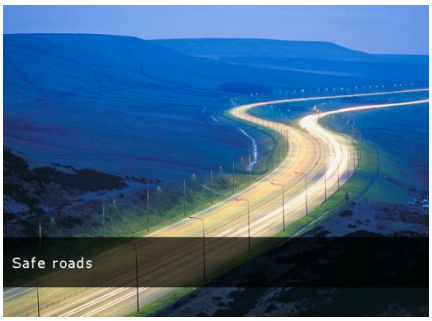
HIGHWAYS AGENCY

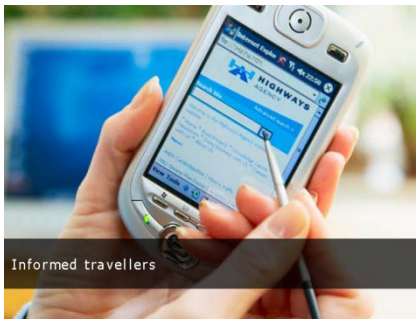
Safe roads, reliable journeys, informed travellers

Constructed Highways (CH) Metrics Handbook

Version 1.2 – April 2013

Network Delivery and Development Directorate





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1. INTRODUCTION

This Issue of this handbook follows the discontinuance of the Area Performance Indicators. However we still require Service Providers to provide constructed scores for certain Aspects that sit within the MAC and ASC Performance Management Framework (PMF).

2. SERVICE PROVIDER PERFORMANCE MANAGEMENT FRAMEWORK

In 2010/11 the previous methods for monitoring our Service Provider performance were developed into a more useful performance management tool in the form of the Service Provider Performance Management Framework (PMF).

The PMF now gives us a standard approach to capturing performance data in order to achieve:

- Visibility of Service Provider performance
- Consistency in the data we capture on Service Provider performance
- Benchmarking of Service Provider performance results.

See the NDD PMF Methodology document and the MAC and ASC Performance Management Manuals for further details.

All the Constructed Highways Metrics are included in the MAC PMF and/or the ASC PMF.

3. CONSTRUCTED HIGHWAYS METRICS (BY PMF ASPECT)

Details are now provided on the following CH Metrics, which relate to Aspects within the MAC PMF and/or ASC PMF.

Metric subject	Contract applicable to
Operate SRW System	MAC and ASC
Network Availability	MAC
Cost capture data	MAC, ASC, TechMAC and RTMC
Scheme PCCRs	MAC , ASC and TechMAC
Forecast and Actual Expenditure versus Budget	MAC,ASC, ASF, TechMAC
Deliver schemes on time	MAC and ASC
Handling Third Party Claims	MAC,ASC, ASF, TechMAC
Reduction in waste to landfill	MAC, ASC, ASF
Site (Workplace) Safety	MAC, ASC, ASF, TechMAC, RTMC
Severe Weather (Salt Stocks)	MAC and ASC
Operational Data	MAC and ASC

Indicator Ref. & Title	Operate SRW System
Applies to	MAC and ASC
Purpose / Description	To measure the Provider's effectiveness and timeliness in recording occupancy information in the Scheduled Road Works (SRW) system.
Measures	
SRW KPI 1	Percentage of records without fundamental system data entry errors
SRW KPI 2	Percentage of works completed on SRW
SRW KPI 3a	Percentage of records complying with NOM timescale updating
Definitions	
Occupancy	All works, all 'Special Order' Abnormal Indivisible Load movements, all Incidents and all events that take place on the Area Network. For ASC, see Defined Terms in applicable version of AMOR
Methodology	SRW KPI scores are calculated within SRW and reported monthly to the business.
Data Source / Requirements	SRW

Data Input (Frequency / Reporting Period: Calendar month)

Field	Var	Type	Calculation	Decimals	Range
Percentage of records without fundamental system data entry errors	(A)	Percentage		2	0 – 100
Percentage of works completed on SRW	(B)	Percentage		2	0 – 100
Percentage of records complying with NOM timescale updating	(C)	Percentage		2	0 – 100

Calculations (Individual Monthly Performance)

Measure	Type	Calculation	Decimals	Range	Target	PMF Green Threshold
SRW KPI 1	Percentage	A	2	0 – 100	100	>= 95
SRW KPI 2	Percentage	B	2	0 – 100	100	>= 95
SRW KPI 3a	Percentage	C	2	0 – 100	100	>= 95

Indicator Ref. & Title	Network Availability
Applies to	MAC
Purpose / Description	To provide an indirect measure of the amount of work being carried out on the Area Network, and of the effectiveness of the Provider's network management /operator role with respect to road space co-ordination. Wherever possible, road works should be carried out outside of peak times so as to minimise disruption and delay to road users.
Measures	
NA01(M)	**Percentage of the Area Network available for use by road users during peak hours.**
Definitions	
Area network	The length of trunk road and/or motorway, including all carriageways, hard shoulders, slip roads and access roads as recorded in SRW for an Area.
Peak	}
Off-peak	} As defined in SRW
Night	}
Methodology	The network availability percentages are calculated using the standard reports provided within SRW. Percentage scores with decimal places are rounded to the nearest whole number by PMF-Plus scoring logic – e.g. 99.7% meets the target of 100%
Data Source / Requirements	Scheduled Road Works (SRW) system

Data Input (Frequency / Reporting Period: Calendar month)

Field		Type	Calculation	Decimals	Range
Availability - Peak hours	(A)	Percentage		2	0 - 100

Calculations (Individual Monthly Performance)

Measure	Type	Calculation	Decimals	Range	Target
NA01(M)	Percentage	A	2	0 - 100	100%

Indicator Ref. & Title	Cost Capture data provided on time and to the required accuracy
Applies to	MAC, ASC, TechMAC and RTMC
Purpose / Description	Appropriate allocation of costs to relevant activities reported to the Agency to the required time and accuracy.
Measures	
Issues Unresolved	Percentage of issues unresolved from previous months reports
Overdue Submissions	Number of submissions outstanding
Reports 1 to 2 days late	The number of reports which were submitted up to 2 days late
Reports > 2 days late	The number of reports which were submitted over 2 days late
Definitions	
PCCR	Post Completion Comparison Report
Methodology	Commercial team will analyse forms, log them, log how many were late, log any issues and log completed issues (by comparing to last month's report).
Data Source / Requirements	Commercial Team

Measures

Measure	Type	Calculation	Decimals	Range	Target
Issues Unresolved	Percentage	-	2	0 - 100	0%
Overdue submissions	Integer	-	0	Unspecified	0
Reports 1 to 2 days late	Integer	-	0	Unspecified	0
Reports > 2 days late	Integer	-	0	Unspecified	0

Indicator Ref. & Title	Project Cost Control Forms
Applies to	MAC, ASC, TechMAC and RTMC
Purpose / Description	Appropriate allocation of costs to relevant activities reported to the Agency to the required time and accuracy.
Measures	
Issues Unresolved	Percentage of issues unresolved from previous months reports
Late Submissions	Number of forms outstanding
Accuracy related issues	Major, Minor or None. Scoring of this measure it at the discretion of the Regional Commercial Manager
Definitions	
Methodology	Regional Commercial Manager logs issues and late forms and submits to the HA Commercial Team. The HA Commercial Team collate information and produce summary for each Service Provider and submits to AMO Performance Team.
Data Source / Requirements	Commercial Team

Measures

Measure	Type	Calculation	Decimals	Range	Target
Forms late – less than 2 weeks for review	Integer	-	0	unspecified	0
Forms late – less than 1 week for review	Integer	-	0	unspecified	0
Accuracy related issues	Text	-	0	Major, Minor or None	None

Indicator Ref. & Title	Scheme Post Completion Comparison Reports
Applies to	MAC, ASC and TechMAC
Purpose / Description	To measure the effectiveness of the Provider's performance of completing and providing PCCRs including Activity Benchmark Sheets (ABS) and final CON(H) forms (or equivalent 501 Control Forms for ASC)
Measures	
Forms overdue	Number of forms not submitted within the 13 weeks of scheme completion
Forms not provided to required standard	Number of forms submitted containing insufficient information or inaccuracies. Scoring of this measure it at the discretion of the Regional Commercial Manager.
Definitions	
PCCR	Post Completion Comparison Report
ABS	Activity Benchmark Sheets
Methodology	Commercial team will analyse forms, log them, log how many were late, log any issues and log completed issues (by comparing to last month's report).
Data Source / Requirements	Commercial Team

Measure	Type	Calculation	Decimals	Range	Target
Forms overdue	Integer	-	0	unspecified	0
Forms not provided to required standard	Integer	-	0	unspecified	0

Indicator Ref. & Title	**Forecast and Actual Expenditure versus Budget**
Applies to	MAC and ASC
Purpose / Description	To measure the predictability of the Provider's resource (accruals) forecasting with respect to the monthly accruals and annual budget allocation for the overall Area portfolio.
Measures	
Resource Monthly Forecast vs. Actual	Resource Monthly Forecast vs. Actual – Variance %
Capital Monthly Forecast vs. Actual	Capital Monthly Forecast vs. Actual – Variance %
Definitions	
SfM	System for Managing - the Agency's finance database.
Methodology	Obtain the SfM WD6 report from Finance (Duncan Edmonds) – this shows budgets, forecast and spend for each Service Provider cost centre. - Two reports are combined to produce the data; the BR03a (closedown report for the relevant month) and the BR20a (report for monthly budget profiles). - The report will always contain actuals up to the current month with the remaining months being forecasts. - The report includes all NDD data for all cost centres but deletes S278 schemes as these should net off against the income (but income is not captured against the PINs). - As all data is present this will also include Managed Works. However, this is still expenditure under Service Provider control.
Data Source / Requirements	SfM WD6 report

Data Input (Frequency / Reporting Period: Calendar month)

Field		**Type**	**Calculation**	**Decimals**	**Range**
Capital forecast for month	(A)	Integer	-	2	Undefined
Capital actual for month	(B)	Integer	-	2	Undefined
Capital in month variance forecast vs. actual - Variance	(C)	Integer	A - B	2	Undefined
Capital in month variance forecast vs. actual – Variance %	**(D)**	**Percentage**	**(C/A) * 100**	**2**	**-1000 – 1000**
Resource forecast for month	(E)	Integer	-	2	Undefined
Resource actual for month	(F)	Integer	-	2	Undefined
Resource in month variance forecast vs. actual - Variance	(G)	Integer	E – F		Undefined
Resource in month variance forecast vs. actual – Variance %	**(H)**	**Percentage**	**(G/E) * 100**	**2**	**-1000 – 1000**

Calculations (Individual Monthly Performance)

Measure	**Type**	**Calculation**	**Decimals**	**Range**	**Target**
Resource Monthly Forecast vs. Actual	Percentage	C	2	-1000 – 1000	Between -5 and 5

Indicator Ref. & Title	Forecast and Actual Expenditure versus Budget				
Capital Monthly Forecast vs. Actual	Percentage	H	2	-1000 – 1000	Between -5 and 5

Indicator Ref. & Title	Handling Third Party Claims – DCP Metric 6
Applies to	MAC, ASC and RTMC
Purpose / Description	All required evidence to support the handling of third party claims are submitted and verified by the HA Green claims.
Measures	
Percentage of evidence required for handling third party claims submitted and verified	Percentage of completed cost packages with the supporting information, as listed in the Evidence Check list (see Annex 23), submitted and verified by the HA Green Claims Team, within 13 weeks after completion of the scheme
Methodology	Service Provider submits Evidence checklist plus supporting documentation to the HA Green Claims Team. The HA Green Claims Team calculates percentage of checklists incomplete or with inaccuracies (to be rejected) and total of Evidence Checklists (plus supporting documentation) overdue against 13 weeks.
Data Source / Requirements	Green Claims Evidence Log

Calculations (Individual Monthly Performance)

Measure	Type	Calculation	Decimals	Range	Target
Percentage of evidence required for handling third party claims submitted and verified	Percentage	-	2	0-100	100

Metric Title	Deliver Schemes on Time - MAC
Applies to	MAC
Purpose / Description	To measure the accuracy of time predictions, on *eligible schemes* exceeding £100K in value. The indicators are designed to reflect the impact on customers and the HA of *milestones* in the process of design and construction of these schemes not being achieved at predicted times.
Milestone Description	The metric involves a series of *milestones* throughout the life of a scheme: 1. Commitment to detailed design 2. Completion of detailed design 3. Agreement of Cost 4. Agreement of predicted start and finish dates 5. Actual start of Construction 6. Actual Completion of Construction 7. Agreement of final account at first valuation after completion
Measures	(average current + preceding 11 months)
TP01 (A)	Variance between actual date at milestone 2 (SfM Data Field: *Detailed Design End Actual*), compared to date at 2 as predicted at milestone 1 (SfM

Metric Title	Deliver Schemes on Time - MAC
	Data field: *Detailed Design End Planned*).
TP02 (A)	Variance between actual date at milestone 5 (SfM Data Field: *Construction Start (Actual)*), compared to date at 5 as predicted at milestone 4 (SfM Data Field *Construction Start (Planned)*).
TP03 (A)	Variance between actual date at milestone 6 (SfM Data Field: *Construction End (Actual)*), compared to date at 6 as predicted at milestone 4 (SfM Data Field: *Construction Start (Planned)*).
TP04 (A)	Variance between period between milestones 5 to 6 as predicted at milestone 4 (Using SfM Data Fields: *Construction End (Planned) - Construction Start (Planned)* , compared to actual period between 5 – 6 (Using SfM Data Fields: *Construction End (Actual) - Construction Start (Actual)*
Definitions	
Eligible Scheme	Scheme currently approved by HA, with an estimated *scheme cost* over £100K at *milestone* 1.
Methodology	Service Provider provides milestone dates for entry into SfM
Data Source / Requirements	SfM BR21a

Data Input (Frequency / Reporting Period: Calendar month)

Field		Type	Calculation	Decimals	Range
Detailed Design End (Planned)	(A)	Integer	-	0	Any date
Detailed Design End (Actual)	(B)	Integer	-	0	Any date
Construction Start (Planned)	(C)	Integer	-	0	Any date
Construction End (Planned)	(D)	Integer	-	0	Any date
Construction Start (Actual)	(E)	Integer	-	0	Any date
Construction End (Actual)	(F)	Integer	-	0	Any date
Predicted Length Construction duration	(G)	Integer	(D) – (C)	0	Unspecified
Actual Length Construction duration	(H)	Integer	(F) – (E)	0	Unspecified
Number of Eligible schemes	(I)	Integer	-	0	Unspecified

Calculations (average current + preceding 11 months)

Measure	Type	Calculation	Decimals	Range	Target (in days)
TP01 (A)	Integer	∑ (B-A) / I	0	Unspecified	<= 0 days
TP02 (A)	Integer	Σ (E-C) / I	0	Unspecified	<= 0 days
TP03 (A)	Integer	Σ (F-D) / I	0	Unspecified	<= 0 days
TP04 (A)	Integer	Σ (H-G) / I	0	Unspecified	<= 0 days

Metric Title	**Deliver Schemes on Time - ASC**
Applies to	ASCs
Purpose / Description	To measure the accuracy of time predictions on all live Capital Schemes over £100,000. The metric is designed to reflect the impact on customers and the HA of *milestones* in the process of design and construction of these Schemes not being achieved at predicted times.
Measures	
Total Time Variance (Scheme Performance Metric 1 (SPM1)	The Total Time Variance (in days) for all Live Schemes over £100k. Comprises both Design and Construction time variance.
Definitions	
Design Phase Time Variance	Time difference (in days) between SfM Data field *Detailed Design End (Planned)* and SfM Data field *Detailed Design End (Actual)*
Construction Phase Time Variance	Time difference (in days) between Planned Length Construction Duration and Actual Length Construction Duration
Methodology	Service Provider provides milestone dates for entry into SfM
Data Source	SfM BR21a

Data Input (Frequency / Reporting Period: Calendar month)

Field	**Var**	**Type**	**Calculation**	**Dec.**	**Range**
Total Design Phase Time Variance	(A)	Integer	Average for all qualifying schemes of *Detailed Design End (Actual) - Detailed Design End (Planned)*	2	Unspecified
Total Construction Phase Time Variance	(B)	Integer	Average for all qualifying schemes of *Construction End (Planned) - Construction Start (Planned)* – *Construction End (Actual) - Construction Start (Actual)*	2	Unspecified

Calculations

Metric Title	Deliver Schemes on Time - ASC

Measure	Type	Calculation	Decimals	Range	Target
Total Time Variance (SPM1)	Integer	A + B	2	Unspecified	<= -2 days

Indicator Ref. & Title	Reduction in Waste to Landfill
Applies to	MAC and ASC
Purpose / Description	To demonstrate a reduction (agreed at regional level) in the amount of maintenance and construction waste sent to landfill, against the 2012/13 figures.
Measures	
Amount of waste sent to landfill	The amount of waste sent to landfill (in tonnes) as a percentage of the target set
Definitions	
Methodology	Service Provider provides details in their quarterly CCT returns of the amount of waste sent to landfill.
Data Source / Requirements	Provider's records - Quarterly CCT Returns

Data Input (Frequency / Reporting Period: quarterly)

Field	Var	Type	Calculation	Decimals	Range
Amount of waste sent to landfill in quarter	(A)	Integer		0	unspecified
Target amount of waste sent to landfill for quarter	(B)	Integer		0	unspecified

Calculations (Individual Quarterly Performance)

Measure	Type	Calculation	Decimals	Range	Target
Amount of waste sent to landfill.	Percentage	(A)/(B)*100	2	0 - 100	100%

Indicator Ref. & Title	Site (Workplace) Safety
Applies to	MAC, ASC TechMAC and RTMC
Purpose / Description	To measure the effectiveness of the Provider's safety processes by monitoring all accidents reportable under RIDDOR within the Provider's organisation.
Measures	
Accident Frequency Rate (AFR)	Area RIDDOR Frequency Rate, based on all accidents reportable under RIDDOR.
Definitions	
Provider's organisation	All site, network and compound based staff involved in MAC, EMAC or MA/TMC activities including subcontractors and head office staff directly employed in Area business.
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
Methodology	AFR information is supplied as stated in IAN 128 12 AIRSWeb
	AFR is calculated as all accidents reportable under RIDDOR in the 12 month period, divided by the total number of hours worked in that period by the Provider's organisation, multiplied by 100,000.
Data Source / Requirements	AIRSWeb

Data Input (Frequency / Reporting Period: Calendar month)

Field		Type	Calculation	Decimals	Range
Total number of hours worked in the month	(A)	Integer		0	0 – 150000
Total number of all accidents reportable under RIDDOR in the month	(B)	Integer		0	0 – 50

Calculations (Rolling 12 Month Performance) i.e. current month + preceding 11 months

Measure	Type	Calculation	Decimals	Range	Target
AFR	Number	(ΣB / ΣA) *100000	2	0 – 5	0.15

Note: $\sum$ = the aggregation of input data for the current month and the preceding 11 months.

Indicator Ref. & Title	**Severe Weather (Salt Stocks)**
Applies to	MAC and ASC
Purpose / Description	To ensure the Provider is prepared for severe winter weather and is able to respond robustly and in a timely manner to ensure the Area Network remains open
Measures	
SW1	Minimum salt level during the month
SW2	Max. Consecutive days below Minimum Salt Requirement
Definitions	
Minimum Salt Requirement	The minimum level agreed with each MAC ahead of the Winter Period and documented in the Provider's Severe Weather Plan.
Winter Period	1 October – 30 April
Methodology	In the Winter Period these metrics should always be scored.
	See MAC/ASC PMF Scoring Guidance for more information on these measures.
	Minimum salt level during the month is obtained from the NIU Salt Tool
	Max. Consecutive days below Minimum Salt Requirement month is obtained from the NIU Salt Tool
Data Source / Requirements	NIU Salt Tool

Data Input (Frequency / Reporting Period: Calendar month)

Field		**Type**	**Calculation**	**Decimals**	**Range**
Minimum salt level during the month (in tonnes)	(A)	Integer		0	0 – 100000
Max. Consecutive days below Minimum Salt Requirement	(B)	Integer		0	0 – 250

Calculations (Individual Monthly Performance)

Measure	**Type**	**Calculation**	**Decimals**	**Range**	**Target**
SW1	Integer	A	0	0 – 100000	>= Minimum Salt Requirement
SW2	Integer	B	0	0 – 250	0 (<=12 to avoid Red PMF score)

Indicator Ref. & Title	Operational Data
Applies to	MAC & ASC
Purpose / Description	Operational Data may be scored by PMF-Plus if the upload is not 100% accurate (e.g. 'Amber' load result), or is not submitted to time. CH Metrics for each of Incident, Scheme and Asset Data (the latter to be confirmed) provide AMO-P with the ability to record whether or not the Operational Data was uploaded successfully/to time.
Measures	
Incident Data Loaded Successfully	Has the Service Provider's Incident Data loaded successfully ("Green screen" result) and on time into PMF-Plus
Scheme Data Loaded Successfully	Has the Service Provider's Scheme Data loaded successfully ("Green screen" result) and on time into PMF-Plus
Definitions	
Successful Load	100% of data loaded into PMF-Plus on time
Methodology	Check PMF-Plus for a successful load of the data concerned. Entering "Y" onto the CH sheet enables the data to be scored as per the relevant logic Entering "N" will result in the Aspect scoring NO DATA Entering "N/A" will result in the Aspect scoring Not Applicable, if the relevant metrics are also set to N/A in PMF-Plus
Data Source / Requirements	PMF-Plus load records

Data Input

Field		Type	Calculation	Decimals	Range

Calculations (Individual Monthly Performance)

Measure	Type	Calculation	Decimals	Range	Target
Incident Data Loaded Successfully	Text	A	n/a	Y, N or N/A	Y
Scheme Data Loaded Successfully	Text	B	n/a	Y, N or N/A	Y