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**REPORT TO: ECONOMIC DEVELOPMENT AND INFRASTRUCTURE  
SERVICES COMMITTEE ON 7 APRIL 2015**

**SUBJECT: REVENUE BUDGET 2015/2016 – ROADS MAINTENANCE AND  
CAPITAL BUDGET 2015/2016 – RESURFACING, BRIDGES,  
PASSING PLACES, LIGHTING COLUMN REPLACEMENT AND  
LIGHTING IMPROVEMENTS**

**BY: ACTING CORPORATE DIRECTOR (ECONOMIC DEVELOPMENT,  
PLANNING AND INFRASTRUCTURE)**

**1. REASON FOR REPORT**

- 1.1 To ask the Committee to approve detailed plans for the expenditure of funds allocated from the Revenue Budget 2015/2016 to roads maintenance and from the Capital Budget 2015/2016 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 F (1) and (17) of the Council's Scheme of Administration 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 2015/2016 to Roads Maintenance activities, as detailed in APPENDIX 1 of this report;**
- (ii) to approve the detailed allocation of funds, from the Capital Budget 2015/2016 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/overspends to be carried forward to 2015/16;**
- (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; and**

- (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**

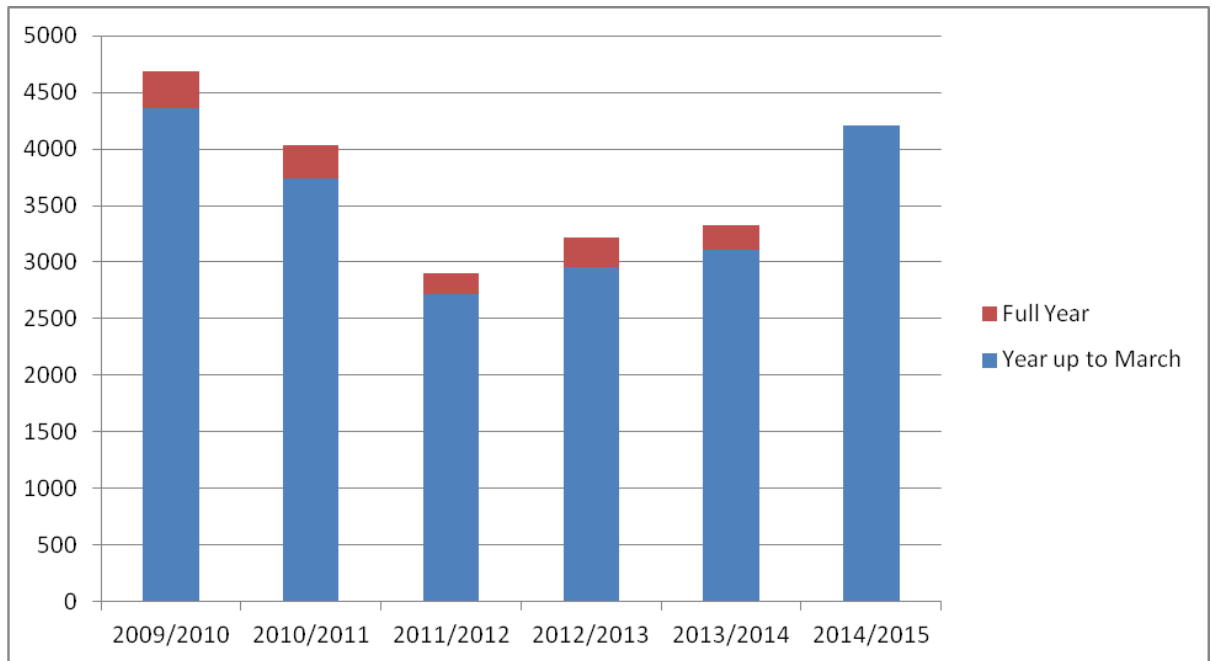
- 3.1 Reference is made to the allocation of capital and revenue funds for 2015/2016 at the special meeting of the Moray Council on 12 February 2015 (Item 3 refers).
- 3.2 In approving capital funds, the Council agreed to detailed reports being submitted to the appropriate Service Committee for approval. This report satisfies the above requirement as well as presenting proposals for all roads maintenance expenditure.
- 3.3 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 2014/2015**

#### **General**

- 4.1 The table in **APPENDIX 1** includes a summary of estimated outturn expenditure for 2014/2015 and proposals for 2015/2016.
- 4.2 It is estimated that capital budgets will be underspent by 3% although this is, in part, dependant on the extent to which winter weather diverts in-house resources away from planned works.
- 4.3 Additional expenditure of £314k was incurred during 2014 on emergency works due to flooding.

- 4.4 The table below shows the number of calls to the Council requesting a roads related service since 2009/10.



- 4.5 Contacts can be further broken down into categories as follows:

Category	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	Grand Total
<b>Carriageway</b>	807	808	606	830	779	893	<b>4723</b>
<b>Footway</b>	109	117	144	148	153	227	<b>898</b>
<b>Verge</b>	15	15	20	26	52	67	<b>195</b>
<b>Drainage</b>	548	336	302	286	299	654	<b>2425</b>
<b>Barrier</b>			5	5	5	10	<b>25</b>
<b>Street Lighting</b>	1295	1186	1176	1237	1538	1726	<b>8158</b>
<b>Winter Maintenance</b>	1483	1176	330	304	89	348	<b>3730</b>
<b>Structures</b>	22	21	30	13	14	5	<b>105</b>
<b>Traffic</b>	81	77	104	112	176	276	<b>826</b>
<b>Grand Total</b>	<b>4360</b>	<b>3736</b>	<b>2717</b>	<b>2961</b>	<b>3105</b>	<b>4206</b>	<b>21085</b>

- 4.6 The high number of winter maintenance calls in 2009/10 and 2010/11 relate to particularly severe winters. Cuts in street lighting maintenance budget and resource issues have seen the number of defect reports rise. Drainage defect reports follow a reduction in the standard for cleaning gullies and is probably also related to flooding experienced around August 2014.

### Asset Value

4.7 Roads asset values at the end of 2013/14 are shown in the table below:

Asset Group	Gross Replacement Cost £'000	Depreciated Replacement Cost £'000	Confidence in asset data
Carriageway	£1,422,313	£1,267,657	90%
Footway	£85,797	£63,217	40%
Structures	£89,890	£85,919	85%
Street Lighting	£46,209	£27,839	85%
Street Furniture	£15,273	£7,219	25%
Traffic Management Systems	£1,369	£822	90%
Land	£177,510	n/a	n/a
<b>Total</b>	<b>£1,838,360</b>	<b>£1,452,672</b>	

4.8 Generally gross replacement cost went up from 12/13 which will reflect construction cost rises. The difference between gross replacement cost and depreciated replacement cost is an indication of how much of the asset has been 'used up'. Excluding land values, at the end of 12/13 this sum was £280 million compared to £208 million at the end of 13/14. For carriageways, this can be attributed to the slight improvement in condition in the 2012/14 results. These figures are required from the Council for financial reporting purposes.

### Winter Maintenance and Other Emergencies

4.9 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	2013/14
<b>Winter Maintenance Expenditure £,000</b>	1,774	2,065	2,586	3,679	3,249	2,145	2,688	1,567

4.10 The 2013/14 winter was exceptionally mild and no significant other emergencies were experienced.

4.11 Ignoring the least and most costly winters, the average cost of winter maintenance is £2,418k against a budget of £1,886k.

4.12 Flooding in July, the widespread surface water flooding on the 11th August 2014 (reference report to this Committee on 30 September 2014) and to a lesser extent, tidal and surface water flooding experienced in October, have resulted in unexpected costs, the revenue element of which is £60k and is allocated against Winter Maintenance and Other Emergencies. The asset replacement type works that were needed as a consequence of flooding are considered against Drainage and Other Works below.

4.13 Other expenditure amounts to £22k for dealing with wind damage, oil spills, etc.

- 4.14 Dry salt was used from the salt barn in Elgin from just before Christmas 2014 after older stock was used up. Salt spread rates are defined for different winter conditions and spread rates. For Elgin gritters, spread rates were reduced for the conditions where that was appropriate. Feedback from operatives is very positive with the potential for blockages in gritters almost eliminated which is a further cost saving. The table below compares different treatments ordered per each route per occasion.

Year/grams per sq m	Salt 10	Salt 15	Salt 20	Salt 30	Mix 20	Mix 30	Mix 40	Sand 40	Total
2004-2005	27	558	700	120	239	142	687		2473
2005-2006	52	1288	835	49	192	272	395		3083
2006-2007		1055	1053	27	70	119	80		2404
2007-2008	2	1032	1406	678		128	91		3337
2008-2009		785	1482	423	9	564	9		3272
2009-2010		383	617	175	299	2203	27	72	3776
2010-2011		99	516	73	1941	755	2	36	3422
2011-2012	2	959	1113	143	12	43			2272
2012-2013		1656	1853	26	27	415			3977
2013-2014		1385	895		11	16			2307
2014-2015	214	905	1064	115	23	54	0	0	2375

- 4.15 Based on the Code of Practice, without the salt barn, 214 Elgin based treatments at 10g/sq m would have been 15g/ sq m. Because of more snow this year, more 30g/sq m treatments were ordered than last year.
- 4.16 At the time of writing this report it is estimated that Winter Maintenance and Other Emergencies will be slightly above budget at year end. Further statistics on salt use and number of winter treatments are provided in **APPENDIX 2**.

### Carriageway Condition

- 4.17 The Scottish Road Maintenance Condition Survey (SRMCS) is undertaken annually and determines the condition of carriageways as a Road Condition Index:

Percentage roads that should be considered for maintenance treatment on :-	2008/2010	2009/2011	2010/2012	2011/2013	2012/2014	2013/2015	2013/15 Scottish Average
A Class roads	22.0%	23.5%	22.6%	22.3%	19.3%	20.0%	29.0%
B Class roads	20.3%	22.5%	21.3%	18.9%	15.9%	17.7%	36.1%
C Class roads	21.6%	23.3%	23.5%	23.3%	21.5%	22.2%	37.3%
Unclassified	32.1%	30.5%	30.1%	31.3%	32.1%	33.1%	39.3%
All roads	26.4%	26.6%	26.1%	26.1%	25.2%	26.3%	37.0%

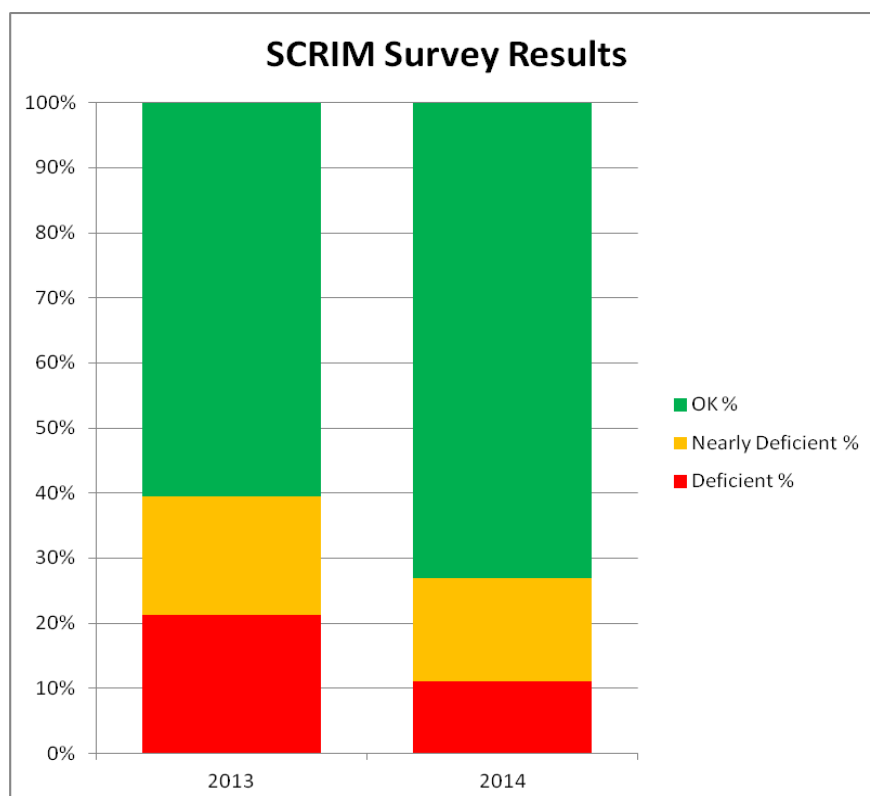
- 4.18 Overall, the condition of Moray's carriageway network has slightly worsened across all classes of road. However, the Scottish average condition has also slightly worsened from 36.2% requiring treatment to 37%.
- 4.19 The Society of Chief Officers of Transportation in Scotland (SCOTS) commissioned work to calculate backlog and steady state figures based on the above SRMCS results. Headline backlog is the estimated cost of bringing the carriageway network back to a defined green condition in one year.

Year	2009	2011	2013	2015
Headline backlog £000's	33,669	41,214	51,904	44,138

- 4.20 This figure has gone down although, on average our carriageways were in a worse condition between 2013 and 2015. However it should be noted that the condition of A, B and C class roads improved between 2013 and 2015. Consequently these would not have needed as many expensive treatments as were included in the 2009 backlog calculations.
- 4.21 The estimated cost to maintain carriageway condition at current (2015) condition is £7,621k per annum. It is this figure that should be compared with the current capital allocation to carriageway treatments of £2,042k per annum.

### **Resistance to Wet Skidding**

- 4.22 Skid resistance was measured for most A and B class roads in 2013 and the results were a factor in determining the programme of work for 2014/15. The graph below shows that there have been improvements to this characteristic of carriageway surfaces.

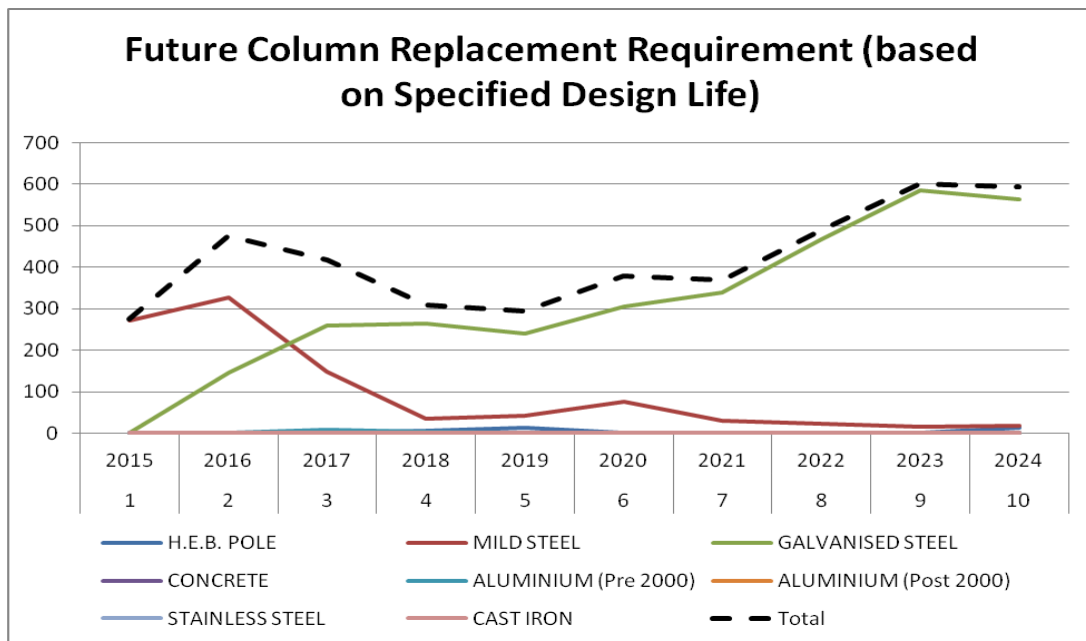
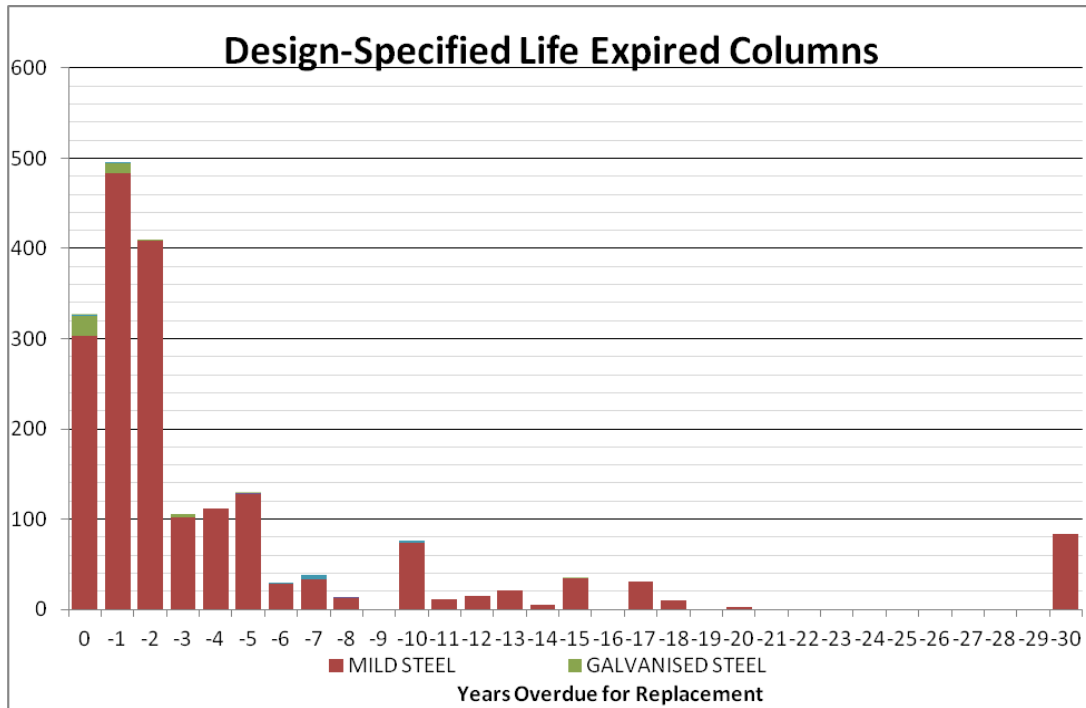


**Structures**

- 4.23 The Council's road bridges are in relatively good condition compared to other Councils (average condition indicator 86.84 against Scottish average of 85.65). However, we have an above average percentage of bridges with unacceptable weight, height or width restrictions (11 bridges). In 2013/14 the annual budget was 7.73% of the estimate to repair all identified works. This excludes the cost of removing unacceptable restrictions. Because 2015/16 budgets will be similar, the condition of our bridges will deteriorate.
- 4.24 One area where our knowledge is poor is in regard to the extent and condition of retaining structures. Work has been done in 2014/15 to identify these assets and record them in our database. To date we have recorded 142 retaining walls.

**Street Lighting**

4.25 The graphs below shows the number of street lighting columns that have exceeded their specified design life – 1,950 columns from a total of 17,166 columns and future column replacement forecasts excluding those columns that are already over design life.





- 4.26 The table below shows increase in number of lamps, carbon footprint, cost of electricity, etc. since 2009/10. In terms of kWh per lamp, the trend is that this is flattening out and should start to reduce in future years. The trend is masked because there are still 17000 inefficient SOX and SON lamps in use.

Year	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015
<b>Total Lamps</b>	18,272	18,389	18,569	18,813	19,010	19,103
<b>Total kWh</b>	5,802,586	5,819,943	6,230,159	6,131,015	6,296,373	6,310,058
<b>Total tonnes CO2</b>	3,139	3,148	3,370	3,316	3,406	3,363
<b>Total Cost (£'000)</b>	609	568	574	636	601	639
<b>kWh per lamp</b>	317.57	316.49	335.51	325.89	331.21	330.32

- 4.27 Electrical tests had previously revealed some problems with older cables and earth impedance which were sorted as part of the 2014/15 works. Testing continues on a six year cycle.
- 4.28 Intermittent problems with lighting columns directly fed from old hydro connections continue especially in Elgin. These are being addressed by re-cabling a dedicated supply to the sections of street lights.

#### **Drainage and Other Assets**

- 4.29 Outturn expenditure with this asset group is estimated to be:

	<b>Income</b>	<b>Expenditure</b>
Capital allocation	599	
Planned Works		539
Emergency works (flooding)		314
50% grant from Scottish Timber Transport Group	94	
<b>Total</b>	<b>693</b>	<b>853</b>

- 4.30 Last year was the first time for a number of years that the Council have managed to get grant funding from the Scottish Timber Transport Group. All of the eligible drainage works were on routes identified as preferred routes for timber extraction and was for work that would have been a high priority regardless.
- 4.31 The Council have been successful in obtaining some grant funding for similar works next year, with estimated grant of £76k.

- 4.32 The emergency works relate to damage from flooding in August 2014, about £87,000 of which was work carried out in house. That is in addition to works which, because they were more associated with reacting to the flooding, are accounted for under Winter Maintenance and Other Emergencies revenue budget (see Para 4.11 above).

### **Footways**

- 4.33 There is a forecast underspend of £138k against a £438k budget for these works due to resource issues.

### **General Roads Maintenance**

- 4.34 It is estimated that revenue expenditure on general roads maintenance will be 4% under budget.

## **5. CONSIDERATIONS**

- 5.1 Apart from an allowance for wage increases, the budget for 2015/16 is the same as for 2014/15 which followed reductions, in the previous two years, of £977k in revenue and £2,069k in capital allocations.
- 5.2 Unfortunately, inflation statistics for construction are currently not available from the National Statistics Office. Bitumen products bought through a Scotland Excel contract have come down in price however quarry prices for surfacing materials have not reduced.
- 5.3 To facilitate planning it is assumed that the projected under spends 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.
- 5.4 The results in the table in Para 4.15 are a summation of red and amber defects in carriageway surfaces except edge deterioration. Dealing with edge deterioration, however, has been a significant component of work done in the last couple of years.
- 5.5 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.
- 5.6 In drawing up a programme of work various criteria are applied to produce a 'first pass' list of works. For example, the criteria shown below are for A class roads.
- Texture  $\leq 0.4$  (0.3 in urban areas) – consider surface dressing.
  - Texture  $\leq 0.6$  plus Whole Carriageway Cracking  $\geq 0.15$  - consider surface dressing.
  - Profile (3 metre)  $\geq 10$  plus Whole Carriageway Cracking  $\geq 0.2$  - consider moderate thickness overlay (surfacing).
  - Rut depth  $\geq 20$  – consider thick overlay (surfacing).
  - Rut depth  $\geq 20$  plus Whole Carriageway Cracking  $\geq 2.0$  - consider reconstruction.

- 5.7 This information is then considered by technical teams, along with the resistance to wet skidding results described in Para 4.17 above. Using their detailed knowledge of the Moray roads network the teams will refine this into an affordable list of planned works for 2015/16 which aims to achieve best value within the resources available.
- 5.8 We are, however, seeing examples of carriageway surfaces that exhibit none of the above faults but the surface layer binder is no longer effectively binding the aggregate. These surfaces can quickly start to unravel (promoted by winter/wet weather) resulting in potholes.
- 5.9 There are a number of National Codes of Practice that have to be considered in determining standards applied to roads, bridges, street lighting and winter maintenance. There are some areas where this Council apply lesser standards and those were reported to Committee last year (reference item 13 on the 11 March 2014 meeting). A review is being undertaken to update these Codes of Practice, the outcome of which will be reported to Committee in due course.

## **6. SUMMARY OF IMPLICATIONS**

### **(a) Moray 2023: A Plan for the Future/Service Plan**

Several objectives of the Moray 2023 plan are influenced by the condition of the public roads network.

A Growing, Diverse and Sustainable Economy – the public road network is used by all sections of society, to access shops and services and to transport goods within and to and from Moray.

Adults living healthier, sustainable independent lives safeguarded from harm – encouraging active travel options of walking and cycling require well maintained and well lit facilities.

Safer Communities – road and footway hazards have the potential to cause injury. Street lighting contributes to making communities safer.

### **(b) Policy and Legal**

The Council is responsible for the maintenance of 1553km of road, 375 bridges, and 17,262 street lighting columns 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 2015/16 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**

There are no direct staffing implications because vacancies and overtime are being managed. Staffing levels within Roads Maintenance were held below establishment levels following budget reductions in 2014/15.

**(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, A Scott, Legal Services Manager and D Toonen, Equal Opportunities Officer has been consulted and any comments taken into consideration.

**7. CONCLUSION**

- 7.1 The Committee is asked to note the estimated outcome against programmed expenditure set for 2014/15, 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 2015/16**

Author of Report: Bill Ross, Roads Maintenance Manager

Background Papers:

Ref:

## Appendix 1

	2014/2015 end of year budget	2014/2015 Estimated Expenditure	2015/2016 Allocation (report to Council 12 Feb 2015)	plus c/f from 2014/2015
<b>Capital</b>				
Carriageway Resurfacing/Reconstruction	£2,059,000.00	£931,000.00	£2,042,000.00	-£51,000.00
Surface Dressing (recently resurfaced roads)	incl. above	£1,179,000.00	incl. above	
Drainage and Other Assets Replacements	£599,000.00	£539,000.00	£560,000.00	£60,000.00
Emergency Works due to Flooding		£314,000.00		
Bridges Non-routine Works	£188,000.00	£188,000.00	£597,000.00	
Footways, footpaths and steps	£438,000.00	£300,000.00	£394,000.00	£138,000.00
Column Replacement	£718,000.00	£718,000.00	£725,000.00	
Replace SOX and SON lights with LED lights			£600,000.00	
Passing Places	£50,000.00	£50,000.00	£50,000.00	
<b>Sub-total</b>	<b>£4,052,000.00</b>	<b>£4,219,000.00</b>	<b>£4,968,000.00</b>	<b>£147,000.00</b>
Winter Maintenance	£1,895,784.00	£1,850,000.00	£1,895,784.00	plus wage rise plus fuel inflation
Other Emergencies	£0.00	£82,000.00		
<b>Sub-total</b>	<b>£1,895,784.00</b>	<b>£1,932,000.00</b>	<b>£1,895,784.00</b>	<b>£0.00</b>
<b>Electricity</b>				
Signs	£12,000.00	£12,000.00	£12,000.00	
Lighting	£627,000.00	£627,000.00	£627,000.00	
<b>Sub-total</b>	<b>£639,000.00</b>	<b>£639,000.00</b>	<b>£639,000.00</b>	<b>£0.00</b>
<b>Revenue Budget (Roads Maintenance)</b>				
General Maintenance	£1,485,000.00	£1,418,500.00	£1,485,000.00	
Footway Works	£20,000.00	£10,000.00	£20,000.00	
Bridge Works	£50,000.00	£50,000.00	£50,000.00	
Traffic Works	£150,000.00	£150,000.00	£150,000.00	
Drainage and Other Works	£20,000.00	£14,000.00	£20,000.00	
Lighting Maintenance	£257,000.00	£257,000.00	£257,000.00	
<b>Sub-total</b>	<b>£1,982,000.00</b>	<b>£1,899,500.00</b>	<b>£1,982,000.00</b>	<b>£0.00</b>
revenue	£4,516,784.00	£4,470,500.00	£4,516,784.00	£0.00
<b>TOTAL</b>	<b>£8,568,784.00</b>	<b>£8,689,500.00</b>	<b>£9,484,784.00</b>	<b>£147,000.00</b>

Items shaded grey were  
adjustments to budget.

Appendix 2

