Moray Council

Roads Asset Management Plan

Version	Date	Signed	Checked	Status
0.1	February 2011			Draft
0.2	February 2012			Final Draft

Contents

1. Introduction

The maintenance of our road assets impacts on the whole community and all the services that Moray Council delivers. The real value of the Council's road network and associated infrastructure such as its structures, street lighting, signs and drainage, is in its delivery of the essential services upon which economically healthy, safe and sustainable communities are built.

The roads infrastructure will, however, deteriorate and a failure to address this deterioration will lead to increasing maintenance, repair and replacement costs. This will result in reduced levels of service that will impact on public safety, the environment and the sustainability of our communities. It was recently estimated that every £1 reduction in road maintenance funding costs the wider economy £2[1].

The value of the Council's assets is significant and they need to be properly managed. Moray Council is developing its corporate Asset Management Plan covering Land and Buildings, Infrastructure as well as Vehicles, Plant & Equipment. The Roads Asset Management Plan forms part of the Infrastructure group.

Roads Asset Management is the systematic process associated with the inspection and maintenance of the road network. It involves the collection of data relating to the asset and the whole-life costing of maintaining and improving the asset. In addition to the carriageway and footway, this includes all the various elements such as structures, street lighting and street furniture. This process is adopted to ensure value for money is achieved and to provide justification for the various budgets.

This Roads Asset Management Plan (RAMP) is the Moray Council's initial plan. It shows the current position and is a starting point for further modification and development. This version of the RAMP is to run until 2013 and it is expected that this initial plan will be updated annually for the first couple of years after which the plans will be developed to an extent where they can be reviewed every 3 years.

With ever more constraints on the Council's budgets, it is essential that the money available is allocated to areas of priority and that best value is obtained from the limited resources.

This RAMP is based largely on the individual Lifecycle Plans for the various asset groups. Rather than repeating the findings of these Lifecycle Plans they are attached as appendices to this RAMP document.

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[1] National Roads Maintenance Review, Phase 2 Report

2. Asset Description

2.1. The Road Asset

The Council's Road Asset are roads as shown on the List of Public Roads (LoPR) and comprises the following:

Table 1: Road Assets	
Asset Category	**Asset Elements**
Carriageway	All roads on the List of Public Roads (LoPR). Includes the road surface and associated verges.
Footway, footpaths and cycle tracks	Footway – adjacent to the carriageway Footpath – remote from the carriageway Cycle tracks – off-carriageway cycle tracks and shared pedestrian/cycle footways.
Structures	Bridges (span ≥1.5m) Retaining walls (height >1.5m)
Street Lighting – including illuminated signs and bollards	Lighting columns, lamps, lantern, cables and control pillars. Illuminated signs and bollards (street lights also light areas that are not public roads)
Drainage	Road drainage systems including pipe work, chambers and outfalls. Culverts <1.5m diameter Gullies and drainage channels
Safety fencing and pedestrian barriers	Safety barriers (Road Restraint Systems) and pedestrian guardrails.
Signs: non-illuminated	All non-illuminated signs.
Road Markings, Traffic Signals and other street furniture	Road markings, traffic signals, bollards, verge marker posts, bus shelters, weather stations, cattle grids and grit bins.

2.2. The Size of the Roads Asset

Table 2: Road Asset Inventory (as at January 2012)			
Asset Category	**Asset Element**	**Asset Amount**	**Unit**
Carriageways	Public roads	1,541	km.
Footways, footpaths & cycle tracks	Footways	510 (03/10)	km
	Footpaths	20	
	Cycle tracks	19	
Structures	Bridges – Road over Rail	3	No.
	Bridges – Road over Water	455	No.
	Footbridges	16	No.
	Retaining walls	?	
Street Lighting – including illuminated signs and bollards	Lighting columns	17,097	No.
	Illuminated signs & bollards	1,010	No.
Drainage			
Safety Fencing and pedestrian barriers	Road restrain systems	25,006	Lin.m
	Pedestrian barriers	<100	Lin.m
Signs: non-illuminated	Non-illuminated signs	?	No.
Road Markings, Traffic Signals and other street furniture	Road Markings	?	Lin.m
	Traffic Signals installations (junctions and crossings).	17	No.
	Bus Shelters	188	No.

2.3. Quality of the Asset Data

Table 2 above details the basic asset inventory data currently held. As can be seen this data is of variable quality.

The information on carriageways and footways is reasonably comprehensive however we currently do not split the remote footpaths and cycle tracks into urban and rural lengths.

There is little or no data recorded on retaining walls and pedestrian barriers. The non-illuminated signs, road markings and other street furniture are not adequately recorded in a database.

2.4. Assets not covered by this Plan

The RAMP does not include data on assets that are the responsibility of other Council services or functions such as Education, Housing or Property sections. It also does not include the following:

- Vehicles, Plant & Equipment
- Flood Alleviation Schemes
- Harbours or Car parks
- Structures not on the public road.
- Private roads.

2.5. Asset Growth

In 1999 the length of road asset was 1,485km. Currently we have 1541km which represents a growth of 3.6% in 12 years.

This growth has mainly resulted from the additional lengths of road associated with the adoption of new housing schemes.

The street lighting asset has grown by over 5% in the past 5 years again due in large to the development of new housing schemes.

The structures asset includes elements such as retaining walls where the size and extent of the asset is unknown. Work has commenced to gather the data for these and store this within the roads asset management system.

3. Community Requirements

3.1. Introduction

The road network is provided for the benefit of the community and to aid economic development of the area.

Some years ago the local authority operated a private-unadopted (PU) road scheme to upgrade the surface of a number of shared private roads. The legacy of that scheme meant that the Council took on the responsibility for maintaining the road surface. For a number of years however the Moray Council has had no budget for this.

3.2. Customer Expectations

Meeting the expectations of the road users is notoriously difficult, particularly as these expectations have grown in recent years. For example it seems that during the winter a lot of drivers expect the roads to be "black" and clear of ice at all times; irrespective of how bad the weather is.

3.3. Customer Satisfaction Surveys

The Roads Maintenance section have, in the past, requested customer feedback both in general via the website and also specifically relating to road or lighting schemes.

The online survey received a very poor response possibly due to poor promotion of the link. Questionnaires issued either immediately before or after road or lighting works did receive a better response level. Consideration should be given to reviewing how best to receive feedback from the public.

3.4. Road Condition Survey

Compared with other Scottish councils, the condition of the roads in Moray are generally very good. This is reflected in the Road Condition Index (RCI) achieved following the annual Scottish Road Maintenance Condition Survey (SRMCS).

The annual Scottish Roads Maintenance Condition Survey monitors the condition of local authority carriageways and the overall trend in Moray, relative to other local authorities, had been an improving one with the area's roads being best in Scotland in 2008 - 10. However this is now starting to decline. In addition as only 10% of the U class roads are now surveyed each year the information is less reliable.

The SRMCS measures the condition of the road using a number of parameters. These include the roads longitudinal and transverse profiles, rutting, surface texture and cracking. It takes account of the severity of the defect and its relative importance to road users. A weighted score is then attributed to each defect and combined to gives a score for each 10 metre section of road. The results are presented graphically with each section of road shown as either;

- Green – The road is considered to be in an acceptable condition
- Amber – The road has defects and requires further investigation
- Red – The road has deteriorated to the point that repairs are required.

The RCI figure reported for each Council's road network is the % of the network that is either amber or red and is defined as "*the percentage of the network for which some form of maintenance may be required*"

Table 3: Moray Council SRMCS Results for 2010-2012		
	RCI	**Ranking**
Overall network	26.9%	Ranked 4th
A Class Roads	22.6%	Ranked 6th
B Class Roads	21.3%	Ranked 2rd
C Class Roads	23.5%	Ranked 5th
Classified Roads	22.6%	Ranked 3rd
Unclassified Roads	31.7%	Ranked 7th

Table 4: Previous Moray Council SRMCS Rankings						
SRMCS Result	**2004/06**	**2005/07**	**2006/08**	**2007/09**	**2008/10**	**2009/11**
RCI (rank out of 32)	28.4% (6)	30.7% (7)	28.2% (7)	22.7% (2nd equal)	24.4% (1)	27.5% (2)

3.5. Road and Street Lighting Faults

Road and street lighting faults reported by members of the public are recorded in the Roads Asset Management System – CSS Module.

Over the past few years the number of calls received from the public has increased.

4. Future Demands

Over the past few years the bulk of added assets have come from developer investment. This trend is likely to continue particularly around Elgin and the other major centres in Moray.

The Council has recently published its Moray Economic Strategy and along with the Elgin City for the Future project, this acknowledges the importance of encouraging economic development and ensuring the appropriate infrastructure is put in place to cater for this development.

The preparation of proper inventories for retaining walls and unlit signs will improve the management of these assets.

With developers being required to provide sustainable drainage systems these will become more prevalent. The implementation of the Flood Risk Management (Scotland) Act will put additional pressures on the Council to record and monitor all Sustainable Urban Drainage System (SUDS) schemes

5. Levels of Service

5.1. Introduction

The Council has stated that the maintenance of its roads network is a priority and has reflected this in its recent 2012 – 2022 Capital Plan.   However, continuing revenue budget pressures are likely to influence the levels of service provided over the next few years.

As highlighted above, the Council's road network currently compares relatively well with others in Scotland.

5.2. Measurement

The Council have a number of statutory and local indicators that measure levels of service. These are identified in Appendix E.

5.3. Reporting

Both the national and local performance indicators are reported to Committee regularly. Currently this tends to be quarterly. In addition a report is submitted annually, at the start of the financial year, reporting on the proposals for the Capital and Revenue budgets and advising members of the latest national Road Condition Indicator (RCI) statistics.

5.4. Performance Review

Performance across the roads asset tends to be measured by various national and local indicators. The results are reported regularly to the Council's Audit & Performance Committee. In addition certain national indicators are reported through CIPFA.

V0.2

The SRMCS results are analysed by the SCOTS group and included in annual reports issued to all Scottish councils. Results from these surveys are included in reports by Audit Scotland.

In addition the Council's Winter Maintenance Service was reviewed in October 2010. A number of follow up actions recommended in that review are still to be completed.

5.5. Levels of Service (current and proposed)

Currently the annual Scottish Road Maintenance Condition Survey (SRMCS) places Moray near the top of the list of authorities however this doesn't tell us how the roads are in absolute terms. More importantly the headline backlog figure for carriageways is increasing.

The information for the Street Lighting asset group shows that whilst the number of columns in the network is increasing, the overall budgets are remaining static or are reducing. Consequently the percentage of columns over 30 years old is increasing. Energy costs for street lighting (including lit signs and bollards) are also steadily increasing.

The revenue budget for structures has reduced steadily over the past few years and although there has been an increase in the capital allocations this doesn't always compensate.

Currently there are no national indicators for structures that are used for comparison purposes. The SCOTS group however are currently considering a number of Core and Secondary indicators.

6. Lifecycle Planning

6.1. Introduction

This section provides a description of the process of lifecycle planning and how we apply it in Moray Council. It includes a summary of the current status of the asset groups for which lifecycle plans have been developed.

As part of the development of this plan we have created lifecycle plans to document how each of the asset groups that make up how our road infrastructure is managed. Each lifecycle plan (LCP) provides definition of the standards that are applied to the management of the asset group in question and details of the processes that are used to ensure that these standards are delivered.

Production and updating of the lifecycle plans is also enabling local knowledge to be captured. Documenting the LCPs has allowed us to capture the knowledge of individuals, to record this and enable it to be shared and developed.

6.2. Importance of Lifecycle Planning

Lifecycle plans (LCPs) are the core of the roads asset management process. They will contain the details that enable practices such as long term cost projection, performance management and risk management to be applied consistently across all asset groups.

The output from the Lifecycle plans will be long term predictions of the cost of the management and operation of the asset over its serviceable life. These will be in the form of financial projections and should be linked to target levels of service. It is expected that the individual LCPs will identify where money needs to be spent in order to get or maintain the asset at an acceptable standard to provide an acceptable level of service.

6.3. Lifecycle Plan Contents

The lifecycle plans contained in RAMP v1 are a starting point. The plans will be reviewed, updated and developed as more data is gathered and analysed. When fully populated, each LCP will contain the following information:

Table 5: Lifecycle Plan Contents		
SECTION	**ANSWERS**	**CONTAINS**
The Asset	What assets do the Council Own?	- Inventory details (Type, size etc.) - Asset growth statistics
Service Expectations	What is each asset group required to do?	- Customer expectations - Councils Transport objectives - User requirements - Safety considerations - Third party use

Table 5: Lifecycle Plan Contents		
SECTION	**ANSWERS**	**CONTAINS**
		- Environmental requirements - Network availability - Amenity considerations
Management practices	How is this asset group managed?	- Policies - Inspection regime - Condition assessment - Asset acquisition standards - Routine maintenance standards - Cyclic maintenance standards - Planned maintenance standards - Disposal standards
Investment	How much is and how much should be spent on this asset group?	- Historical investment - Forecast financial needs - Future investment levels - Valuation: GRC, DRC, ADC.
Works programme	How are works programmed for this asset group?	- Existing forward works programme - Works programme co-ordination - Option appraisal
Risk	What are the risks associated with this asset group?	- Risk identification - Risk register
Works and service delivery	How are works procured and delivered for this asset group?	
Performance measurement	How is the performance measured and managed?	- Performance indicators - Target performance figures - Current performance figures
Strategies	What strategies exist for the future management of this asset?	
Service improvement actions	What actions would improve the management of this asset?	- Asset specific improvement actions -

6.4. Lifecycle Plan Status

Separate LCPs are being developed for each of the following asset groups and are currently in the state of development noted below

Table 6: Status of Lifecycle Plans (February 2012)			
ASSET TYPE	**ASSET GROUP**	**STATUS**	**ACTIONS**
Carriageway	All	Final draft	Review and issue
Footways, footpaths and Cycle tracks	All	Final draft	Review and issue
Structures	Bridges	Final draft	Review and issue
	Retaining Walls		Collect additional data
Street Lighting	Columns Wall Lights Control Points Lit signs and bollards	Final draft	Review and issue
Street Furniture	Non-lit signs & bollards Road restraint systems Pedestrian barriers Street name plates Bus shelters Etc.	1st draft underway	Collect additional data and validate existing

6.5. Asset Group Status Reports (Major asset groups)

Status reports for the major asset groups are to be developed.

7. Financial Summary

7.1. Introduction

This section will provide a summary of the current financial position of the roads asset. It will identify where funding is currently obtained from, give an outline of the historical expenditure on the roads asset and an estimate of the gross replacement cost (GRC) and annualised depreciation cost (ADC) of the asset. An estimate will also be given of the cost of maintaining the asset in its present condition

7.2. Definitions

Gross Replacement Cost: *"the total cost of replacing an asset".*

Depreciated Replacement Cost: "*is a method of valuation which provides the current cost of replacing as asset with its modern equivalent asset less deductions for all physical deterioration and all relevant forms of obsolescence and optimisation*".

Annualised Depreciation Cost: *"the total cost of maintaining/repairing an asset over its lifecycle, divided by the estimated number of years in the lifecycle".*

7.3. Sources of Funding

The principle sources of funding for the roads asset are as follows;

- Council Revenue Funding. This is allocated annually and is generally based on historic expenditure and service pressures.
- Council Capital Funding. Allocated for specific projects.
- External Capital grants. Grants from the Scottish Government or other government funding agencies and European funding such as ERDF grants.
- Fees and Charges such as income from pay and display carparks, charges for permits, etc.
- Developer Contributions

7.4. Budget Allocation

Revenue budgets are set annually based on historical expenditure with an allowance for inflationary elements such as wage rises and agreed budget pressures. At the present time a 10 year capital budget to fund an asset replacement programme has also been agreed.

7.5. Historical Investment

Funding for the roads assets over the last 9 years is as outlined below.

Table 7 Historical Budget Allocation 2003/04 to 2011/12							
Financial Year	**Maintenance - Planned**	**Maintenance - Reactive**	**Maintenance - Cyclic**	**Winter Maintenance**	**Street Lighting**	**Structures**	**Grand Total**
2003/2004	£ 2,591,109	£ 1,278,691	£ 260,000	£ 1,400,000	£ 735,000	£ 206,600	£ 6,471,400
2004/2005	£ 4,143,258	£ 1,198,881	£ 270,000	£ 1,400,000	£ 908,000	£ 270,000	£ 8,190,139
2005/2006	£ 3,509,196	£ 1,243,953	£ 301,527	£ 1,781,600	£ 1,060,000	£ 274,000	£ 8,170,276
2006/2007	£ 2,542,676	£ 1,245,000	£ 285,000	£ 1,818,300	£ 1,031,600	£ 200,000	£ 7,122,576
2007/2008	£ 3,402,331	£ 1,158,346	£ 336,000	£ 1,818,300	£ 1,357,000	£ 275,000	£ 8,346,977
2008/2009	£ 3,189,746	£ 1,414,000	£ 315,000	£ 1,872,369	£ 1,454,000	£ 275,000	£ 8,520,115
2009/2010	£ 3,361,727	£ 1,356,000	£ 325,000	£ 1,900,454	£ 1,768,500	£ 320,000	£ 9,031,681
2010/2011	£ 3,206,000	£ 1,342,727	£ 385,000	£ 1,900,454	£ 1,480,000	£ 312,000	£ 8,626,181
2011/2012	£ 3,225,371	£ 1,271,000	£ 400,000	£ 1,872,964	£ 1,489,000	£ 320,000	£ 8,578,335
Grand Total	£ 29,171,414	£ 11,508,598	£ 2,877,527	£ 15,764,441	£ 11,283,100	£ 2,452,600	£ 73,057,680
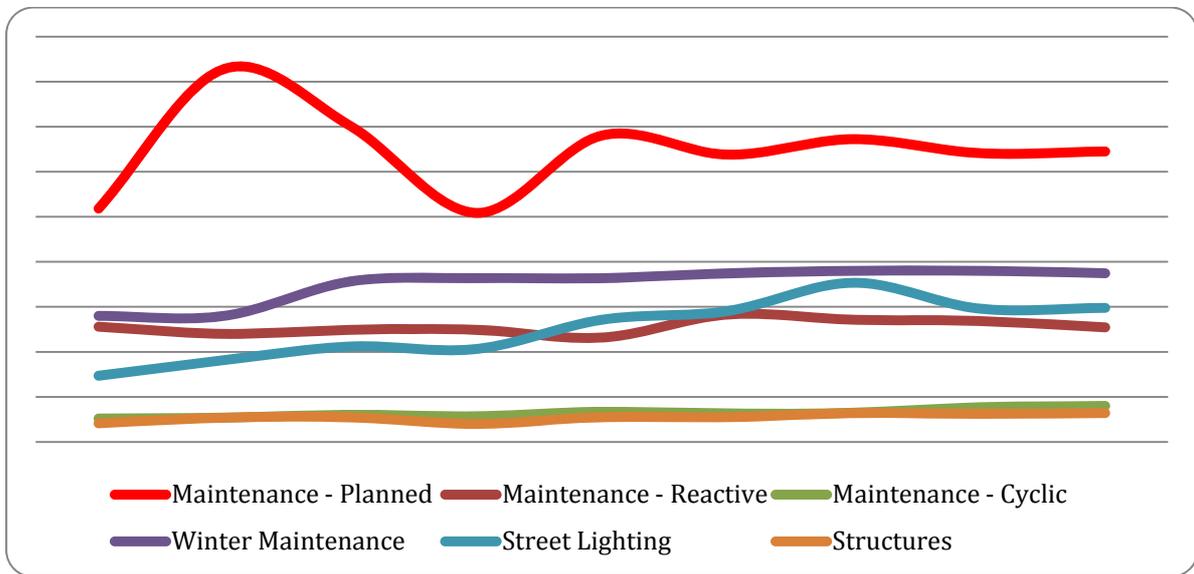
Historically, funding has been spent as follows:

Table 8 Historical Spend 2003/04 to 2011/12 (£,000)								
Asset	**03/04**	**04/05**	**05/06**	**06/07**	**07/08**	**08/09**	**09/10**	**10/11**
Carriageways	2353	2609	2520	1956	2407	2334	2410	2613
Footways	140	216	191	122	152	206	169	
Structures			433	318	395	385	3444	
Street Lighting	632	749	832	1056	1145	1560	1487	1423
Signs								
Drainage								

Other								
Winter Maintenance								

<mark>Table to be completed.</mark>

7.6. Future Funding Requirements

A new 10 year capital programme was agreed by the Council in January 2012. The previous 5 year capital programme of resurfacing allowed for a 5% increase in expenditure per annum. Unfortunately road construction inflation has significantly overtaken this figure. Also, some of the allocation that was nominally for resurfacing was, with Committee approval, reallocated to other assets that had previously been funded from revenue budgets.

Where we have reasonable condition information (carriageways, footways/footpaths/steps and drainage/ironwork) the allocated budget aims to maintain or improve these assets from their current condition. Other allocations are based on historical expenditure.

7.7. Asset Valuation

Table 9: Asset Valuation (May 2011)				
Asset Type	**Gross Replacement Cost (GRC) £'000**	**Accumulated Consumption £'000**	**Depreciated Replacement Cost (DRC) £'000**	**Annualised Depreciation Cost £'000**
Carriageways	1,276,406		1,102,071	5,100
Footways, footpaths & cycleways	81,450		58,384	2,024
Structures	78,172		N/A	N/A
Lighting	61,803	24,470	37,333	1,370
Traffic Management Systems	250		174	4
Street Furniture	16,231		8,476	879
Land	15			
Total	**1,514,327**		**1,206,438**	**9,377**

Refer to definitions in section 7.2

8. Risk Management
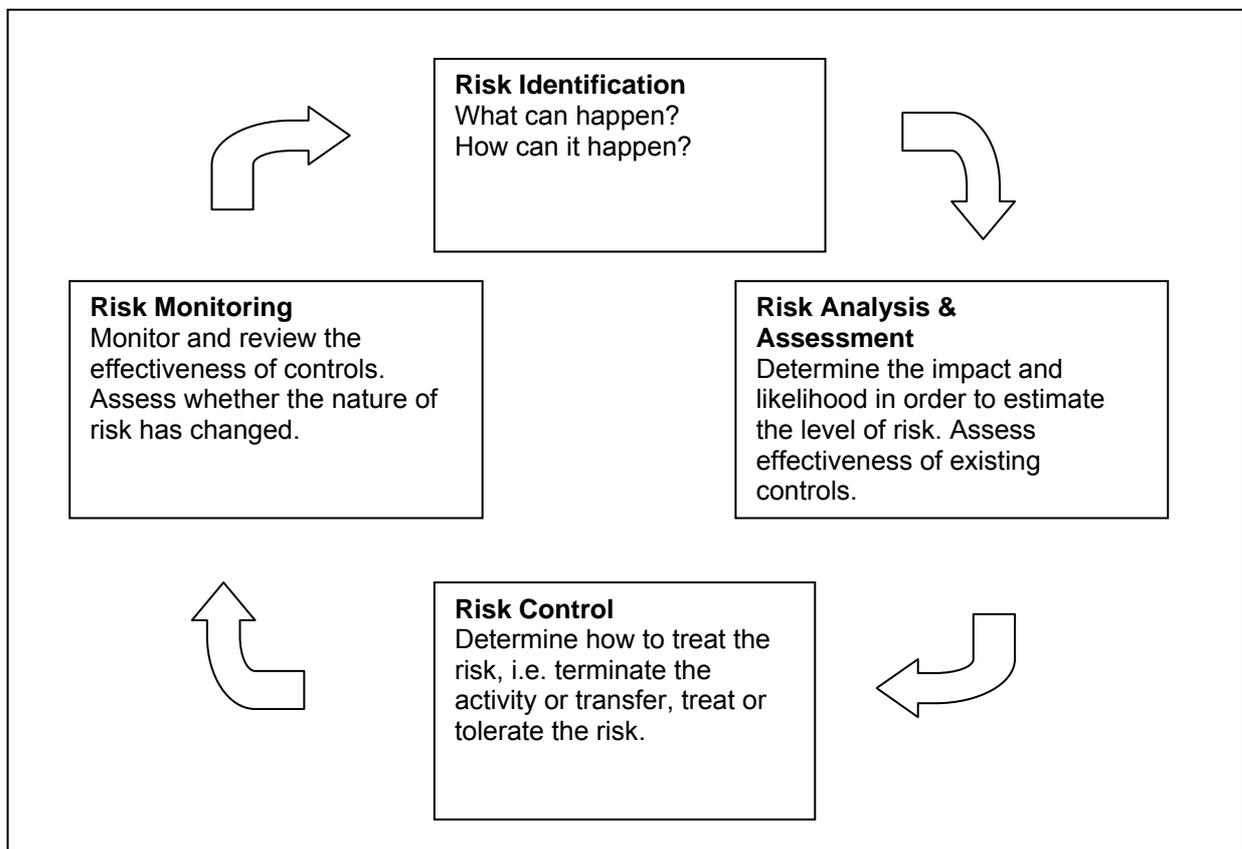
8.1. Introduction

The understanding and management of risk is fundamental to any organisation and the process of risk identification and assessment is undertaken at all levels within an organisation. This section of the RAMP will summarise how Moray Council's risk management Policy and Strategy are applied to the management of its roads asset. It will identify the major areas of risk to the asset, where they are recorded and outline how they are currently being controlled.

8.2. Corporate Risk Management Strategy

The Moray Council's Risk Management Policy is to pursue a structured approach to the effective management of risk in pursuit of business objectives. This approach and the framework for its achievement is set out in the Risk Management Strategy, which details the process of integrated activities by which the potential impact of risks to the achievement of the organisation's objectives is managed. The policy is underpinned by the Council's corporate objectives and its core values and also supports its governance obligations.

The Risk Management Strategy outlines how it will implement its risk management policy. It identifies the objectives of the Strategy as well as roles and responsibilities.

Risk Identification
What can happen?
How can it happen?

Risk Monitoring
Monitor and review the effectiveness of controls. Assess whether the nature of risk has changed.

Risk Analysis & Assessment
Determine the impact and likelihood in order to estimate the level of risk. Assess effectiveness of existing controls.

Risk Control
Determine how to treat the risk, i.e. terminate the activity or transfer, treat or tolerate the risk.

8.3. Risk Identification

Risk to the Council's business can take a variety of forms; for example, financial risk, risks to project and service delivery, its reputation, partnerships, employees and Councillors and risks from missed opportunities. Those risks could affect the council's performance, its assets, stakeholders, customers or members of the public. They can also affect the Council's viability.

Risk identification is undertaken by all officers as part of their daily activities, these are then brought together as part of a group brainstorming exercise; the thoughts and ideas from that brainstorming are then grouped into common themes and developed into a risk that expresses how the issue will impact upon achievement of the council's strategic objectives.

8.4. Risk Evaluation

The next step is to assess those risks in terms of the likelihood that they will occur and the impact if they do. The criteria for the levels of likelihood and impact for risks are shown in tables 8.1 and 8.2 below.

Table 10: Description and definitions of LIKELIHOOD of the RISK occurring					
Score	Category	Description/Frequency			
1	Remote	Less than 5%	1 in 25 years	May occur only in exceptional circumstances	Force majeure, Acts of God
2	Unlikely	Up to 20%	1 in 10 years	Not expected to occur in normal circumstances	Not known in this activity
3	Possible	Up to 65%	1 in 5 years	Might occur at some time	Has happened elsewhere
4	Likely	Up to 90%	1 in 2 years	Will probably occur at least once	Has happened in the past
5	Expected	Over 90%	Within 1 year	Will occur in most circumstances	Imminent/near miss

• Threat 0% probability will never happen = no threat

• Threat 100% probability is certain = not a risk – issue that needs to be addressed

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Table 11: Description and definitions of IMPACT of the RISK should it occur					
Score	**1**	**2**	**3**	**4**	**5**
Category	**Minimal**	**Minor**	**Moderate**	**Major**	**Catastrophic**
Political	Action or non-action which impacts on a single member ; change of government but no change in policies.	Minor changes in government policies	Action or non-action which causes embarrassment to a political group or other group of Councillors ; several changes to government policies	Significant change in government policies as a result of a change of government.	Action or non-action which affects the administration of the Council as a whole; change of government brings about complete reversal of previous policies
Environmental	No lasting effect on the environment, (noise, fumes,etc.), of short term duration	Short term local effect on the environment or social impact, (significant discharge of pollutants) within local neighbourhood	Serious local discharge of pollutant /community annoyance within general neighbourhood that requires remedial action	Long term detrimental environmental or social impact, (chronic / significant discharge of pollutant)	Extensive long term impacts to environment and community (extensive discharge of persistent hazardous pollutant)
Reputation	Minor adverse publicity in local media.	Some public embarrassment. No damage to reputation	Some adverse publicity. Legal implications.	Sustained adverse publicity Major loss of confidence	Highly damaging, severe loss of public confidence. Resignation/removal of senior officers
Financial	Minimal costs or loss of less than £5K	Minor costs or loss of between £5K and £50K	Moderate costs or loss of between £50K and £250K	Major costs or loss of between £250K and £1m	Severe costs or loss in excess of £1m
Information & Technology	Temporary incident. Up to 2 hours to recover to pre-event position.	Localised incident. More than one user affected. 2 to 6 hours to recover	Localised incident. Several users affected. Between half to 1 day to recover.	Significant incident. Multiple locations. Between 1 to 2 days to recover	Extreme incident affecting whole Council. No data use possible. In excess of 2 days to recover pre-event position
People	Incident – no obvious harm/injury	Minor injuries or discomfort First aid treatment, no permanent harm	Medical treatment required, semi-permanent harm up to 1 month. Compensatable injury	Traumatic/stressful experience Extensive injury, resulting in hospitalisation. Major permanent harm	Fatalities, not from natural causes. Multiple casualties

Table 11: Description and definitions of IMPACT of the RISK should it occur					
Score	1	2	3	4	5
Category	**Minimal**	**Minor**	**Moderate**	**Major**	**Catastrophic**
Disruption to established routines / operational delivery	Minimal impact. No service interruption	Some disruption manageable by altered operational routine	Disruption to a number of operational areas at a location and possible knock-on effect at other locations	All operational areas at a location compromised. Other locations may be affected	Total system dysfunction. Total shutdown of operations
Regulatory	No breach of compliance	Compliance breach – internal remedial action required	Compliance breach – external examination / action	Significant breach – penalties imposed	Serious compliance breach. Penalties and legal action

Risk management deals with threats whose probability lies within those extremes 1% - 99%

Multiplying the likelihood score by the impact score gives the uncontrolled risk score. The next stage identifies controls (strategy, policies, practices that exist currently) and their efficacy (ineffective, partially effective, effective, and very effective).

The risk is then re-assessed for likelihood and impact. The new score is the current risk score that exists after controls have been applied and so the real level of risk. That information is then recorded in the risk register.

The risks are then prioritised to enable decisions to be made about the significance of those risks to the Council, and how they will be managed.

Table 12: Risk Prioritisation	
Level of risk/ (Inherent risk score)	**How the risk should be managed**
Very High Risk (15 – 25) RED	**Requires active management** High impact/ High likelihood: risk requires active management to manage down and maintain exposure at an acceptable level
High Risk (8 -12) AMBER	**Requires active management** High impact/ High likelihood: risk requires active management to manage down and maintain exposure at an acceptable level

Table 12: Risk Prioritisation	
Medium Risk (4 – 6) YELLOW	**Good Housekeeping** May require some risk mitigation to reduce likelihood if this can be done cost effectively, but good housekeeping to ensure the impact remains low should be adequate. Re-assess to ensure conditions remain same
Low Risk (1 – 3) GREEN	**Review periodically** Risk are unlikely to require mitigating actions but status should be reviewed to ensure conditions have not changed

8.5. Risk Control

Now that the risks and opportunities have been identified and assessed for likelihood and impact, there needs to be agreement on who will own the risk (and/or manage it) and how the risk will be managed, controlled or exploited.

When the existing controls and action plans have been identified, the risks are re-assessed for likelihood and impact. This gives a forecasted controlled score of the Risk Profile as a result of the mitigation action plans. That information is then recorded in the risk register.

8.6. Review and Reporting

Risk action reviews are timed to coincide with overall Business Plan progress reviews following the following pattern:

- RED - 3 monthly reviews of action progress throughout the year
- AMBER - 6 monthly reviews throughout the year coinciding with red reviews
- YELLOW / GREEN - Annual reviews, coinciding with red and amber reviews (see note)

Note: - This review schedule will be programmed to culminate in an annual review of Risk Profiles recorded in all Council's Risk Registers that should be timed to coincide with the substantive revision of Business Plans.

The risk management framework (the four steps of risk management) is a continuous cycle designed not only to identify, assess, manage and review risks, but also to support the service business objectives. Reviewing the risk identification process when drawing up the annual business plan enables the risks and opportunities to be linked directly to the business objectives. That way, risks and opportunities are directly linked to the achievement of business objectives which can then be prioritised using that information.

8.7.   Risk Register

8.8.   Major Asset Risks

Table 13 below details the major risks identified within the Road Asset Risk Register.

Table 13 Road Asset Major Risks							
Risk	Likelihood Score	Impact Score	Uncontrolled Risk Score	Current Controls In Place	Revised Likelihood Score	Revised Impact Score	Controlled Risk Score
Structures							
Failure of unknown assets - retaining walls	3	4	12	No controls in place	3	4	12
Street Lighting							
Light column failure	5	5	25	Visual inspections and targeted column replacement programme.	2	5	10
Carriageways							
Defective road markings & signs are not identified	5	5	25	Regular inspections with annual programme for maintenance ensures prioritisation of treatment of risks. Existing lining database targets	3	5	15
Footways							
Severity and extent of winter - climate change (doesn't	4	4	16	Winter Service Operational Plan with agreed routes,	4	4	16

Table 13 Road Asset Major Risks							
Risk	Likelihood Score	Impact Score	Uncontrolled Risk Score	Current Controls In Place	Revised Likelihood Score	Revised Impact Score	Controlled Risk Score
guarantee milder winters)				priorities, treatments etc			
Other							

9. Improvement Plan

9.1. Introduction

A number of improvements or actions have been identified during the preparation of this RAMP. These are detailed in the various Lifecycle Plans and where appropriate are summarised below.

9.2. Milestones

An improvement action plan has been created to support the RAMP and is shown in Appendix F. For the duration of this plan (1 year for RAMP #1) key actions are identified below.

Table 15: Key Actions			
No.	Improvement Milestone	Priority	Reference
	Develop status reports for major asset groups.		

9.3. Progress Reporting

10. Management and Control of Plan

10.1. Introduction

Throughout this RAMP, issues and corresponding improvement actions have been established. These actions will need to be prioritised, programmed, resourced and implemented in order for an asset management approach to be fully introduced.

10.2. Ownership of the RAMP

The Roads Asset Management Plan will become a controlled document with a named officer responsible for:

- distribution to appropriate staff, members and the public
- monitoring of improvement actions and the implementation plan
- authorising and actioning updates to the plan

The persons charged with the delivery of this Road Asset Management Plan and their roles within the process are detailed below.

Position	Name	Role
Elected Members - Corporate Management Team - Service Development Group - Council		Approval of the RAMP (3 Yearly)
Director of Environmental Services		Approval of the RAMP under delegated powers (annually)
Head of Service	Sandy Ritchie	Champion of RAM within the authority
Roads Maintenance Manager	Bill Ross	Day to day implementation of RAM, monitoring improvement actions, informed decision making & ensuring updates to the documents.

Systems Manager	Roads Maintenance Support Section working with ICT	Development of data management systems for all assets & ensuring their integration.
Data Manager	Roads Maintenance Support Section	Ensuring data management procedures are followed and that all information is kept up to date. Providing requested information outputs to other parties.
Programme Manager	Roads Maintenance Manager and Area, Consultancy and Traffic Engineers	Producing integrated forward work programmes, both long and short term, and ensuring their availability to all interested parties. Identifying conflicts and opportunities for rationalisation of works.
Principal Manager Service Management	Roads Maintenance Manager	Provides a link to Corporate strategies and identifies where improvements to the service can be made under the continuous improvement agenda
Policy & Performance Manager	Support Section	Identifying and actioning policy updates. Collecting and interpreting performance measures and providing relevant output to other personnel

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Risk & Quality Manager	Roads Maintenance Manager	Monitoring and updating risk registers, ensuring control measures are put in place & identifying risks that need to be passed up the management tree.
Asset Owner/Champion **Carriageways**	Area Engineers	Updating lifecycle plans, ensuring implementation of improvement actions. Identifying asset specific investment requirements; works programmes and changes to procedures and documentation.
Asset Owner/Champion **Footways**	Area Engineers	
Asset Owner/Champion **Structures**	Bridges Manager	
Asset Owner/Champion **Street Lighting**	Street Lighting Engineer	
Asset Owner/Champion **Drainage**	Area Engineers	
Asset Owner/Champion **Traffic Calming**	Senior Traffic Engineer	
Asset Owner/Champion **Safety Fences**	Area Engineers	
Asset Owner/Champion **Signs**	Senior Traffic Engineer	
Asset Owner/Champion **Car Parks**	TBA	
Asset Owner/Champion **Traffic Signals**	Senior Traffic Engineer	
Asset Owner/Champion **Street Furniture**	Various	

10.3. Updating the RAMP

This version of the RAMP is to run until 2013 and it is expected that this initial plan will be updated annually for the first couple of years after which the plans will be developed to an extent where they can be reviewed every 3 years.

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