

## Delivering for Highways (Roads)

Delivering for  
Communities.

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- Communities View
- About the Network
- Value of the Network
- Maintaining the Asset
- Condition of the Network
- Tools for Maintaining the Asset
- National Backlogs
- Addressing Community Priorities

## Publics View

- Roads are a High Priority
- Safety
  - Potholes
  - Water on Carriageway
  - Sightlines
  - Signs
  - Markings
  - Street Lighting

## How do we Communicate with our Communities

- Customer Satisfaction Surveys
- Community Councils
  - (50 throughout Area)
- Citizens Panel
  - 1000 members
- Members
  - very proactive.
- Local Press

# Customer Surveys 2005

How are we doing?	Mtce of Main Roads	Mtce of Local Streets	Repairs to Potholes
Total Score	177	185	157
No of Respondents	183	182	183
Average Score	2.13	2.26	1.89
Importance Weighting	93.78%	88.44%	93.63%
Weighted Score (out of Five)	2.00	2.00	1.77
	40.00%	39.91%	35.42%

# Customer Survey 2005

How are we doing?	Mtce of Verges	Mtce of Gulleys	Utility Reinstatement	Standard of Service
Total Score	214	210	177	200
No of Respondents	182	182	182	184
Average Score	2.61	2.56	2.16	2.38
Importance Weighting	78.89%	86.37%	91.69%	91.21%
Weighted Score (out of Five)	2.06	2.21	1.98	2.17
	41.18%	44.24%	39.58%	43.43%

## Citizen's Panel 2006

In relation to ROADS the key findings are:

- Significant numbers of people have contacted the Council to complain or report a fault with respect to roads within Argyll and Bute over the past year.
- Satisfaction levels with the way these faults or complaints are dealt with are low and this is primarily related to the lack of a satisfactory solution to the underlying cause rather than to the way which the contact is handled.
- Satisfaction with the maintenance of trunk roads is low, and there are even poorer levels of satisfaction with the maintenance of other roads.
- People see the main problems as relating to the general quality of surfaces, number of potholes and the quality of road repairs, with drainage also being an issue.
- Respondents would like to see greater emphasis placed on resurfacing of roads and the filling in of potholes. They would like to see greater resources allocated to road maintenance overall and are reluctant to see less being spent on other elements of road maintenance, although some suggest that areas such as traffic management, provision of new cyclepaths, road safety measures and other elements ought to be sacrificed to improve the quality of roads and road repairs.

## ARGYLL AND BUTE

- Population 89,000 Land Area 2,676 sq miles
- Population Density 33.25 /sq mile
- 4 Areas (Day to day operation)
- 120 Operatives
- 7 Depots
- 8 Small satellite depots

## Size of the Asset

- 2314 Km of Carriageway (40% on islands) Rural(83%)  
–9,863,000 Sq M
- 287Km Footway  
–473,000 Sq M
- 958 Bridges  
–Span greater than 1.5 M
- 2000 Structures (Retaining Walls etc.)

## Size of the Asset

- **Drainage**
  - 1,700 Km Ditches
  - 13,520 Culverts
  - 280 Km French drains
  - 15 Km Pipework
  - 14900 Gullies
  - 125,000 Offlets
- **8,300 Road signs**
- **13,627 St Lighting columns**

## Value of Asset

- Road Replacement £1,567,500,000
- Footway Replacement £ 24,990,000
- Bridges and Structures £ 435,000,000
- Drainage Replacement £ 112,490,000
- Road Markings £ 776,500
- Replacement Signage £ 688,000
- Street Lighting £ 17,742,200

## Value of Asset

- **Estimated Total Value of Road Network**
- **£2,159,186,799**

## Maintaining the Asset

- Roads Maintenance and Asset Management Plan.
  - Road Hierarchy
  - Inventory
  - Inspection
    - Reaction Timescales
  - Condition Standards
  - Cost
  - Review Cost v Budget
  - Works Programme

## Road Hierarchy

Rank	Hierarchy Description	Type of Road	Detailed Description
1	Strategic Road	Linking large main centres of population. Linking large main centres of population to Trunk road network.	Routes for fast moving long distance traffic with little frontage access or pedestrian traffic. Generally speed limits are in excess of 40mph and there are a few junctions. Normally two lane with no footway.
2	Main Distributor	Lifeline Routes connecting secondary centres of population to main population centres and Trunk road network.	These routes provide lifeline access from small villages to services within main population areas. They are of varying widths and not always capable of taking two way traffic.
2a	Urban Distributor	Main routes within built up areas. Bus routes and routes to hospitals. Routes linking urban routes to Strategic roads.	Routes between Strategic Roads and urban areas. Main routes within urban areas linking to commercial areas of towns and larger villages. Routes to Hospitals, Main Schools and other strategic buildings. On street parking is generally unrestricted and speed limit is 30mph with random pedestrian movement. Normally two lane with adjacent footways.
3	Minor Roads	Routes serving small settlements and individual access.	Lightly used lifeline routes serving small isolated communities, individual access to property and land. Predominately narrow single carriageway.
3a	Minor Urban Roads	Minor roads within urban areas	Residential loop roads or culs-de-sac. With or without footways and within 30 mph restriction. Spur roads to commercial areas

Area	Sub Area	Town	Prefix 1	Road No	Road Name	Km	Maintenance Hierarchy
MKI	Mid Argyll		A	816	Lochgilphead-Oban Road	27.52	1
MKI	Mid Argyll		A	819	Inveraray - Dalmally Road	10.54	1
MKI	Mid Argyll	Inveraray	A	819	Croitville Road	0.24	1
MKI	Mid Argyll	Kilmartin	A	816	Lochgilphead-Oban Road	0.79	1
MKI	Mid Argyll	Lochgilphead	A	816	Lochgilphead-Oban Road	0.65	1
MKI	Mid Argyll	Ardrishaig	U	49	East Bank Road	0.34	2a
MKI	Mid Argyll	Ardrishaig	U	46	Kilduskland Road	0.76	2a
MKI	Mid Argyll	Ardrishaig	U	71	Park Road (Glenfyne Park Access Road)	0.43	2a
MKI	Mid Argyll	Furnace	U	64	Quarry Park Housing Scheme Road	0.03	2a
MKI	Mid Argyll	Lochgilphead	C	37	Manse Brae (part) and Hospital Road, Lochgilphead	1.08	2a
MKI	Mid Argyll	Lochgilphead	C	62	Lochgilphead Loop Road	1.05	2a
MKI	Mid Argyll	Lochgilphead	U	73	Kilmory Industrial Estate Road	0.69	2a
MKI	Mid Argyll	Lochgilphead	U	8	Manse Brae	0.61	2a
MKI	Mid Argyll		U	33	Ardpatrick Ferry Road	1.67	3
MKI	Mid Argyll		C	41	Danna Road	2.25	3

## Condition Standards

Hierarchy Ranking	Location	Description	Condition Standard (per 100m length)
1	Carriageway	Minor deterioration: - potholing, fine cracking, permeable surfaces, fretting of existing surfaces.	Where > than 30% of surface area then consideration of surface treatment.
		Major Deterioration: - Cracking, coarse crazing, serious loss of aggregate, serious permeability.	Where > than 10% of surface area Patch or surface treat Where > than 30% of surface area Patch or resurface.
		Previously patched surface resulting in numerous joints.	Where >40% then consideration for surface treatment.
		Loss of Skid Resistance / texture over whole surface area.	Consideration for Surface Dressing or other proprietary treatment.
		Edge Deterioration	>Than 20% of length of carriageway edge patching required. >Than 50% of length then Edge Strengthen and or kerb.
		Wheel Track rutting	>20mm deep over 10% of length then patch or local resurfaces. >20mm deep over 90% of length of road then Reshape effected lane

# Condition Standards

Hierarchy Ranking	Location	Description	Condition Standard ( per 100m Length)
3 / 3a	Carriageway	Minor deterioration: - potholing, fine cracking, permeable surfaces, fretting of existing surfaces.	No specified minimum standard.
		Major Deterioration: - Cracking, coarse crazing, serious loss of aggregate, serious permeability.	Where > than 25% of surface area Patch and surface treat Where > than 50% of surface area Patch or resurface
		Edge Deterioration	>Than 50% of length of carriageway edge patching to be considered
		Wheel Track rutting	>40mm deep over 90% of length of road then resurface effected lane

# Condition Standards

Hierarchy Ranking	Location	Description	Condition Standard
1	Carriageway	Resurfacing of Carriageway	1 in 40 years
2	Carriageway	Resurfacing of Carriageway	1 in 45 years
2a	Carriageway	Resurfacing of Carriageway	1 in 50 years
3	Carriageway	Resurfacing of Carriageway	1 in 70 years
3a	Carriageway	Resurfacing of Carriageway	1 in 75 years
1	Footway	Surface Treatment of Footway	1 in 25 years
2	Footway	Surface Treatment of Footway	No set standard
1	Carriageway	Surface Dressing of Carriageway	1 in 12 years
2	Carriageway	Surface Dressing of Carriageway	1 in 15 years
2a	Carriageway	Surface Dressing of Carriageway	1 in 15 years
3	Carriageway	Surface Dressing of Carriageway	1 in 20 years
3a	Carriageway	Surface Dressing of Carriageway	1 in 25 years

# Annual Costs

## 2007-08 AREA TOTAL

Activity	Annual Requirement re Plan	Comment
Resurfacing	3,336,535	Capital Only
Structural Works	1,254,248	Capital Only
Structural Works	1,254,248	
Footway Resurfacing	239,922	
Surface Dressing	1,536,635	
Verge Cutting	303,022	
Amenity cut	63,637	
Ditch Cleaning	622,200	
French Drain Cleaning	35,701	
French Drain Filter Material	209,102	
Pipe Cleaning	6,131	
Gully Cleaning	164,291	
Offlets	299,274	
Culvert maintenance	434,131	
Weedkilling French Drains	4,955	
Weedkilling Urban	64,148	
Road Markings	135,731	
Traffic Signs	80,065	
St Lighting Pillars	2,869	
At Lighting Column Maintenance	38,293	
St Lighting Circuits	43,639	
Lamp Clean	9,861	
Lamp Change	59,006	
Column Painting	77,248	
Column Replacement	582,312	Capital Only
5th Core Replacement	330,000	Capital Only
<b>Total</b>	<b>11,187,204</b>	
<b>Total Revenue</b>	<b>5,684,109</b>	

## Reactive Activities

Activity	Average (3 yrs) Costs
Winter	1,860,700
Emergencies	258,000
Reactive R10	2,171,200
Reactive St Lighting	376,000
<b>Total</b>	<b>4,665,900</b>

## Description Requirement

Revenue Activities as per Plan	5,684,109
Reactive 3yr average	4,665,900
<b>Total Revenue</b>	<b>10,350,009</b>

Capital Required \* 5,503,095 \* Steady State does not include for backlog

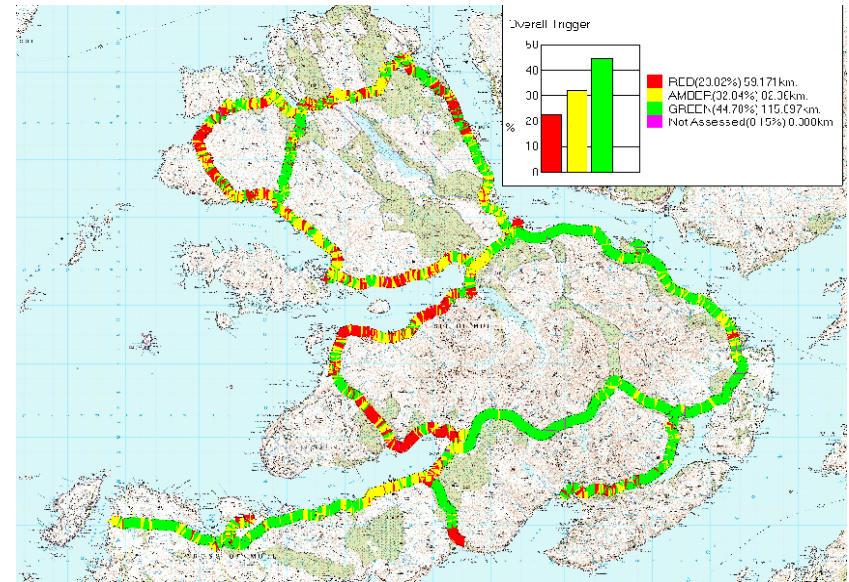
Description	Budget	Shortfall
Revenue	7,110,072	-3,239,937
Capital	2,276,000	-3,227,095
<b>Total</b>	<b>9,386,072</b>	<b>-6,467,032</b>

# Spend Ratio

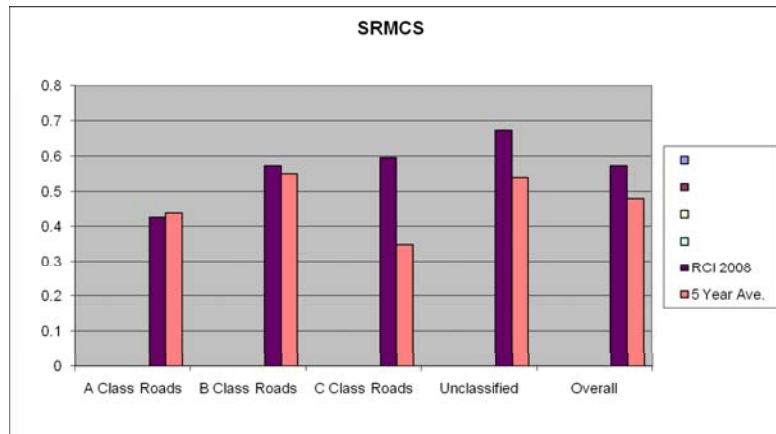
- Spend at Present 0.4% of value of the asset per annum
- Per Asset Plan should be spending 0.75% of value of the asset per annum
- Asst Plan + tackle Backlog 1.15% of value of the asset per annum

## Tools for Maintaining Network

- UKPMS (United Kingdom Pavement Management System)
- RMMS (Roads Maintenance Management System)
- LMMS (Lighting Maintenance Management System)
- SMS (Structures Management System)



## SRCMS 5 Year Average



## SRCMS Scottish Roads Maintenance Condition survey

- Change to SCANNER Survey this Year  
– Now have worst condition Roads in Scotland

# The maintenance backlog

- In Scotland
  - Councils estimate the cost of eliminating their road maintenance backlog to be around £1.5 billion, including £900 million for road repairs
    - Audit Scotland Report “Maintaining Scotland's Roads” Nov. 2004
- In Wales
  - "But we recognise that significantly more funding is required to address the £292m backlog as reported to the Welsh Assembly Government by Halcrow (engineering consultants) in 2006."
    - Spokesperson from Welsh Government

# Backlog

Authority	Headline Backlog		Annual Expenditure		Steady State Expenditure	
	2003&2004	2004&2005	2003&2004	2004&2005	2003&2004	2004&2005
	0% Defects in 1 Yr	0% Defects in 1 Yr	Yr 1-10	Yr 1-10	> yr 11	> yr 11
Aberdeenshire	47,492,908	47,612,839	10,278,750	10,365,144	8,819,324	8,813,354
Angus	17,904,634	18,118,066	3,610,131	3,636,069	3,023,424	3,035,496
Argyll & Bute	48,812,341	44,374,257	8,824,807	8,567,249	6,980,349	6,961,398
Borders	29,507,713	29,520,501	6,108,558	6,124,511	5,149,449	5,139,419
Dumfries	54,652,697	52,759,856	9,301,649	9,185,512	7,016,355	6,996,352
Highlands	73,825,295	69,413,048	14,717,446	14,493,327	12,145,062	12,093,704
Moray	16,937,339	16,329,092	3,254,067	3,233,329	2,657,492	2,653,018
Perth Kinross	26,819,641	29,696,646	5,441,774	5,654,674	4,510,584	4,529,083
<b>Total Scotland</b>	<b>910,813,994</b>	<b>863,970,466</b>	<b>168,024,523</b>	<b>166,548,788</b>	<b>135,426,156</b>	<b>136,160,966</b>

# ALARM Survey 2008

Annual Local Authority Road Maintenance (ALARM) Survey 2008



Key findings – ALARM Survey 2008	England (ex London)	London	Wales
Shortfall in road structural budget	£858m	£140m	£66m
Average shortfall per authority	£7.5m	£4.2m	£3m
Percentage of required budget received	51%	45%	48%
Percentage of budget used on reactive maintenance	26%	32%	23%
Estimated time to clear the carriageway maintenance backlog	11 years	10.4 years	16.1 years
Frequency of road surfacing (all road classes)	65 years	34 years	81 years
Average percentage increase in the number of visual defects <sup>1</sup> over the past 10 years	57%	54%	81%
Number of potholes filled over the last year	603,980	151,800	97,834
Average number per authority	5,252	4,600	4,447
Average cost to fill one pothole	£69	£41	£45
Total spent filling potholes over last year	£41.7m	£6.2m	£4.4m
Percentage of authorities who believe there is a threat to road users' safety due to road maintenance under-funding	89%	81%	100%
Amount paid in road user compensation claims	£24.2m	£22.2m	£6.6m
Staff time per year spent working on such claims	29,498 days	6,782 days	4,521 days
Average number of utility company trenches per authority during the year	16,548	13,220	4,978

# Other Cost Pressures

- Structures
  - Bridges
  - Retaining walls
  - Sea Walls
  - Coastal Protection
- Street Lighting
  - Column Replacement
  - Fifth Core Replacement
  - Switch to White Light
- Car Parks
  - Surfacing

# Addressing The Issues

## Addressing Community Priorities

- Reorganisation
- Additional Funding
- Deciding on Priorities
- Back to Basics
- Streetscene
  - Local Environment Teams
  - Cyclic Squads
- New Technology

## Reorganisation

- Options Appraisal
  - In House Delivery
- Centralised Services Delivered Locally
- Area managers replaced by Centralised managers for each speciality.
  - Roads Operations
  - Design
  - Marine and Airfields
  - Strategy
  - Streetscene

## Additional Funding

- Lobby Members
  - Presentation to Council
- Funding Allocation
  - £26 Million over next 5 years
  - £250K additional Lighting Capital
  - Additional £450K revenue per annum
  - Other parts of service will suffer
- Shortfall Reduced
  - From £6.5 Million to £4 Million per annum

## Deciding on Priorities

- Revenue
  - Safety
  - Visual
- Roads Capital
  - Resurfacing
  - Surface Dressing
  - In situ Recycling
- Lighting Capital
  - Column Replacement
  - 5<sup>th</sup> Core Replacement

## Streetscene

- Local Environment Teams
  - Complaints,
  - Litter Picking,
  - Street Sweeping,
  - Grass Cutting,
  - Local Flower Beds,
  - Street Furniture,
  - Benches,
  - **Winter,**
  - **Flooding,**
  - **Ditch and Offlets,**
  - Graffiti,
  - **Pot Holes,**
  - Toilet cleaning,
  - Verge litter,
  - **Sign Cleaning,**
  - Beach Cleaning
  - Etc, etc,

## Cyclic Squads

- Cyclic Squads (Rural Streetscene)
  - Find & Fix
    - 2/3 man squad
    - 52 weeks
    - Potholes
    - Drainage
    - Sightlines
    - Signs
    - etc
  - Every Route min 4 times per year