

REPORT TO: ECONOMIC DEVELOPMENT AND INFRASTRUCTURE SERVICES COMMITTEE ON 11 MARCH 2014

SUBJECT: REVENUE BUDGET 2014/2015 – ROADS MAINTENANCE AND CAPITAL BUDGET 2014/2015 – RESURFACING, BRIDGES, PASSING PLACES, LIGHTING COLUMN REPLACEMENT AND LIGHTING IMPROVEMENTS

BY: ACTING CORPORATE DIRECTOR (ENVIRONMENTAL SERVICES)

1. REASON FOR REPORT

- 1.1 To ask the Committee to approve detailed plans for the expenditure of funds allocated from the Revenue Budget 2014/2015 to roads maintenance and from the Capital Budget 2014/2015 to resurfacing/reconstruction, surface dressing, bridges, footways, drainage, passing places, lighting column replacement and lighting improvements.
- 1.2 This report is submitted to the Committee in terms of Section III G (1) and (16) of the Council's Administrative Scheme in relation to Capital and Revenue Budgets and relating to the functions of the Council as Roads Authority.

2. RECOMMENDATION

2.1 The Committee is asked:

- (i) to approve the detailed allocation of funds, from the Revenue Budget 2014/2015 to Roads Maintenance activities, as detailed in APPENDIX 1 of this report;**
- (ii) to approve the detailed allocation of funds, from the Capital Budget 2014/2015 to the various roads asset groups and work types, as outlined in APPENDIX 1 of this report;**
- (iii) to note that the detailed allocations are subject to Policy and Resources Committee approving the projected capital underspends to be carried forward to 2014/15;**

- (iv) to grant authority to the Roads Maintenance Manager to proceed with necessary roads maintenance works whilst noting that the Roads Maintenance Manager will, as soon as possible, publish a main list of schemes, which can be funded from the budget provision recommended in this report, and a reserve list of desirable schemes, which cannot presently be funded, along with a list of projects to be funded from the Capital allocation;
- (v) to note that the list of schemes will be drawn up in accordance with the principles and objectives detailed in this report, in the Roads Asset Management Plan and in the Capital Plan;

3. **BACKGROUND**

- 3.1 Reference is made to the allocation of capital and revenue funds for 2014/2015 at the special meeting of the Moray Council on 11 February 2014 (Item 3 refers).
- 3.2 In approving capital funds, the Council agreed to detailed reports being submitted to the appropriate Service Committee for approval. This report satisfies the above requirement as well as presenting proposals for all roads maintenance expenditure.
- 3.3 This report is submitted before the start of the next financial year to meet the committee cycle. Consequently it has not been possible to prepare detailed lists of proposed maintenance works in the various categories to accompany this report. Detailed lists will be circulated to Members and published on the Council's web site at a later date.

4. **PROGRESS DURING 2013/2014**

General

- 4.1 The table in **APPENDIX 1** includes a summary of estimated outturn expenditure for 2013/2014 and proposals for 2014/2015.
- 4.2 It is estimated that capital budgets will be underspent by 2% although this is, in part, dependant on the extent to which winter weather diverts in-house resources away from planned works.

Winter Maintenance & Other Emergencies

- 4.3 Moray's winter maintenance budget has remained much the same since 2006/07 whilst actual expenditure has risen as detailed below:

	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Winter Maintenance Expenditure £,000	1,774	2,065	2,586	3,679	3,249	2,145	2,688

- 4.4 As shown in the table above, ignoring the least and most costly winters, the average cost of winter maintenance is £2,546k against a budget of £1,886k.
- 4.5 At the end of January 2014, it was estimated that the winter and other emergencies budget would be on budget given that the winter has been very mild so far. **APPENDIX 2** shows some trends related to winter maintenance.
- 4.6 The above expenditure includes £92k spent on other emergencies, with blown sand and other severe weather accounting for £38k and £18k respectively.

Carriageway Condition

- 4.7 The Scottish Road Maintenance Condition Survey (SRMCS) is undertaken annually and determines the condition of carriageways as a Road Condition Index.
- 4.8 Changes in the Road Condition Index for Moray since 2008 are shown below.

	2008/ 2010	2009/ 2011	2010/ 2012	2011/ 2013	2012/ 2014	Scottish Average 2011/13
Percentage of A class roads that should be considered for maintenance treatment	22.0%	23.5%	22.6%	22.3%	19.3%	29.4%
Percentage of B class roads that should be considered for maintenance treatment	20.3%	22.5%	21.3%	18.9%	15.9%	35%
Percentage of C class roads that should be considered for maintenance treatment	21.6%	23.3%	23.5%	23.3%	21.5%	34.8%
Percentage of unclassified roads that should be considered for maintenance treatment	32.1%	30.5%	30.1%	31.3%	32.1%	39%
Overall percentage of road network that should be considered for maintenance treatment	26.4%	26.6%	26.1%	26.1%	25.2%	36.2%

Overall, the road network condition has improved. The condition of unclassified roads has marginally worsened. Improvements are likely to reflect the consequence of a major increase in surface dressing from 2012/13.

4.9 Roads asset values at the end of 2012/13 are shown in the table below:

Asset Group	Gross Replacement Value £,000	Depreciated Replacement Cost £,000	Confidence in asset data
Carriageways	1,407,815	1,191,839	90%
Footways and cycle tracks	83,339	60,984	40%
Structures	86,856	82,077	85%
Lighting	60,384	32,847	85%
Traffic management	1,154	806	90%
Street furniture	18,262	9,675	25%
Land	176,560	n/a	n/a
TOTALS	1,834,371	1,377,141	

In effect, excluding estimated land values, £280 million of the asset value has been used up.

5. CONSIDERATIONS

- 5.1 In setting the budget for 2013/14, revenue budgets were subject to a one year reduction of £400k and capital budgets to a deferment of £1,500k. Those budget changes have been carried forward with additional reductions in the revenue budget of £577k and in the capital budget of £569k.
- 5.2 It is interesting to note that road construction inflation, which had reduced to under 1% in 2012/13, appears to be increasing again, with provisional figures for the tendered price of major road maintenance contracts showing year on year increases of 9%.¹
- 5.3 In the last 6 years, over 20 km of road has been added to the adopted road network. 607 lighting units have been added by developers. Typically roads cost £3,000 per kilometre per year to maintain and lighting units, £57 per unit per year (excluding electricity) implying that capital and revenue budgets have absorbed cumulative pressures of £300,000 in the last 6 years.
- 5.4 To facilitate planning it is assumed that the projected underspends from the areas described in section 4.2 above will be approved by Policy and Resources Committee to be carried forward, in conformance to past practice.
- 5.5 **Appendix 3** shows examples of the type of defect picked up by the road condition survey. Depending on the severity of the defect, sections of road are categorised as:
- **Red** – requires treatment.
 - **Amber** – requires investigation and possible treatment.
 - **Green** – requires no treatment.

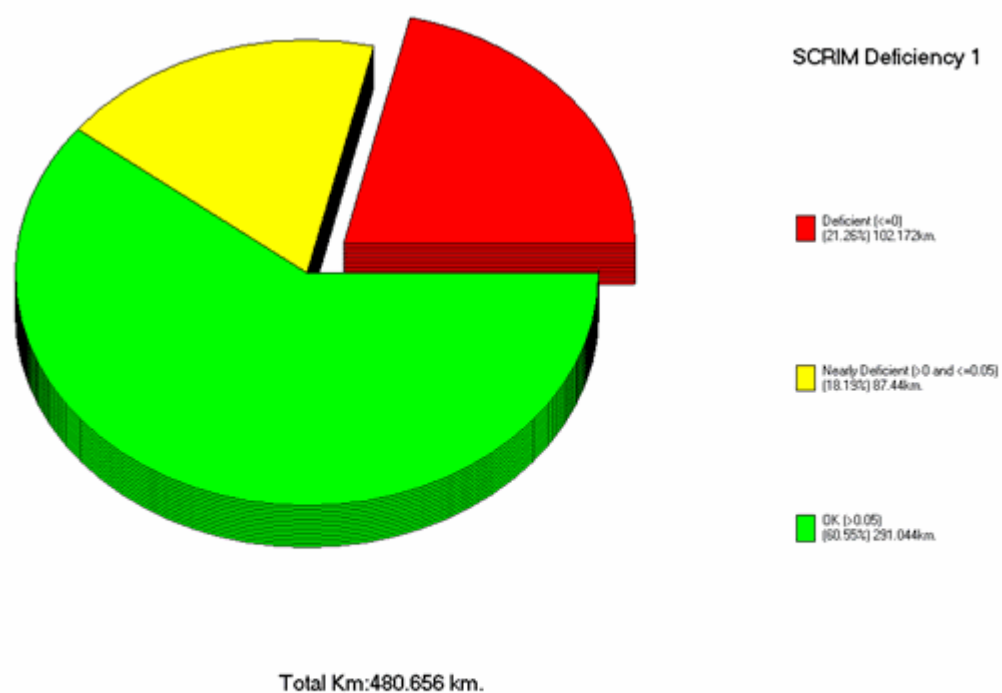
¹ Cost Index of Road Construction

- 5.6 The results in the table in Para. 4.8 are a summation of the red and amber defects except edge deterioration. Dealing with edge deterioration, however, has been a significant component of work done in 2013/14.
- 5.7 Especially as budgets decline, there is increased potential to question why one section of road has been identified for treatment against another section where no work is planned. The following describes the criteria for selecting works to be programmed.
- 5.8 In drawing up a programme of work the following criteria are applied to produce a 'first pass' list of works.
- Texture ≤ 0.4 (0.3 in urban areas) – consider surface dressing.
 - Texture ≤ 0.6 plus Whole Carriageway Cracking ≥ 0.15 - consider surface dressing.
 - Profile (3 metre) ≥ 10 plus Whole Carriageway Cracking ≥ 0.2 - consider moderate thickness overlay (surfacing).
 - Rut depth ≥ 20 – consider thick overlay (surfacing).
 - Rut depth ≥ 20 plus Whole Carriageway Cracking ≥ 2.0 - consider reconstruction.
- 5.9 This information is then considered by technical teams, along with the resistance to wet skidding results described below. Using their detailed knowledge of the Moray roads network the teams will refine this into an affordable list of planned works for 2014/15 which aims to achieve best value within the resources available.

Resistance To Wet Skidding

- 5.10 Skid Resistance derives from the surfaces in contact with each other – the road stone and vehicle tyres – and that is influenced by the road stone micro texture. A separating layer of water will reduce contact between tyres and road stone. Good road texture and tyre tread help displace surface water.
- 5.11 Annual surveys measure texture depth, however, the Council's roads asset management plan recognised that:
- There are no routine surveys of carriageway skid resistance undertaken within Moray. Surveys are commissioned from time to time, to measure specific lengths of road where skid resistance might be a concern.*
- 5.12 The Code of Practice for Highway Maintenance assumes that authorities are surveying the whole of their network for skid resistance every year. It was therefore decided to initially survey most A and B class roads for skid resistance during 2013.
- 5.13 The results of this survey are still being analysed in detail. However, as a first pass, using the lowest investigatory levels suggest 102km of the 480 km surveyed (21.25%) are deficient in terms of skid resistance and should be investigated (see pie chart below).

5.14



Scrim Summary SCRIM DEFICIENCY

- 5.15 It should be stressed that on average (6 years) loss of control accidents on wet roads in Moray are below Scotland wide figures.
- 5.16 Department for Transport (DfT) guidance requires that:
Wherever the CSC² is at or below the assigned investigatory level a site investigation shall be carried out, to determine whether treatment to improve the skid resistance is required or whether some other action is required.
- 5.17 In parallel the Council needs to agree a policy to define how improvements to wet skid resistance are prioritised.
- 5.18 The Design Manual for Roads and Bridges recommends investigatory levels for lengths of road depending on their characteristics.

² Characteristic SCRIM Coefficient

Site category and definition		Investigatory Level at 50km/h							
		0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65
A	Motorway	X							
B	Dual carriageway non-event	X							
C	Single carriageway non-event		X						
Q	Approaches to and across minor and major junctions, approaches to roundabouts				X				
K	Approaches to pedestrian crossings and other high risk situations					X			
R	Roundabout				X				
G1	Gradient 5-10% longer than 50m				X				
G2	Gradient >10% longer than 50m				X				
S1	Bend radius <500m – dual carriageway				X				
S2	Bend radius <500m – single carriageway				X				

Carriageway Characteristics and Applied Investigatory Levels

- 5.19 There are a number of options to deal with sites that are below the investigatory level ranging from do nothing to signing the area of concern, to changing the surface characteristics.
- 5.20 It will be necessary to prioritise treatment so it is proposed that:
- Priority one - sites where there is an associated accident record.
 - Priority two - rural sites of category G1, G2 or S2 where there is, in addition, a carriageway condition defect, e.g. poor texture, whole carriageway cracking, edge deterioration.
- 5.21 One of the properties that influence skid resistance is the 'polished stone value' (PSV) of the surface coarse aggregate. Over time aggregate is polished by vehicle tyres. Typically, the aggregate available from local quarries has a PSV in the low 50's with a lower resistance to polishing.
- 5.22 Where it offers best value consideration will be given to importing higher PSV stone. This is likely to be on roads with higher traffic volumes and will add cost to maintenance treatments.

6. PROPOSALS

- 6.1 The table in **APPENDIX 1** contains summary details of recommended expenditure against work type for 2014/2015. Some of this detail is reproduced below, with additional commentary.

Carriageways

	Capital £'000 (excluding c/f)	Revenue Planned Works £'000
2013 – 14	2,678	577
2014 – 15	2,042	nil
Estimated budget to stand-still	6,110	

- 6.2 For carriageways, it is estimate that to hold the current depreciated value (reference Para 4.9) would require an average annual expenditure of £6,110k pa over the next 5 years, rising to an average annual expenditure of £9,313k pa over years 6 to 10.
- 6.3 The 10 year capital plan approved by the Council on the 11 February 2014 (Item 3 refers) allocates an average of £2,042k pa to carriageway planned works over the next 5 years, rising to an average annual expenditure of £9,015k pa over years 6 to 10.
- 6.4 It is anticipated that carriageway condition will reduce to the current Scottish average³ by year 5 and that the depreciated replacement cost of the carriageway asset will worsen by £25 million.
- 6.5 The need for a significant rise in planned expenditure from year 6, to hold even a reduced carriageway condition, suggests many of Moray's roads will significantly deteriorate over the next 10 years. As was mentioned in the Roads Asset Management Plan; '*Housing Estates in many of our towns were built 30-40 years ago and are approaching the time when their roads will require extensive levels of maintenance*'. Further, there was a significant peak of road maintenance activity in early 2000, to recover from poor road condition, and these carriageways will need more major maintenance in the coming years.
- 6.6 Expenditure on surface dressing will still be a significant element of the carriageway treatment programme.

Footways

	Capital £'000 (excluding c/f)	Revenue Planned Works £'000
2013 – 14	394	20
2014 – 15	394	20
Estimated budget to stand-still	500 (based on annual average increase in reserve list of works)	

- 6.7 The capital footways budget was substantially increased in 2012/13 to £394k from £84k the year before. Even so, our expenditure per km was less than our family group⁴ average (£1,000 per km against £1,071 per km) although higher than the Scottish average (£870 per km).⁵

³ Scottish Roads Maintenance Condition Survey

⁴ Family group members are:

Aberdeenshire, Angus, Argyll & Bute, Scottish Borders, Dumfries & Galloway, Highland, Moray and Perth & Kinross Councils.

⁵ SCOTS benchmarking

Structures

	Capital £'000 (excluding c/f)	Revenue Planned Works £'000
2013 – 14	261	50
2014 – 15	220	50
Estimated budget to stand-still	658	

- 6.8 The major Boat O' Brig project is excluded from figures reported.
- 6.9 The Council's road bridges are in relatively good condition compared to other Councils (average condition indicator 93.06 against Scottish average of 86.59). However, we have an above average percentage of bridges with unacceptable weight, height or width restrictions (11 bridges). In 2012/13 the annual budget was 11.69% of the estimate to repair identified works. This excludes the cost of removing unacceptable restrictions. 2014/15 budgets imply deterioration in the condition of our bridges.
- 6.10 One area where our knowledge is poor is in regard to the extent and condition of retaining structures.

Drainage and Other Assets

	Capital £'000 (excluding c/f)	Revenue Planned Works £'000
2013 – 14	560	20
2014 – 15	560	20
Estimated budget to stand-still	450 (based on annual average increase in reserve list of works)	

- 6.11 The capital budget for this category was significantly increased from £49k to £560k this year and last. On the other hand the revenue budget for planned drainage works was reduced from £268k to £20k.
- 6.12 Other assets mean things like safety barrier and embankment. The latter can be unexpected failures such as recently on the Keith to Dufftown Road at Drummur, or known potential failures like Inchberry Road. We have 367 separate lengths of safety barrier stretching to 27km. Some 25 sections of this are in sufficiently poor condition to warrant consideration of replacement soon. The cost associated with that is in the order of £400k however much depends on actual length (shorter lengths are proportionately more expensive), site works, etc.
- 6.13 Good drainage of surface water and ground water is important. Both weaken and damage roads infrastructure. Excessive surface water is at least an inconvenience to motorists but, at worst, a significant hazard (see Wet Skidding Resistance above).

Traffic Works

	Capital £'000 (excluding c/f)	Revenue Planned Works £'000
2013 – 14	0	150
2014 – 15	0	150
Estimated budget to stand-still		?

6.14 Traffic works relate to existing signs and road markings. A recent survey into the quality of road safety markings on the UK's road network reported that, in Scotland, 61 per cent of single carriageway road markings are invisible or fall into the warning zone. Detailed information is not available for Moray's roads however, by observation, there are many roads where markings are at a less than ideal standard.

6.15 Signs should be cleaned every 2 years according to the code of practice⁶. Strategic route road markings should be renewed when 30% worn. Due to budget constraints, this is not practice in Moray.

General Roads Maintenance

	Capital £'000 (excluding c/f)	Revenue Planned Works £'000	Revenue Maintenance £'000
2013 – 14	0	0	1,485
2014 – 15	0	0	1,485
Estimated budget to stand-still		n/a	n/a

6.16 General maintenance covers routine and reactive works under the following headings:

	Comment
Gully emptying, catchpits, piped grips	Gully emptying standards were reduced last year to the minimum. The Highways code of practice recommends they should be emptied at least once per year. Moray's current schedule is to empty gullies only once per year. There are increased requests/need for gullies to be emptied on an ad hoc basis and because this is unplanned, unit costs are rising.
Ditching & cleaning offlets	
General Section Maintenance	
Grass cutting, weeding & pruning (cyclic)	The code of practice recommends sight lines and minimum sight distances should be kept clear and the first swathe of verge should be cut a minimum of twice per annum. Problems occur when growth is

⁶ Well-maintained Highways

	<p>vigorous and a third cut has to be funded from limited budgets. The 'Well maintained highways' code recommends other verge areas should be cut every 3 years. Verge maintenance standards were reduced a number of years ago so only A class roads and designated visibility splays are cut twice per annum. 'Other verge areas' as defined above are not cut at all.</p> <p>Controlling weed growth is becoming more problematic with the reduction in effectiveness of pesticides. Moray complies with the code that suggests at least 2 applications per annum. Moray should be considering moving to three applications per annum.</p>
Sweeping & cleansing	
Patching flexible roads	As surfaces are allowed to deteriorate, there will be more pressure to carry out patching on potholes and other surface defects.
Temporary repairs to flexible roads	
Footway & cycletrack repairs	
Kerbing	
Remedial works, embankments & cuttings	
Drainage & culverts (<2m)	The code recommends inspecting culverts every 5 years and checking/flushing piped drainage every 10 years as a default position. That is not done.
Filter drains	
Gullies	
Chambers	
Grass cutting & weeding (non-cyclic) Tree, Gorse & Broom Maintenance	<p>Because other verge areas are not cut at all (see above), scrub has grown and now hangs over the first metre of verge. This scrub is relatively more costly to deal with than cutting grass. According to the Code of Practice, Moray should have a tree policy and inspect trees at least every 5 years. In practice, species of concern are considered (Dutch elm disease, Ash die back) however limited budgets mean applying a risk based approach. Noxious weeds on Moray road verges are only dealt with following pressure</p>

	from adjacent land owners.
Boundary fences	
Maintenance of safety fences	
Technical items	
Emergency items	

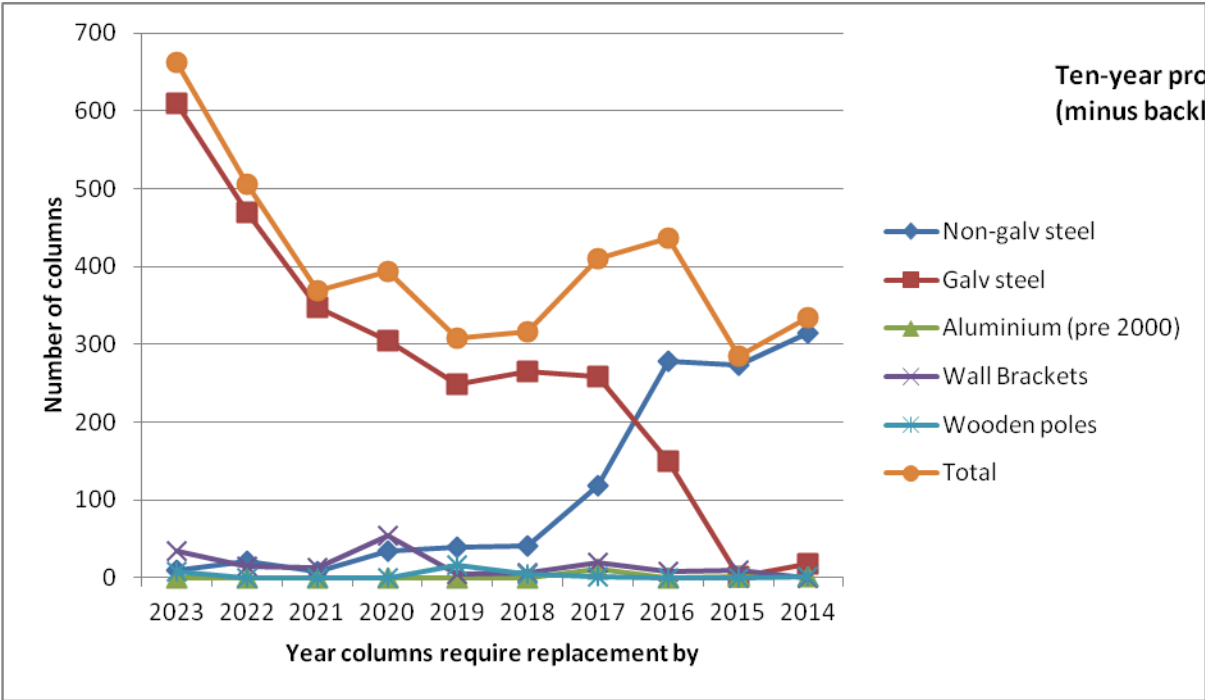
Private (Unadopted) Roads

- 6.17 In line with decisions in 2011/12, 2012/13 and last year, it is proposed not to allocate any funding to the maintenance of private (unadopted) roads.

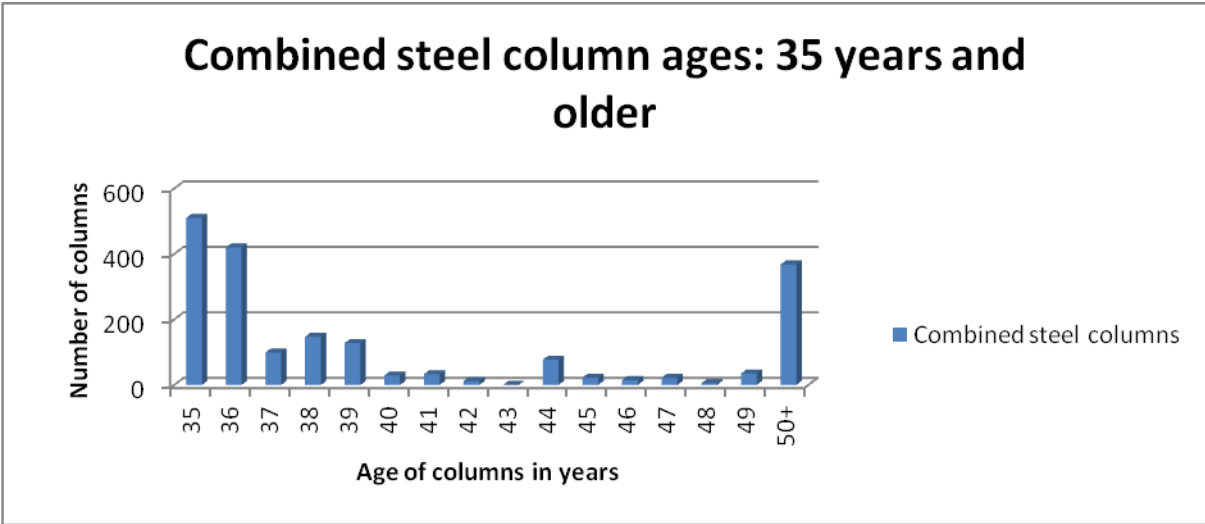
Street Lighting

	Capital £'000 (excluding c/f)	Revenue Planned Works £'000	Electricity £'000
2013 – 14	665	257	595 (out-turn cost)
2014 – 15	725	257	684
Estimated budget to stand-still	725		

- 6.18 Whilst electricity costs dropped significantly last year following a change of supplier, they are expected to rise by 15% during 2014/15.
- 6.19 In 2012 – 13, the capital investment in lighting was only 40% of the estimated annual depreciation (national average 60%) and the asset value had depreciated to 55% of its 'as new' value.
- 6.20 This Council does not undertake formal structural inspections of lighting columns, relying instead on informal inspections coupled with a detailed knowledge of type and age of columns.
- 6.21 Detailed electrical tests are conducted in-house. This has revealed some problems with older cables and earth impedance which are being dealt with. Unfortunately cable type and age records are poor so the extent to which this problem will continue cannot be judged.
- 6.22 In 2012 – 13, the number of columns which had exceeded their expected service life was below average at 20.87% (average 28.73%). However, the number of lanterns that had exceeded their expected life was above average at 47.3% (average 33.19%).
- 6.23 Life expectancy calculations are based on manufacturer's advice plus local knowledge. For columns the forecast date for column replacement is as below.



6.24 Over the next 8 years we should be replacing an average of 356 columns per annum and anticipating a rising requirement thereafter. However we have 2,022 columns that have exceeded their theoretical design life. Those are shown below.



7. **SUMMARY OF IMPLICATIONS**

(a) Council / Community Planning Priorities

Transport and Infrastructure is a priority under the theme of 'A growing and diverse economy' in the Council priority in the Moray Community Partnership, Single Outcome Agreement 2013-2016.

(b) Policy and Legal

The Council is responsible for the maintenance of 1541km of road, 474 bridges, and 17,097 street lighting units, which have been adopted by the Local Authority in terms of the Roads (Scotland) Act 1984. The Act places a duty on the Local Authority to maintain the roads, lighting units and structures so adopted, but does not prescribe the level of maintenance to be delivered.

Codes of Practice for Highway Maintenance Management, Management of Highway Structures and for Highway Lighting Management identify good practice and consideration has to be given to this advice.

The Council have agreed standards for response to identified roads and lighting defects (public performance standards).

The Council's Winter Maintenance Policy and Procedures set out requirements in relation to provision of a winter maintenance service.

(c) Financial implications

The proposals detailed in this report can be accommodated within the relevant 2014/15 revenue and capital allocation.

(d) Risk Implications

There is a risk of exceeding revenue budget although every attempt will be made not to do so. General maintenance budgets are under pressure and that will increase in terms of reactive maintenance as carriageway conditions deteriorate. Winter budgets are likely to be exceeded as the amount allocated is below the average cost of winter based on the last 9 years.

It is judged that the provision of a winter maintenance service required a minimum workforce of 90 so that it could be delivered in line with Council Policy and in accordance with legislation on health and safety, driver's hours and working time directives whilst allowing for vacancies and absences. A smaller workforce of 80 will reduce this contingency. This will have a consequence on the Council's ability to react to other events such as flooding and storms.

(e) Staffing Implications

Despite the budget reductions, there are no direct staffing implications because vacancies and overtime are being managed. Existing staffing levels within roads maintenance are below establishment and will remain so to match available workload.

(f) Property

There are no property implications as a result of this report.

(g) Equalities

There are no equalities implications as a result of this report.

(h) Consultations

L Paisey (Principal Accountant) has been consulted and comments incorporated into the report.

A McEachan (Senior Solicitor) has been consulted and is in agreement with the report.

D Toonen, Equal Opportunities Officer has been consulted and is in agreement with the report.

8. CONCLUSION

8.1 The Committee is asked to note the estimated outcome against programmed expenditure set for 2013/14, to note condition of the carriageway asset group as described in this report, to agree the approach taken to managing the different asset groups and to agree the split of revenue and capital allocation to the various maintenance headings and asset types for 2014/15.

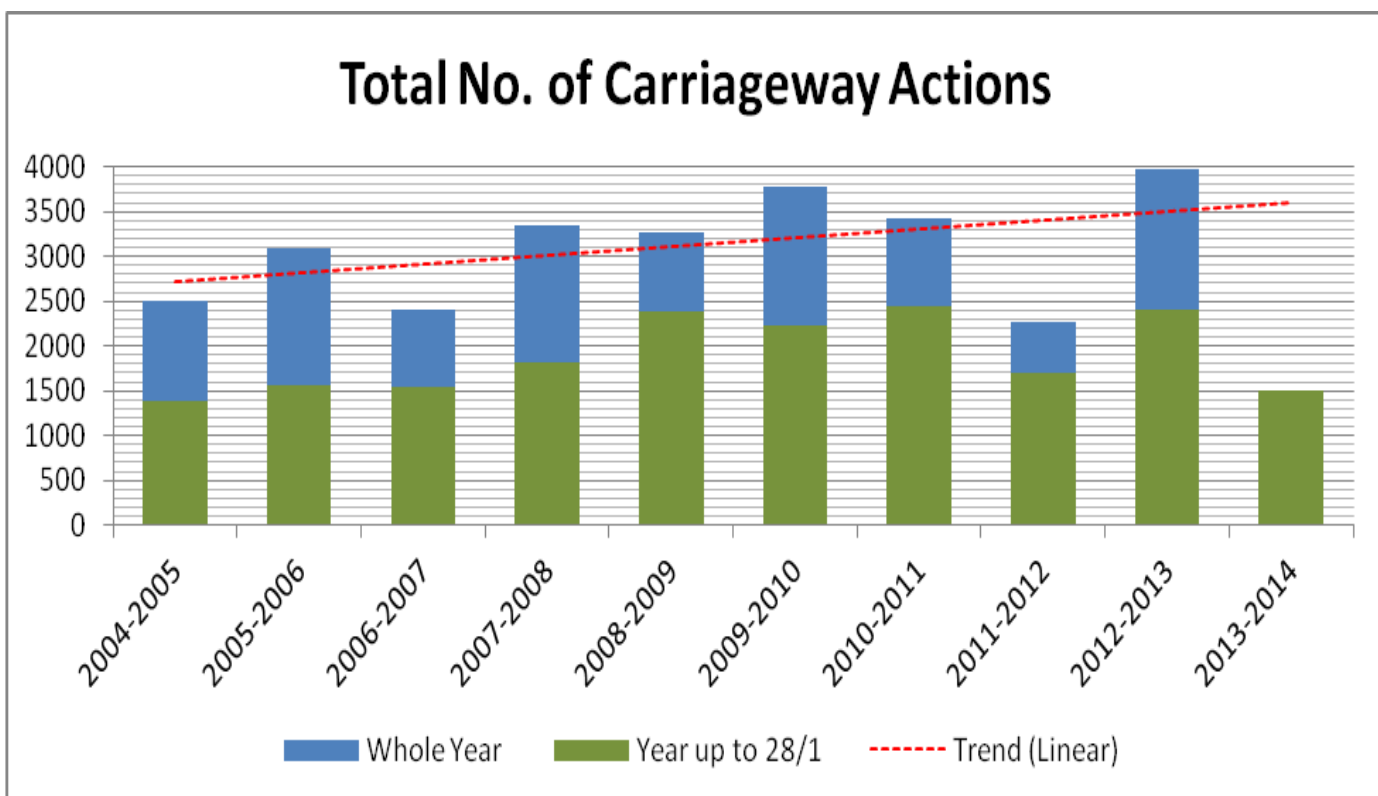
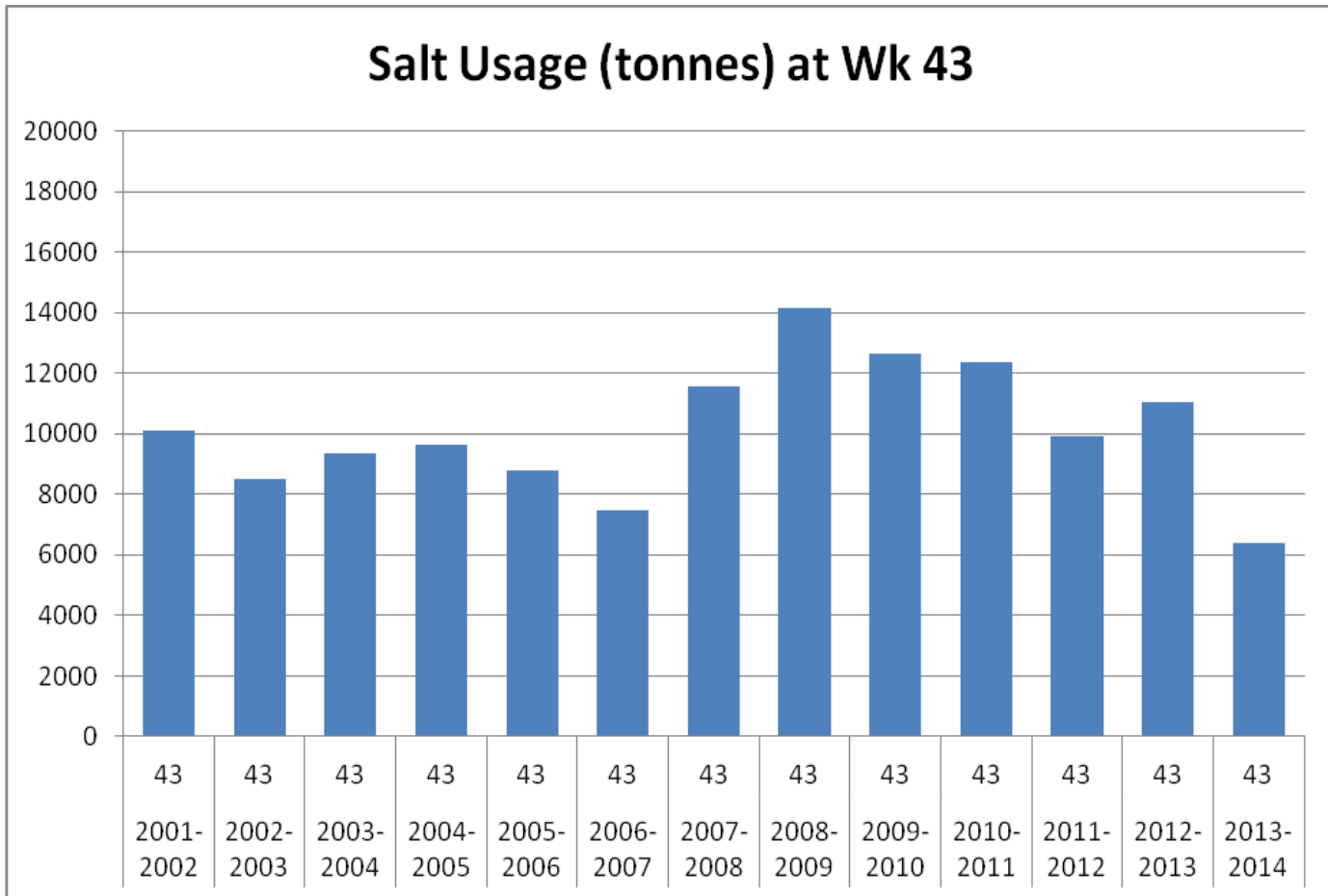
Author of Report: Bill Ross, Roads Maintenance Manager

Background Papers:

Ref:

APPENDIX 1

	2013/2014 end of year budget	2013/2014 Estimated Expenditure		2014/2015 Capital Allocation (report to Council 11 Feb 2014)	2014/2015 Proposals	plus c/f from 2013/2014	2014/2015 proposals incl. estimated c/f
Capital							
Carriageway Resurfacing/Reconstruction	£2,285,977	£2,285,977	-	£2,042,000	£2,042,000	£0	£2,042,000
Surface Dressing (recently resurfaced roads)	£623,023	£623,023	-	incl. above	incl. above	£0	incl. above
Drainage and Other Assets Replacements	£703,000	£610,000	-	£560,000	£560,000	£93,000	£653,000
Bridges Non-routine Works Bridge assessment and strengthening	£338,000	£359,000	-	£220,000	£220,000	£-21,000	£301,700
Boat o' Brig additional Footways, footpaths and steps	£126,000	£23,300	-	incl. above	incl. above	£102,700	incl. above
Footway Resurfacing/Reconstruction	-	£82,000	-	£210,000	£21,000	£-82,000	£-61,000
Column Replacement	£330,000	£330,000	-	£394,000	£394,000	£0	£394,000
Lighting Improvements	£190,000	£190,000	-	incl. above	incl. above	£0	incl. above
Passing Places	£465,000	£465,000	-	£725,000	£725,000	£0	£725,000
	£205,000	£205,000	-	incl. above	incl. above	£0	incl. above
	£15,000	£15,000	-	£48,000	£48,000	£0	£48,000
Sub-total	£5,281,000	£5,188,300	-	£4,199,000	£4,010,000	£92,700	£4,102,700
Winter Maintenance & Other Emergencies							
Winter Maintenance	£1,831,129	£1,739,129	-		£1,831,129	plus wage rise	
Other Emergencies	£0	£92,000	-		£0	"	
Sub-total	£1,831,129	£1,831,129	-		£1,831,129		
Electricity							
Signs	£16,775	£10,500	-		£12,000		
Lighting	£782,640	£595,000	-		£684,000		
Sub-total	£799,415	£605,500	-		£696,000		
Revenue Budget (Roads Maintenance)							
General Maintenance	£1,485,000	£1,485,000	-		£1,485,000	"	
Surface Dressing	£576,977	£576,977	-		£0	"	
Footway Works	£20,000	£5,600	-		£20,000	"	
Bridge Works	£50,000	£50,000	-		£50,000	"	
Traffic Works	£150,000	£150,000	-		£150,000	"	
Drainage and Other Works	£20,000	£4,700	-		£20,000	"	
Lighting Maintenance	£257,000	£257,000	-		£257,000	"	
Sub-total	£2,558,977	£2,529,277	-		£1,982,000		
Car Parks Maintenance							
Car Parks Maintenance	£101,000	£101,000	-		£101,000	"	
Sub-total	£101,000	£101,000	-		£101,000		
TOTAL	£10,571,521	£10,255,206	-		£8,620,129	£92,700	



Poor Longitudinal Profile

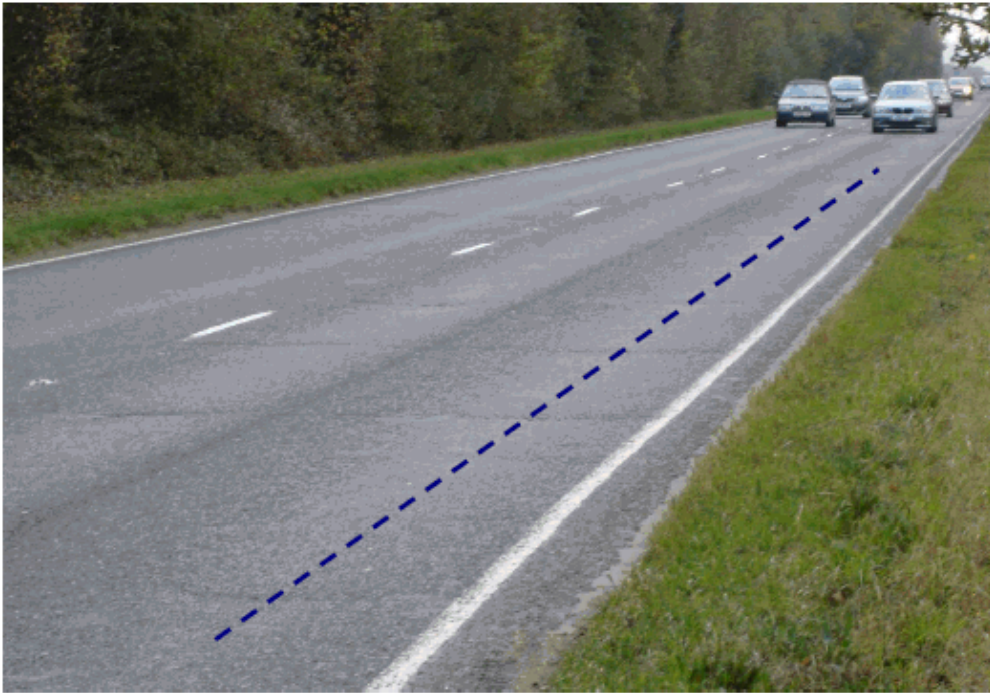


Figure 6 Road where poor ride quality has been reported

Poor Transverse Profile

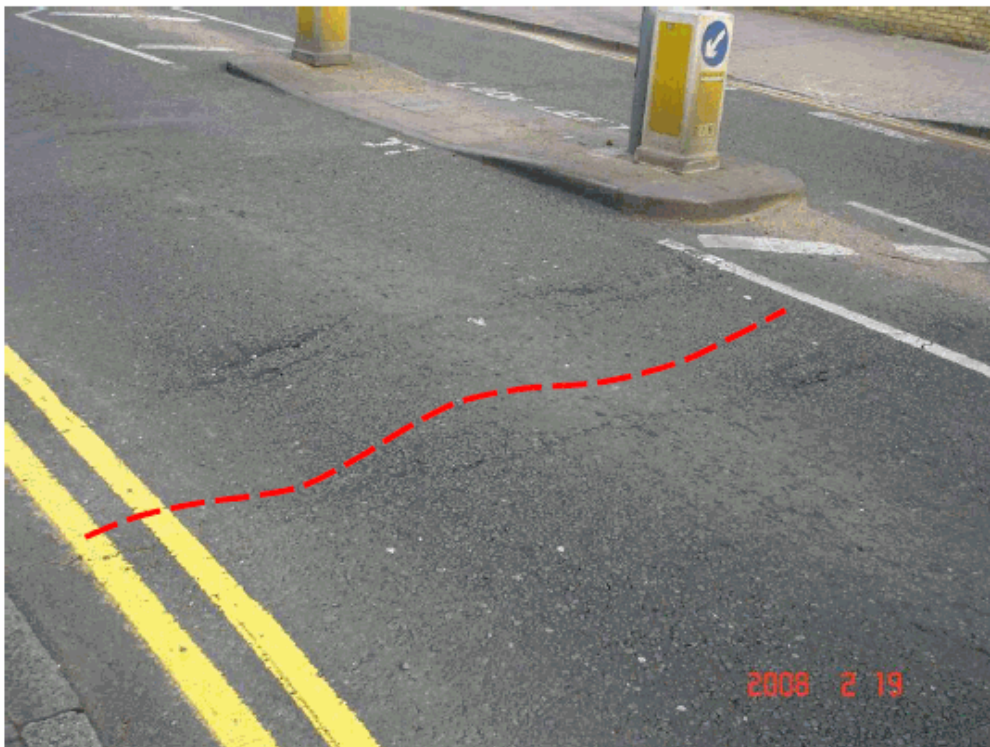


Figure 7 Road with poor transverse profile (rutting)

Edge Deterioration



Figure 8 Road where edge of carriageway deterioration has been identified

Poor Texture



Figure 9 Unevenness of texture across the carriageway

Cracking



Figure 10 Road showing wheel track and transverse cracking ⁷

⁷ Introduction to Scanner Surveys – UK Roads Board