



The Performance Audit Group's Annual Report **2014/15**

An independent public report on Scotland's trunk road maintenance

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Acting on behalf of the Trunk Road and Bus Operations
Directorate of Transport Scotland

ch2mSM

In association with PricewaterhouseCoopers,
Aecom and TRL

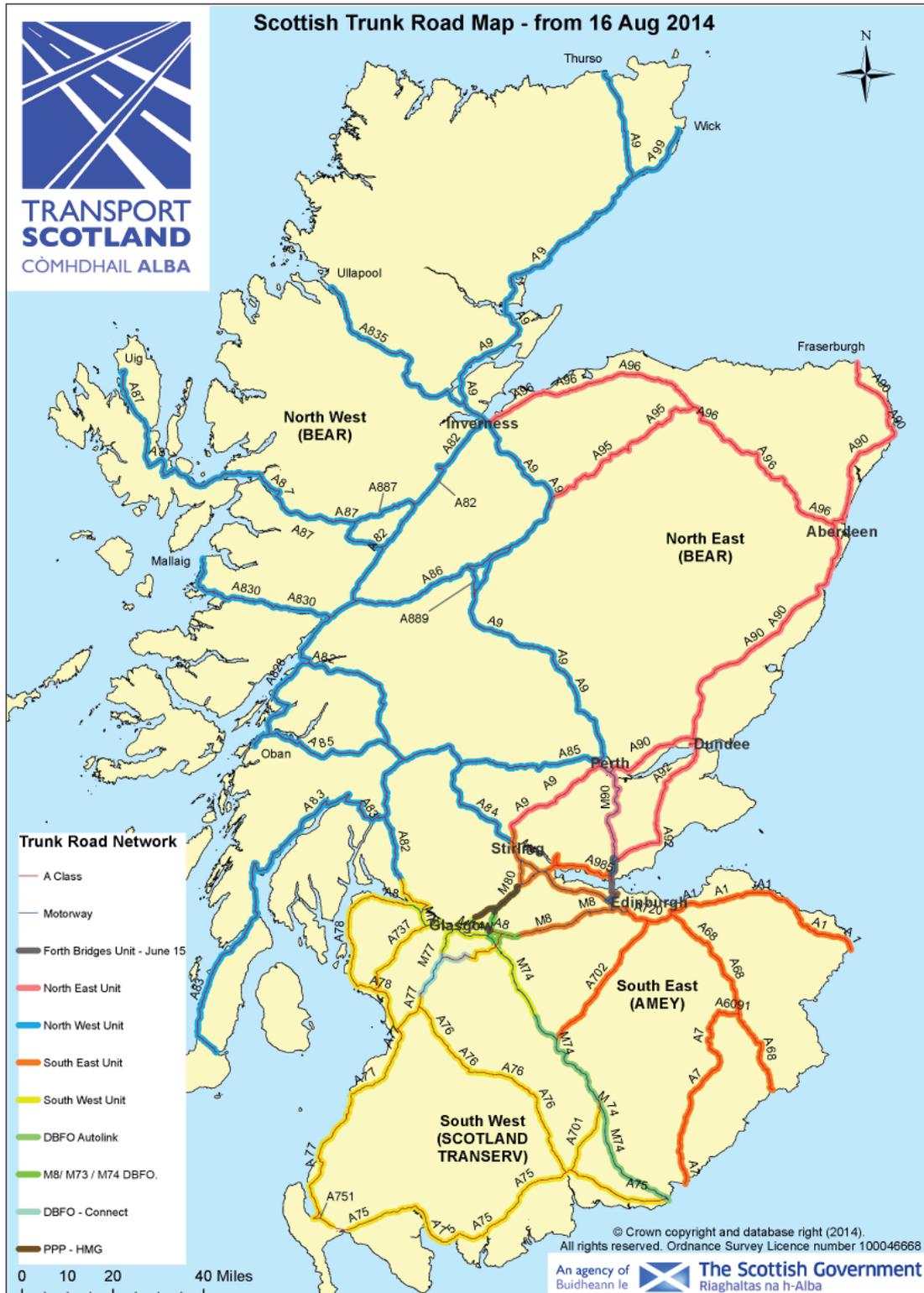


Figure 1-The Scottish trunk road network (2013/14) and how it is divided up for contract purposes (see figures 3-6 for details of the Units)

Foreword

This is the Performance Audit Group's (PAGplus) annual report on the management and maintenance of Scotland's trunk road network for 2014/15.

This report summarises the extensive work carried out by our experienced multi-disciplinary team over the last year, led by CH2M. Our role is to audit, monitor and report on the performance of the Operating Companies (OC) in managing and maintaining the Scottish trunk road network.

Our team works closely with our client, Transport Scotland, who is committed to managing and maintaining the network. The overall aim of all parties is to raise standards and assist Transport Scotland in providing a safe and reliable network. Our team's approach to the commission is one of working closely with Transport Scotland and the OCs to provide:

- quality of service;
- asset enhancement;
- value for money; and
- collectively deliver sustainable value to all stakeholders.

We assisted Transport Scotland with procurement documentation and processes for the fourth generation (4G) trunk road maintenance contracts. These new contracts were awarded in North East (NE) and South East (SE) and have been in operation since 16 August 2014. 4G has been in operation in both West Units since 1 April 2013. This sixth PAGplus annual report is therefore the first to report on work carried out under these 4G contracts in all Units.

The North East (NE) and South East (SE) continued to operate under the third generation (3G) contracts until 15 August 2014.

A separate addendum to this report has been prepared to report exclusively on the work carried out under the 3G contracts between 1 April 2014 and 15 August 2014.

Budget has continued its rising trend over the last five years. The PAGplus team is proud of its ongoing and effective contribution to the successful management and maintenance of Scotland's trunk roads. We are pleased to continue our strong, constructive working relationships with Transport Scotland and the OCs.

We trust you find our latest report clear, comprehensive and informative.



Eddie McDowell
Commission Manager
PAGplus
CH2M
May 2016

Executive summary

Both East Units saw, in August 2014, the end of the 3G contracts and introduction of the 4G contracts. This follows on from the introduction of 4G to both West Units the previous year.

The 4G contracts have generated savings through the competitive procurement process when compared to prices under the 3G contracts for similar operations. Savings of £7m were delivered during 2014/15, with cumulative savings of £14.9m delivered to date over the life of the 4G contracts. A separate addendum has been prepared to report on performance during the final months of the 3G contracts with the main report, and this executive summary, focusing on 4G performance.

Overall, the OCs collectively delivered a good level of service across the network. Both East Units made a good start to 4G with only two activities identified for prioritised improvement, namely safety inspection and inventory management.

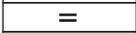
Following a poor start to 4G last year in NW, BEAR's performance has generally improved and is now considered to be good. However, several areas remain where significant improvement is required, as highlighted in the 'Performance at a glance' table below.

In the SW, performance has now improved overall to fair. Improvements were achieved in several areas as highlighted in the 'Performance at a glance' table below, however, performance also reduced elsewhere. Scotland TranServ will need to ensure performance overall continues to improve.

It is pleasing that there is a very low level of reportable accidents across the network with SW, NE and SE having zero reportable accidents and NW having only one.

Performance at a glance

PAGplus has used a rating system to assist in benchmarking OC performance. These performance ratings have been applied throughout the Annual Report to reflect overall OC performance for the various areas reviewed. This performance at a glance table is a summary of these ratings and, where relevant, provides a comparison with OC performance in 2013/14. No prior comparison is available for NE and SE as both are in the first year of 4G contract.

Key:		Excellent		Performance better than last year	
		Good			Performance unchanged from last year
		Fair			Performance worse than last year
		Poor			Activity not reviewed in 2013/14
		Very Poor			

	NW	SW	NE	SE
Chapter 2 Network management				
2.1 Network reliability				
2.1.2 Availability of the network to road users	=	=		
2.2 Network safety				
2.2.1 Safety inspections and patrols	▲	▲		
2.2.2 Detailed inspections - roads	▲	▲	N/A	N/A
2.2.3 Inspecting structures	=	=		
2.3 Inventory management				
2.3.1 RMMf	=	=		
2.3.2 SMS	▲	=		
2.3.3 Electrical assets	▼	=		
2.4 Traffic Management	=	▼		
2.5 Sustainability	=	=		

Performance at a glance

	NW	SW	NE	SE
Chapter 3 Network maintenance				
3.1 Cyclic maintenance				
<i>Grass cutting</i>	▲	▲		
<i>Weed control</i>	▲	▲		
<i>Soft landscaping</i>	=	▼		
<i>Sweeping, cleansing and litter</i>		▲		
<i>Drainage, gullies and ironwork</i>	▲	▼		
<i>Signing, signals, road markings and studs</i>	=	=		
<i>Structures</i>	▼	▼		
3.2 Reactive maintenance				
<i>Lighting</i>	=	▲		
<i>Safety fences, barriers and fencing</i>	=	▼		
<i>Carriageway condition</i>	▲	▲		
3.2.1 Repair of category 1 defects	▲	▲		
3.2.2 Incidents	▲	▲		
3.2.3 Winter service				
<i>Winter readiness</i>	=	▼		
<i>Winter decision making</i>	▲	▼		
<i>PI for winter service performance</i>				
<i>Management of salt stocks</i>	=	=		
<i>Road closures</i>	N/A	N/A	N/A	N/A
3.3 Planned maintenance				
3.3.2 Roads	▲	=		
3.3.3 Structures	=	▼		
3.4 Works contracts				
<i>Tender documents</i>		▲		N/A
<i>Supervision</i>	▲	=	N/A	N/A

Performance at a glance

	NW	SW	NE	SE
Chapter 4 Quality of service				
4.1 Management systems				
Quality management - rectifying non-compliance (PAGplus and internal)				
<i>Health and Safety management</i>	▲	▲		
<i>Environmental management</i>	▲	▼	N/A	N/A
4.2 Information systems	=	=		
Chapter 5 Value of service				
5.1 Budgets, orders and spend				
<i>Budgetary control</i>	▼	=		
<i>Orders v spend</i>	▼	=		
5.2 Financial management				
5.2.1 Submission of financial information	=	=		
5.2.2 General financial management	▼	=		
5.3 Commercial matters				
5.3.1 Measurement issues	=	=		
5.3.2 Claims	=	▼	N/A	

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Chapter 1

Overview

Background

The Scottish trunk road network

The network is divided into four geographic Units (NE, SE, NW and SW) and four DBFO/PPP projects, each with its own contract (see Figure 1).

Each of the four Units (see Figures 3 to 6) is managed and maintained by an OC. Figure 2 outlines the structure of these arrangements.

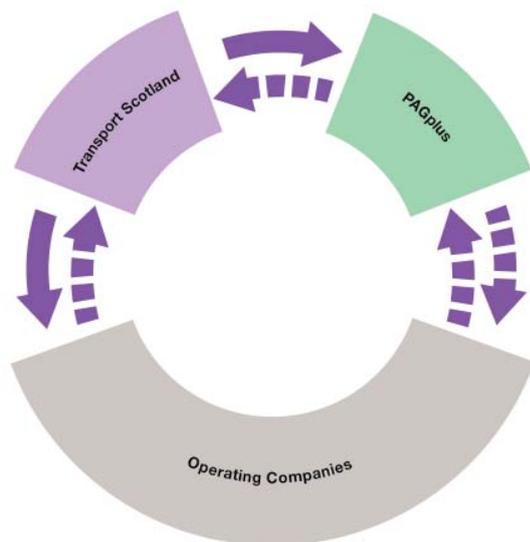


Figure 2 – Structure of arrangements between Transport Scotland, PAGplus and the OCs

The network is 3,372km long, excluding M6 DBFO, M77 PPP, M8/M73/M74 DBFO and M80 DBFO. It contains a total of 5,611 structures, including 1,893 bridges and footbridges.

The OC contracts

Since 1 April 2007, the 3G contracts in NE and SE have been managed and maintained by BEAR Scotland Ltd, an independent company jointly owned by Jacobs Engineering, Breedon Aggregates and Eurovia. These contracts continued until 15 August 2014. Refer to the separate addendum for all information concerning these 3G contracts.

The 4G contracts in NE and SE have been managed and maintained by BEAR Scotland Ltd and Amey respectively from 16 August 2014. These contracts will be in place until at least August 2020.

The 4G contracts in NW and SW have been managed and maintained by BEAR Scotland Ltd and Scotland TranServ (a joint venture between Balfour Beatty and Mouchel) respectively since 1 April 2013. These contracts will be in place until at least March 2018. The development of the 4G contracts gave an opportunity to improve on the already high standards achieved under the 3G arrangements. Overall, the 4G contracts take a similar form to the 3G contracts, but the opportunity was taken to clarify some requirements and give an improved level of service for activities including:

- defect inspections and recording;
- category 1 defect repairs;
- incident response; and
- enhanced performance management requirements.

The contracts' objectives

The contracts to manage and maintain the network were awarded by the Scottish Ministers, and focus on the following three objectives:

- Customer service – “to enable a ‘customer oriented’ approach to be further developed in the way roads are managed and maintained.”
- Value for money – “to achieve the maximum efficiency in the use of the substantial sums of money expended on the maintenance of the network.”
- Effective management – “to encourage innovation and skilful management to maximise trunk road capacity and achieve the best use of the network.”

The contracts also aim to encourage:

- Flexibility – “to accommodate changes to the trunk road network.”

Performance ratings

PAGplus uses a star rating system to assist in benchmarking OC performance. These performance ratings have been applied throughout the report. The ratings used are:

- ★★★★★ Excellent
- ★★★★☆ Good
- ★★★☆☆ Fair
- ★★☆☆☆ Poor
- ★☆☆☆☆ Very poor

A summary of these ratings can be found in the ‘Performance at a glance’ section of this report.

Chapter 1

Overview

South West fact file



Figure 4 - SW Unit

Managed and maintained by: Scotland TranServ.

Scotland TranServ's central office:
Oatlands House
150 Polmadie Road
Glasgow
G5 0HD

Total route length of the network in SW: 728 km
Number of structures: 1,732
Budget for maintaining trunk roads in SW this period: £39.9m

Chapter 1

Overview

North East fact file



Figure 4 - NE Unit

Managed and maintained by: BEAR Scotland Ltd.

BEAR's central office:
BEAR House
Inveralmond Road
Inveralmond Industrial Estate
Perth
PH1 3TW

Total route length of the network in NE: 640km
Number of structures: 623
Budget for maintaining trunk roads in NE this period: £17.2m

Chapter 1

Overview

South East fact file



Figure 4 - SE Unit

Managed and maintained by: Amey

Amey's central office:
6A Dryden Road
Bilston Glen
Loanhead
EH20 9TY

Total route length of the network in SE: 566km
Number of structures: 837
Budget for maintaining trunk roads in SE this period: £14.6m

Chapter 1 Overview

Network spend

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

4G contracts for the East Units commenced 16 August 2014, to allow for year on year spend comparison spend figures include for both 3G and 4G contracts unless otherwise stated.

A comparison of spend figures for 2014/15 and 2013/14 is shown in Figure 7. Total spend for 2014/15 is £139.2m (2013/14: £141.7m).



Figure 7 - Financial comparison - all Units

A profile of spend by Unit split between OC operations and works contracts is given in Figure 8.

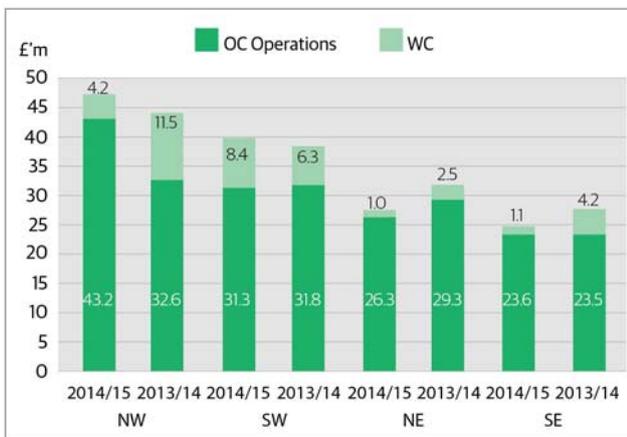


Figure 8 - Spend split by works and operations by Unit

The budget for 2014/15 of £139.4m was up £9.8m (7.6%) from the previous year, continuing its rising trend over the last five years (see Figure 9).

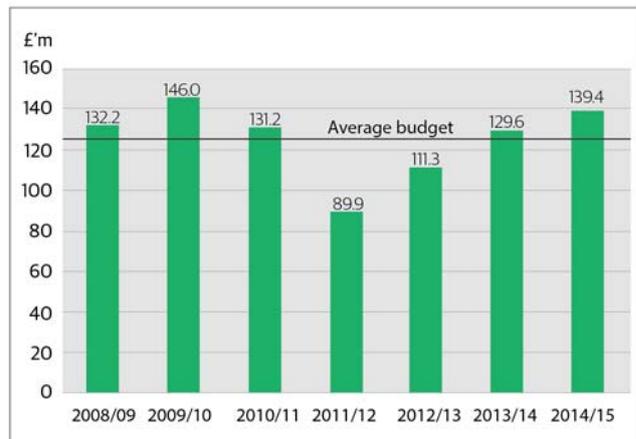


Figure 9 - Comparison of budgets (net of CPF) for maintenance and improvements

Spend net of CPF for 2014/15 is £134.0m (2013/14: £130.3m). For 2014/15 inflation payments totalled £5.2m on operations priced at base rates totalling £119.2m, see Figure 10. The CPF figure for 2013/14 was £11.4m on operations priced at base rates totalling £105.8m.

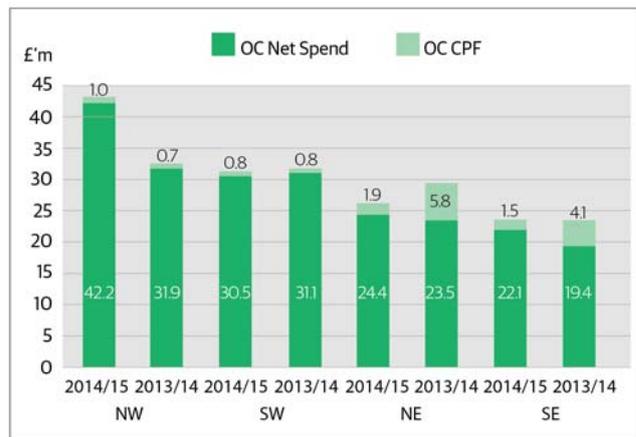


Figure 10 - OC spend split by base rates and CPF - all Units

Transport Scotland's current contracts have generated savings through competitive procurement process when compared to prices under its previous contracts for like operations. Savings of £7 m have been delivered during 2014/15, with cumulative savings of £14.9m delivered to date over the life of the contracts.

Chapter 1

Overview

Spend analysis

Transport Scotland has a network asset valued at a net £11.6bn for roads and £4.2bn for structures. In maintaining its asset, Transport Scotland spent £139.2m during 2014/15 (2013/14: £141.7m). Figure 11 shows how this spend was allocated by asset type during the year.

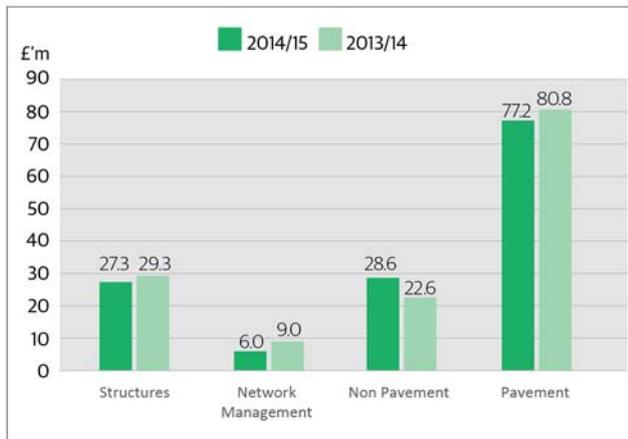


Figure 11 - Spend by asset type - all Units

The spend categories identified in Figure 11 are detailed below:

- Structures include bridges, footbridges, underpasses, culverts, retaining walls, sign gantries, high mast lighting and CCTV masts.
- Network management includes core operation activities not directly attributable to structures, pavements and non-pavement assets.
- Non-pavement includes drainage systems, vehicle restraint systems, street lighting, traffic signs and other ancillary assets.
- Pavements include carriageways and footways.

Figure 12 highlights maintenance activities where spend exceeds £5m.

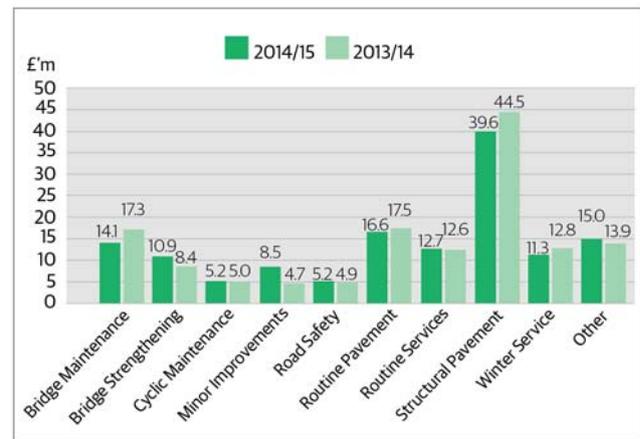


Figure 12 - Spend by maintenance activity - all Unit

Chapter 2

Management of service

Key points

Network reliability

- The OCs' performance in minimising the delays and disruption to road users was excellent.
- Overall, 99.996% of the network was available to road users in 2014/15, which is an improvement from the previous year.
- In general, the OCs were placing notices in the Scottish Road Works Register (SRWR).

Network inspections

- Significant improvement was achieved by NW and SW with respect to safety inspections.
- Performance on safety inspections and patrols was poor in NE and SE.
- An improvement was noted in carrying out detailed inspections in NW and SW. However, further improvement is required in SW and significant further improvement is required in NW.
- In NE and SE, there is concern that detailed inspection programmes will not be substantially completed given the progress recorded during the reporting period.
- NE, SE and NW all successfully completed their structures inspections either within or ahead of programme, whereas performance remains fair in SW.

Inventory management

- NW and SW performance in maintaining and updating RMMf inventory continues to be very poor.
- NE and SE both made a poor start in maintaining and updating RMMf inventory.
- Good performance by NW and NE in uploading information and updating the inventory in SMS. By comparison SE performance was fair and SW performance was poor.
- Performance was poor in NW and SW in maintaining and updating the electrical asset inventory.
- NE and SE performance in verifying the accuracy of electrical asset inventory was poor.

Traffic management

- Excellent performance in traffic management was delivered by NE, with fair performance achieved by NW, SW and SE.

Sustainability

- All OCs delivered good performance in implementing sustainable practices into their operations.

Chapter 2

Management of service

2.1 Network reliability

Network reliability

The delivery of Transport Scotland's investment by the OCs is pivotal to a safe, efficient, reliable and sustainable network.

The OCs are required to minimise the potential disruption and inconvenience to road users caused by essential maintenance by planning works, combining activities and coordinating with all stakeholders, including statutory undertakers.

2.1.1 Coordinating roadworks

In 2014/15, there were 18,774 roadworks sites across the network, an average of 63 per day (54 per day in 2013/14). Figure 13 shows the number of roadworks sites in each Unit during the year.

Unit	Number of roadworks sites
NW	7,694
SW	4,060
NE	3,426
SE	3,594

Figure 13 - Number of roadworks sites in 2014/15 (source Traffic Scotland Automated Diary Facility)

Various measures were put in place by the OCs to reduce disruption and maintain network availability and safety during roadworks. These included:

- Traffic management measures such as contraflows, use of temporary vehicle restraint systems, lateral safety zones and convoy working;
- Advance notice of roadworks using media campaigns and variable message signs;
- Increased stakeholder consultation;
- Communication on road closures; and
- Road closures with agreed diversion routes.

2.1.2 Availability of the network for road users

-all Units ★★★★★

The OCs' performance in minimising the impact of roadworks

is measured as a monitoring indicator (MI). This is based on the length and time of lane closures in each Unit. These road occupation values are used to calculate the overall percentage of the network available to road users.

There was excellent performance in all Units keeping the network open (see Figure 14).

Unit	MI value	% Available
NW	0.053	99.998%
SW	0.061	99.997%
NE	0.101	99.989%
SE	0.059	99.993%
Total	0.274	99.996%

Figure 14 - MI reporting road occupations and percentage of network available to road users

2.1.3 Scottish Road Works Register

The Scottish Road Works Commissioner was established under the Transport (Scotland) Act 2005 to oversee the planning and coordination of works on Scotland's roads by all roads authorities and statutory undertakers.

The SRWR is a database used by all roads authorities and statutory undertakers to register and coordinate all proposed work. It is also used to monitor reinstatement, supervision and road work history. Every public road in Scotland is included in the SRWR. The Scottish Road Works Commissioner is the keeper of the SRWR.

The OCs have responsibility for:

- checking all trunk road information is accurate;
- coordinating the execution of works affecting the trunk roads and monitoring the performance of undertakers in fulfilling the relevant legislative requirements; and
- registering their own works in accordance with the appropriate legislation.

During 2014/15 PAGplus periodically monitored whether the SRWR was being correctly populated and updated with planned road works by the OCs. PAGplus checked that works listed in Traffic Scotland's Automated Diary Facility (ADF) were replicated accurately in the SRWR. The OCs use the ADF to log all activities and are required to update it daily.

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Management of service

In general, the OCs were found to be noticing roadworks information to the SRWR. However, inconsistencies were found in site location descriptions supplied by NW, NE and SE. BEAR Scotland identified referencing issues between the SRWR and ADF and supplied Traffic Scotland with proposals for bringing the two systems into line. PAGplus monitoring noted there were minor differences in dates recorded between the ADF and the SRWR for all Units.

2.1.4 Abnormal loads

Abnormal load movement is one of the network management tasks which is delegated to the OCs. Each OC provides an abnormal load routing and coordination service within its Unit and liaises with hauliers and other statutory bodies.

One of the key aspects of the service is assessing the suitability of bridges and other structures on the network to carry heavy loads as well as the suitability of routes to carry wide or long loads.

In 2014/15, the OCs approved 428 special order abnormal load applications (460 applications approved in 2014/15), see Figure 15.

Unit	2014/15
NW	53
SW	284
NE	15
SE	76

Figure 15 - Special order abnormal load applications

2.1.5 High loads

Unlike abnormal load movement, high loads are not specifically covered by legislation.

All OCs continued to undertake assessments, sign reviews and identify mitigation measures at high risk sites, such as low operational rail bridges over trunk roads.

Transport Scotland and the OCs provide coordination and route planning advice for high load movements on request.

In addition, Transport Scotland has published on its website the 'High Load Grid', a collection of advisory routes on the Scottish trunk road network for extremely high loads.

Since Transport Scotland introduced its over-height vehicle strategy, the number of bridge strike incidents across the network has remained low.

2.2 Network inspections

Inspections

To deliver reliable journey times, ensure safety of the network and ensure budgets are allocated to areas of most need, the OCs are required to implement inspection regimes.

Weekly safety inspections/ patrols are carried out on all routes to identify and repair the most serious defects quickly.

To maintain the safe condition of the trunk road assets, detailed inspections are carried out, typically annually, to identify minor defects. These defects are grouped into schemes, which are prioritised based on need.

2.2.1 Safety inspections and patrols

Figure 16 gives the OCs' performance in completing safety inspections on time.

Unit	2014/15	2013/14
NW	96.2%	78.2%
SW	98.4%	84.6%
NE	88.3%	N/A
SE	81.8%	N/A

Figure 16 - Safety inspection performance

NW - BEAR ★★★★★☆

BEAR significantly improved its performance from poor in 2013/14 to good in 2014/15.

Overall, 96.2% of safety inspections and patrols were recorded as being completed on time. This comprised of 99.6% of safety

Chapter 2

Management of service

inspections and 89.9% of night time safety patrols. Further investigation established that the OC carried out the vast majority of the required night time safety patrols but did not always manage to update Integrated Roads Information System (IRIS) with this information within the required timescales.

SW – Scotland TranServ ★★☆☆☆

Scotland TranServ significantly improved its performance from poor in 2013/14 to good in 2014/15.

Overall, 98.4% of safety inspections and patrols were carried out on time. This included 99.6% of safety inspections, 98.3% of safety patrols and 96.7% of night time safety patrols completed on time.

NE – BEAR ★★☆☆☆

Overall, performance was poor, with 88.3% of safety inspections and patrols completed on time since the contract commenced. Similar to the situation in NW, the OC carried out all of the required safety inspections and the vast majority of night time safety patrols but did not always manage to update IRIS within the required timescales resulting in a lower figure being recorded.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

SE – Amey ★★☆☆☆

Overall, Amey's performance was poor, with 81.8% of safety inspections and patrols completed on time since the contract commenced.

Further investigation established that the OC carried out the vast majority of the required night time safety patrols but did not always manage to update IRIS with this information within the required timescales.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

2.2.2 Detailed inspections – roads

Performance by the OCs in completing detailed inspections within the required intervals in 2014/15 is shown in Figure 17.

Unit	2014/15	2013/14
NW	69.0%	31.4%
SW	84.0%	19.6%
NE	0.1%	N/A
SE	1.1%	N/A

Figure 17 – OC performance in completing detailed inspections within the required intervals

NW – BEAR ★★☆☆☆

BEAR's performance was poor throughout 2014/15 with only 69% of the required detailed inspections carried out. Although a poor performance was recorded, it is an improvement to 2013/14.

The notice of non-conformance (NNC) raised in January 2014 was open throughout the period due to limited progress being made by the OC.

PAGplus will work closely with the OC to establish how performance will be further improved in 2015/16.

SW – Scotland TranServ ★★☆☆☆

Overall, the performance by Scotland TranServ was fair with 84% of the required detailed inspections within the required intervals being carried out in 2014/15.

It is recognised that the OC put in significant effort to improve on its previous performance.

However, a NNC raised in January 2014 remained open throughout the period, subsequently being closed in April 2015.

PAGplus will continue to monitor this activity closely in 2015/16.

Detailed inspections – East Units

The 4G contract requires the first full round of detailed inspections to be completed within 12 months of the contract starting with all information uploaded into the Routine Maintenance and Management function (RMMf) of the Integrated Roads Information System (IRIS). As the East Units are still within the first year of their respective contracts the annual performance on detailed inspections cannot yet be fully assessed. However, month on month progress was monitored by PAGplus.

Chapter 2

Management of service

NE – BEAR N/A

At the end of the reporting period BEAR had not made any significant progress towards completing the detailed inspection programme, which is required to be completed by 15 August 2015.

Based on this information PAGplus will monitor this activity closely.

SE – Amey N/A

At the end of the reporting period Amey had not made any significant progress towards completing the detailed inspection programme, which is required to be completed by 15 August 2015.

Based on this information PAGplus will monitor this activity closely.

2.2.3 Inspecting structures

Maintaining structures

The OCs are required to inspect structures at regular pre-determined intervals and prepare programmes to manage and maintain them. The OCs must then design, procure and carry out works either directly or through tendered works contracts. The term 'structures' includes bridges, footbridges, underpasses, culverts, retaining walls, sign gantries, high mast lighting and CCTV masts. Regular inspections are carried out at two and six yearly intervals.

The OCs are also required to carry out cyclic maintenance tasks to structures each year.

The OCs have an obligation to inspect all structures within their respective Units. The inspection year generally runs from February to November in each calendar year. Two types of inspections are routinely undertaken:

- General inspection – visual inspections carried out every two years; and
- Principal inspection – close inspection of every structural element carried out every six years.

Other inspections may be carried out on a needs basis. These may include superficial, scour or special inspections, usually

following severe weather, sudden change in condition or a major incident.

Inspections enable the current condition and any defects to be noted and recorded in the Structures Management System (SMS). Based on the inspections, each OC develops a programme of prioritised proposals for essential maintenance work within the available budget.

A breakdown of the inspections completed by Unit, and the overall performance of each OC is shown in Figure 18.

Unit	Principal Inspections	General Inspections	Completed on time
NW	204	503	100%
SW	177	507	91%
NE	27	4	100%
SE	32	43	100%
Total	440	1057	96%

Figure 18 - OC performance in completing principal and general inspection programmes

NW – BEAR ★★★★★

Overall, performance by the OC was excellent with 100% of the inspections completed ahead of programme.

Two diving surveys of structures, identified in the contract as requiring a survey during its principal inspection, were not carried out.

SW – Scotland TranServ ★★☆☆☆

Overall the performance by the OC was fair.

All the general inspections and the majority of the principal inspections were carried out in accordance with the OCs programmes. An extension of time was agreed with Transport Scotland to complete the inspections, however the OC could not deliver the reports on time.

The principal inspection of M8 Kingston Bridge was due in 2013/14 but an extension of time was granted by Transport Scotland to allow the inspection to be carried out in 2014/15. The OC failed to carry out the inspection within the agreed timescale and as a result a NNC was issued.

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Both NNCs were addressed by the OC and subsequently closed.

PAGplus will continue to monitor this activity closely in 2015/16.

NE - BEAR ★★★★★

Performance by BEAR was excellent, with 100% of the PI and GI inspection programme completed within the time period.

SE - Amey ★★★★★

Performance by Amey was good. The OC requested an extension to the inspection programme. Further to this extension, 100% of the PI and GI inspection programme was completed within the time period.

2.3 Inventory management

2.3.1 Routine maintenance and management function (RMMf)

The RMMf is a computer-based system operated by the OCs, which contains the inventory of trunk road assets. The OCs are responsible for recording all works carried out on the network and updating and archiving the inventory as necessary. The accuracy of the inventory is important as data is used to assist and establish budgets and programmes.

The contract required the OCs to verify the inventory within the first annual period of the contract.

NW - BEAR ★☆☆☆☆

BEAR's performance was again very poor resulting in a NNC being issued and subsequently closed.

A remedial notice was issued in March 2015 for a number of issues relating to IRIS.

Transport Scotland and PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

SW - Scotland TranServ ★☆☆☆☆

Scotland TranServ's performance was again very poor resulting in a NNC being issued, which remains open. In addition, PAGplus monitoring of inventory validation and condition rating resulted in a remedial notice being issued.

Transport Scotland and PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

NE - BEAR ★★☆☆☆

BEAR's performance was poor with no significant progress made to verify the inventory.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

SE - Amey ★★☆☆☆

Amey's performance was poor with no significant progress made to verify the inventory.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

2.3.2 Structures management system (SMS)

During 2014/15, the OCs were responsible for managing 5,611 structures on behalf of Transport Scotland. These are recorded in SMS.

Structures range from culverts carrying watercourses under roads to major estuarial crossings such as A898 Erskine Bridge and M90 Friarton Bridge.

Of these structures, 1,893 are bridges or footbridges. Small pipes and culverts are not classed as structures and are not subject to the full inspection regimes applied to structures.

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A breakdown of the type and number of structures in each Unit, as extracted from SMS, is shown in Figure 19.

Unit	Bridges	Foot-bridges	Other Structures
NW	614	63	1,742
SW	502	49	1,181
NE	289	15	319
SE	346	15	476
Total	1,751	142	3,718

Figure 19 - Number and type of structures in each Unit (source SMS)

In 4G there are additional requirements to upload information into SMS relating to maintenance operations undertaken on structures.

NW - BEAR ★★☆☆☆

Overall, the OCs performance continued to be good in uploading information and updating the inventory in SMS.

Some minor errors and omissions were identified by PAGplus.

SW - Scotland TranServ ★★☆☆☆

The OCs performance in uploading information and updating the inventory in SMS remains poor.

PAGplus noted updates to SMS after Damage to Crown Property (DCP) incidents were not fully completed by the OC.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

NE - BEAR ★★☆☆☆

In general, BEAR's performance was good in relation to uploading information and updating the inventory in SMS.

The OC took some time to update the major bridge schedule in accordance with the maintenance manual.

SE - Amey ★★☆☆☆

In general, the OCs performance was fair in relation to uploading information and updating the inventory in SMS.

The OC did not update the major bridges inspection schedules in accordance with the maintenance manuals.

PAGplus will monitor this activity closely in 2015/16.

2.3.3 Electrical assets

All OCs are required to inspect, on a five-yearly cycle, all electrical assets across the trunk road network. In addition, the 4G contract requires 20% to be completed each year. Furthermore, the 4G contract requires the OCs to verify the accuracy of the inventory within the first six months of the contract.

NW - BEAR ★★☆☆☆

BEAR's performance reduced to poor with issues still remaining concerning the accuracy of the electrical asset inventory held within IRIS.

BEAR condition rating surveys recorded in IRIS represent only 0.53% of all lighting points (22/4276) and traffic signals (2/279) within the Unit. However, PAGplus audits confirmed that these surveys were significantly completed. BEAR recognised that ongoing recording of these surveys in IRIS is required.

A total of five Observations resulting from inspection (ORI) were raised relating to electrical assets during the year.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

SW - Scotland TranServ ★★☆☆☆

Scotland TranServ's performance remained poor with issues still remaining concerning the accuracy of the electrical asset inventory held within IRIS.

The OC carried out condition rating surveys on 1.41% of all lighting points (123/8118) and traffic signals (1/563) within the Unit. However, PAGplus audits confirmed that these surveys were significantly completed. Scotland TranServ recognised that ongoing recording of these surveys in IRIS is required.

A total of three ORIs were raised relating to electrical assets during the year.

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PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

As the East Units are still within the first year of their respective contracts, the annual performance on electrical inspections and electrical condition rating surveys cannot yet be fully assessed.

NE - BEAR ★★☆☆☆

BEAR performance in verifying the accuracy of electrical asset inventory was poor.

A total of five ORIs were raised relating to electrical assets during the reporting period.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

SE - Amey ★★☆☆☆

Amey performance in verifying the accuracy of electrical asset inventory was poor.

A total of three ORIs were raised relating to electrical assets during the reporting period.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

2.4 Traffic management

NW - BEAR ★★☆☆☆

Overall, BEAR's performance remains fair.

Ten hazard notices were raised, seven of which were for third party works carried out on the network. In addition, six ORIs were raised.

PAGplus will continue to monitor this activity closely during 2015/16.

SW - Scotland TranServ ★★☆☆☆

Overall, Scotland TranServ's performance reduced to fair.

Four ORIs were raised for non-compliant traffic management in the reporting period. A NNC was raised for non-compliance with traffic management restrictions on A8 where the OC and local authority traffic management overlapped each other.

A small number of ORIs were raised for issues relating to the maintenance of temporary traffic management. Issues raised included fallen signs, dirty cones and the insufficient number of road lamps.

PAGplus will continue to monitor this activity closely during 2015/16.

NE - BEAR ★★★★★

Overall, BEAR's performance was excellent.

One ORI and one hazard notice was issued for non-compliant traffic management arrangements concerning lack of lateral safety zone for works carried out by a third party. BEAR showed a proactive approach in addressing this issue promptly and carried out further site audits to ensure compliance.

SE - Amey ★★☆☆☆

In general Amey delivered a fair performance.

Eight ORIs, six of which related to third party activities, and one hazard notice were raised for traffic management which was non-compliant. Issues included lack of lateral safety zone, displaced direction signs, inadequate number of road lamps and poor condition of the road signs and cones.

In addition, checks on temporary traffic management revealed a number of instances where the Automated Diary Facility (ADF) was not being maintained.

PAGplus will monitor this activity closely during 2015/16.

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2.5 Sustainability

Sustainability monitoring

The Scottish Government has set a target to reduce carbon emissions by 42% by 2020 and by at least 80% by 2050.

Transport Scotland, PAGplus and the OCs continue to work together to provide a more sustainable service and to assist in achieving these ambitious carbon reduction targets. The CEEQUAL based sustainability monitoring tool developed by PAGplus continues to be utilised to determine the OCs performance when planning, designing and completing approved schemes. In addition, a number of site visits are undertaken by PAGplus.

Waste generation and management and the use of reused, recycled and renewable materials continues to be monitored. The manner in which the quantities of waste and use of recycled materials is recorded and reported is subject to ongoing discussions between Transport Scotland, OCs and PAGplus, with a more consistent approach expected to be adopted within the forthcoming year of the 4G contract.

NW - BEAR ★★☆☆☆

BEAR's performance continued to be good.

PAGplus carried out site visits and completed scheme sustainability monitoring checklists. These identified that BEAR was implementing relevant mitigation measures and managing schemes in line with legal requirements (see Figure 20).

In the reporting period, 10 reviews of the OCs schemes were undertaken. The OC regularly scored above 80% for its sustainability reviews and mitigation implementation. It is however noted that although the OC regularly complied with basic environmental requirements and good practice, more could have been done to achieve best practice.

Issues such as vehicles driving on verges, a missing environmental screening report and mitigation measures were found during the sustainability monitoring exercises.



Figure 20 – Dearg Bridge mitigation measures including silt traps and otter fencing on A830 in NW

SW - Scotland TranServ ★★★★★

Scotland TranServ's performance continues to be good.

PAGplus site visits and scheme sustainability monitoring checklists, identified that the OCs were implementing relevant mitigation measures and were managing schemes in line with legal requirements. However, there was a lack of evidence of ongoing monitoring of these mitigation measures.

During the reporting period, eight reviews of the OCs schemes were undertaken. The OC regularly scored above 85% for its sustainability reviews and mitigation implementation. It is however noted that although the OC regularly complied with basic environmental requirements and good practice.

To help reduce waste and lower the volume of virgin material used in schemes the OC employed various innovative techniques. For example on the A701 at Kirkland Farm resurfacing scheme, in-situ recycling and treatment of the existing coal-tar road structure was undertaken. The existing road was milled, crushed and treated on site, making it suitable for re-use as the base layer for the re-surfaced road (see Figure 21).

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Figure 21 – In-situ coal-tar recycling on A701 in SW

NE - BEAR ★★★★★

BEAR's performance was good.

PAGplus site visits and scheme sustainability monitoring checklists, identified that the OC was implementing relevant mitigation measures and were managing schemes in line with its legal requirements (see Figure 22).

Over the first seven months of the contract, six reviews of the OCs schemes were undertaken. The OC regularly scored above 80% for its sustainability review and mitigation implementation. It is however noted that although the OC regularly complies with basic environmental requirements and good practice, more could be done to achieve best practice. BEAR reported that it was able to recycle all construction waste produced. However, very little information was supplied to PAGplus to document the use of reused, recycled and renewable materials. BEAR has room for improvement in this area.



Figure 22 – Cowie silt management system on A90 770 in NE

SE - Amey ★★★★★

Amey demonstrated good performance.

PAGplus site visits and scheme sustainability monitoring checklists, identified that the OCs were implementing relevant mitigation measures and were managing schemes in line with legislation.

Over the first seven months of the 4G Contract, four reviews of the OC's schemes were undertaken. The OC regularly scored above 90% for its sustainability reviews and environmental mitigation measures implemented. Completion of the PAGplus sustainability monitoring checklists highlighted that Amey regularly complies with basic and good practice. More consideration should be given to the implementation of best practice.

Waste generation and management and the use of reused, recycled and renewable materials were also monitored. Amey reported that it has been able to recycle the majority of construction waste produced. However, no information was supplied to PAGplus to document the use of reused, recycled and renewable materials. Amey has room for improvement in this area.

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Key points

Cyclic maintenance

- All OCs performed well in grass cutting, with good performance by SW and SE in weed control and by NE and SE in soft landscaping, with room for improvement by the other OCs.
- Room for improved performance by all OCs in dealing with drainage issues, signs, road markings and road studs.
- Structures cyclic maintenance performance by all OCs was fair.

Reactive maintenance

- The OCs, and in particular NE, performed well in repairing safety fences, barriers and fencing.
- NW, NE and SE dealt timeously with lamp outages across the network.
- Performance in maintaining carriageway condition in SW, NE and SE was fair, with poor performance in NW.
- Issues of defect identification and classification raised in all Units.
- Increase in backlog of category 1 defects open beyond permanent repair period in NW, SW and SE.
- All OCs performed well in dealing with emergencies/incidents across the network.

Winter

- It was a wet winter in Scotland, with snowfall generally confined to higher levels.
- The overall performance by the OCs in preparing for winter was good.
- Decision-making and actions to deal with winter conditions was good in NW, NE and SE. Poor performance in SW with concerns over control room resources was subsequently addressed.
- Performance was generally good by all OCs for winter response times and data logger downloads.

Planned maintenance

- All Units delivered planned maintenance on roads to a good standard.
- A fair performance on structures was delivered in NW, SW and SE with issues of slow progress on a number of schemes in the NE.

Works contracts

- Overall, in NW, SW and NE, preparation of tender documents was good. There were no tender documents submitted by SE.
- In general, all OCs delivered a good standard of supervision on works contracts.

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3.1 Cyclic maintenance

Cyclic maintenance

The OCs carry out various cyclic maintenance activities on the network in order to keep it operational, safe and tidy. These include operations such as cleaning gullies and catchpits, cutting grass and cleaning road signs.

The OCs are required to update RMMf when they carry out these operations.

Grass cutting

NW - BEAR ★★★★★☆

Performance improved significantly from poor to good.

Generally grass was found to be within specification and issues raised by PAGplus were attended to timeously.

SW - Scotland TranServ ★★★★★☆

Overall a good performance was maintained by Scotland TranServ.

A number of ORIs were raised for areas being outwith specification and these were quickly dealt with by the OC.

NE - BEAR ★★★★★☆

Performance was good during the reporting period.

Generally grass was found to be within specification.

SE - Amey ★★★★★☆

Performance was good during the reporting period.

It was noted that an extensive programme of grass cutting was undertaken.

Weed control

NW - BEAR ★★★★★☆

Overall, performance improved to good.

In general, issues identified by PAGplus were attended to timeously although die-back weeds were not removed until late

in the year on A9 in the Inverness area. In addition, the OC was slow to clear some footpaths of weeds.

SW - Scotland TranServ ★★★★★☆

Performance as in 2013/14 was good.

Some areas of excessive weed growth were noted but generally the OC maintained a good overall standard in weed control.

NE - BEAR ★★★★★☆

Overall, performance was good.

Weed dieback following treatment was generally effective but not always successful with weeds remaining in some central reserves throughout the winter period. It is recognised that daytime working embargos such as that in place during the Ryder Cup delayed some treatments.

SE - Amey ★★★★★☆

Performance was good.

The OC inherited routes where weed growth had not received the programmed treatment by the previous OC prior to the handover in August 2014. Amey progressed weed treatment timeously post-handover.

Soft landscaping

NW - BEAR ★★★★★☆

Performance remains fair.

Clearance of storm felled trees was undertaken timeously to ensure maximum network availability, however, follow up clearance of verges and other areas were subject to several ORIs.

In addition a NNC was issued in April 2014 for lack of a landscape strategy.

PAGplus will continue to monitor this activity closely during 2015/16.

SW - Scotland TranServ ★★★★★☆

Performance reduced from good to fair.

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A NNC was issued in April 2014 for lack of a landscape strategy.

PAGplus will continue to monitor this activity closely during 2015/16.

NE - BEAR ★★☆☆☆

Performance was good.

Soft landscaping was carried out satisfactorily. Issues raised for obscured signs were generally dealt with promptly by the OC.

SE - Amey ★★☆☆☆

Performance was generally good.

There were some issues concerning failure to carry out timeous clearance of storm felled trees.

Litter picking

Responsibility for litter picking on the trunk road network excluding motorways and special roads, rests with the local authorities.

Each OC is required to issue its grass cutting programme to relevant local authorities. This is intended to ensure an integrated approach to cutting grass and litter picking. If litter is not removed prior to grass being cut, it is shredded by grass cutting equipment. Shredding of litter makes removing it more difficult.

If a local authority is deficient in its litter picking duties, the OCs are responsible for contacting the local authority to highlight their concerns.

Sweeping, cleansing and litter

In April 2013, Transport Scotland established a protocol, which set out the process the OCs should follow for sweeping carriageway channels where local authorities had failed to undertake their responsibilities. This requires the OC to identify any local authority failings and bring them to the attention of Transport Scotland. Transport Scotland may then order the OC to undertake such work.

NW - BEAR ★★☆☆☆

The performance of the OC was poor in implementing the protocol and carrying out the required sweeping.

There were particular issues with A9 channel sweeping.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

SW - Scotland TranServ ★★☆☆☆

Performance improved to fair.

There has been an improvement in performance on those routes where Scotland TranServ is responsible for sweeping and cleansing. The OC has communicated with local authorities regarding litter and sweeping on routes where the local authorities have the responsibility.

The remedial notice issued in February 2014 for poor performance in motorway channel sweeping was closed in July 2014. Following closure of the remedial notice there has been an improvement by the OC.

PAGplus will continue to monitor this activity closely during 2015/16.

NE - BEAR ★★☆☆☆

Performance was good on the routes where the OC is responsible for sweeping, cleansing, and litter removal.

There were occasions where litter accumulations reached the level where urgent intervention was required. The OC continued to communicate issues regarding litter collection and channel sweeping with the respective local authorities and undertook channel sweeping on some prioritised routes.

SE - Amey ★★☆☆☆

Amey's performance was fair.

Amey is responsible for sweeping and cleansing of motorway routes. Detritus on hardshoulders and litter accumulations were brought to the attention of Amey by PAGplus. Some issues were not closed out timeously.

PAGplus will monitor this activity closely during 2015/16.

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Drainage, gullies and ironworks

NW – BEAR ★★☆☆☆

Overall, BEAR's performance improved to fair.

There were issues with the OC not submitting flood reports to the RMMf within contractual timescales. In addition, some of the defects were found to be incorrectly classified.

PAGplus will continue to monitor this activity closely during 2015/16.

SW – Scotland TranServ ★★☆☆☆

OC performance continues to be poor.

There were some instances where better planning of gully cleaning may have resulted in less flooding issues. In addition, several long term drainage issues were treated repeatedly in a reactive manner with no permanent repairs carried out timeously. A lack of flooding reports also contributed to poor performance.

Two separate NNCs were issued for incomplete flooding reports being recorded in the RMMf. Progress was made in closing out longstanding issues.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

NE – BEAR ★★☆☆☆

Performance was fair.

Known issues regarding debris that had built up between the filter drains and carriageway on A9, A95 and A96 were dealt with timeously.

A PAGplus monitoring activity focused on the OC's cyclic drainage operations concluded that while gully emptying was satisfactory, not all manholes and catchpits were being fully maintained.

In addition, flooding reports were not uploaded to the RMMf and some of the defects were found to be incorrectly classified.

PAGplus will monitor this activity closely during 2015/16.

SE – Amey ★★☆☆☆

Performance was fair.

The OC has a drainage strategy in place to allow it to rank drainage problems and prioritise repair works.

A NNC was issued for failure to provide flooding reports, including photographic evidence, and not uploading the reports to RMMf.

PAGplus will monitor this activity closely during 2015/16.

Signing, signals, road markings and studs

NW – BEAR ★★☆☆☆

BEAR performance remains poor.

Replacement of Category 1 defects for lining and studding failed to meet contractual timescales. In addition, faded or missing road markings and dirty signs were not always recorded in the RMMf.

A NNC was issued in January 2014 for road markings and studs not being repaired within the required timescale. The NNC remained open throughout the period.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

SW – Scotland TranServ ★★☆☆☆

Scotland TranServ performance remains poor.

Issues were raised regarding faded or missing road markings which the OC had not identified as category 1 defects. With a number of exceptions, road markings and reflecting road studs have been replaced timeously following resurfacing works.

There were instances of vegetation growth obscuring both signs and visibility splays.

A NNC was issued in November 2014 for failure to carry out an annual retroreflectivity survey of road markings in both 2013/14 and 2014/15.

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PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

NE - BEAR ★★☆☆☆

Performance was fair.

Progress was observed with the renewal of roadmarkings but poor progress with the renewal of Category 1 defect road studs within contract timescales was noted.

PAGplus will monitor this activity closely during 2015/16.

SE - Amey ★★☆☆☆

Amey performance was fair.

It is recognised that there were significant issues at handover with many assets noted as being in a poor condition. However, some road marking defects were not correctly categorised by the OC and permanent repairs have not been completed within the required timescales. Pre-existing issues with missing road studs and reflectors were not corrected timeously by the OC.

A NNC was issued in January 2015 for failure to carry out works relating to speed signs on A702 West Linton.

PAGplus will monitor this activity closely during 2015/16.

Structures

Maintenance of Structures

OCs are required to carry out cyclic maintenance to structures to keep them in optimum operating condition and deal with minor recurring maintenance issues. These activities include clearing vegetation, cleaning movement joints and construction gaps, checking and cleaning bearings and bearing shelves, checking parapets, mesh infills and connections to safety fences. Cyclic maintenance of structures is required to be carried out twice each year.

NW - BEAR ★★☆☆☆

BEAR performance reduced from good to fair.

The OC was delayed in completing its second round of cyclic maintenance in the autumn due to severe weather. In addition, PAGplus found evidence that Japanese Knotweed

had been cut down by the OC during vegetation clearance. The OC acted upon this by providing an additional tool box talk to its operatives and undertaking a review of its procedures.

PAGplus will continue to monitor this activity closely during 2015/16.

SW - Scotland TranServ ★★☆☆☆

Scotland TranServ's performance reduced from good to fair.

Cyclic maintenance was carried out to a reasonable standard, but at the end of spring there were still approximately 100 structures outstanding. It was also been noted that SMS had not been updated after operations had been completed resulting in a discrepancy between the figures used by PAGplus and those reported by the OC. The OC took some time to prepare its cyclic maintenance programmes for spring and autumn, delaying the start of the operations.

PAGplus will continue to monitor this activity closely during 2015/16.

NE - BEAR ★★☆☆☆

BEAR's performance was fair.

PAGplus monitoring noted that the OC had not completed, in full, all the required cyclic maintenance activities. In addition, these omissions were not always recorded by the OC.

BEAR commenced its cyclic maintenance programme in advance of the contractual period without seeking Transport Scotland consent.

PAGplus noted that the OC had a good management system for recording cyclic maintenance operations. However, the autumn programme was not uploaded to SMS until after March 2015.

PAGplus will monitor this activity closely during 2015/16.

SE - Amey ★★☆☆☆

Performance by Amey was fair.

The OC was late in producing its programme. Subsequent PAGplus monitoring noted that the OC had not completed several elements of work. In addition, when the OC returned

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to site to complete the work it failed to clean all the bearing shelves.

PAGplus will monitor this activity closely during 2015/16.

3.2 Reactive maintenance

Lighting

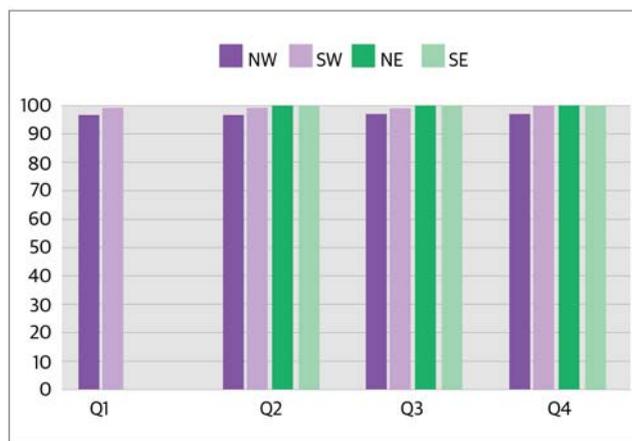


Figure 23 – OC performance for lamp outages (* Q2 August and September only for NE and SE)

NW – BEAR ★★★★★

Performance remained excellent as reflected in the MI result of 97% for lamp outages (see Figure 23).

SW – Scotland TranServ ★★★★★☆

Scotland TranServ's performance improved to good with some issues raised concerning identification, recording and classification of lighting defects. The MI result was 99% (see Figure 23).

NE – BEAR ★★★★★

Overall, performance was excellent.

An excellent MI result of 100% was achieved and any issues identified by PAGplus during routine inspections were dealt with timeously (see Figure 23).

Two hazard notices were issued in January and March 2015 for detached doors. This has been identified as a design issue with these lighting columns.

SE – Amey ★★★★★☆

Overall, performance was good.

An excellent MI result of 100% was achieved (see Figure 23).

One hazard notice was issued for a potentially unsafe lighting column.

Safety fences, barriers and fencing

NW – BEAR ★★★★★☆

BEAR performance remains fair.

Identification and repair of Category 1 safety fence defects was on several occasions not to the timescales required.

PAGplus will continue to monitor this activity closely during 2015/16.

SW – Scotland TranServ ★★★★★☆

Performance has improved from poor to fair.

Issues raised by PAGplus were generally dealt with timeously. However, the repair of A77 pedestrian barrier was significantly affected by delays during design.

PAGplus will continue to monitor this activity closely during 2015/16.

NE – BEAR ★★★★★☆

BEAR's performance was good with accident damaged safety fences and post and rail fence repairs generally carried out timeously.

SE – Amey ★★★★★☆

Amey's performance was fair.

Towards the latter part of the reporting period a number of damaged safety fences were not repaired within the required timescale.

PAGplus will monitor this activity closely during 2015/16.

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Carriageway condition

Over the course of the year PAGplus undertook a number of monitoring activities to assess each OC's performance with respect to the identification and categorisation of carriageway defects.

NW - BEAR ★★☆☆☆

BEAR's performance improved to fair.

ORIs and hazard notices were issued for potholes not being recorded in IRIS.

The identification and categorisation of defects remained an issue throughout the year.

PAGplus will continue to monitor this activity closely during 2015/16.

SW - Scotland TranServ ★★☆☆☆

Performance improved from poor to fair.

PAGplus monitoring identified that defects were not always correctly categorised or recorded within IRIS.

PAGplus will continue to monitor this activity closely during 2015/16.

NE - BEAR ★★☆☆☆

BEAR's performance was fair.

PAGplus monitoring raised issues with the identification and categorisation of defects.

Two hazard notices were raised during the period for open central joints and a large pothole.

PAGplus will monitor this activity closely during 2015/16.

SE - Amey ★★☆☆☆

Amey's performance was fair.

PAGplus monitoring raised issues with the identification and categorisation of defects.

PAGplus will monitor this activity closely during 2015/16.

3.2.1 Category 1 defects

Category 1 defects

Category 1 defects are the most serious defects, generally safety-related which, once identified by the OC, should be made safe within 24 hours or quicker for certain defects and permanently repaired within 28 days. Details of all Category 1 defects are recorded in RMMf along with details and dates of all temporary and permanent repairs.

Damaged bridge parapets identified as category 1 defects are made safe using temporary safety barriers. However, these repairs can take longer due to the need to obtain or fabricate parts and use sector scheme trained and registered contractors.

Unit	2014/15	2013/14
NW	95%	94%
SW	94%	64%
NE	93%	N/A
SE	91%	N/A

Figure 24 - OC performance in repairing category 1 defects

NW - BEAR ★★☆☆☆

BEAR maintained a good performance throughout the year, achieving the PI threshold figure of 95% (see Figure 24).

The number of Category 1 defects open beyond the contractual repair period of 28 days has decreased significantly throughout the period.

SW - Scotland TranServ ★★☆☆☆

Scotland TranServ's performance improved significantly from poor to fair.

There was significant improvement made towards reaching the PI threshold with a figure of 94% being achieved (see Figure 24).

The OC made significant effort to close out the backlog of Category 1 defects open beyond the contractual repair period of 28 days resulting in the closure in early 2015 of a longstanding NNC.

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PAGplus will continue to monitor this activity closely during 2015/16.

NE - BEAR ★★☆☆☆

Overall performance by BEAR was fair, with a PI figure of 93% being achieved (see Figure 24). A low level of backlog repairs open beyond the 28 day permanent repair period was maintained throughout the period.

Route inspections and auditing undertaken by PAGplus identified a number of issues concerning the incorrect classification of Category 1 defects.

PAGplus will monitor this activity closely during 2015/16.

SE - Amey ★★☆☆☆

Overall, performance in SE was good, with a PI figure of 91% being achieved (see Figure 24).

An increasing backlog of defects in early 2015, open beyond the 28 day permanent repair period, was addressed by the OC.

PAGplus will monitor this activity closely during 2015/16.

3.2.2 Incident response

Incident response

The OCs must provide resources to deal with incidents on the network or to assist the emergency services. Incidents include:

- debris removal;
- overturned lorries;
- road traffic accidents/breakdowns;
- landslips;
- flooding;
- serious carriageway defects;
- bridge/gantry strikes;
- spillages; and
- severe weather.

The OCs are required to respond to incidents as quickly as possible and within specific timescales depending on the type of road.

Trunk road incident support service (TRISS)

TRISS operates on routes on the trunk road network where the potential for major delays due to breakdowns or other incidents have been identified.

The overall aims of TRISS are to:

- clear up incidents quickly;
- offer assistance to broken down vehicles;
- reduce congestion; and
- free up police time.

TRISS vehicles are specially adapted and equipped high-roofed vans (see Figure 25). They are operated by trained staff working for the OCs. The target time for TRISS to get to an incident is 20 minutes.



Figure 25 - TRISS vehicle

In July 2014 TRISS vehicles were introduced for the first time in NW to cover A9 from Tore through Inverness to Daviot, and on A96 from Inverness to Inverness Airport roundabout.

Incident response

In addition to TRISS each OC is responsible for responding to incidents across the entire Unit. Specific contractual timescales are set for the OCs to respond and a monthly PI is used to measure whether response times are achieved. Figure 26 shows each OC's performance in dealing with incidents.

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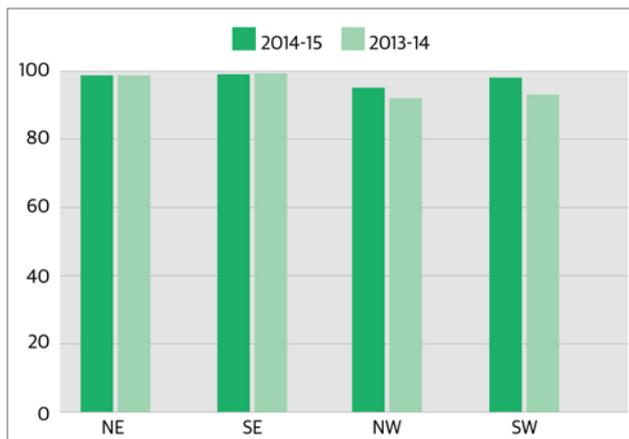


Figure 26 - OC performance in dealing with incidents

NW – BEAR ★★☆☆☆

BEAR's performance improved from fair to good with the PI increasing from 92% to 95%.

On A83 at Rest and be Thankful the 'old military road' diversion was used in October 2014 when a landslide blocked the trunk road. PAGplus reviewed the OC's response to both this incident and a further incident on A82 during a prolonged period of weather disruption. PAGplus concluded that the OC had delivered an excellent response to both incidents.

In addition, during March 2015 the OC worked well with the Forestry Commission following rock falls on A82 between Invermoriston and Drumnadrochit.

SW – Scotland TranServ ★★☆☆☆

Scotland TranServ's overall performance improved from fair to good with the PI increasing from 93% to 97.5%.

However, a PAGplus audit found issues with how the OC was populating the management of incidents (MOI) database within IRIS.

NE – BEAR ★★☆☆☆

BEAR performance was excellent with a PI score of 98% being achieved.

The OC showed good performance for the first seven months of the 4G contract.

SE – Amey ★★☆☆☆

Overall Amey's performance was good with an excellent PI score of 98% being achieved.

However, a PAGplus review of two incidents in February and March 2015 identified issues with respect to response time and provision of traffic management.

Hazard notices

Hazard notices are issued to OCs immediately when PAGplus identifies hazardous defects/situations, whether these are the responsibility of OCs or third parties.

Hazard notices found on the network can include:

- Poor traffic management;
- Faulty traffic signals;
- Exposed electrical wiring;
- Missing/broken ironwork and gullies (within trunk road boundary);
- Dangerous carriageway defects (potholes); and
- Debris on the carriageway.

A total of 43 hazard notices were issued by PAGplus during 2014/15 (see Figure 27).

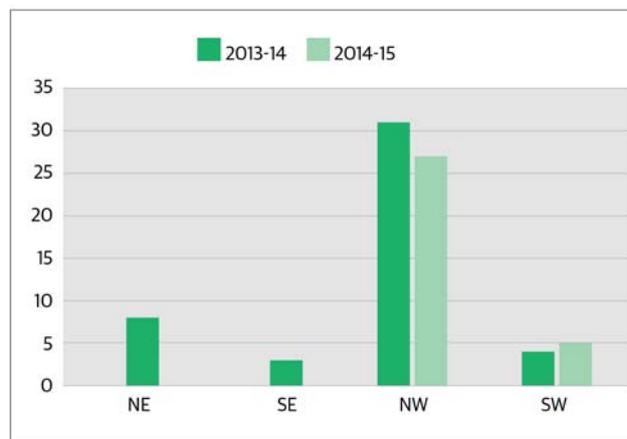


Figure 27 - Number of hazard notices issued

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3.2.3 Winter

Winter treatments

During the winter period, which runs from 1 October through to 15 May, the OCs must minimise delays and disruptions caused by snow and ice. To do this, the OCs carry out precautionary treatments.

In addition, when forecasts change significantly or surface conditions become unexpectedly icy, reactive treatments are undertaken. The response times for these reactive treatments are monitored by a PI.

The OCs decide which treatments are necessary to comply with the contract. They are also required to keep records of the work planned and undertaken

Winter service

The OCs are required to provide 24-hours a day, 7 days a week dedicated service throughout the winter period. The objective is to keep the network free from ice and snow as far as is reasonably practicable, hence reducing risks to road users.

Winter weather conditions

Met Office records highlight that the 2014/2015 winter was relatively benign and quiet, especially when compared to the exceptionally stormy weather of the previous winter. Nevertheless the north of the UK bore the brunt of some significant storms in mid-December 2014, mid-January and late February 2015.

Snowfalls caused some disruption during the second half of January 2015, but were generally unexceptional. The Scottish mountains received large accumulations in January and February 2015, especially in the West.

Scotland provisionally had its sixth-wettest winter in a series from 1910 and it was especially wet across western and northern Scotland.

Winter service improvements

NW introduced fast track multi-purpose vehicles to aid snow clearance and removal of stranded vehicles. SW introduced Schmidt Auto-Logic to the front-line winter fleet. Following the award of the contracts in 2014, NE and SE have both invested in new front-line winter fleet.

Both SE and NW participated in live network trials of brine versus pre-wetted salt.

Pre-winter exercises - all Units

The OCs organised and facilitated a one-day event in October 2014 to test the delivery and resilience of current procedures through an unfolding series of hypothetical scenarios as set by Transport Scotland. The principal objectives were to improve delivery and share best practice, involving representatives from the all OCs.

Performance assessment

PAGplus assessed the OCs' performance for the following areas over the 2014/15 winter period:

- winter readiness;
- winter decision making and actions;
- winter service PIs;
- management of salt stocks; and
- road closures.

Winter readiness

Winter preparedness audits were carried out in all four Units prior to the start of the winter season.

The audits concluded that the OCs were in general prepared for winter, as required by the contract.

NW - BEAR ★★★★★

No findings were raised during the PAGplus depot audit. Sufficient salt stocks were confirmed as being in place for the start of the winter season and enhancements made to the forecasting service were noted.

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SW – Scotland TranServ ★★☆☆☆

One finding was raised in SW regarding road surface temperature sensors not fitted to a number of front-line vehicles. The finding was actioned timeously by the OC.

NE – BEAR ★★☆☆☆

PAGplus auditing identified three findings concerning salt stock levels, salt storage and brine manufacturing. All findings apart from the one regarding the construction of salt storage facilities, were actioned timeously by the OC.

SE – Amey ★★☆☆☆

A number of issues including the use of an interim fleet, sharing of a control room outwith the Central Office on a temporary basis and salt stock at Gorebridge were raised during PAG audits and in some cases had already been identified by the OC with corrective action carried out or planned to be taken.

A follow up to the winter preparedness audit was carried out to ensure all winter depots were contract compliant with no significant issues raised.

Winter decision-making

During the winter period PAGplus undertook a number of retrospective reviews of the OCs' winter decision making and performance.

NW – BEAR ★★☆☆☆

Overall performance improved from fair to good.

One winter performance review was carried out by PAGplus, focusing on the resources in the winter control room. Further to this, BEAR was required to carry out a separate review of resources with particular reference on experience of control room winter staff.

In general, routes were observed to be clear of snow and ice during PAGplus inspections.

SW – Scotland TranServ ★★☆☆☆

Scotland TranServ performance reduced significantly from good to poor.

A remedial notice was issued on 20 January 2015. Further to this, concerns were highlighted over control room operations in one of the four winter performance monitoring exercises carried out by PAGplus.

In addition, a second remedial notice was issued in March 2015 due to the treatment selection being outwith contract compliance.

The OC has taken steps to address these issues, including the provision of additional winter training for control room staff and deployment of approved winter service duty officers within the control room.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

NE – BEAR ★★☆☆☆

Overall performance by BEAR was good.

Two winter monitoring reviews were carried out, one concerning winter control room resources and the second following winter related accidents on A90 and A96.

The A90 and A96 review, reinforced the recommendation for BEAR to carry out a review of resources with particular reference to experience of control room staff.

SE – Amey ★★☆☆☆

Overall performance by Amey was good.

A winter monitoring review was carried out, concerning winter control room resources. The review identified that the OC was fully compliant with regard to Winter Service Duty Officers and good monitoring practice was demonstrated.

Winter service PI

To measure performance in undertaking winter duties the OCs report their performance monthly using one PI that incorporates the following three activities:

- Unplanned treatment response times;
- Planned treatment times; and
- Successful electronic data logger downloads.

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The PI is calculated as the arithmetic average of the three activities (see Figure 28).

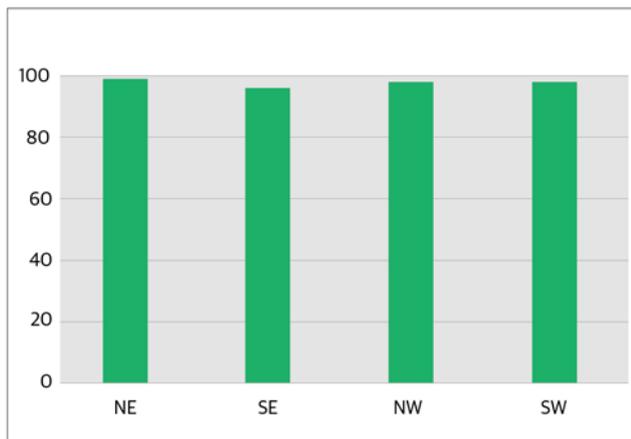


Figure 28 - Winter performance (PI 11)

NW - BEAR ★★★★★

BEAR's performance was excellent with a PI result of 99%.

SW - Scotland TranServ ★★★★★☆☆

Scotland TranServ's performance was fair, with a PI result of 95%.

NE - BEAR ★★★★★☆

BEAR's performance was good, with a PI result of 99%.

SE - Amey ★★★★★☆

Amey's performance was good, with a PI result of 98%.

Management of salt stocks levels - all Units ★★★★★

There were no recorded issues with the management of salt stock levels during the period, with all OCs proactive in maintaining salt stock levels and liaising regularly with Transport Scotland.

There was a reduction in the SE and SW salt stocks due to the commencement of M8 bundle.

Winter related road closures - all Units N/A

There were no winter related road closures over four hours in any of the OC Units (see Figure 29).

Winter period	No of winter related major incident road closures
2014/15	0
2013/14	4
2012/13	3
2011/12	2
2010/11	15
2009/10	21
2008/09	3
2007/08	6

Figure 29 - Number of winter related major incident road closures in last eight years

3.3 Planned maintenance

Planned maintenance

Work flowing from inspections together with other priority remedial works already identified feed into the one and three year programmes of planned maintenance needs, which are updated annually. This maintenance work is programmed based on the budgets available to each OC.

Planned maintenance schemes are vital to maintain assets in good serviceable condition and require careful planning, prioritisation and coordination.

Planned maintenance is carried out to maintain the asset value of the network.

These operations are carried out by the OC for scheme values up to £350k. Larger schemes are procured using works contracts (see section 4.1).

3.3.1 Statements of intent audit

Statements of Intent (SOIs) and Value for Money (VfM) assessments are required for all routine maintenance, strategic road safety and, minor improvement schemes with a value of more than £10k, and for structures schemes valued at more than £50k. There is a more detailed SOI process for road structural maintenance schemes.

Both NW and SW had programmes in place. While both NE and SE also had programmes, action plans compliant with the contract were not in place as of 31 March 2015.

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3.3.2 Roads

Maintaining roads

This typically includes:

- reconstruction and resurfacing of carriageways;
- application of surface dressing and anti-skid surfacing;
- upgrading safety fencing; and
- replacing road markings and studs.

NW - BEAR ★★☆☆☆

BEAR's performance improved from fair to good.

Works undertaken included resurfacing, application of anti-skid surfacing and replacement of road markings and road studs (see Figure 30).

PAGplus monitoring confirmed that sites were supervised by experienced personnel and that record keeping, traffic management and workmanship were all to a good standard at the time of the visits.

Remedial actions from last year were resolved, however, during some site visits over the period further remedial actions were identified.

Scheme records reviewed were all generally found to be of a good standard.



Figure 30 - Rest and Be Thankful resurfacing on A83 in NW

SW - Scotland TranServ ★★☆☆☆

Scotland TranServ's performance continues to be good.

Works undertaken included resurfacing, application of anti-skid surfacing and replacement of road markings, road studs, gantry refurbishment, bridge joint replacements and cantilever tip welding (Erskine Bridge).

PAGplus monitoring confirmed that traffic management was consistently to a good standard with contraflows implemented where appropriate. Site health and safety protocols were noted as being followed on all sites visited by PAGplus. Supervision, record keeping and workmanship were all to a good standard.

TS2010 has been successfully installed at various sites across SW.

Scheme records reviewed were all generally found to be of a good standard.

NE - BEAR ★★☆☆☆

BEAR performance was good.

A good quality of workmanship was recorded using experienced resources during the construction of schemes throughout NE.

BEAR supervision and record keeping were of a good standard at sites visited and also at post completion reviews.

Good traffic management arrangements were recorded including the use of 'convoy working' on sites and slip road closures.

Structural maintenance operations were recorded on M90 Glenfarg overbridge which resulted in traffic management remaining in place over a lengthy period of time on the north and south carriageways on M90. Unforeseen matters caused delays during the works.

TS2010 thin surface course with 6mm and 10mm aggregates was successfully used on numerous surface courses across NE.

Filter drain, central reserve red chip replacement and upgrading of laybys were also completed under planned maintenance operations during the period.

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SE - Amey ★★☆☆☆

Amey's performance was good.

Experienced resources delivered good workmanship with good quality records being completed during site inspections by PAGplus. This was also reflected at post completion reviews.

Flushing of surface course was recorded at A985 High Valleyfield where 'jetting' remedials were completed and M90 J2-J2A northbound.

Hot rolled asphalt surface course was recorded with chip rejection on A68 Ravenswood roundabout. These areas continue to be monitored by PAGplus.

Health and safety procedures and traffic management were found to be compliant. Supervision was recorded as adequate during site inspections by PAGplus.

TS2010 thin surface course with 10mm aggregates were successfully used on numerous surface courses across SE.

3.3.3 Structures

Maintaining structures

The typically includes:

- re-waterproofing of bridge decks;
- resurfacing of bridge decks;
- replacement of deck joints;
- concrete repairs;
- repainting of steelwork;
- repair and replacement of parapets; and
- repair of scour damage at watercourses

NW - BEAR ★★☆☆☆

BEAR's performance remains fair.

Scour works were a high priority, however, only 20 out of 27 schemes were delivered.

In addition, the OC did not deliver a number of high value schemes as environmental issues were not identified during the preliminary design stage.

It is recognised that BEAR was required to manually operate the A9 Mound Sluice gates to protect the surrounding environment on over 90 occasions during the period.

SW - Scotland TranServ ★★☆☆☆

Scotland TranServ's performance reduced from good to fair with delivery being hindered by resourcing issues throughout the period.

The OC successfully managed the design of complex schemes such as A77 Carlock Wall and M8 J15 structures.

However, the OC failed to issue tender documents for the Erskine Bridge electrical refurbishment despite assurances having been given by the OC that this would be achieved. The OC commenced preparation of a communications strategy for 2015/16 but did not complete and submit an acceptable strategy to Transport Scotland to the agreed timescale. It is recognised that Scotland TranServ delivered additional schemes including the successful completion of the majority of planned gantry projects when additional budget was made available.

PAGplus will continue to monitor this activity closely during 2015/16.

NE - BEAR ★★☆☆☆

BEAR's performance was poor.

Progress with four schemes was slow and as a result a NNC was issued in December 2014.

Following the issue of the NNC, progress with the design of pier protection works for M90 Glenfarg Footbridge improved and subsequent site supervision, traffic management and workmanship were all to a good standard.

The NNC was closed in March 2015.

Progress with regard to land purchase was slow which as a result impacted on the 2015/16 programme.

As a result of slow delivery, the OC's bridges budget was reduced on two occasions during the period.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

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SE - Amey ★★☆☆☆

Amey's performance was fair with resourcing issues for the majority of the period. As a result, there were delays to the programme.

However, it is recognised that there were issues during the handover period outwith the control of the OC.

PAGplus will monitor this activity closely during 2015/16.

3.4 Works contracts

Works contracts

Schemes with an estimated value between £350k and £5m are generally put out to tender as works contracts. The OCs manage the procurement of works contracts through design to construction on behalf of Transport Scotland.

Schemes of a value greater than £5m are generally managed by Transport Scotland's Major Transport Infrastructure Projects Directorate team and are outside the OCs' responsibilities.

Tender Documents

Prior to contractors being invited to tender for works contracts, the OCs submit draft tender documents to PAGplus for review (see Figure 31). PAGplus undertakes a high level review of all draft tender documents submitted and a detailed review of at least 25% of tender documents received each year.

NW - BEAR ★★☆☆☆

BEAR's performance was good based on the one set of tender documents PAGplus received for review.

SW - Scotland TranServ ★★☆☆☆

Performance has improved from fair to good based on the two sets of tender documents PAGplus received for review.

NE - BEAR ★★☆☆☆

BEAR's performance was good based on the one set of tender documents PAGplus received for review. However, some inconsistencies in the text were noted.

SE - Amey N/A

No tender documents were issued to PAGplus for review.

Unit	Number received 2014/15	Number received 2013/14
NW	1	0
SW	2	2
NE	1	2
SE	0	4
Total	4	8

Figure 31 - Number of tender documents received by PAGplus

Supervision

NW - BEAR ★★☆☆☆

BEAR's performance improved to excellent.

A9 Kessock Bridge Phase 2 (tender value of £13.2m) commenced on 10 February 2014 with substantial completion awarded 29 May 2014 (see Figure 32). Site works were formally completed on 24 June 2014 as the last scheduled traffic management day. The supervision of these works was good.



Figure 32 - Kessock Bridge Phase 2 resurfacing on A9 in NW

A82 Glen Gloy realignment works (tender value of £1.1m) commenced in March 2014 and works are ongoing as of 31 March 2015. Works involved the construction of 400m of carriageway with associated earthworks and drainage. The supervision of these works was good with no major issues.

Chapter 3

Delivery of service

SW – Scotland TranServ ★★★★★

Scotland TranServ performance remains excellent, with three works contracts in progress or completed this year e.g. M8 Hillington footbridge refurbishment (see Figure 33), A75 Ringford and A751 South of Inchpark Farm carriageway reconstructions.

M8 Hillington footbridge (tender value £2.5m) was a design and build scheme with the design phase on-going from September 2014. The construction started in January 2015 and was initially planned to be completed in April 2015. However, some delays were experienced due to concrete pile caps and piers not reaching the specified compressive strength and also due to high winds.



Figure 33 - Hillington footbridge refurbishment on M8 in SW

A75 Ringford (tender value was £1.2m) was carried out in June 2014 and consisted of pavement reconstruction over 1.4km (see Figure 34).



Figure 34 - Ringford pavement reconstruction on A75 in SW

A751 South of Inchpark carriageway reconstruction works (tender value of £0.9m) were carried out in March 2015 over a length of 1650m (see Figure 35).



Figure 35 -South of Inchpark carriageway reconstruction on A751 in SW

NE – BEAR N/A

No Works contracts recorded during the period.

SE – Amey N/A

No Works contracts recorded during the period.

Chapter 4

Quality of service

Key points

Quality management

- NW and SW continued to be accredited to ISO 9001:2008, either directly or through their parent companies.
- Accreditation is not required for NE and SE until August 2015. NE has already achieved accreditation and SE is progressing toward this.
- The OCs are rectifying non-compliance with varying levels of success. NW and NE were both excellent, with SE fair and SW very poor.

Health and safety management

- Low levels of RIDDORs were reported by all OCs with NE and SE having a zero reportable level since August 2014, SW reported no RIDDORs.
- All Units have achieved or maintained accreditation to OHSAS 18001:2007 occupational health and Safety management systems across all sites and depots.

Environmental management

- NW and SW Units have maintained accreditation to BS EN ISO 14001.
- NW continues to operate a good Environmental Management System (EMS).
- In SW issues were found in its EMS particularly relating to documentation.
- No 4G EMS audits took place in the East Units.

Continuous improvement

- Performance for the West Units decreased significantly.
- One remedial notice was issued to the NW and four remedial notices to SW. No remedial notices were issued to NE or SE.

Chapter 4

Quality of service

4.1 Management systems

OC Management systems

The OCs are required to maintain management systems that comply with:

- BS EN ISO 9001 – Quality management systems
- BS EN ISO 14001 – Environmental management systems
- BS OHSAS 18001 – Occupational health and safety systems

Management systems refer to a framework of processes and procedures used to ensure that an organisation can fulfil all tasks required to achieve its objectives (see Figure 36).

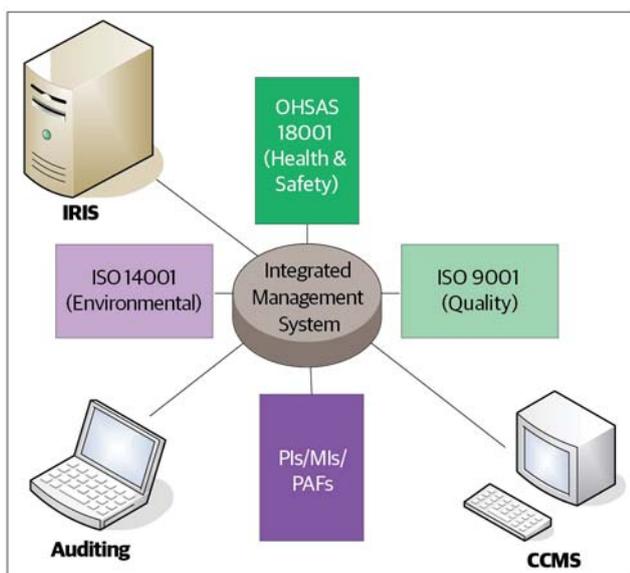


Figure 36 - Processes influencing an Integrated Management System (IMS)

Quality management - achieving and maintaining compliance

NW and SW continue to meet the requirements of BS EN ISO 9001:2008.

NE and SE are required to achieve certification for quality, environmental and occupations health and safety management systems by no later than August 2015. Thereafter these must be maintained throughout the contract.

NE successfully maintained certification following on from the 3G contract and SE is working towards certification.

Quality management - rectifying non-compliance (PAGplus and internal)

The OC performance in closing out corrections is measured by PI 15 (see Figure 37).

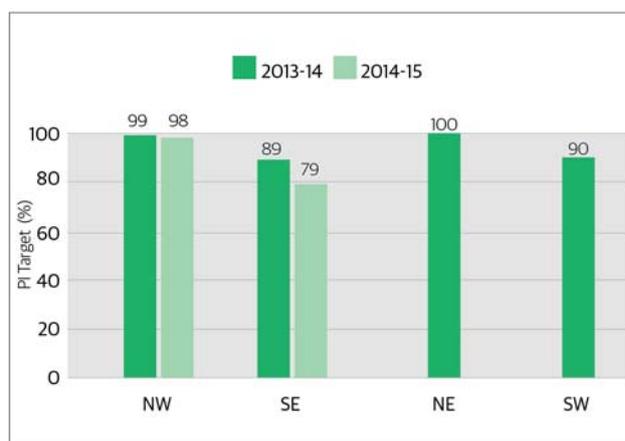


Figure 37 - PI15 OC performance in closing out corrections

NW - BEAR ★★★★★

BEAR continues to deliver excellent performance recording an overall annual average result of 98% for PI 15.

A QMS audit by PAGplus on record keeping identified no significant issues and found that the OC was complying with the contract in regard to maintaining, storing and updating records.

The OC successfully completed all its programme of audits. PAGplus monitoring confirmed that these audits were satisfactory and met the requirements of the contract.

SW - Scotland TranServ ★☆☆☆☆

Scotland TranServ's performance has dropped from fair to very poor with an overall figure of 79% achieved for PI15. It is recognised that performance improved significantly during the second half of the year.

PAGplus carried out a QMS audit on record keeping which found contract compliance in regard to maintaining, storing and updating records.

Chapter 4

Quality of service

The OC successfully completed almost all of its planned internal audits. PAGplus monitoring confirmed that these audits were satisfactory and met the requirements of the contract.

PAGplus will monitor this activity closely in 2015/16.

NE - BEAR ★★★★★

BEAR showed excellent performance in closing out corrections on time, achieving a figure of 100%.

BEAR carried out its first internal audits of management systems within the first 13 weeks of the contract as required.

The OC successfully completed its internal audit programme. PAGplus monitoring confirmed that these audits were satisfactory and met the requirements of the contract.

SE - Amey ★★★☆☆

Overall a fair performance was delivered by Amey with a monthly average figure of 90%. Performance reduced in February and March 2015.

The OC carried out its first internal audits of management systems within the first 13 weeks of the contract as required. The OC was slightly late in completing its internal audit programme. PAGplus monitoring confirmed that these audits were satisfactory and met the requirements of the contract.

A QMS audit by PAGplus identified issues with the omission of 3G handover records in Amey's records register, and records relating to staff training. These were rectified timeously.

Health and safety management

Health and safety

OCs are required to report to the Health and Safety Executive (HSE) any incidents involving deaths and injuries, occupational diseases and dangerous occurrences under the legislative requirements of The Reporting of Injuries, Diseases and Dangerous Occurrences 2013 Regulations (RIDDOR).

Reported RIDDORs to the HSE are shown in Figure 38.

NW - BEAR ★★★★★

BEAR achieved an excellent level of performance, improving on 2013/14. One reportable accident occurred in March 2015 and entailed a traffic management operative sustaining a broken ankle while exiting a vehicle.

No findings were identified from the Health and Safety audit undertaken by PAGplus, which focused on site visits.

In addition to this audit, routine reviews by PAGplus confirmed that health and safety procedures were adhered to.

SW - Scotland TranServ ★★★★★☆

Scotland TranServ RIDDOR performance improved from fair to good with no reportable accidents to the HSE.

PAGplus carried out a health and safety audit involving site visits, with issues raised on traffic management and vehicle livery.

NE - BEAR ★★★★★

BEAR performance was excellent with no reportable accidents to the HSE.

SE - Amey ★★★★★

Amey reported no RIDDORs to the HSE, and maintained an excellent level of performance.

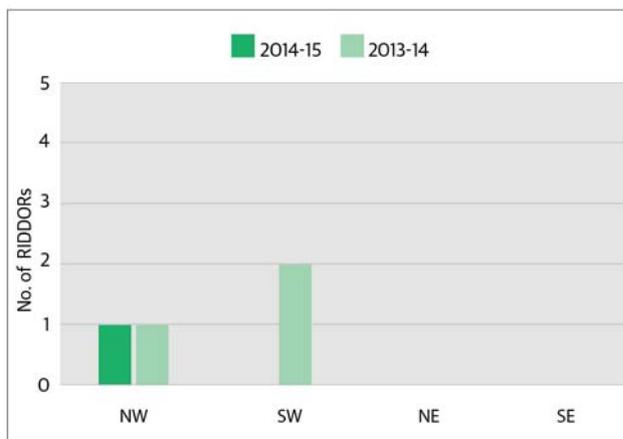


Figure 38 - OCs' RIDDOR performance Environmental management

Chapter 4

Quality of service

Environmental management

Environmental management systems (EMS)

A well implemented and managed EMS demonstrates a commitment to improving environmental performance and protection. It should fulfil the requirements of wide reaching environmental legislation and meet stakeholders' expectations for sustainable development.

During the year EMS audits were completed in NW and SW, none were carried out for NE and SE by PAGplus. NW and SW Units have maintained accreditation to BS EN ISO 14001.

NW - BEAR ★★★★★

BEAR's performance improved to excellent, with no issues raised. PAGplus auditing confirmed that BEAR's EMS was operating well.

SW - Scotland TranServ ★★☆☆☆

Scotland TranServ's performance dropped to poor with several issues identified during PAGplus audits concerning documentation and depot waste storage.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

NE - BEAR N/A

No EMS audits undertaken.

SE - Amey N/A

No EMS audits undertaken.

4.2 Continuous improvement

Resolving problems and improving performance

Management systems are required to continually improve the effectiveness and efficiency of an organisation. This is achieved by identifying areas for improvement to the organisation's processes.

The OCs are, therefore, required to regularly monitor and verify their activities through testing, inspecting and auditing. They should then action where necessary to prevent use and recurrence where deficiencies are uncovered.

PAGplus monitors the OCs' systems and uses an escalation process to ensure issues are resolved (see Figure 39).

Where an issue is escalated to either NNC or remedial notice, the OC is required to manage the default in accordance with its QMS within the specific timescale.

The OCs, in most cases, respond positively to these notices and rectify the immediate problems and improve their overall effectiveness.

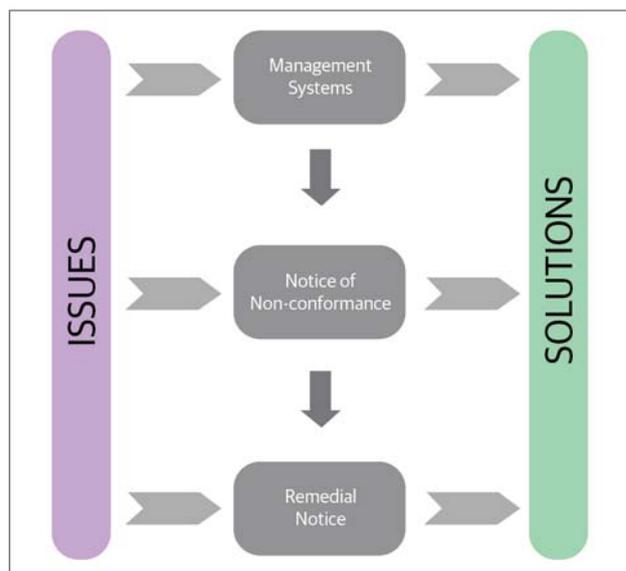


Figure 39 - Escalation process

OC default performance

In total five remedial notices were issued, one in NW and four in SW (see Figure 40). The length of time the remedial notices were open is shown in Figure 42.

NNCs issued after 31 March 2014 relating to 2013/14 performance have been included as they were not reported in this section in last year's report.

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Quality of service

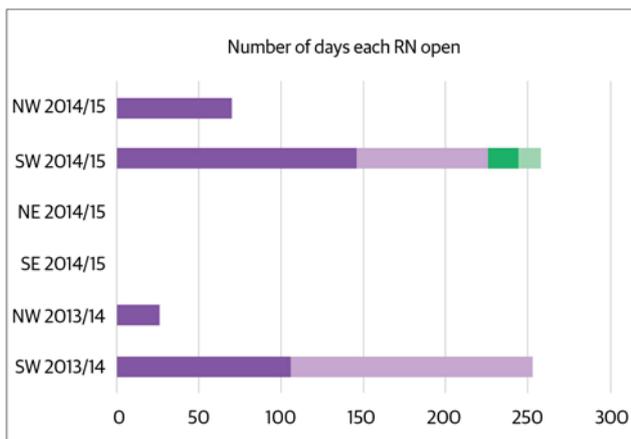


Figure 40 - Number of days each remedial notice was open

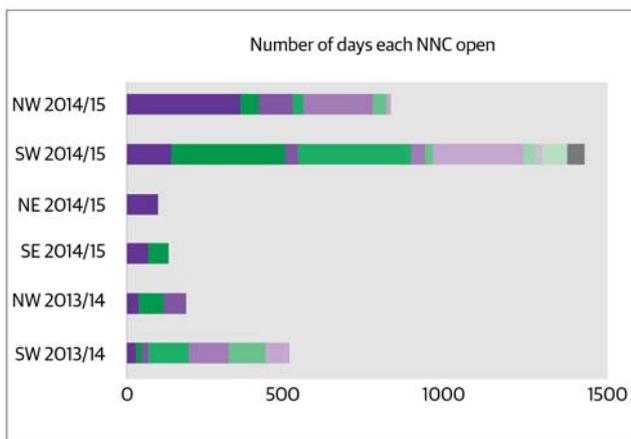


Figure 41 - Number of days individual NNCs were open

NW - BEAR ★★☆☆☆

Overall, BEAR's performance remained poor.

Six NNCs were issued, five of these were issued in April 2014 relating to 2013/14 performance. Figure 42 shows that the number of NNCs and length of time those NNCs have been open have both increased from 2013/14 to 2014/15. One of the five NNCs opened in April 2014 remained open at the end of 2014/15.

One remedial notice was issued in March 2015 for failing to comply with the contract requirements with respect to the use of IRIS. This remained open at the end of 2014/15.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

SW - Scotland TranServ ★☆☆☆☆

Scotland TranServ's performance deteriorated further from its very poor performance in 2013/14.

Eleven NNCs were issued, four of these relating to 2013/14 performance. The number and length of time NNCs have been open has increased significantly since 2013/14. Two of the four NNCs opened in April 2014 remained open at the end of 2014/15.

Four remedial notices were issued in the last six months of 2014/15. One of these, raised in November 2014 remained open at the end of March 2015.

Transport Scotland and PAGplus will work very closely with the OC to ensure improved performance is delivered in 2015/16.

NE - BEAR ★★☆☆☆

BEAR's overall performance was good with one NNC issued in December 2014, which was closed within four months. No remedial notices were issued.

SE - Amey ★★☆☆☆

A fair performance with two NNCs issued. One was closed after two months with the other remaining open at the end of the year. No remedial notices were issued.

PAGplus will monitor performance closely during 2015/16.

Performance measurement

Performance measurement

The OCs' performance in the management and maintenance of the network is measured by a set of 20 PIs in the West and 22 PIs in the East and 21 MIs in all Units.

The performance measurement indicators agreed with the Scottish Ministers are calculated using standard methods of measurement developed by PAGplus. These are reported monthly, with the exception of PI 19 and MI 19 which are reported annually.

Chapter 4

Quality of service

Summary of performance measurement

PAGplus monitors all performance indicators throughout the year and works with the OCs to address any poor performance.

Transport Scotland and PAGplus set thresholds for the performance indicators, which are reviewed annually to help drive continuous improvement.

Descriptions of the PIs can be found in the contract. These are summarised in Figure 48 and are cross-referenced within this report where appropriate.

Performance measurement - continual improvement

NW – BEAR

In comparison to 2013/14, the PI performance of BEAR improved. The OC achieved the thresholds for 12 of the 17 PIs measured. Three PIs in the annual period were not applicable. Figure 42 summarises performance against each PI, inset to this is the same PI results for 2013/14 (see Figure 43).

SW – Scotland TranServ

The PI performance of Scotland TranServ dropped compared to 2013/14. Of the 19 PIs measured, 11 achieved the thresholds required. However, it is recognised that there was significant improvement in some PIs although not enough to achieve the set thresholds. Figure 44 summarises performance against each PI, inset to this is the same PI results for 2013/14 (see Figure 45).

NE – BEAR

BEAR achieved the thresholds set in 11 of the 15 PIs measured. Seven of the PIs in this annual period were not applicable. Figure 46 summarises performance against each PI. As the 4G contract in NE started on 16 August 2014 there is no prior PI data for comparison.

SE – Amey

Amey achieved the thresholds set in 8 of the 15 PIs measured. Seven of the PIs in this annual period were not applicable. Figure 47 summarises performance against each PI. As the 4G contract in SE started on 16 August 2014 there is no prior PI data for comparison.

The performance measurement indicators not referenced elsewhere in this report can be categorised as reporting (PI 16), dealing with planning applications (PI 17) and communications (PI 18).

All OCs exceeded the threshold target for submission of reports, programmes and minutes (PI 16). All OCs with the exception of Amey met the threshold target for dealing with planning applications (PI 17). BEAR (NW) was the only OC not to meet the threshold target for communications (PI 18).

Chapter 4

Quality of service

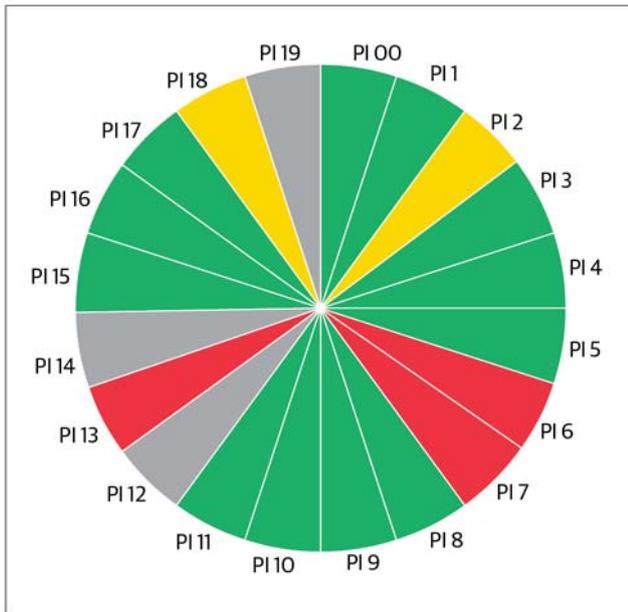


Figure 42 - PI summary for NW 2014/15

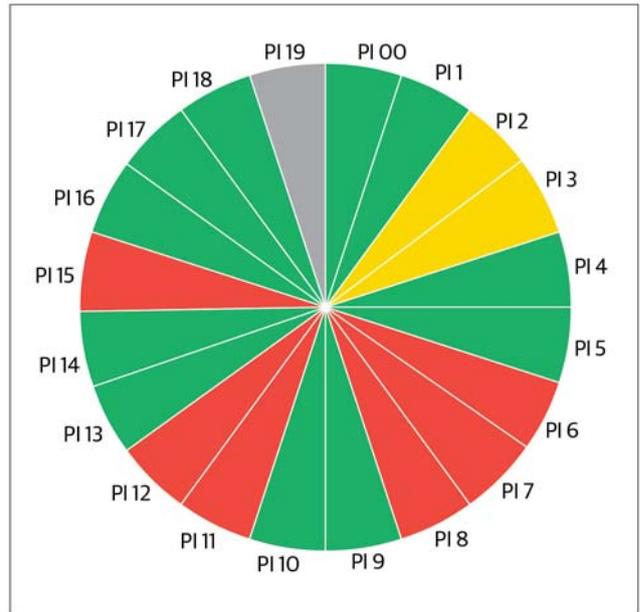


Figure 44 - PI summary for SW 2014/15

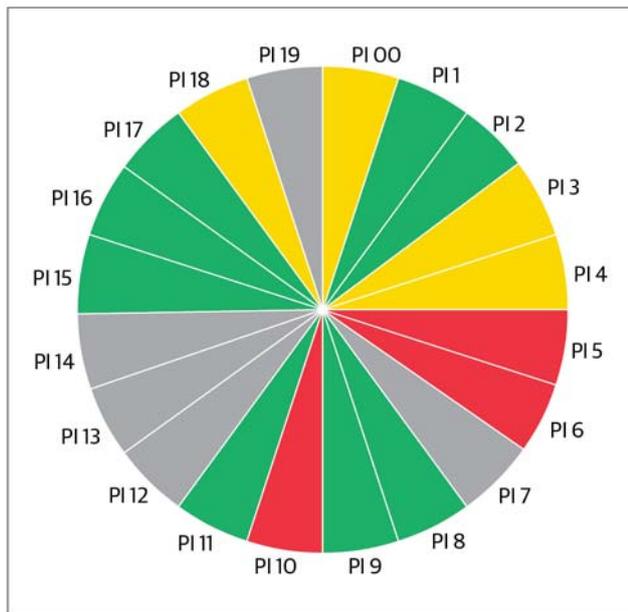


Figure 43 - PI summary for NW 2013/14

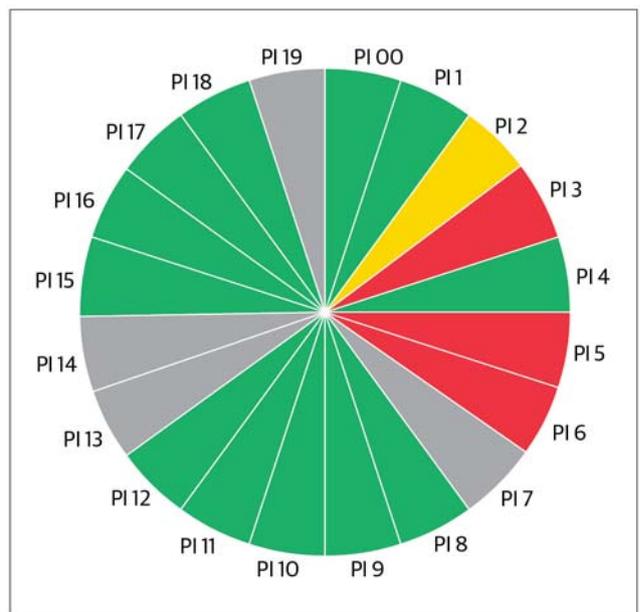
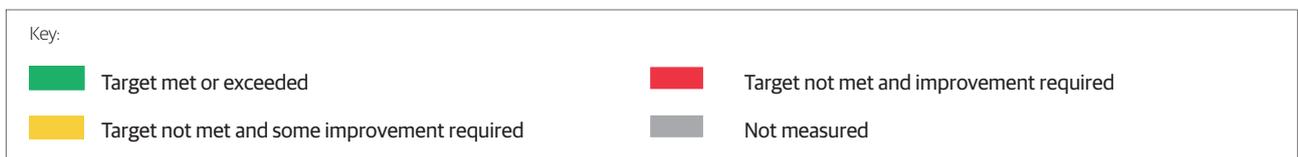


Figure 45 - PI summary for SW 2013/14



Chapter 4

Quality of service

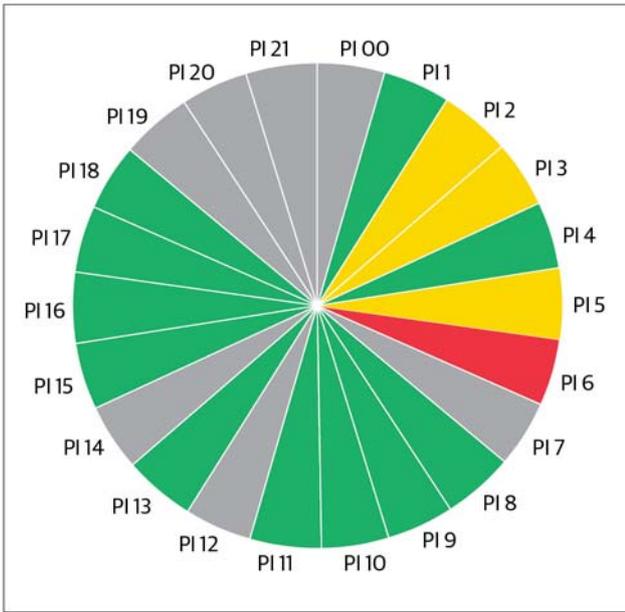


Figure 46 - PI summary for NE 2014/15

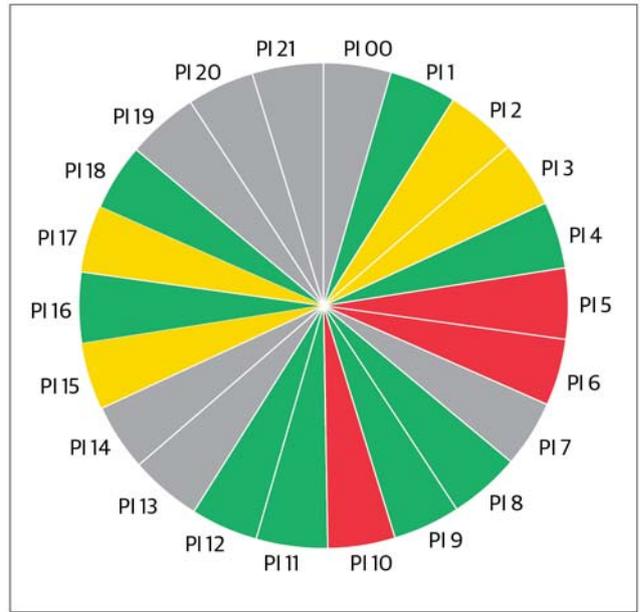
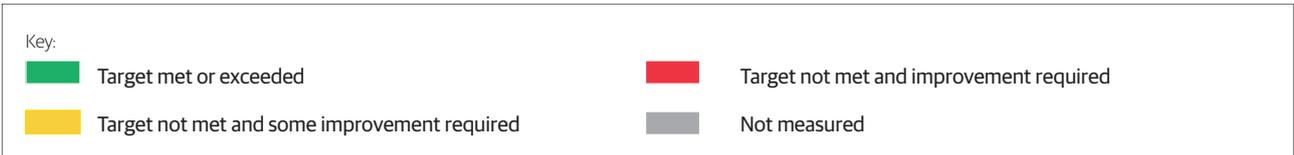


Figure 47 - PI summary for SE 2014/15



Chapter 4

Quality of service

PI No.	PI Name
00	Overall Performance Indicator
1	RIDDOR
2	Accident Frequency Rate
3	Repair of Category 1 Defects
4	Incident Response
5	Safety Inspections and Patrols
6	Detailed Inspections
7	Maintenance
8	Structures - Principal Inspections
9	Structures - General Inspections
10	Structures Maintenance
11	Winter Service Treatments
12	Actual spend against profile
13	Works Contracts - cost estimates
14	Works Contracts - out turn costs
15	Closure of Non-Conformances
16	Submission of reports
17	Planning applications
18	Communications response
19	Carbon emissions
20 (East Units only)	Maintenance of grassed areas
21 (East Units only)	Recording Inventory Condition Rating

Figure 48 - PIs in 4G contract

Chapter 5

Value of service

Key points

Financial spend

- OC 4G spend was less than budget by £3.3m. There were significant differences between spend and budget at budget level category.

Financial management

- OC performance in managing the budget was good in SW, NE and SE and fair in NW. All OCs except SE had issues with monthly profiling of spend.
- The OCs' performance in managing the bid/order process was good except in NW where a NNC was issued for poor performance.

Commercial matters

- OCs operated effective measurement processes, although there were issues with provision of records in all Units.
- Performance in dealing with claims was good in SE. Performance was fair in NW and poor in SW with the OCs failing to fully comply with the claim notification process.

Chapter 5

Value of service

5.1 Financial Spend

5.1.1 Budget, orders and spend

PAGplus monitors and reports on the inter-relationship of budget, orders and spend to assist Transport Scotland in its financial management. How this fits into the overall process is shown in Figure 49.

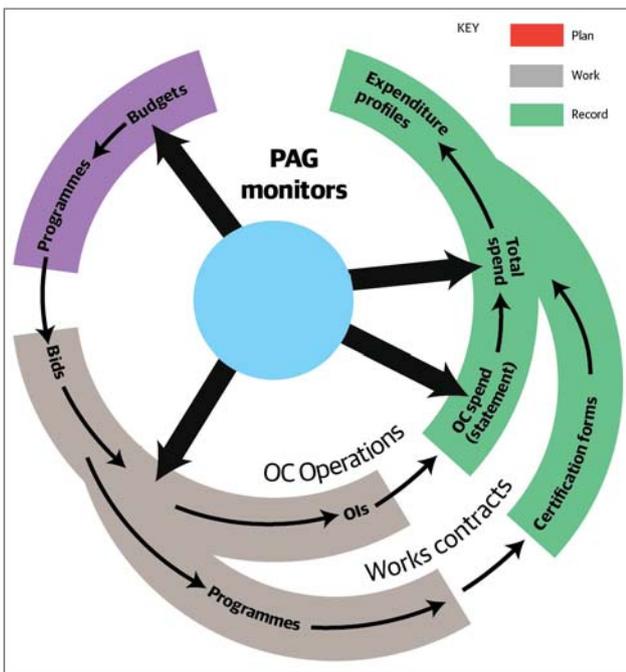


Figure 49 - Financial monitoring process

Budgetary control

Budgetary control by the OCs is an important management responsibility. It is important that the OCs 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 PAGplus audit and monitoring programme.

The OCs have responsibility for delivering a programme of maintenance covering five budget categories, these are routine maintenance (RM), structural maintenance (SM), bridges (BR), minor improvements (MI) and strategic road safety (SRS). A comparison of spend against budget for 2014/15 is shown in

Figure 50. All comments and figures relate to the 4G contracts. 2014/15 figures and comments on 3G contracts may be found in the 2014/15 Addendum to this report.

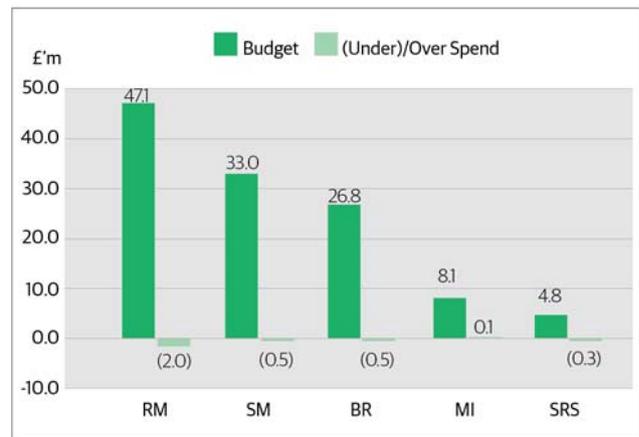


Figure 50 - Spend v Budget (excluding CPF) - all Units

Spend in all Units was less than budget with a total under spend of £3.3m. Figure 50 highlights differences between spend and budget at budget category level.

NW - BEAR ★★☆☆☆

Overall performance dropped to fair. Budget in NW was under spent by £1.6m (3%). Figure 51 shows how the OC managed its budget at budget category level.

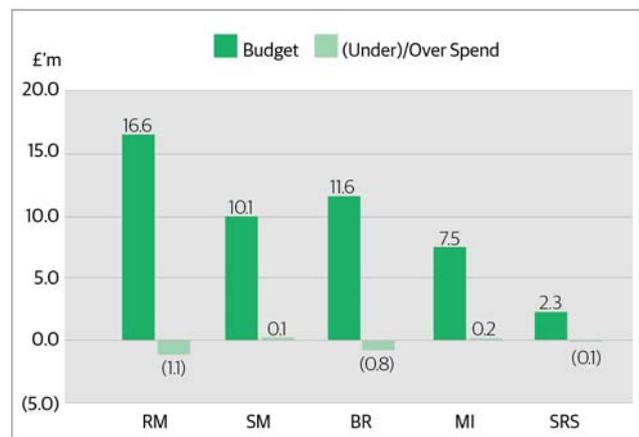


Figure 51 - NW Budget v Spend (excluding CPF)

Figure 51 highlights significant budget under spend against routine maintenance and bridges at £1.1m (7%) and £755k (7%) respectively.

Chapter 5

Value of service

The underspend of £1.6m was in part due to the OC overestimating work done in 2013/14 to be paid in 2014/15 thereby delaying reporting and underspend of £1m for 2013/14. There were performance issues throughout the year, particularly with accuracy of expenditure profiles where performance was at times poor.

PAGplus will monitor this activity closely in 2015/16.

SW - Scotland TranServ ★★☆☆☆

Performance during the year remained fair with all budget categories being under spent. SW spend was less than budget by £0.9m (2%). Figure 52 shows how the OC managed its budget at budget category level.

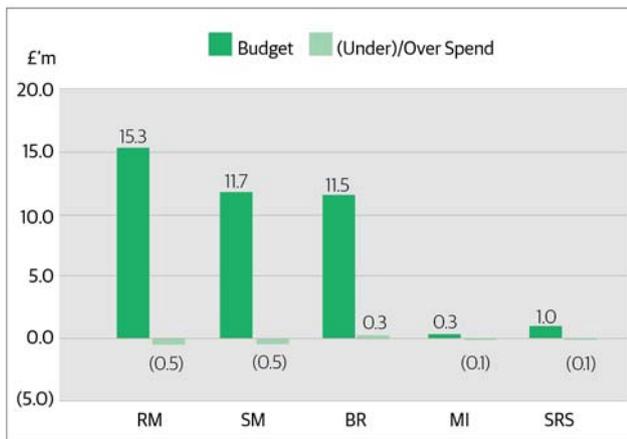


Figure 52 - SW Budget v Spend (excluding CPF)

Figure 52 highlights significant differences with routine maintenance and structural maintenance where spend was less than budget by £519k (3%) and £494k (4%) respectively. There were performance issues during the year with the OC's programme and expenditure profiles not always aligned. PAGplus will monitor this activity closely in 2015/16.

NE - BEAR ★★☆☆☆

Overall, performance was good. Budget in NE was under spent by £292k (2%). Figure 53 shows how the OC managed its budget at budget category level.

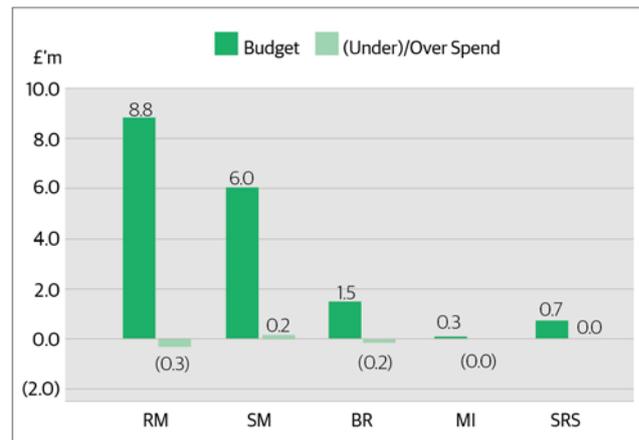


Figure 53 - NE Budget v Spend (excluding CPF)

Figure 53 highlights differences, with routine maintenance and bridges spend less than budget by £306k (3%) and £157k (8%) respectively. This is partly offset by an overspend of £167k (3%) for structural maintenance.

PAGplus monitoring noted performance issues throughout the year, particularly with accuracy of expenditure profiles which at times was fair.

SE - Amey ★★☆☆☆

Performance was good, with an under spend of £447k (3%). Figure 54 shows how the OC managed its budget at budget category level.

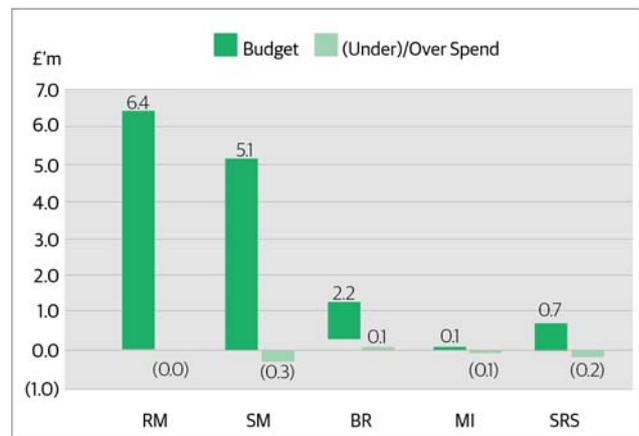


Figure 54 - SE Budget v Spend (excluding CPF)

Figure 54 highlights how the underspend was mainly attributable to structural maintenance £295k (6%) and strategic road safety £163k (22%).

Chapter 5

Value of service

Orders v spend

The responsibility to ensure that the value of orders issued by Transport Scotland matches its annual budgets and subsequent spend rests with the OCs.

Pressures on this process are inevitable due to operational demands changing and work already bid and ordered not proceeding. These changes may have a significant impact on the financial outturn if not managed through the contractual requirements for submitting revised bids. This process should ensure ordered work does not exceed budget.

PAGplus monitored the OCs' financial management performance throughout the year to review whether spend for each scheme exceeded order value. PAGplus also reported on the relationship between budget, order value and spend for operations.

NW - BEAR ★★☆☆☆

BEAR's performance dropped significantly to poor. There were issues throughout the year with spend exceeding orders, resulting in a NNC being issued.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

SW - Scotland TranServ ★★★★★

Overall, performance remained good, although there were issues with spend exceeding orders.

NE - BEAR ★★★★★

BEAR's performance in managing order versus spend was good with some minor issues with spend exceeding orders during the year.

SE - Amey ★★★★★

Overall, performance was good, although there were issues with spend exceeding orders towards the end of the year.

5.2 Financial management

5.2.1 Submission of financial information

NW - BEAR ★★★★★

Overall performance remained good. There were some late submissions of financial records, such as works contractor invoices and expenditure profiles.

SW - Scotland TranServ ★★★★★

Performance improved to excellent with all financial submissions being received within contractual timescales.

NE - BEAR ★★★★★

Overall performance was excellent with all financial submissions being received within contractual timescales.

SE - Amey ★★★★★

Performance was excellent with all financial submissions being received within contractual timescales.

5.2.2 General financial management

NW - BEAR ★★★★★

BEAR's performance overall remained fair particularly in closing out schemes throughout the year. There were also issues with progressing new rates in the first half of the year with a NNC issued for poor performance in 2013/14 only being closed out during November 2014.

PAGplus will monitor these activities closely in 2015/16.

SW - Scotland TranServ ★★★★★

Overall, Scotland TranServ's performance improved to good.

There were, however, some issues in closing out schemes during the year.

PAGplus will monitor this activity closely in 2015/16.

Chapter 5

Value of service

NE - BEAR ★★★★★☆

Overall BEAR's performance was good with some minor issues in closing out schemes during the year.

SE - Amey ★★★★★☆

Performance was good in SE with minor issues in closing out schemes and progressing new rate applications.

5.3 Commercial matters

PAGplus continued to monitor the OCs' measurement processes. Issues raised were discussed and resolved through regular meetings. Where appropriate, monies were deducted from the OCs for failure to substantiate values claimed.

5.3.1 Measurement issues

PAGplus carries out detailed reviews on OC spend through a process of site visits and reviews of measurement records held at the OCs' central offices. Given the volume of work undertaken by the OCs, PAGplus' work is carried out on a sample basis with 10% of operations reviewed. The aim of these reviews is to ensure the OCs' measurement processes are robust and accurately record amounts due through their monthly statements.

NW - BEAR ★★★★★☆

Overall performance remained good, although some issues were noted with measurement records.

SW - Scotland TranServ ★★★★★☆

Overall performance remained good, although some issues were noted with measurement records.

NE - BEAR ★★★★★☆

Overall performance was good. PAGplus monitoring highlighted issues with measurement records and OC review comments with performance at times fair.

SE - Amey ★★★★★☆

Amey's performance overall was good. PAGplus monitoring throughout the year highlighted some issues with measurement records.

5.3.2 Claims

Given the wide ranging requirements of the 4G contracts, it is inevitable that issues will arise around claims for additional cost and contract interpretation.

Transport Scotland has made key changes to its term maintenance contracts to ensure claims are resolved within a reasonable timeframe. The OCs are required to meet timescales for claim notification and to provide detailed supporting information to Transport Scotland.

NW - BEAR ★★★★★☆

Overall performance remained fair.

A number of claims arose during the year and the OC frequently failed to submit claim notifications and supporting details within the timescales stipulated by the contract. Performance improved in relation to claims issues that arose towards the end of 2014/15.

PAGplus will monitor progress closely in 2015/16.

SW - Scotland TranServ ★★☆☆☆☆

Overall performance dropped to poor.

A number of claims arose during the year with the OC generally failing to comply with the claim notification process.

PAGplus will work closely with the OC to establish how performance will be improved during 2015/16.

NE - BEAR N/A

No claims issues arose during the year.

SE - Amey ★★★★★☆

Overall performance was good.

One claim issue arose during the period. The OC largely complied with the claim notification process.

Frequently asked questions

What is the Performance Audit Group (PAGplus)?

CH2M, working in association with PricewaterhouseCoopers, Aecom and TRL, was re-appointed through competitive tendering by Transport Scotland for a third seven year term from December 2009. CH2M and PricewaterhouseCoopers monitor performance on the four Units. Aecom's role in PAGplus is primarily to monitor the M6 DBFO project.

What is PAGplus' role?

PAGplus audits, monitors and reports on the financial, technical and performance aspects of the OCs to a plan agreed with Transport Scotland. PAGplus also reviews payment requests from the OCs and carries out inter-Unit comparisons and value for money investigations at the request of Transport Scotland. PAGplus can escalate the auditing and monitoring of the OCs if performance issues are identified.

PAGplus assisted Transport Scotland in the development of the fourth generation trunk road maintenance contracts.

What is a trunk road?

The primary transport functions for the national strategic transport network are defined as:

- Linking major urban centres and areas of population change;
- Providing links to international gateways, airports, ports and borders;
- Linking remoter communities;
- Linking key tourist areas;
- Facilitating freight routes; and
- Linking areas of economic activity and regeneration areas of national significance.

All motorways and some A-roads are designated as trunk roads.

Are trunk roads managed and maintained in a different way to other roads?

Yes. Trunk roads are the responsibility of and funded by the Scottish Ministers. As such they are managed by Transport Scotland, maintained by the OCs and monitored by PAGplus. Local authorities are responsible for managing, maintaining and monitoring the local non-trunk road network.

What is Transport Scotland?

Transport Scotland is the Scottish Government's national transport agency responsible for helping to deliver the Government's capital investment programme and overseeing the safe and efficient running of Scotland's trunk roads.

What are Transport Scotland's responsibilities for trunk roads?

Transport Scotland is responsible to the Scottish Ministers for overseeing the management and maintenance of the trunk road network. To assist with this, it employs OCs, works contractors, concession companies and PAGplus.

What are OCs?

The Operating Companies (OCs) are responsible for delivering the management and maintenance of the trunk road network in each Unit, working under contract to Transport Scotland.

What are the OCs' main tasks?

The OCs oversee, coordinate and undertake cyclic and routine maintenance, winter service and emergency response.

In addition, they undertake bridges and structural road maintenance, bridge strengthening and replacement, safety and condition inspections, road safety and minor improvement schemes.

What else do the OCs do?

The OCs also oversee and coordinate maintenance works carried out by contractors and coordinate works by utility companies (statutory undertakers).

The OCs:

- undertake day-to-day management of the Unit;
- provide professional and design services, including scheme preparation;
- carry out surveys, inspections and investigations;
- manage and supervise operations and works contracts;
- manage their allocated budgets; and report to Transport Scotland.

Frequently asked questions

What work is not done by the OCs?

There are certain maintenance and information management services carried out on the network that are not the OCs' responsibility.

These include:

- Maintenance of M74/A74(M) from junction 12 to the English border; which is the responsibility of Autolink under the terms of the M6 DBFO project.
- Maintenance of M77 PPP project; which is the responsibility of Connect.
- Maintenance of M80 DBFO project is the responsibility of Highway Management (Scotland) Ltd.
- Maintenance of M8/M73/M74 DBFO is the responsibility of the Scottish Roads Partnership (SRP) consortium.
- Maintenance of Traffic Scotland electrical equipment such as variable message signs, emergency telephones, permanent speed cameras and associated cabling.
- Collection of traffic data and maintenance of counting equipment.
- Major trunk road improvements built by contractors appointed by Transport Scotland. Maintenance responsibility for these improvements is split between the contractor and the OC for a set period, up to five years, prior to full responsibility passing to the OCs.

This report does not include an assessment of these other maintenance organisations.

Where can I find out more about the management and maintenance of the M6 DBFO, M77 PPP, M8/M73/M74 DBFO and M80 DBFO projects?

For M6, contact:

Autolink Concessionaires (M6) plc
M6 DBFO Project Office
Nethercleugh
Lockerbie
Dumfriesshire
DG11 2SQ

For M77, contact:

Connect M77/GSO plc
Connect Roads Operations Centre
Maidenhill Interchange
Ayr Road
Glasgow
G77 6RT

For M8/M73/M74, contact:

Scottish Roads Partnership
Hermiston House, Unit B
M8 Central Business Park
Greenhouse Road
Newhouse
Motherwell
ML1 5FL

For M80, contact:

Highways Management (Scotland) Ltd
c/o Bilfinger Project Investments Europe
Pavilion 2
Buchanan Park
Stepps
Glasgow
G33 6HZ

Glossary of Terms

3G contracts

Third generation contracts which were tendered in two phases. NW and SW were tendered first and finished on 31 March 2013. NE and SE finished on 15 August 2014.

4G contracts

Fourth 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.

Automated diary facility

The Automated Diary Facility (ADF) is a web-based roadworks diary provided by Traffic Scotland as part of the Scottish Minister's Term Contract for Management and Maintenance of the Scottish Trunk Road Network. The ADF provides the ability for the OC to input and edit planned roadworks traffic management, lane closures, lane occupations and events likely to cause traffic delays.

Abnormal load

An item which, when loaded on the carrying vehicle, exceeds critical weight or size parameters given in legislation and cannot be broken down into smaller components (also referred to as Abnormal Indivisible Load).

Budget

Money allocated by Transport Scotland to manage and maintain the network during a financial year. This includes operations and works contracts.

Category 1 defects

Serious road faults, such as potholes, that should be repaired within set timescales.

CEEQUAL

An evidence-based sustainability assessment, rating and awards scheme for civil engineering, infrastructure, landscaping and the public realm, indicating the achievement of high environmental and social performance.

Contract control and management function (CCMf)

A computer-based financial management system supplied by Transport Scotland and operated by the OCs. The system gives everyone working on the OC contracts, including Transport Scotland and PAGplus, relevant access to information about how operations and works contracts are being managed and where money is being spent.

Contract price fluctuation factor (CPF)

Inflation adjustments to the OCs' tendered rates and prices.

Financial year

The period between 1 April 2014 and 31 March 2015.

Integrated road information system (IRIS)

The road information system provided by Transport Scotland and used by the OCs in 4G, which includes the functionality of CCMf, RMMf, SMS and data on the physical characteristics, condition of the trunk road network and accidents.

Monitoring indicators and Performance indicators

The contracts state that a list of indicators must be provided by the OCs to show how they are performing and to allow comparisons between Units.

Network

The system of motorways and trunk roads in Scotland. The network is 3,372km long and varies from urban motorways to rural single carriageways (see Figure 1). In addition, a total of 253km of motorway is covered by the M6 DBFO, M77 PPP, M8 DBFO and M80 DBFO projects.

Notice of non-conformance (NNC)

The process used in the contract to flag up where the OCs are not complying with the contract. This is issued by PAGplus.

Payment adjustment factors (PAFs)

Factors applied to monthly sum payment items in 4G for a number of maintenance activities where an OC's performance falls below target.

Glossary of Terms

Operations

Work carried out by the OCs.

Orders

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

Pavement

Spend related to carriageways and footways.

Quality management system (QMS)

Quality management is fundamental to the contracts. A QMS is drawn up by each OC to show 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 OC commits a default. This is part of the performance management procedures and may lead to withholding amounts from payment.

Routine maintenance management function (RMMf)

A computer-based system supplied by Transport Scotland and operated by the OCs, to record and report on details of the network, including where it has been inspected and routinely maintained.

Sector scheme

Sector scheme certification is given to suppliers and installers of materials by United Kingdom Accreditation Service (UKAS) accredited certification bodies. This certifies that the holder operates a QMS in line with the international standard, BS EN ISO 9001:2008 and the sector scheme document.

Spend

The amount paid for work done, including OC operations and works contracts, excluding CPF.

Statements of intent

These are reports prepared by the OCs to support their bids to carry out work on the network. The SOIs include scheme justification, possible options, cost estimates and recommended treatment.

Structures management system (SMS)

A computer based management system containing an inventory of information on all trunk road structures.

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.

Traffic Scotland

Traffic Scotland enables the collection and distribution of real-time traffic information relating to incidents and events currently taking place on the Scottish trunk road network.

TS2010

A specification for a new quieter and more durable road surfacing material.

Unit

The network is divided into four separate geographic Units. These are: NE, SE, NW and SW.

Works contracts

Schemes usually with a value of more than £350k and below £5m, which the OCs design, procure through competitive tender and supervise on site.

Abbreviations

2G	Second generation	NW	North West
3G	Third generation	OC	Operating Company
4G	Fourth generation	OHSAS	Occupational health and safety assessment series
ADF	Automated diary facility	ORI	Observation resulting from inspection
BS	British Standard	PAF	Performance adjustment factors
CCMS	Contract control and management system	PAGplus	Performance audit group
CEEQUAL	Civil engineering environmental quality assessment and award scheme	PI	Performance indicators
CPF	Contract price fluctuation	QMS	Quality management system
DBFO	Design, build, finance and operate contract	RIDDOR	Reporting of injuries, diseases and dangerous occurrences regulations
EMS	Environmental management system	RMMF	Routine maintenance management
EN	European standard of the CEN	SE	South East
H&S	Health and safety	SEPA	Scottish Environment Protection Agency
HSE	Health and safety executive	SMS	Structures management system
IRIS	Integrated road information system	SOI	Statement of Intent
ISO	International Standards Organisation	SRWR	Scottish road works register
MI	Monitoring indicators	SW	South West
MOI	Management of incidents	TRISS	Trunk road incident support service
NE	North East	TRL	Transport Research Laboratory
NNC	Notice of non-conformance		

Useful websites

PAGplus

www.performanceauditgroup.co.uk

CH2M

www.ch2m.com

PricewaterhouseCoopers

www.pwc.co.uk

Aecom

www.aecom.com

TRL

www.trl.co.uk

Transport Scotland

www.transportscotland.gov.uk

Traffic Scotland

www.trafficscotland.org

Scottish Road Works Commissioner

www.roadworksscotland.gov.uk

Scottish Government

www.scotland.gov.uk

Scottish Parliament

www.scottish.parliament.uk

Amey

www.amey.co.uk/

BEAR

www.bearscot.com

Scotland TranServ

www.scotlandtranserv.co.uk

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CH2M

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www.ch2m.com

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CH2M
certifications

BS EN ISO 9001: 2008
BS EN ISO 14001: 2004
OHSAS 18001: 2007