures presented are averaged over this two-to-three-month period only.

Low performance is noted in PI 02 (an NMC contract measure only) with no results for SE unit as there were no structures Category 1 defects due for repair in that timeframe.

Safety

PAG notes the number of Structures Category 1 defect repairs due in a month are relatively low, generally less than 10 in a typical month, which can mean that missing the timescale for one repair when only two are required can result in a PI of 50%. NE NMC had one repair to complete in March 2023 which was not done on time hence a PI of 0%, NW NMC had 11 repairs due of which none were completed on time, again resulting in a PI of 0%.

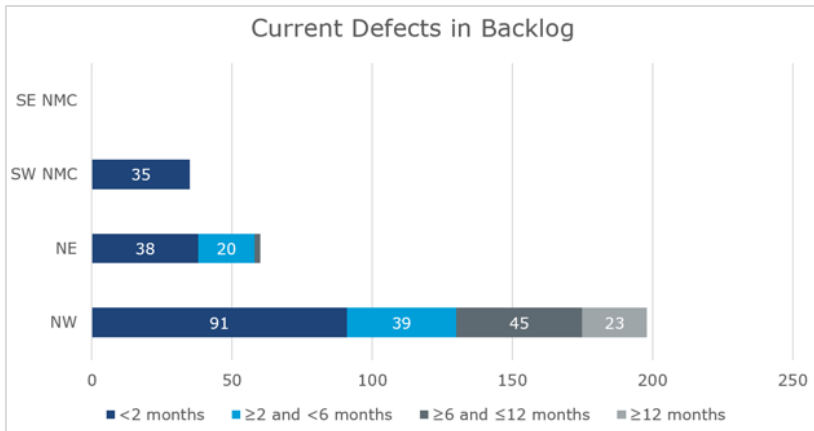


Figure 1: As April 2022

In the SW NMC an NNC opened in April 2021 for non-repair of high mast lighting defects was closed in June 2022 whilst a second NNC for lighting defects at St James Interchange, opened in December 2021, remained open at the end of the current annual period.

PAG monitors the number of defects in the backlog, i.e. the number of Category 1 defects that have gone beyond their contractual timescales for repair. Figure 1 shows the number of defects in the backlog at the start

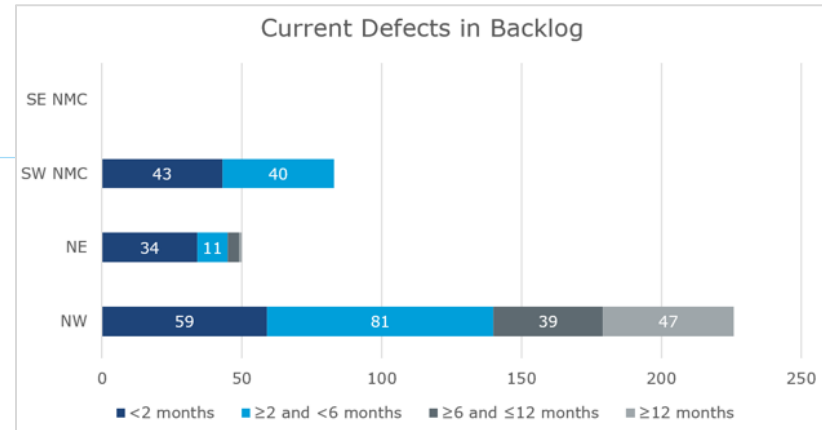


Figure 2: As July 2022

of the annual period, Figure 2 shows the number when the NW and NE 4G contracts came to an end, whilst Figure 3 shows the number the end of the annual period.

It is noted that SW and SE NMC units have been repairing Category 1 defects generally within timescale with only a few going over the contractual time for repair. NW 4G had a significant number of defects beyond the required time for repair with a high number of these going for over 12 months without repair. Since moving over to NMC contracts both the NW and NE have very high numbers of unrepaired defects starting to appear (Figure 3).

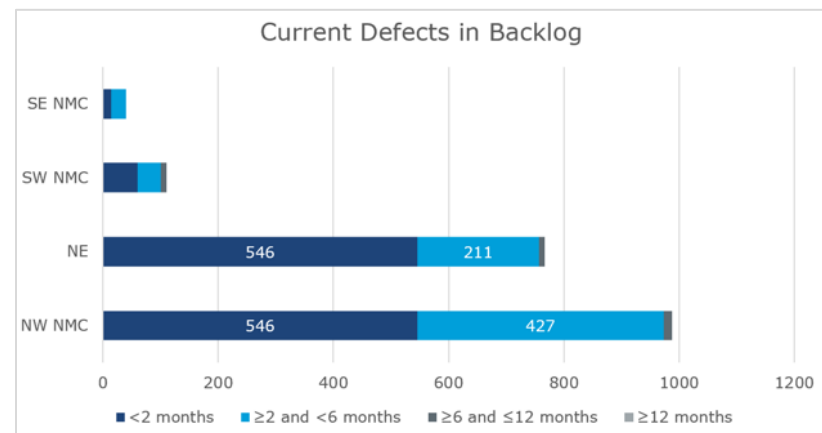


Figure 3: As March 2023

Safety



NE NMC: A90 Category 1 Repair



SE NMC: A702 Category 1 repair

A large number of NNCs and Remedial Notices were raised over the course of the annual period relating to Winter Service delivery. In NE NMC a Remedial Notice and three NNCs were raised for various non-conformances such as depots not being fully prepared to deliver the winter service, training of staff not contractually compliant, testing of salt stocks not evidenced and missing or incomplete records of treatments undertaken. In NW NMC two Remedial Notices and two NNCs were raised. Both NNCs were closed however the two Remedial Notices, which contained a large list of areas of non-compliance, remain open at the end of the annual period. In SE NMC two NNCs were raised relating to missing or incomplete records were quickly closed. An NNC raised in October 2021 for salt being stored incorrectly was closed in September 2022, whilst a Remedial Notice raised in February 2022 for not deploying reserve winter plant on the forecast of snow was closed in June 2022. In SW NMC an NNC raised in February 2022 for missing records was closed in March 2023.

Winter Service

Winter Service reviews found that Operating Companies were delivering appropriate precautionary treatments for the weather forecasts, although issues were noted in NW NMC and NE NMC for various aspects such as precautionary treatments or patrols being completed out with contractual timescales. As in previous years in all units there were issues in the population of records which often found many records not in place or information missing on the records that were in place.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Winter Service						
PI 11 (4G) / MI 22 (NMC) Winter Service Treatments	99.5%	74.4%	96.0%	98.3%	50.0%	33.2%
PI 13 (NMC) / MI 20 (4G) Weather Forecast Accuracy	98.0%	1.2%	97.5%	0.4%	0.4%	0.7%
PI 21 (NMC) Salt Spread	N/A	100.0%	N/A	100.0%	98.3%	99.8%
PI 12 (NMC) Winter Treatment Efficiency	N/A	18.9	N/A	0.6	0.0	0.0

Table 2

Incident Response

Operating Companies were meeting Incident Response times to attend and assist at incidents on the network; however, reviews identified issues on record keeping, with all required records not always fully in place and incidents often recorded as an incorrect category.

A Remedial Notice was raised in NW NMC for not having adequate plans or resources in place to ensure contractual response times for secondary equipment could be met, which remained open at the end of annual period. NE and NW NMCs had NNCs raised for TRISS and/or ISU vehicles not containing full required list of equipment, both remained open at the end of the annual period. In the NW NMC further NNCs were raised relating to ISU vehicles still bearing the 4G specification for livery and for not fully populating the AMPS system with response times to attend incidents.

In SE NMC two NNCs raised in 2021 were closed in the annual period, these related to ISUs not containing the full equipment list and not having all secondary response plant available at depots. In SW NMC an NNC raised in July 2021 relating to secondary equipment not being able to meet the contractual response times remained open at the end of the annual period.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Incident Response						
PI 27 (NMC) / PI 04 (4G) Incident Response	96.6%		97.2%			

Table 3

Health & Safety

PAG visited 92 sites over the course of the annual period. A key check was on the Health and Safety measures taken on site, to protect both the workforce and the nearby travelling public. All Operating Companies were found to perform highly in this area with sites well set out, maintained and managed (Table 4).

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Health & Safety						
PI 29 Timely Upload of Construction Phase Plans	N/A	29%	N/A	100.0%	94.2%	94.5%
PI 30 Timely Upload of Final Health and Safety Files	N/A	50%	N/A	100.0%	100.0%	51.9%

Table 4

Two new PIs, 29 and 30, have been introduced into the NMC contract to measure performance in uploading CDM regulation documentation both before and after construction in line with the timescales set out in the NMC contract. Issues are noted in the NE unit which is failing to meet the required timescales for both measures for most of its schemes. SW unit is also noted to have issues in meeting requirements to upload H&S files post construction.

NNCs were raised in 4G in June 2021 and in SW and SE NMCs in May 2022 for not uploading CDM documentation to IRIS in the contractual timescales have all subsequently been closed.

Case Study: BEAR NW

In-situ pavement recycling on A86

Within the period, BEAR Scotland successfully completed an in-situ pavement recycling project on the A86 at Creagdubh, approximately midway between Newtonmore and Laggan, over a length of around 1500 metres. This was carried out under a 24hr closure to recycle 190mm of existing road pavement and then overlay to around 200mm above existing road level.

This £900,000 investment by Transport Scotland saw approximately 1800 tonnes of existing road construction (with around 50% of this being classed as special waste) being processed on site, with additional small quantities of new binders and filler added and mixed in, to form the base layer of the new pavement construction.

The adoption of this economic and environmentally sustainable solution meant that no waste was produced from the road (no materials left the site), therefore saving around 320 lorry movements. Overall, the scheme delivered around a 49% CO2 saving over a 'traditional' hot mix asphalt maintenance solution and provided a design life of more than 20 years.

This is a significant contribution to the circular economy; treating the existing pavement asset as a linear quarry and exploiting the materials which form it, rather than disposing and replacing with virgin materials.



Figure 4 A86 Planing Operation



Figure 5 A86 Insitu Recycling

Condition

“ To measure and maintain our trunk road assets in a condition that meets the needs of our users but which is also affordable.

The Scottish trunk road network has a very high number of assets of various types including road pavements, drainage networks, barriers & fences, and electrical installations such as streetlights and sign lighting.

Key to keeping this inventory of assets in good condition is regular maintenance. This is done via a combination of maintenance schemes, where assets reaching end of life are identified for renewal with schemes raised to replace the materials, and cyclic maintenance undertaken on assets that benefit from regular cleaning such as drainage systems, channel sweeping, grass cutting, landscaping and sign cleaning.



SW NMC: A75 footway resurfacing



SW NMC: M74 Bridge refurbishment

Key to ensuring programmes of maintenance schemes are targeted at the assets most in need of renewal, and to help identify the level of budget requirement to ensure all network needs are met, are the comprehensive inspections undertaken on an annual basis. The frequency of inspection of some assets varies depending on asset type, for example structures General and Principal Inspections follow the timescales set out in the national standards in the Design Manual for Roads and Bridges.

Schemes identified for repair or replacement represent the greatest proportion of budget spend in an annual period, typically accounting for 85% of budget spend. By contrast cyclic maintenance activities account for 3% of overall spend with Network Operations (winter maintenance and Incident Response) accounting for 6%.

Condition

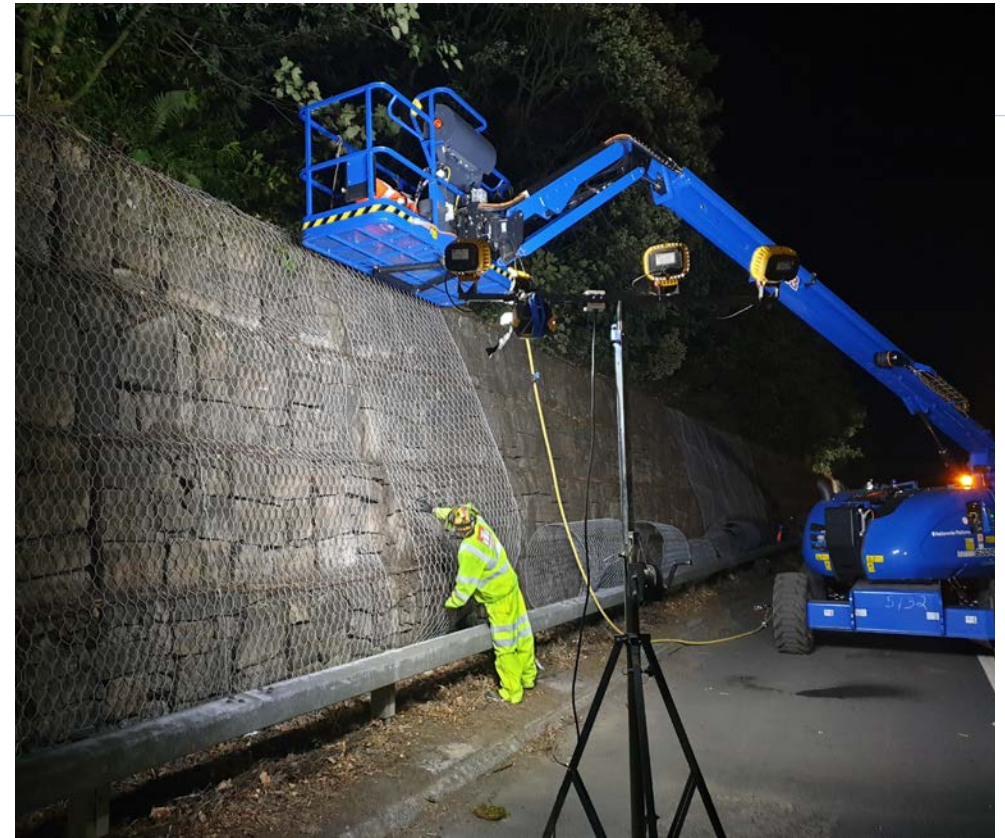
Maintenance Schemes

PAG visited 92 sites over the course of the annual period covering many different types of operation to assess the quality of construction. Most sites visited were for schemes to replace life expired assets such as carriageway resurfacing/reconstruction, lighting/electrical replacements/installations, drainage improvements, footway resurfacing, sign renewal, road lining and road stud replacement.



NW NMC: A9 Vehicle Restraint System replacement

For structures, sites visited included a cantilevered footway installation, bridge refurbishments, waterproofing, joint replacement, drainage improvements, scour and parapet repairs.



SE NMC: M876 Retaining Wall

The quality of workmanship at each site was excellent in all units. Sites were tidy and well maintained and the works were undertaken to the required specification.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Network Maintenance Schemes						
Structures Maintenance Schemes						

Table 5

Condition

Cyclic Maintenance

PAG completes Route Tours of the entire trunk road network every month. A programme of inspection on these route tours covers various aspects of cyclic maintenance to assess the general performance over the annual period. This covers areas such as litter, cleanliness of signs, instances of flooding, grass cutting, weed control, soft landscaping, channel sweeping and cleanliness of laybys. Sites are also visited on foot for a closer look at the quality of the works as a check that the full specification requirement was being met. Sites visited in this annual period included weather stations, traffic signals, electrical installations, cleaning traffic signs, and cleansing of gullies, manholes and catchpits.



NW NMC: A828 Footway siding out

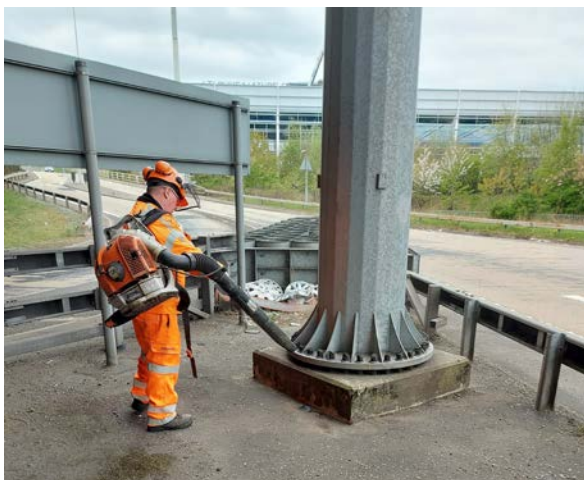
Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Network Cyclic maintenance						
PI 07 Cyclic Maintenance	60.8%		71.3%			
Structures Cyclic Maintenance						
PI 10 Structures Cyclic Maintenance	98.5%	32.0%	100.0%	93.8%	94.1%	93.9%

Table 6

The quality of cyclic maintenance operations noted on the road network were undertaken to an excellent standard in 4G NE, NW, NE and SE NMC . The 4G NW and SW NMC were to a Good standard In the SW unit, issues were noted for gully, manhole, and catchpit cleaning where operations were not always in accordance with the contract and for traffic signal maintenance for which the required annual review had not been completed and strategy documents were not in place.

PI 07, which is a measure of the frequency of maintenance, remained below an acceptable level for the 4G NW and NE units up to the end of those contracts in August 2022. In the NMC units the AMPS based PI report is not yet available.

Condition



SW NMC: M8 high Mast cyclic maintenance

For Structural cyclic maintenance, the NW 4G and SE NMC units received a Fair rating, the remaining units, NE 4G; NE NMC; NW NMC; and SW NMC received a Poor rating. Workmanship was not satisfactory with regards to vegetation management, especially moss growth, joint cleanliness, and drainage maintenance. Remedial Notices were raised in NE

and SW NMCs which remained open at the end of the annual period, similarly an NNC which was raised in SE NMC in January 2022 was subsequently closed in April 2022.

Inspections

Comprehensive inspections of all assets are generally undertaken annually, although there are differing periods for some asset types. This inspection includes a review of the asset's condition and provides a condition rating. It is also an annual validation of the asset as recorded in Transport Scotland's asset database that the database matches exactly the assets on the ground and that more detailed asset information, such as construction materials, are also captured and updated on an annual basis.

These inspections and the data collected is of key importance to Transport Scotland to allow full understanding of the number of assets they have on the network, their condition and expected remaining life. This assists in setting required levels of maintenance budget for future years by providing the necessary data to make forward planning decisions.

It also provides the Operating Company with the information they need to target maintenance schemes where it is required and to allocate their annual budget to the appropriate asset types.

Reviews undertaken towards the end of the 4G NW and NE contracts on general network assets and on electrical equipment found a good performance. However, PI 06 continued to show that a large percentage of the network had not received an inspection within the contractual timescale of the previous inspection.

In NMC, reviews have not yet been undertaken in the NW and NE units as only six months had passed since the start of those contracts. Reviews of the SW and SE contracts has also been delayed due to a delayed start date for the NMC asset inventory verification exercise as issues around inputting information into AMPS are resolved. Reviews were undertaken on drainage assets in the SE unit and on electrical installations in the SW, both of which found issues with defects not being recorded in AMPS.

PI 06 which measures the frequency of Detailed/Comprehensive Inspections is not yet available in AMPS to measure performance in the NMC contracts.

Condition

An NNC was raised in SW NMC for various aspects of traffic signal inspections and maintenance, not updating inventory in AMPS or raising defects for repair, and annual operational and strategy reports not being produced, which remained open at the end of the annual period. In NW 4G an NNC raised in 2020 for lack of records on Vehicle Restraint System was closed in May 2022.

With regards to Structures, standards for the qualification requirements of personnel undertaking inspections of structures were introduced in 2016 (Bridge Inspector Certification Scheme: BICS).

All Operating Companies continue to have issues in meeting the requirements for all inspector's achieving the accreditation required. This continues to be managed by Transport Scotland. An NNC raised in SE unit in the previous reporting period for not meeting BICS requirements was escalated to Remedial Notice in April 2022 and remains open.

Reviews of Principal and General Inspections in the NE NMC and NW 4G found a good performance in the quality of reports. In the NE 4G and NW NMC the quality was Fair, and the SE and SW NMC performance was Poor with various issues noted in the quality of the reports.

NW NMC was issued with an NNC whilst SW unit was issued with separate Remedial Notices for not completing its Principal and General Inspection programme for both 2021 and 2022, these all remain open. A Remedial Notice was also raised in SW NMC for various issues relating to the management of sub-standard structures and structures with known defects which remains open.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Comprehensive Inspections (NMC) / Detailed Inspections (4G)						
PI 06 Comprehensive Inspections (NMC) / Detailed Inspections (4G)	84.3%		68.0%			
PI 21 (4G) Recording Inventory Condition Rating	93.3%	N/A	92.8%	N/A	N/A	N/A
Principal and General Inspections						
PI 08 Structures Principal Inspections	87.0%	92.8%	86.0%	83.0%	95.9%	95.9%
PI 09 Structures General Inspections	95.0%	95.8%	87.8%	82.4%	97.6%	99.8%

Table 7

The Remedial Notices raised by Transport Scotland in 2019 with regards to inspection and maintenance requirements of road markings remained open in 4G NE and 4G NW when those contracts ended.

Resilience and Prosperity

“ To provide consistent, predictable and reliable journeys for the movement of people and goods, and to minimise disruption caused by roadworks, unplanned incidents and severe weather conditions.

Journey Time Reliability Coordinator

The contract contains specific requirements for ensuring a free flowing a network as possible via the role of the Journey Time Reliability Coordinator (JTRC). Audits were undertaken of the JTRC role which found the role was being delivered to the requirements of the contract.

Audits were undertaken on all four NMC units which demonstrated in depth knowledge and delivery of the JTRC role and requirements. Traffic management installations observed during monthly route tours of the trunk road network were found to be well laid out and maintained providing the least possible impact on travel times as essential maintenance operations are undertaken.

Disruption Risk Management Plan

A key element of ensuring a free-flowing network is advance preparation and plans in place for areas where disruption might be anticipated in the event of extreme weather. The Disruption Risk Management Plan (DRMP) requirements cover a wide range of areas with plans required to be in place setting out the mitigation to ensure minimal impact.

Although audits in the NE NMC and NW NMC found excellent systems in place to manage disruption risk parts of the contract, issues were noted with inconsistencies and errors in the recording of incidents in AMPS, subsequently they received a Good rating. Similar issues were encountered in the SW NMC, where they received a Fair rating. Reviews of the 4G NW identified Excellent quality and NE 4G along with the SE NMC unit found a good performance.

Structures Risk Programmes

Structures Risk Programmes involve the inspection, monitoring and maintenance of a defined list of structures with specific attributes which are particularly at risk of developing issues which may reduce their load carrying capacity and hence be a pinch point that impacts on Journey Time Reliability.

Reviews in SE NMC management of Scour, Half joints, Parapets and At Risk Supports were all assessed as a Good performance. Reviews of Scour and Half Joints in 4G NW and of Scour, Half Joints, Parapets and Post Tensioning in the SW NMC were all assessed as Fair as issues were noted in the management of these aspects. An NNC was raised in SW NMC related to various aspects of management of Scour which was subsequently closed.

Resilience and Prosperity

Structures Investigations

In NW 4G a review of the management of swing bridges found a poor performance with Operation and Maintenance manuals not up to date and issues found on competencies and recording of electrical testing. An NNC was raised for meeting contractual requirements in relation to witnessing monthly testing. In SE NMC reviews of the Forth Road Bridge Engineering Manual and of the network management of gantries both found an Excellent performance, although a few minor issues were noted. In SW NMC reviews of the Kingston Bridge Operations and Maintenance manual and of management of sub-standard structures both found a Good performance with issues noted in the management process of both reviews. The Operating Companies response was excellent through acknowledging the issues and putting in place actions to resolve.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
JTRC and Traffic Management						
DRMP						
Structures Risk Programmes						
Structures Investigations						

Table 8

Two NNCs raised previous periods were closed, in NW 4G relating to approval process for changes to the Operational and Maintenance Manual of the Killiecrankie bridge, and SE NMC relating to reviewing of handover records to identify missing information.

Case Study: Amey NE

Queen Elizabeth II funeral Cortege

Following the death of Queen Elizabeth II the Amey team in the North East Unit responded to assist with the funeral cortege from Balmoral to Edinburgh. Significant managerial, operational and plant resources across the business were mobilised to work with Transport Scotland and Police Scotland in ensuring the cortege passed safely along the trunk road routes through Aberdeenshire, Angus, Perth and Kinross and Fife.

Following confirmation of the Queen's passing on 8 September, regular meetings were scheduled with Transport Scotland, Local Authorities and emergency responders to ensure preparations were in place for the cortege, which was confirmed to take place on Sunday 11 September.



Figure 6 TRISS supporting the cortege

(cont.)

Resilience and Prosperity



Figure 7 TRISS closing of the A90/A937 junction

In accordance with the Operational plan which had been developed during the 4G contract, Amey operational teams closed junctions along the route to ensure the cortege could pass through the trunk road unit unimpeded, the closures were quickly removed once the cortege had passed. To mitigate against any potential breakdown issues recovery vehicles were pre-placed at strategic locations along the route. MEWP's were pre-placed to remove protest banners at overbridges crossing the trunk road. CCTV units were mobilised to monitor areas of strategic importance and VMS placed to advise road users of the event. Daily inspections were programmed in advance of the event to identify and attend any issues. Teams were also in place through urban areas to remove any floral tributes left on the route following the cortege passing.

On the day of the cortege the Operating Company Representative was in the Traffic Scotland National Control Centre to oversee the event alongside Transport Scotland's senior management team. Amey's Network Manager, Control Room Manager and JTRC were present in our operational control room to monitor the event and provide support to the Amey team.

Value for Money and Innovation

“ To make economic and efficient use of available resources for road maintenance and foster innovation in all aspects of work.

Financial Management

Reported spend figures are inclusive of contract price fluctuations (CPF) unless otherwise stated.

Total spend for 2022/23 is £361.2m (2021/22: £319.0m). A comparison of spend figures by Unit for 2022/23 and 2021/22 is shown in Figure 8: Spend v Budget (excluding CPF) all Units.

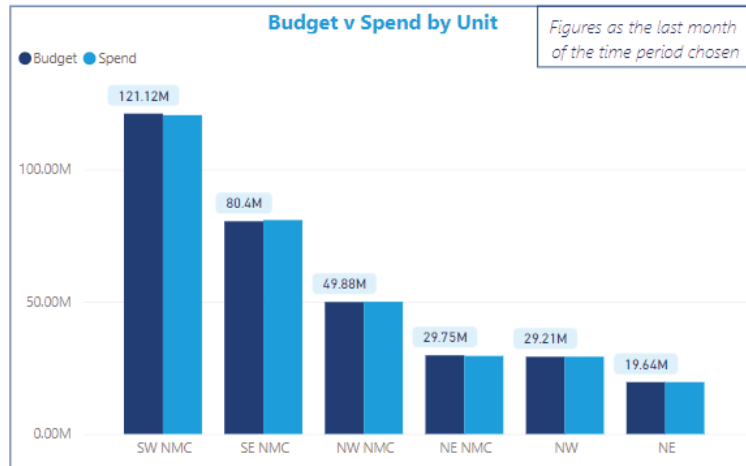


Figure 8: Spend v Budget (excluding CPF) all Units

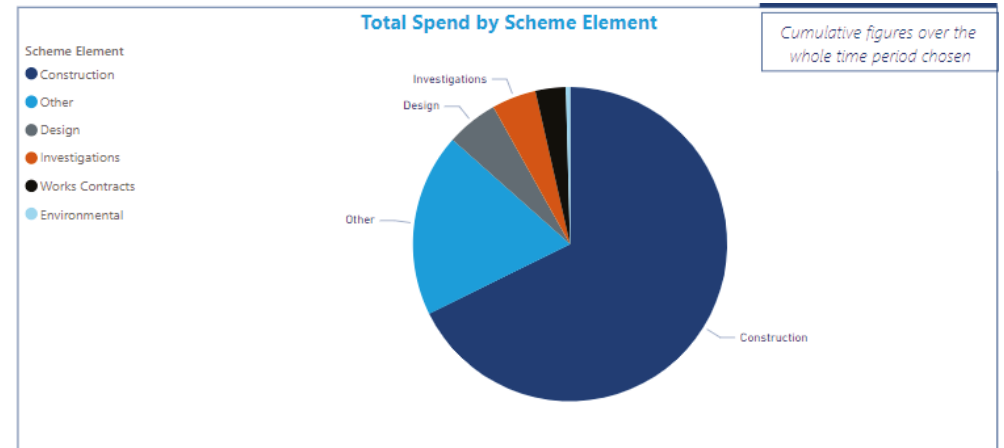


Figure 9: Total Spend by Scheme Element all Units

The budget for 2022/23 of £330.0m (net of CPF), which is an increase of £9.5m (3.0%) from the previous year.

Figure 9 gives a breakdown by the differing elements of activity. Note that in Figure 5 the heading 'Other' is mostly comprised of Core Operations activities such as cyclic maintenance, detailed/comprehensive inspections, and winter maintenance.

Value for Money and Innovation

Budget, Spend and Programmes

PAG monitors and reports on the inter-relationship of budget, orders and spend to assist Transport Scotland in its financial management.

Budgetary Control

Budgetary control by the Operating Companies is an important management responsibility. It is important that the Operating Companies exercise good budgetary control regardless of funding levels, as there may be little scope to revise programmes if there are any significant increases in scheme costs, particularly towards year end.

This risk has been recognised by Transport Scotland and is included within the PAG audit and monitoring programme.

The Operating Companies have responsibility for delivering a programme of maintenance covering five budget categories, these are routine maintenance (RM), structural maintenance (SM), structures (STR), minor improvements (MI) and strategic road safety (SRS).

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Budget v Spend						

Table 9

A comparison of spend against budget for 2022/23 is shown in Figure 10: Spend v Budget (excluding CPF) all Units.

Operating Company performance in budgetary control is assessed on the accuracy of monthly profiled spend v actual spend and year-to-date profiled spend v actual spend. Performance was Fair for all units. All units were consistently behind in delivering their programmes.

All units apart from NE NMC did spend their allocated budgets by the financial year end, however, the NE NMC had its budget allocation reduced by circa £3m. PAG will continue to monitor this aspect of contract budgetary control.

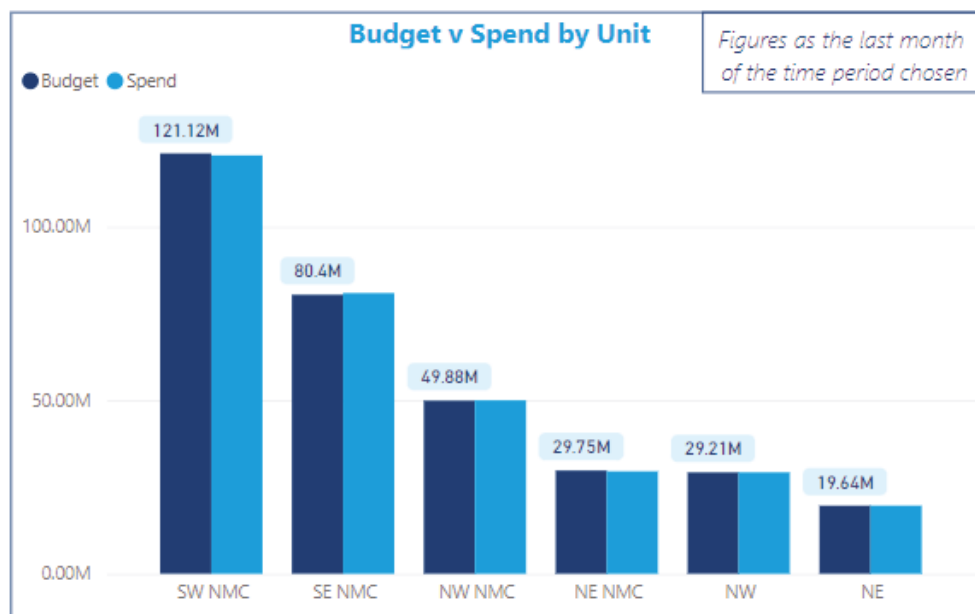


Figure 10: Spend v Budget (excluding CPF) all Units

Value for Money and Innovation

Financial Management of Schemes

PAG monitors various aspects of Operating Company performance in financial management of schemes with ratings given throughout the year.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Bids	Grey	Blue	Grey	Grey	Grey	Grey
Expenditure Profiling	Grey	Grey	Grey	Grey	Grey	Grey
Order v Spend	Grey	Blue	Grey	Grey	Grey	Grey
Part B and C items	Grey	Blue	Blue	Blue	Dark Blue	Blue
Scheme Completion	Dark Blue	White	Blue	White	White	Grey
Statements	Blue	Dark Blue	Dark Blue	Grey	Blue	Dark Blue
Works Contract Invoices	White	White	White	White	White	Dark Blue

Table 10

Bids

Operating Company performance in Bid submission is based on regularity of Bid revisions, Bids in system for the next month's programme and Bids submitted for the construction element not later than 25 working days of construction starting. Overall performance was Good in NE NMC with the Operating Company not always submitting revised bids adjusting for over or under spends for schemes completed up to two months.

Overall performance was Fair in 4G NE, NW NMC, SE NMC and SW NMC units with the Operating Companies not always submitting revised bids adjusting for over or under spends for schemes completed for two months or longer, having insufficient Bids in the system or not always submitting construction bids within contractual timescales. Performance in 4G NW was Poor with the Operating Company not always submitting revised bids adjusting for over or under spends for schemes completed for three months or longer, having insufficient Bids in the system or not always submitting construction bids within contractual timescales.

Order v Spend

Assessment of Operating Company performance is rated on the number of schemes and/or financial materiality of overspend to Ordered value. Performance was Good in NE NMC with spend exceeding orders on an occasional basis. Performance was Fair in 4G NE with spend exceeding orders on a regular basis. Performance was Poor in 4G NW, NW NMC, SE NMC and SW NMC units, where spend frequently exceeded orders. The NNC for NMC SW issued in 2020/21 remained open at the end of the annual period. The NNCs issued in 202/21 for 4G NE and 4G NW remained open until the 4G contracts ended on 15 August 2022. Where appropriate, monies were deducted from payment.

Value for Money and Innovation

Scheme Completion

Operating Company performance for scheme completion is based on identifying schemes from Operating Company expenditure profiles which have no further planned spend and check if schemes are logged as completed in the Contract Control and Management function (CCMF) of IRIS. Performance in 4G NE was Excellent. For 4G NW performance was Good with the Operating Company closing out a significant number of schemes after scheme construction. Performance in the NMC units has not been undertaken as scheme completion reports are under development. The NNC issued to SW NMC unit in June 2021 was closed in July 2022.

Expenditure Profiling

Operating Company performance is assessed on timeliness of submission and agreement with budget value. Performance in all units was Fair. Whilst profiles were submitted on time there were moderate issues encountered, including profiles not matching budgets and use of bucket code schemes. An NNC was issued to NE NMC unit in March 2023 for submitting its 2023/24 one-year programme with a significant amount of missing information. This NNC remained open at the end of the reporting period.

Statements

Operating Company performance is assessed on statements being issued within contractual timescales and the value of missing supporting records within CCMF. Performance was Excellent in 4G NW, NE NMC and SW NMC. Good performance was noted in 4G NE and SE NMC as some supporting information was not available in CCMF at time of the statement submission.

Performance in NW NMC was fair as a moderate level of supporting information was not available in AMPS at time of the statement submission. For all Units, statements were submitted within required timescales.

Works Contractor Invoices

Performance was excellent in NMC SW. No works contract invoices were submitted in 4G NE, NE NMC, 4G NW, NW NMC and SE NMC units during the reporting period.

Disputed Items (Part B and C items)

PAG undertakes a review of the Operating Companies applications for payment with any issues highlighted for discussion via PAG Statement Review Notes process with disputed amounts recorded in separate parts of the statement (Parts B & C). Performance is assessed on how the Operating Companies resolve, address, or respond to disputed issues within a reasonable timescale. SE NMC unit performance was Excellent. Performance in NE NMC, 4G NW, NW NMC and SW NMC unit was Good with the Operating Companies responding to issues reported in PAG's Statement Review Notes within a reasonable timescale. Performance in 4G was Fair as the Operating Company was slow in closing out issues.

Operating Company Financial Management of CCMF

As part of the financial management of schemes and budget, 4G Operating Companies are required to utilise the Contract Control and Management Function (CCMF) of IRIS. NMC Operating Companies utilise AMPS.

Value for Money and Innovation

CCMF - Damage to Crown Property

Performance in populating damage to crown property (DCP) data within CCMF was Excellent for 4G NE. For 4G NW performance was Good with minor level of DCP data missing from CCMF.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
CCMf - DCP						
CCMf - Statements						

Table 11

Performance of Excellent for SW NMC relates to actions undertaken in 2022/23 to back populate missing DCP data in CCMF. Performance in the NMC has not been assessed as the DCP module in AMPS was still under development in 2022/23.

CCMF - Statements

Performance in populating statement data within CCMF/AMPS was Excellent in all units.

Measurement and Valuation

Works are ordered by Transport Scotland via Elements in the AMPS database which set out what is to be done and how it is to be measured for payment along with payment rates. PAG reviews Elements at both bid stage and on completion of the operations to check operations were being measured and charged to the appropriate rates and that all records required

to back up the values claimed were saved to the appropriate location in the contract control database.

Two distinct aspects are reviewed, the Method of Measurement utilised, and the records provided. Records include both measurement records to justify the values claimed, and testing records to evidence the quality of the materials constructed achieve the required specification.

PAG carried out a total of 159 OI/Measurement reviews during the annual period. Operations reviewed including resurfacing, patching, drainage, cycleway improvements, bridge deck refurbishment, steel work repairs, barrier replacement, fencing, traffic sign replacement, lighting, and pedestrian crossing installation. PAG rated measurement to a good standard in 4G NE, 4G NW and NMC SE units whilst in NE, NW and SW NMC units' performance overall was Fair.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Measurement						

Table 12

The Method of Measurement was often marked down in reviews due to insufficient records being in place to allow an accurate assessment to be undertaken, other issues included not having all approvals from Transport Scotland in place, or utilising incorrect Schedule of Rate items. For Records, observations relating to a lack of supporting records or specific types of records missing such as site diaries, measurement records, waste transfer notes or material test results.

Value for Money and Innovation

An NNC for SW NMC was issued in June 2022 for poor performance in uploading the records required to support payment for operations claimed. This is the second related NNC received by SW NMC and remains an ongoing issue. An NNC was raised in March 2023 in NE NMC related to the monthly core operations monthly payment as the Operating Company was incorrectly classifying Incidents as chargeable Category 1 Defects.

Quality Management

Over the course of the year PAG reviews Operating Company performance in delivering its own internal audit programme, and the effectiveness of its Non-Conformance Register to log, resolve, and close out any Non-Conformances noted either internally or via PAG reporting. The Quality Management Systems of the Operating Companies received an Excellent performance in the 4G NE and NW units with Non-Conformances actioned within timescale and internal audits completed to schedule.

In NE and SW NMC units' performance was Fair, NE NMC performance started out well at the start of the year issues were noted towards the end of the annual period with the rising number of Non-Conformances not being dealt with and internal audit programme not being completed. SE NMC internal audit programme was Excellent whilst in SW NMC it was undertaken to programme. However, issues were noted in both units, in the NCR register with SW NMC not recording PAG raised NNCs, or incorrectly closing Non-Conformances that were not yet closed, and SE NMC had a large number of Non-Conformances going beyond target closure date.

An NNC was issued to SW NMC in June 2022 for not complying with the requirement to submit weekly Non-conformance Register reports, with another NNC issued in February 2023 for not reporting the full list of Performance and Monitoring Indicators required by the contract. Both NNCs remain open.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Quality Management System Monitoring and Audit						
PI 16 (4G) / MI 15 (NMC) Submission of reports	100.0%	92.4%	100.0%	100.0%	100.0%	87.3%
PI 15 Closure of Non-Conformances	87.3%	4.3	91.3%	6.3	6.1	6.7
PI 14 (NMC) / MI 14 (4G) Remedial Notices	1.0	1.7	2.0	0.0	1.5	2.4
Notice of Non-Conformance raised in period	0	7	1	10	6	8
Remedial Notice raised in period	0	3	0	4	2	6
Notice of Non-Conformance raised since start of the contract	32	7	32	10	31	36
Remedial Notice raised since the start of the contract	8	3	9	4	3	9

Table 13

Sustainability

“ To reduce carbon and waste and enhance environments.

On each site visit undertaken by PAG a check is undertaken on the environmental measures employed on the site. To check materials are safely stored with adequate measure in place in case of spillage, and that soft landscaped areas are adequately protected from machinery or spillage.

These reviews found a good overall performance on site with required documentation in place and environmental principles being applied. Occasional issues were noted such as materials not being adequately stored with appropriate containment safeguards in place.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Environmental and Sustainability Monitoring and Audit						
PI 28 (NMC) / MI 18 (4G) Sustainability - Waste generation and management	100.0%	100.0%	94.3%	100.0%	100.0%	99.5%
MI 33 (NMC) / MI 17 (4G) Sustainability - use of reused recycled, renewable materials	0.0%	35.6%	0.0%	17.0%	18.8%	5.7%

Table 14

Case Study: Amey SW

A77 Stranraer to Beach Cottage Ex-Situ Recycling

This summarises the case study that examined the carbon savings of the ex-situ pavement recycling on the A77 between Stranraer and Beach Cottage, completed in September 2022. Hazardous tar-bound and non-tar bound materials from multiple sites were stabilised with foamed bitumen, cement and PFA (pulverised fuel ash), before being reused as base course on the A77 site. This is compared to the traditional scenario which involves sending the tar-bound materials to a specialist landfill for hazardous materials.

Scenario 1 - As-built: Ex-Situ Recycling

Following planning, 950t of tar-bound materials removed from the A77 Stranraer to Beach Cottage, Brock's Factory, the A701 South of Parkgate, and the A75 Old Military Road, along with 1110t of non-tar bound materials from the A77 site, were transported to Breedon Barlockhart Quarry. Materials were stabilised with 3% foamed bitumen, 1% cement, and 7% pulverised fuel ash (PFA). The material is then transported back to the A77 for reuse as base course.

Scenario 2 - Baseline: Landfill

950t of tar-bound materials from the 4 locations are sent to OCL Micheldever Depot in Hampshire where they are processed for landfill. 1110t of non-tar bound materials are recycled locally. For the new base course, 2924t of new virgin aggregates are used, mixed with 3.9% bitumen.

Conclusions

Ex-situ recycling is estimated to emit 44 tCO₂e, while the landfilling would emit 108 tCO₂e, resulting in a 64 tCO₂e saving. The total cost savings were £164,380.



Figure 11 Ex-situ Recycling

Customer Care and Travel Information

“ To provide customers with up-to-date, reliable travel information and support the level of satisfaction in trunk road services.

Audits were undertaken in the SW and SE NMC units on the Community Benefits requirements of the contract, and of Customer Care and Travel Information requirements. SE NMC was found to be performing well in both areas with robust procedures in place set up to deliver the requirements of the contract, SW NMC fared less well with a few areas noted in need of improvement.

An NNC was raised in SW NMC for not supplying quarterly reporting to Transport Scotland detailed achievements made in the previous quarter which was subsequently closed. NW NMC audit on Customer Care and Travel Information found a Fair performance with issues noted in relation to report submissions and employee training.

An NNC was raised in Oct 2022 with NW NMC not having a Journey Time Reliability Coordinator role in place, this was escalated to Remedial Notice in November 2022 and subsequently closed in December 2022. Two NNCs were raised in SW NMC relating to the requirements of the Scottish Road Works Commissioner for not entering information onto the Scottish Roads Works Register and for not responding to correspondence from the Commissioner. Both were subsequently closed.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Customer Care and Travel Information						
PI 16 (NMC) Complaints Response Time Compliance	N/A	100.0%	N/A	100.0%	100.0%	100.0%
PI 18 (NMC) Correspondence and Call Response Time Compliance / PI 18 (4G) Communications Response	100.0%	99.8%	98.5%		99.1%	98.8%

Table 15

Customer Care and Travel Information



Figure 12 A702 80 Westwater concrete pour



Figure 13 A702 80 Westwater Completed Scheme

Case Study: BEAR SE

A702 80 Westwater Emergency Scour Repairs

The A702 80 Westwater is a single span masonry arch bridge that forms part of the A702 trunk road, passing over the Westwater River. The structure was originally constructed in 1831.

Between the 31st of December and 2nd of January, a major scour incident occurred, which undermined the foundation of the south abutment. The original foundation consists of 2.7m timber piles and slabs.

Following an initial closure of the structure to allow a full assessment of the damage, it was decided to limit traffic to one lane on the downstream side

of the carriageway where damage to the foundation was minimal. In addition, a temporary weight restriction of 7.5T was imposed. BEAR immediately responded and mobilised to protect the structure. Initial work to divert the water course back under the arch of the structure was carried out under an emergency CAR license, this was further enhanced by the introduction of rock armour.

On 20 January, 35m³ of concrete was poured to secure the area affected by the scour. In total, 128m of rock armour was installed on the south and north riverbank to protect the structure.

Emergency works were complete in early February 2023.

Accessibility and Integration

“ To provide a network that is accessible to all users, with improved connectivity, and to ensure that traffic moves freely and quickly across Scotland.

Audits were undertaken in NE, NW, and SE NMC units to assess Operating Company performance in dealing with Barriers to Accessibility on their units. Barriers to Accessibility are such things as not having dropped crossings at road junctions to assist wheelchairs users to cross the road, or not having tactile paving slabs at pedestrian crossings to assist blind pedestrians to safely use crossings. By installing such infrastructure, the Operating Company is removing these barriers to accessibility.

Minor issues were noted in NE and SE NMC units on not submitting all require contractual information or fully maintaining all registers, but all units were found to have good robust procedures in place and were undertaking contractual requirements.

Performance Measure	NE (4G)	NE (NMC)	NW (4G)	NW (NMC)	SE (NMC)	SW (NMC)
Barriers to Accessibility						
PI 17 Planning Applications	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 16

Performance and Quality Indicators Summary

Performance and Quality Indicators Summary

The following tables provide a summary comparison of performance in all the differing areas of the contract in either PAGs Quality assessment of delivery or the contractual Performance Indicators. The 2020/21 ratings are also provided for comparison.

Quality Ratings in delivery performance

Quality Ratings	NE (4G)		NE (NMC)	NW (4G)		NW (NMC)	SE (NMC)		SW (NMC)	
	2021/22	2022/23	2022/23	2021/22	2022/23	2022/23	2021/22	2022/23	2021/22	2022/23
Routine Monitoring Inspections (NMC) / Safety Inspections (4G)										
Winter Service										
Incident Response										
Health & Safety and CDM										
Network Maintenance Schemes										
Structures Maintenance Schemes										
Network Cyclic Maintenance										
Structures Cyclic Maintenance										
Comprehensive Inspections (NMC) / Detailed Inspections (4G)										
Principal and General Inspections										
JTRC & Traffic Management										
DRMP										
Structures Risk Programmes										
Structures Investigations										
Measurement										
Quality Management System										
Environmental and Sustainability										
Customer CSE are and Travel Information										
Barriers to Accessibility										

Table 17

Performance and Quality Indicators Summary

Quality Ratings in financial performance

Financial Management	NE (4G)		NE (NMC)	NW (4G)		NW (NMC)	SE (NMC)		SW (NMC)	
	2021/22	2022/23	2022/23	2021/22	2022/23	2022/23	2021/22	2022/23	2021/22	2022/23
Budget v Spend										
Bids										
Expenditure Profiling										
Order v Spend										
Part B and C items										
Scheme Completion										
Statements										
Works Contract Invoices										
DCP										
Statements										

Table 18

Performance and Quality Indicators Summary

Contractual Performance Indicators

Performance Indicators	NE (4G)		NE (NMC)	NW (4G)		NW (NMC)	SE (NMC)		SW (NMC)	
	2021/22	2022/23	2022/23	2021/22	2022/23	2022/23	2021/22	2022/23	2021/22	2022/23
PI 02 (NMC) Repair of Structures Category 1 Safety Defects	N/A	N/A	0.0%	N/A	N/A	0.0%	66.7%		75.0%	50.0%
PI 03 Repair of Category 1 Safety Defects (except Structures)	95.7%	92.6%	66.5%	95.9%	94.3%	76.9%	93.0%	95.2%	92.0%	93.5%
PI 04 (NMC) Asset Data Quality Audit										
PI 05 Routine Monitoring Inspections (NMC) / Safety Inspections and Patrols (4G)	97.9%	100.0%		96.8%	98.7%		95.6%		95.6%	
PI 06 Comprehensive Inspections (NMC) / Detailed Inspections (4G)	85.1%	84.3%		70.3%	68.0%		79.4%		77.7%	
PI 07 Cyclic Maintenance	76.4%	60.8%		80.3%	71.3%		50.4%		56.5%	
PI 08 Structures Principal Inspections	99.8%	87.0%	92.8%	90.6%	86.0%	83.0%	96.9%	95.9%	84.2%	95.9%
PI 09 Structures General Inspections	99.4%	95.0%	95.8%	98.8%	87.8%	82.4%	99.3%	97.6%	98.8%	99.8%
PI 10 Structures Maintenance Programme	100.0%	98.5%	32.0%	98.2%	100.0%	93.8%	96.6%	94.1%	88.5%	93.9%
PI 11 (NMC) Well Lit Network	N/A	N/A		N/A	N/A					
PI 11 (4G) Winter Service Treatments	99.4%	99.5%	N/A	98.1%	96.0%	N/A	N/A	N/A	N/A	N/A

Table 19 (cont.)

Performance and Quality Indicators Summary

Performance Indicators	NE (4G)		NE (NMC)	NW (4G)		NW (NMC)	SE (NMC)		SW (NMC)	
	2021/22	2022/23	2022/23	2021/22	2022/23	2022/23	2021/22	2022/23	2021/22	2022/23
PI 12 (NMC) Winter Treatment Efficiency	N/A	N/A	18.9	N/A	N/A	0.6	0.0	0.0	13.8	0.0
PI 12 (4G) Actual spend against profile	84.3%	81.5%	N/A	72.0%	86.8%	N/A	N/A	N/A	N/A	N/A
PI 13 (NMC) Weather Forecast Accuracy	N/A	N/A	1.2%	N/A	N/A	0.4%	N/A	0.4%	N/A	0.7%
PI 14 (NMC) Remedial Notices	N/A	N/A	1.7	N/A	N/A	0.0	0.1	1.5	0.2	2.4
PI 15 Closure of Non-Conformances	98.7%	87.3%	4.3	95.1%	91.3%	6.3	1.8	6.1	12.7	6.7
PI 16 (NMC) Complaints Response Time Compliance	N/A	N/A	100.0%	N/A	N/A	100.0%	100.0%	100.0%	100.0%	100.0%
PI 16 (4G) Submission of reports	100.0%	100.0%	N/A	100.0%	100.0%	N/A	N/A	N/A	N/A	N/A
PI 17 Planning Applications	100.0%	100.0%	100.0%	99.8%	100.0%	100.0%	98.3%	100.0%	99.3%	100.0%
PI 18 (NMC) Correspondence and Call Response Time Compliance / PI 18 (4G) Communications Response	99.3%	100.0%	99.8%	100.0%	98.5%		99.1%	99.1%	94.4%	98.8%
PI 20 Grassed area										
PI 21 (NMC) Salt Spread	N/A	N/A	100.0%	N/A	N/A	100.0%	98.7%	98.3%	100.0%	99.8%

Table 19

(cont.)

Performance and Quality Indicators Summary

Performance Indicators	NE (4G)		NE (NMC)	NW (4G)		NW (NMC)	SE (NMC)		SW (NMC)	
	2021/22	2022/23	2022/23	2021/22	2022/23	2022/23	2021/22	2022/23	2021/22	2022/23
PI 21 (4G) Recording Inventory Condition Rating	75.4%	93.3%	N/A	75.2%	92.8%	N/A	N/A	N/A	N/A	N/A
PI 22 (NMC) Litter and Refuse										
PI 23 (NMC) Review and Inspection of Structures Assets with Known Defects										
PI 24 (NMC) Inventory Data Completion										
PI 25 (NMC) Approvals for Structural Maintenance										
PI 27 (NMC) / PI 04 (4G) Incident Response	96.5%	96.6%		97.9%	97.2%		91.6%		95.7%	
PI 28 (NMC) Sustainability - Waste generation and management	N/A	N/A	100.0%	N/A	N/A	100.0%	100.0%	100.0%	98.0%	99.5%
PI 29 (NMC) Timely Upload of Construction Phase Plans	N/A	N/A	29%	N/A	N/A	100.0%	N/A	94.2%	N/A	94.5%
PI 30 (NMC) Timely Upload of Final Health and Safety Plans	N/A	N/A	50%	N/A	N/A	100.0%	N/A	100.0%	N/A	51.9%

Table 19

Operating Company Unit Information

4G North West fact file



Managed and maintained by:

BEAR Scotland Ltd.
BEAR House
Inveralmond Road
Inveralmond Industrial Estate
Perth
PH1 3TW

Total route length of the network in NW:

1,439km

Number of structures:

1,511

Budget for maintaining trunk roads in NW this period:

£29.2m

Operating Company Unit Information

NMC North West fact file



Managed and maintained by:

BEAR Scotland Ltd.
BEAR House
Inveralmond Road
Inveralmond Industrial Estate
Perth
PH1 3TW

Total route length of the network in NW:

1,431km

Number of structures:

1,585

Budget for maintaining trunk roads in NW this period:

£49.9m

Operating Company Unit Information

4G North East fact file



Managed and maintained by:

BEAR Scotland Ltd.
BEAR House
Inveralmond Road
Inveralmond Industrial Estate
Perth
PH1 3TW

Total route length of the network in NE:

573km

Number of structures:

567

Budget for maintaining trunk roads in NE this period:

£19.6m

Operating Company Unit Information

NMC North East fact file



Managed and maintained by:

Amey
Caledonian House
West Kinfauns
Perth
PH2 7XZ

Total route length of the network in NE:

604km

Number of structures:

579

Budget for maintaining trunk roads in NE this period:

£29.7m

Operating Company Unit Information

NMC South West fact file



Managed and maintained by:

Amey
Oatlands House
150 Polmadie Road
Glasgow
G5 0HD

Total route length of the network in SW:

663km

Number of structures:

1,754

Budget for maintaining trunk roads in SW this period:

£121.1m

Operating Company Unit Information

NMC South East fact file



Managed and maintained by:

- BEAR
- Forth Road Bridge
- South Queensferry
- EH30 9SF

Total route length of the network in SE:

551km

Number of structures:

786

Budget for maintaining trunk roads in SE this period:

£80.4

Glossary of Terms

4G contracts

4th generation contracts which were tendered in two phases. NW and SW were tendered first and commenced on 1 April 2013. NE and SE commenced on 16 August 2014.

NMC Contracts

Network Management Contracts (NMC) were introduced to replace the 4G contracts. The SW and SE contracts commenced August 2020 whilst the NW and NE contracts commenced August 2022.

Operating Company

The contractual term to describe the companies who tendered and were awarded the term maintenance contracts to maintain and operate the Scottish trunk road network.

Category 1 defect

A Defect that necessitates prompt attention because it presents:

- (i) an immediate or imminent hazard, or
- (ii) a risk of rapid structural deterioration to the affected element.

Category 2 Defect

Any Defect which is not a Category 1 Defect.

CCMf (Contract control and management function)

The asset management system provided by Transport Scotland and used by Operating Companies in delivery of the maintenance contracts including a full asset information database of all Network and Structures assets on the Trunk Road Network. It is used to log the physical characteristics and condition of the trunk road network, dates inspection and maintenance were last undertaken, and log all incidents that occur. It also contains financial modules that contain information about how operations and works contracts are being managed financially and where money is being spent.

Contract price fluctuation factor (CPF)

Inflation adjustments to the Operating Company's tendered rates and prices.

Financial year

The period between 1 April 2022 and 31 March 2023.

Performance indicators

A contract based numerical measure of the Operating Company's performance in delivering various contractual requirements with targets to be achieved.

Monitoring indicators

Monitoring indicators provide a numerical measure of service provision. These differ from Performance Indicators in that there is no target set for achievement.

Non-conformance (NC)

Default by the Operating Company or defect in operations.

Notice of non-conformance (NNC)

The process to notify Operating Companies of areas noted by PAG that are not complying with the contract.

Operations

Work carried out by the Operating Companies.

Orders

Instructions issued by Transport Scotland to the Operating Companies. These give details of operations (not works contracts) to be carried out under the contract by the Operating Companies. The Operating Companies should not start operations until an order has been issued.

Glossary of Terms

Quality management system (QMS)

Quality management is fundamental to the contracts. A QMS is drawn up by each Operating Company to set out how it will carry out every function required of it under the contract.

Remedial notice

A procedure used under the contract where Transport Scotland can issue a notice when an Operating Company commits a default. This is part of the performance management procedures and may lead to withholding amounts from payment.

Sustainability

Sustainability in trunk road maintenance and improvement allows for an enhanced network consistent with social needs, permitting environmental stewardship, improving safety, promoting efficiency and meeting the mobility requirements of current and future generations.

Works Contract

Any works undertaken under a separate contract, designed, procured and supervised by Operating Companies. Such contracts are between the Scottish Ministers and a works contractor for execution of a scheme or part of a scheme.

Abbreviations

4G	4th Generation Term Contract for the Management and Maintenance of the Scottish Trunk Road Network
NMC	Network Management Contract
AMPS	Asset Management Performance System
BICS	Bridge inspector certification scheme
CCMF	Contract control and management function
CDM	The Construction (Design and Management) Regulations 2015
CPF	Contract price fluctuation
DCP	Damage to Crown Property
DRMP	Disruption Risk Management Plan
H&S	Health and safety
ISO	International Standards Organisation
JTRC	Journey Time Reliability Coordinator
LED	Light emitting diode
MI	Monitoring indicators
NNC	Notice of non-conformance
ORI	Observation resulting from inspection
PAG	Performance Audit Group
PI	Performance indicators
QMS	Quality management system
RMMF	Routine maintenance management function
RN	Remedial Notice
SM	Structural maintenance
SRS	Strategic road safety
STR	Structures
TS	Transport Scotland
VRS	Vehicle restraint system



PAG Performance Audit Group

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