

**TRANSPORT, ENVIRONMENTAL AND
COMMUNITY SERVICES**
**SEIRBHEISEAN CÒMHDHAIL, ÀRAINNEACHD
IS COIMHEARSNACHD**

**ROAD ASSET MANAGEMENT PLAN
2010/11**
**PLANA STIÙIRIDH SO-MHAOIN RATHAID
2010/11**



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Executive Summary

Geàrr-chunntas Gnìomhach

Overview

Thar-sealladh

This document provides an overview of The Highland Council's Road Asset Management Plan (RAMP), 2010/11. The RAMP is the first version of an infrastructure asset management plan produced by The Highland Council and was developed through participation in the Society of Chief Officers for Transportation in Scotland (SCOTS) 4 year Road Asset Management project. All 32 Local Authorities in Scotland are taking part in the SCOTS project to develop a common framework for road asset management plans which will continue to be utilized after the project has concluded. The aims of the SCOTS project are to:-

- Deliver the aspirations for a better road network as set down by the Scottish Parliament by ensuring that available finances are spent in the most productive manner.
- Create a common framework for the development of road asset management plans for all Roads Authorities across Scotland.
- Provide a single asset management protocol for all Roads Authorities in Scotland.

Corporate Asset Management

Stiùireadh So-mhaoin Chorporra

As one of the projects in its Corporate Improvement Programme, The Highland Council has adopted a corporate approach to asset management and developed a Corporate Asset Management Plan. This focuses on the realisation of assets in terms of consolidation and disposal of property. Roads cannot be sold as a commodity; however, the asset management principles of developing long term management strategies and ensuring efficient allocation of resources are common objectives and can be applied to any asset.

The RAMP is an important part of the corporate project as it establishes the relationships between the Council's Corporate Plan objectives and the management practices in operation.

Road Asset Management

Stiùireadh So-mhaoin Rathaid

In basic terms, asset management sets out the approach to be used in acquiring, maintaining, improving and disposing of an asset. For the purposes of road assets, asset management is defined as:-

“A structured, long term approach to planning optimal maintenance and eventual renewal of infrastructure. “

Key Milestones

Prìomh Chlachan-mìle

The RAMP provides a statement of current practice within the Council and identifies areas that require development. The five key milestones for improvement, targeted for completion in 2010/11, are:-

- 1. Development of an asset information management strategy**
- 2. Development of a roads risk register**
- 3. Updating relevant policies**
- 4. Development of levels of service**
- 5. Development of local performance indicators**

Review

Ath-bhreithneachadh

It is anticipated that the main section of the document will be reviewed annually for the first three years and every three years thereafter. Many of the appendices are considered to be 'live' documents and, as such, will be updated on an annual basis.

It is important to note that improvements identified through the development of the RAMP require to be implemented with resource levels currently available. Target dates for completion of actions are therefore open to rescheduling.

Road Network

Lìonradh Rathaid

The Highland Council is responsible for a road network totalling 6,730km. The road asset comprises not just the carriageway and footway but, for example, also includes structures, lighting, signage, associated drainage and environmental assets. The local authority network is currently estimated to have a gross replacement cost of around £3.5 billion which is significantly different to the present value in the accounts of approximately £210 million. Private and Trunk roads are excluded from this document as they are the responsibility of the private owners and Transport Scotland respectively.

Finance

Ionmhas

Funding levels within local authorities are constantly being challenged yet expectations of the levels of service continue to increase. All Highland Council services are being asked to propose annual revenue savings of 5%, 6% and 6% over 2010/11 to 2012/13. There is also a reduction in capital funding of 24% for 2010/11. Further development of road asset management will provide evidence of how this impacts the service through lifecycle planning and risk management.

Lifecycle Plans

Planaichean Cearcaill-beatha

Lifecycle planning is the core component of asset management. Producing lifecycle plans allows us to document how a particular asset is managed. This captures knowledge and allows development of processes and practices to achieve efficient delivery of services. The lifecycle planning process facilitates the prediction of long term costs of management and operation of the asset. It links the available budget to levels of service achievable, and allows comparison of the impact of changing those levels while continuing to deliver an efficient service.

Levels of service are determined by the adoption of standards which can be afforded with the available budget.

In this version of the RAMP, lifecycle plans have been developed for carriageways, footways, street lighting and structures. Plans for other asset groups will be developed for future versions of the RAMP.

Risk Management

Stiùireadh Cunnairt

Risk management is an important aspect of developing the management practices required to maintain the asset. Risks are identified, assessed, prioritised and then managed to mitigate impacts on service delivery. As identified above as a milestone, a specific road asset risk register will be developed as part of the ongoing asset management process.

User Expectations

Dùilean Luchd-cleachdaidh

Expectations of road users are an important aspect of asset management as ultimately, it is public money which is used to maintain the asset. The Council undertakes an annual performance survey which provides an opportunity for comment on the management of the road asset. However, the survey is not specific enough to be used to inform changes to management practices. The development and use of a more detailed user survey is an improvement action identified for future implementation.

Future Development

Leasachadh san Àm ri Teachd

In producing this first version of the RAMP, significant progress has been made in documenting current practice and identifying areas for improvement. The next version of the RAMP will be published in spring 2011 and will include additional lifecycle plans for other road assets.

Continued development of the Road Asset Management Plan should provide realistic expectations regarding the road asset and enable future investment decisions to be informed and sustainable.

Glossary of Terms

Beag-fhaclair Theirmean

Abbreviations

Giorrachaidhean

The following abbreviations are used in this plan:

<u>Abb.</u>	<u>Definition</u>
ACoP	Approved Code of Practice
ADC	Annualised Depreciated Cost
AMP	Asset Management Plan
AIL	Abnormal Indivisible Loads
BCI	Bridge Condition Indicator
BSClav	Average Bridge Stock Condition Indicator
BSClcrit	Critical Bridge Stock Condition Indicator
BSI	British Standards Institution
CAD	Computer Aided Drawing
CAMP	Corporate Asset Management Plan
CAR	Controlled Activities Regulations
CARMEN	Card Management System
CAG	Corporate Address Gazetteer
CIP	Corporate Improvement Programme
CJS	Criminal Justice Services
CPOG	Capital Programme Officers Group
CRM	Customer Relationship Management
CSO	Contract Standing Orders
CSS	County Surveyors Society
CVI	Course Visual Inspection
DLO	Direct Labour Organisation
DRC	Depreciated Replacement Cost
DVI	Detailed Visual Inspection

<u>Abb.</u>	<u>Definition</u>
ECS	Education, Culture & Sport
ERDF	European Regional Development Fund
GPS	Global Positioning System
GRC	Gross Replacement Cost
GRP	Glass Reinforced Plastic
H&P	Housing & Property Services
HGV	Heavy Goods vehicle
HRSWG	Highland Road Safety Working Group
IA	Improvement Action
ILE	Institution of Lighting Engineers
KW_{hr}	Kilo Watt hour
LCA	Lifecycle Cost Analysis
LCP	Lifecycle Plan
LED	Light Emitting Diode
LTS	Local Transport Strategy
NoSRAUC	North of Scotland Roads and Utilities Committee
NRSWA	New Roads and Street Works Act
OBC	Outline Business Case
RAMP	Road Asset Management Plan
RAUC(S)	Roads Authorities and Utilities Committee (Scotland)
RCI	Road Condition Indicator
RCW	Roads & Community Works
ROADDEX	A technical exchange co-operation across the Northern Periphery roads districts
SAC	Special Area of Conservation
SCOTS	Society of Chief Officers of Transportation in Scotland
SEPA	Scottish Environmental Protection Agency
SMS	Structures Management System
SNH	Scottish Natural Heritage

<u>Abb.</u>	<u>Definition</u>
SOA	Single Outcome Agreement
SRMCS	Scottish Road Maintenance Condition Survey
SRWR	Scottish Road Works Register
SSSI	Site of Special Scientific Interest
SPI	Statutory Performance Indicator
SWS	Social Work Service
TECS	Transport, Environmental & Community Services
T&I	Transport & Infrastructure
TR	Technical Report
WBM	Ward Business Meeting
WDM[®]	Williams Detail Management Limited
WEEE	Waste Electrical and Electronic Equipment Regulations
WGA	Whole of Government Accounts

Main Definitions

Prìomh Mhìneachaidhean

The following terms are used in this plan:

<u>Term</u>	<u>Definition</u>
Annualised Depreciation	The cost of an asset in one year of its expected service life.
Asset Management	A strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the road infrastructure to meet the needs of current and future customers.
Asset Management Database	Electronic database used to capture and interrogate information relating to the asset.
Asset Valuation	The calculation of the current monetary value of an authority's assets.
Depreciated Replacement Cost	The current value of the asset, calculated as the Gross Replacement Cost minus depreciation and impairment.

<u>Term</u>	<u>Definition</u>
Depreciation	The consumption of economic benefits over its service life arising from use, ageing, damage or obsolescence.
Deterioration	The change in physical condition of an asset resulting from use or ageing.
Gross Replacement Cost	The monetary cost of replacing the existing asset with a modern equivalent new asset.
Levels of Service	A statement of the performance of the asset in terms that the customer can understand.
Lifecycle Cost Analysis	Total cost of design, construction, maintenance and disposal of an asset over its expected life.
Lifecycle Plan	Document defining the standards applied to an asset and detailing the management processes used to deliver those standards.
List of Public Roads	List of adopted, public roads.
Option Appraisal	The formal assessment of the options available for an asset or groups of asset in terms of alternative levels of service and the costs, benefits and risks associated.
Risk Management	The formal assessment of risks with the potential to affect delivery of the service via a process of identification, assessment, ranking and control planning.
Soffit	Underside of a structural component.
Statutory Undertakers	Various companies and agencies with legal rights to carry out works on the road.

1.0 Introduction

Ro-ràdh

The purpose of this document is to set out the approach and practices The Highland Council will undertake to manage its' road infrastructure. The powers and duties of road authorities are defined by the Roads (Scotland) Act 1984^(RR1) and additional relevant legislation.

The Road Asset Management Plan (RAMP) consists of several sections and appendices detailing current aspects of the management of the network. It is the first RAMP which The Highland Council has produced and, therefore, is a starting point which records the current position and identifies potential improvements. The RAMP was developed from a common framework used by all Local Authorities in Scotland based on the CSS Framework for Highway Asset Management^(RR2).

The first RAMP will cover the period 2010/11. Initial plans are expected to be updated annually for the first three years. Thereafter, plans should be sufficiently developed to facilitate a review cycle frequency of three years. Asset management facilitates long term planning and the review and updates of the plan are to ensure information is current.

The Highland Council is the largest geographical local authority in Scotland. It covers an area of over 26,480 km which equates to a third of Scotland. The Highland Council also has the largest amount of coastline and local road network of any of the Scottish Local Authorities. Some of the significant road assets are detailed below:

- 6700km of road
- 2,000 bridges and culverts
- 1,000 retaining walls
- 48,800 lighting columns
- 100 car parks

It is widely recognised that the infrastructure asset has been in decline due to a lack of funding. However, the objective of an asset management plan is not to increase levels of spending to an unattainable figure, but to allow the available budgets to be prioritised and assets maintained at a reasonable level. A sustainable transport infrastructure facilitates numerous social and economic developments. In maintaining vital links and reducing environmental impacts, we will improve the quality of life for residents within the Highlands.

Asset management is not a new initiative. It is a process through which formal application of a management system for strategic planning is implemented. The following definition is taken from the CSS Framework for Highway Asset Management^(RR2).

“Asset management is a strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future customers.”

The Highland Council’s Corporate Asset Management Plan (CAMP) defined asset management planning as:-

“optimising the utilisation of assets in terms of Service benefits and financial return. The purpose is to achieve better use of public assets and to minimise the cost of resources tied up in land and buildings.”

The Corporate definition focuses on property assets and, in reality, infrastructure assets are generally not realisable in terms of sale or disposal.

For the purposes of road assets, asset management is defined as:-

“A structured, long term approach to planning optimal maintenance and eventual renewal of infrastructure. “

In basic terms, asset management sets out the approach to be used in acquiring, maintaining, improving and disposing of an asset.

Asset management is an important tool which is used to demonstrate prudent stewardship of assets. This is becoming more important as the government is working towards the production of Whole of Government Accounts (WGA). This means that local authorities will be required to value their road assets, taking depreciation into account, which will see a significant rise in the value within the accounts. Historically, assets have been valued at the actual spend on projects rather than what it would cost to replace the whole asset. The current value in the Council's accounts is approximately £210 million.

Other drivers include:-

- Best Value
- Audit Scotland Report "Maintaining Scotland's Roads"
- Local Government in Scotland Act 2003
- Codes of Practice relating to the asset

There are various outputs expected from production of the first RAMP. Improvement actions will identify the initial measures which need to be implemented. The areas which require attention include:-

- improved inventory and condition data,
- policies and procedures to implement asset management processes,
- efficient delivery of infrastructure objectives and
- a move from historic spending profiles to targeted maintenance strategies.

The Highland Council has adopted a corporate approach to asset management. A draft Corporate Asset Management Plan (CAMP) was approved by The Highland Council in November 2007^(RR3). This set out the asset management documents required by the Council to achieve a more strategic approach to maintaining property and infrastructure assets. The relationship between these documents is demonstrated in the diagram below.

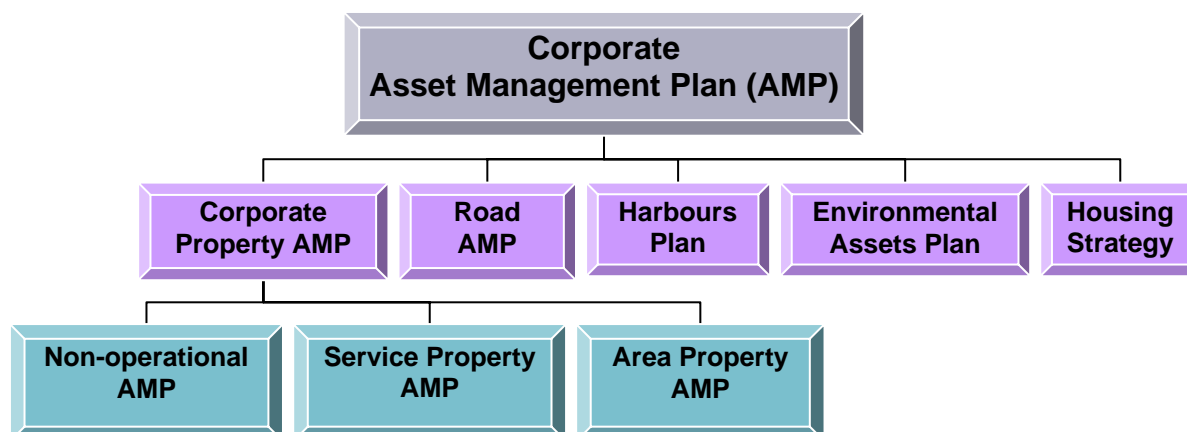


Figure 1.1: Corporate Asset Management Document Structure

Asset management is one of the projects forming the Corporate Improvement Programme (CIP). An Asset Management Project Board was established in April 2009 consisting of the following:

- Director, H&P (Chair)
- Head of Roads & Community Works, TECS
- Estate Strategy Manager, ECS
- Head of Housing Development & Estates, H&P
- Head of Operations (CJS & Central Services), SWS
- Head of Corporate Finance, Finance Service

To oversee the development of the RAMP, the Director of TECS established an Infrastructure Asset Management Planning Team in May 2008. The Team consists of:-

- Head of Roads & Community Works
- Head of Transport & Infrastructure
- Project Design Unit Manager
- Chief Structural Engineer
- Lighting Manager
- Roads & Community Works Manager
- Senior Engineer (Asset Management)

Several committee papers on infrastructure asset management have been presented to the TECS Committee who support implementation of the process.

The objectives of the Council in relation to the road network can be found, or are referenced, in several documents:

- Single Outcome Agreement
- The Corporate Plan; The Programme for the Highland Council 2009 – 2011, Strengthening the Highlands
- TECS Service Plan 2009 – 2011
- RCW Operational Plan (under review for 2010)
- The Transport Strategy for the Highlands and Islands, HITRANS, 2008
- Local Transport Strategy for the Highlands (under review for 2010)
- The Highland Structure Plan, 2001 (to be replaced by the draft Local Development Plan)
- Highland Wide Local Development Plan; Main Issues Report (consultation ongoing in 2010)

The TECS Service Plan^(RR4) specifically details the objectives relating to the road asset and cross references them to the Corporate Plan^(RR5). Progress on the objectives is also reported in the Service Plan.

2.0 Asset Description

Tuairisgeul So-mhaoin

2.1 The Road Asset

So-mhaoin an Rathaid

The Highland Council is responsible for the largest, non-trunk, road network in Scotland. The road network consists of a wide range of items which are summarised as examples in the table below.

Asset Group	Asset Elements
Carriageways	Carriageway including passing places
Car parks	Off street car parks, on street car parking
Cycleways/paths	Cycleways - adjacent to or part of the carriageway, Cyclepaths - remote from the road
Drainage	Small culverts, gullies, debris screens, piped systems, SUDS schemes, ditches, offlets
Environmental	Verges, embankments, cuttings
Footways/paths	Footways - adjacent to the carriageway, Footpaths - remote from the road
Intelligent Transport Systems	Variable Message/ Realtime/ Smart signs, cabling, ducts
Lighting	Lighting columns, lamps, brackets, cabling, feeder pillars, ducts, illuminated signs & bollards
Road Markings	All lines, coloured surfacing
Road Restraint Systems	Vehicle safety barriers, pedestrian barriers
Signs	Non illuminated signs
Street Furniture	Benches, seats, litter bins, non-illuminated bollards, cycle stands, etc.
Structures	Bridges, retaining walls, large culverts, cattle grids
Traffic Signals	Signalised junctions, signalised pedestrian crossings, detection equipment, cabling, ductwork and bollards.

Table 2.1.1: Road Assets

2.2 Asset Quantities

Tuairseaman So-mhaoin

The principal quantities of the network are:-

Asset	Quantity	Unit
Carriageway (March 2009)	6,730	km
Footways (estimated)	1,700	km
Bridges & culverts	2,053	No.
Lighting columns	48,800	No.
Lanterns on wall brackets	750	No.
Feeder pillars	2,020	No.
Internally illuminated signs	2,600	No.
Illuminated bollards	800	No.
Traffic signals	50	Sets
Non-illuminated signs (estimated)	130,000	No.
Street Furniture	Unknown	-

Table 2.2.1: Asset Principle Quantities

These general figures show the scope of the assets which are related to the road. More details of the assets are available in the relevant lifecycle plans in appendix D. Not all road assets have been included in this first version of the RAMP and lifecycle plans for them will be developed through time.

The quality of data varies across the assets. In recent years, data capture using hand held devices has resulted in a significant increase of street lighting data held within the asset management database. This data is estimated to be 90% complete and of a high quality. Structures data is collected in combination with inspections. It is acknowledged that this will take several years to complete but existing data on bridges and culverts is approximately 80% accurate. The data held electronically on the asset management database for carriageways and footways is of a low extent and reliability.

The asset management database is proprietary software used to hold inventory information which is linked to a common network reference model.

Assessments of the data for the main assets have been completed, highlighting gaps in current records. The assessments are contained in appendix A. Improvement actions (IA) to collect basic data have been detailed in the relevant lifecycle plans and in appendix F.

2.3 Assets Excluded from the RAMP

So-mhaoin air an cumail a-mach às a' PhSSR

Assets which are not covered by this plan include:-

- Trunk Roads including footways/paths and cycleways/paths
- private roads, footways, cycleways and car parks, including those which are the responsibility of other Council Services;
- privately owned road structures, e.g. Network Rail bridges;
- Public Rights of Way;
- utility infrastructure within the road boundary which is owned and maintained by others, e.g. Scottish Water culverts; BT manholes
- assets owned and maintained by the Council as part of its other duties, e.g. harbours and recreational parks.

2.4 Asset Growth

Fàs So-mhaoin

In recent years, the road asset has grown mainly due to development, either housing or industrial. The attributable asset growth is not in a format which is readily accessible and reportable. Roads are occasionally de-trunked and, if required, may become the responsibility of the Council which increases the asset.

[Figure 2.4.1](#) shows how the length of the road asset has grown by 2.5% since 1999.

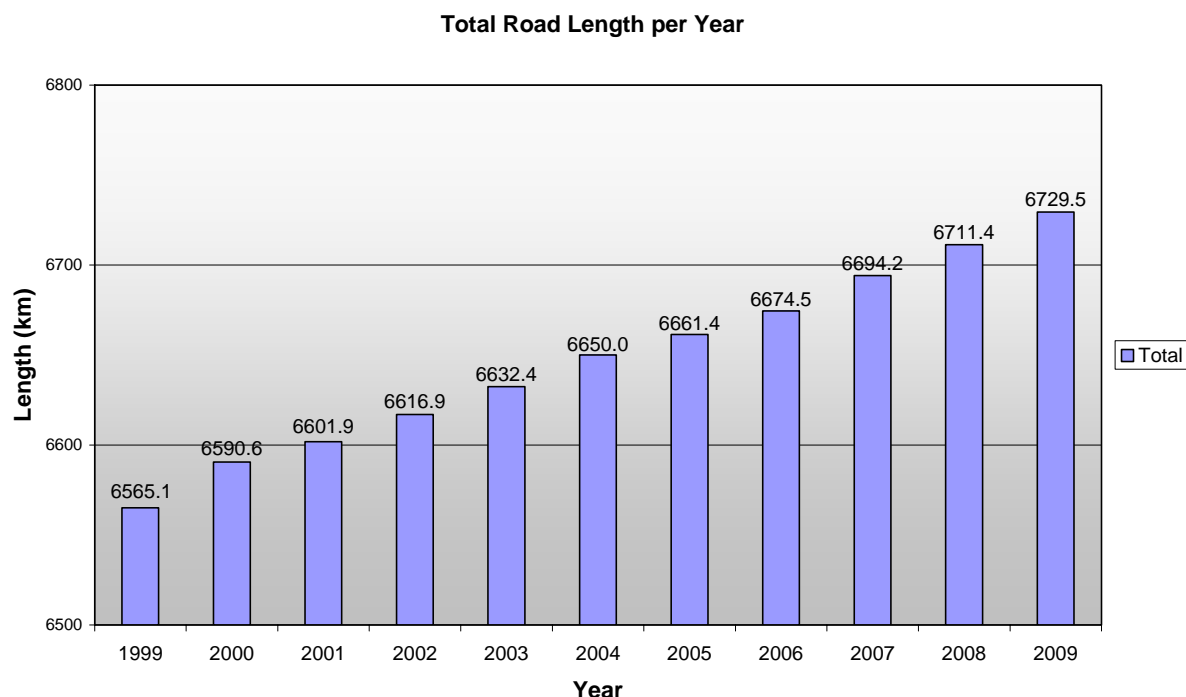


Figure 2.4.1: Total Road Length per Year

Similar data is not currently available for all of the major asset groups. However, urban developments, when adopted, usually result in an immediate increase in the lighting asset which also increases the electrical consumption. Over 4,000 lighting columns have been added to the asset since 2004.

There has also been an increase in the development and implementation of intelligent transport systems. Although not currently quantified, this is expected to result in an increase in maintenance requirements due to the electrical nature of the equipment.

The type of components used for renewals have an impact on the maintenance cost. It is expected that the increased use of granite sets, block paving and higher amenity assets for streetscape projects will increase maintenance and replacement costs.

3.0 Community Requirements

Riatanasan Coimhearsnachd

3.1 Customer Consultation

Co-chomhairle Luchd-cleachdaidh

Annual Performance Survey

The Highland Council commissions a performance survey annually^(RR6). In 2009, Snedden Economics Ltd undertook this survey independently of the Council using a random sample of households across the Highland area. The performance survey was issued to 11,000 residents named on the Register of Electors. The response rate for 2009 was 17% with 1,807 completed questionnaires returned.

The performance survey collects information relating to the overall performance of the Council and is not specifically a roads related questionnaire. It does, however, provide some information on the importance of services to the public and how well they think the Council is performing.

Public Consultations

Public consultations are undertaken for road schemes as necessary. Not all schemes are subject to public consultation procedures. Normally larger schemes, or those with options, are consulted on such as the Inverness Trunk Link Road project. Public meetings may be held for other projects to consult with local residents over proposed works.

Consultations are also undertaken for specific documents such as the Local Transport Strategy for the Highlands (LTS). Details of any ongoing consultations are on the Council website.

Customer Relationship Management

The Council operates a Customer Relationship Management (CRM) system where a single service centre receives all telephone enquiries, regardless of which service they relate to. Contact with the Council can also be made at Service Points and local offices as well as by e-mail or letter. The CRM

system is a standalone system which does not interact with the asset management database used to hold road asset information. The systems are not directly compatible and it is unlikely that this will be rectified in the near future.

3.2 Consultation Results

Toraidhean na Co-chomhairle

Annual Performance Survey

The complete results of the annual performance surveys can be found on the [Council website](#) ^(RR6).

Section 3 of the 2009 annual performance survey details responses to service provision across the Council as a whole. The tables below extract the information relating to road assets.

Satisfaction with services	2009 score	2008 score	2007 score	2006 score	2005 score	2004 score	2003 score
Street lighting	58	53	51	62	64	61	59
Street cleaning	30	25	16	39	42	6	0
Cycle paths	19	28	22	n/a	n/a	n/a	n/a
Pavement maintenance	3	-7	-7	5	11	2	-16
Winter road maintenance	-3	-2	-1	-6	-10	-14	-22
Road repairs and potholes	-50	-55	-53	-57	-57	-57	-52

Table 3.2.1: Satisfaction with Services

The score in Table 3.2.1 is the percentage of respondents who stated 'very satisfied' or 'fairly satisfied' minus the percentage who stated 'fairly dissatisfied' or 'very dissatisfied' for each year. The negative numbers for the lower three services show a constant dissatisfaction with them. However, 'Winter road maintenance' shows an overall improvement. 'Pavement maintenance' results are varied over the years but also show an overall improvement in public satisfaction with the service. 'Road repairs and

potholes' consistently appears at the bottom of the table showing all of the Council's services. The full table is included in appendix B.

Importance of services	2009 %	2008 %	2007 %	2006 %	2005 %	2004 %	2003 %
Road repairs and potholes	49	46	47	48	52	47	55
Winter road maintenance	42	40	41	44	49	53	61
Street cleaning	17	19	17	18	21	22	22
Pavement maintenance	14	17	14	17	16	17	23
Cycle paths	10	9	6	n/a	n/a	n/a	n/a
Street lighting	9	10	9	19	10	13	15

Table 3.2.2: Importance of services: Appearance in top 5

Table 3.2.2 shows the percentages where respondents have mentioned the service in their top five important ones. 'Road repairs and potholes' and 'Winter road maintenance' consistently appear over the years as public priorities.

The 2009 survey included a new question on why respondents were dissatisfied with services. Again, roads and potholes received the most comments, generally as follows:

- poor condition and maintenance
- quantity of repairs required
- time taken to undertake repairs
- quality of repairs including temporary, short lived repairs
- unacceptable road conditions in an area dependent on tourism
- quality and timing of winter gritting (too late in the morning).

It is also worth noting that pavements (footways) and cycle paths were also commented on. As for roads, the unevenness and deteriorated condition of pavements was of most concern and the public perception is that they are

dangerous for more vulnerable users. The low level of provision was the main issue reported for cycle paths.

Although the annual performance survey provides an indication of public perceptions, it is not detailed enough to provide community priorities regarding the whole road network. An asset specific survey is required to assess the needs and reflect the views of the public. (IA R1)

Public Consultations

At the time of writing this plan, the 2009 public consultation on the current revision of the Local Transport Strategy for the Highlands was still ongoing.

Customer Relationship Management

The current CRM system was implemented in 2006 and figures relating to the road asset are contained in appendix B and the relevant lifecycle plans in appendix D.

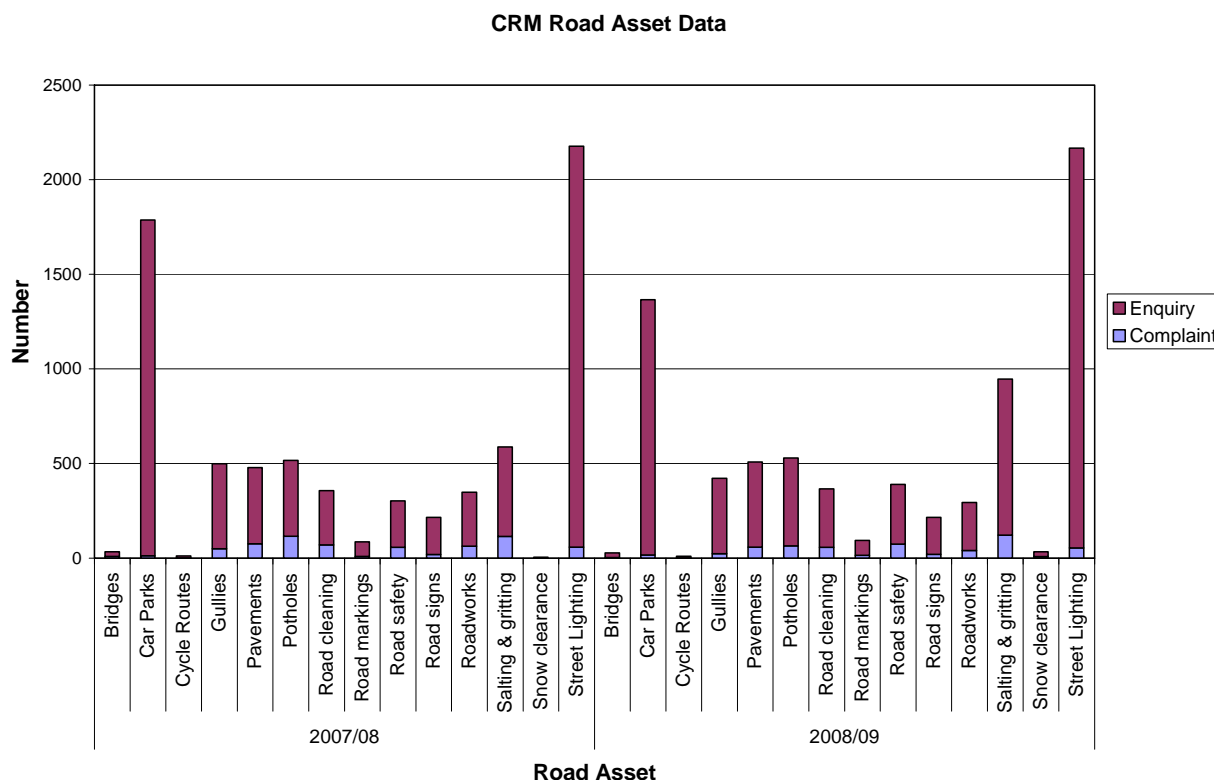


Figure 3.2.1: CRM Road Asset Data

Figure 3.2.1 shows an extract of the data available for the 2007/8 and 2008/9 financial years. The graph shows that enquiries relating to street lighting are the highest of all the road assets. A further breakdown of the reason for the enquiries is not currently available for inclusion in this RAMP but it is estimated that the high number is due to reporting of lighting faults.

From the information available, it can be seen that pavements, potholes and salting and gritting feature as services which result in high levels of enquiries. The enquiries relating to car parks are understood to be due to car park operational issues rather than the condition of the car park.

The development of a process to analyse this information has been identified as an improvement action. (IA R2)

3.3 Use of Consultation Results

Cleachdadh Thoraidhean na Co-chomhairle

The results of the annual performance survey are not used to influence service provision or the budget process as it is not detailed enough.

Reports of deterioration which have been received as part of the CRM system or otherwise are investigated as resources permit by the relevant local office. If issues are identified during the investigation, they are recorded and actioned accordingly.

The information resulting from CRM enquiries is not currently utilised to inform areas of the service which may require revision. (IA R3)

4.0 Future Demands

Iarrtasan san Àm ri Teachd

4.1 Local Transport Strategy

Ro-innleachd Còmhhdhail Ionadail

At the time of writing this version of the RAMP, the Local Transport Strategy for the Highlands (LTS) 2009-2012 was in draft form. The key transport issues for growth will be identified in the Local Transport Strategy and will be included in a future version of the RAMP.

Projects identified as part of the LTS will require to be funded, in part or whole, from the Capital budget. Damage to the existing network from increased flows will have to be repaired from the revenue budget but predicting the requirement is difficult.

4.2 Traffic Growth

Fàs Trafaig

The Highland Council collects information from permanent and temporary traffic counter sites across the network. Cycle usage data is also collected for specific sites around Inverness. Data is collated by TECS Integrated Transport's Transportation team. As would be expected, there is a significant amount of data which will not be reproduced in this version of the RAMP. An improvement action has been identified to set up a sample of the data available to monitor growth throughout the Highlands. (IA R4)

Traffic growth within the Highlands varies significantly due to the large geographical area covered and the spread of the population. As stated in [section 4.1](#), the Council's Local Transport Strategy for the Highlands, when published, will identify key issues for traffic growth in more detail.

Tourist traffic has a significant seasonal impact on some sites, including Fort William, where summer traffic volumes are significantly higher than winter ones. Other events such as Rock Ness and the Black Isle Show have a dramatic effect on the network over a short period.

4.3 Traffic Composition

Co-chur Traftaig

Traffic is split into two categories, vehicular and pedestrian. Vehicular includes cycles. Pedestrian traffic surveys are undertaken for specific sites to justify the installation of crossing facilities. (IA R5)

The Highland Council participates in the identification of timber routes with the Highland Timber Transport Group. These routes have four different designations which are Agreed, Consultation, Severely Restricted and Excluded.

An interactive map showing the various agreed routes and their locations can be found at the following Forestry Commission website link^(RR7):

<http://maps.forestry.gov.uk/imf/imf.jsp?site=TTAR>

Timber routes are subject to heavy loading from forestry traffic, resulting in damage to weak or narrow roads. Initiatives such as varying tyre pressure have been undertaken in conjunction with haulage companies to assist with identification of mitigation measures which will limit the impact on our infrastructure.

The recurrence of heavy loads also impacts on roads. For example, industrial roads subject to HGV traffic can deteriorate at a rapid rate. Vehicles parking on footways also damages infrastructure.

4.4 Utilities

Goireasan

Statutory undertakers who carry out works on the road asset are responsible for reinstating it whether they complete this themselves or sub-contract to another company. Reinstatements require to be undertaken to set standards and a sample number of openings are also subject to inspection.

The effect utility activity has on the maintenance of the network is difficult to quantify. However, it is known that disturbing the layers of a road weakens it

structurally, leading to future issues. Opening a road results in an increase in the frequency and severity of defects found. Trench reinstatements which do not last as long as the surrounding road generally result in sunken tracks or more frequent potholes.

Utility activity is discussed further in the lifecycle plans in appendix D.

4.5 Climate Change

Atharrachadh Gnàth-shìde

Changes in climate cannot be forecast exactly but there has been an acceptance that general weather patterns are changing. The Council has signed up to Scotland's Climate Change Declaration. To deliver this, a Member led Climate Change Working Group has been set up. More information is available in the Scottish Climate Change Declaration Annual Report and the Working Group Minutes which are available on the [Council website](#)^(RR8).



Figure 4.5.1: Flood Damage to Road

In relation to road assets, climate change in the Highlands can cause the following issues:

- fluctuations in winter maintenance requirements
- flooding (including coastal)
- landslides
- culvert washout.

The Council have adopted a strategy to utilise any under spend in the winter maintenance allocation for watercourse maintenance.

4.6 Legislation

Reachdas

Changes in legislation mean we have to react and adapt, which can often result in an increase in the cost of maintaining the asset. As a Local Authority, the Council participates in forming legislation during consultations.

4.7 Demands for Additional Assets

Iarrtasan airson So-mhaoin a Bharrachd

As developments are completed, there will be an increased pressure on existing assets to accommodate any increases in traffic flows. However, infrastructure assets are protected and enhanced through development control and conditions attached to planning consents. As with all major urban areas, Inverness is particularly vulnerable to congestion as housing increases along the A96 corridor and the Southern Distributor.

5.0 Levels of Service

Ìrean Seirbheis

5.1 Establishment of Levels of Service

Stèidheachadh Ìrean Seirbheis

Levels of service will be established as the asset management process develops (IA R6). They will be linked to the long term cost forecast and it is expected that both levels and forecasts will be updated annually (IA R7).

There is no formalised process in The Highland Council for setting levels of service related to road asset maintenance and management. (IA R8)

The Council's budget is allocated to each Service on the previous year's base budget, uplifted for pay awards, pension increases and general inflation increases plus specific Service growths and pressures. The Service budgets are reduced to take account of efficiencies and savings targets notified by the Council's Budget Information Group. TEC Services therefore is allocated a budget target which forms the basis of the Service base budget for the forthcoming financial year. The Service budget is then allocated to the various TECS activities based on both the resources (staffing/workforce/plant, etc.) and the previous year expenditure patterns adjusted to reflect the agreed Service efficiency and savings targets. Once the base budget has been allocated to each activity, budget holders are then advised of their requisite budget for the ensuing year.

As part of the asset management process, levels of service require to be linked to the budget process. (IA R9)

5.2 Performance Reviews

Ath-bhreithneachaidhean Coileanaidh

Although formal levels of service have not been established, there are statutory and internal performance indicators relating to certain aspects of the road asset. Statutory performance indicator information is included in appendix C.

The statutory and internal performance indicators are reported to the Chief Executive through the TECS Quarterly Performance Review. Statutory performance indicators (SPI) are also reported annually to Audit Scotland. All Council indicators are published publicly.

Current internal performance indicators relate to the Programme of the Council and are general statements which do not link directly to levels of service. Further information can be found on the [Council website](#)^(RR6).

Performance is reported on an annual basis to Members.

5.3 Current and Target Levels of Service

Ìrean Seirbheis Gnàthach agus Cuimseach

The statutory and internal indicators are discussed as part of the relevant lifecycle plan in appendix D.

Target levels of service for road assets have not been set and will be developed through the asset management process. (IA R10)

Targets for internal indicators relating to the Single Outcome Agreement (SOA) can be found in the SOA Performance Report 2008/09 available on the [Council website](#)^(RR9).

6.0 Lifecycle Planning

Dealbhadh Cearcaill-beatha

6.1 Purpose of Lifecycle Planning

Adhbhar Dealbhadh Cearcaill-beatha

As part of the development of this plan, we have created lifecycle plans (LCPs) to document how each of the asset groups that make up our road infrastructure is managed. Each lifecycle plan provides a definition of the standards that are applied to the management of the asset group in question and details 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 Output of Lifecycle Planning

Toradh Dealbhadh Cearcaill-beatha

The output from the lifecycle planning process is the long term prediction of the cost of the continued management and operation of the asset in question. These should be in the form of financial projections and are linked to target levels of service.

6.3 Importance of Lifecycle Plans

Cudromachd Phlanaichean Cearcaill-beatha

Lifecycle plans are the core of our approach to road asset management planning. They contain the detail that enables asset management practices such as long term cost projection, performance management and risk management to be applied consistently across all asset groups.

6.4 Lifecycle Plan Contents

Clàr-innse Plana Cearcaill-beatha

Lifecycle plans are living documents which will be updated as we gather and analyse information on each asset group. When fully populated, each LCP will contain the following information:

Section	Information	Contains
Current Status		<ul style="list-style-type: none"> ▪ Overview of the asset
The Asset	What assets do the Council own?	<ul style="list-style-type: none"> ▪ Inventory details (type size, etc) ▪ Asset growth statistics
Service Expectations	What is each asset group required to do?	<ul style="list-style-type: none"> ▪ Customer expectations ▪ Council objectives for transport ▪ Specific user requirements ▪ Safety considerations ▪ 3rd party use ▪ Environmental requirements ▪ Network availability ▪ Amenity considerations
Management Practices	How is this asset group managed?	<ul style="list-style-type: none"> ▪ Policies ▪ Inspection regime ▪ Condition assessment ▪ Asset acquisition standards ▪ Routine maintenance standards ▪ Operational/cyclic maintenance ▪ Planned maintenance standards ▪ Disposal standards
Investment	How much should be and is spent on this asset group?	<ul style="list-style-type: none"> ▪ Historical investment ▪ Output from historical investment ▪ Forecast financial needs ▪ Valuation: GRC, DRC & ADC
Works Programme	How are works programmed for this asset group?	<ul style="list-style-type: none"> ▪ Existing forward works programme ▪ Works programme coordination ▪ Option appraisal: treatment selection <ul style="list-style-type: none"> - At a project level - At a budget category level
Risk	What are the risks associated with this asset group?	<ul style="list-style-type: none"> ▪ Risk identification ▪ Major asset risks
Works and Service Delivery	How are works delivered or procured on this asset group?	<ul style="list-style-type: none"> ▪ Procurement methods
Performance Measurement	How is the performance of this asset group measured and managed?	<ul style="list-style-type: none"> ▪ Performance indicators ▪ Current performance figures ▪ Target performance figures
Strategies	What strategies are there for the future management of this asset group?	<ul style="list-style-type: none"> ▪ Relevant strategy information
Service Improvement actions	What actions would improve the Council's management of this asset group?	<ul style="list-style-type: none"> ▪ Asset specific improvement actions

Table 6.4.1: Completed LCP Contents

6.5 Status of Lifecycle Plans

Inbhe Phlanaichean Cearcaill-beatha

The development of lifecycle plans for road assets has been prioritised. For the first version of the RAMP, separate lifecycle plans have been produced for each of the following asset groups and are currently in the state of development noted in the table below.

Asset Group	Status	Actions
Carriageways	75%	Develop all sections where necessary.
Footways & Footpaths	65%	Develop all sections where necessary.
Street Lighting	70%	Develop all sections where necessary.
Structures	70%	Develop all sections where necessary.

Table 6.5.1: Lifecycle Plan Status

6.6 Asset Group Status Reports (Major Asset Groups)

Aithisgean Inbhe nam Buidhnean So-mhaoin (Buidhnean Mòra So-mhaoin)

The current status of the following major asset groups have been summarised in the asset group tables below.

- Carriageways
- Footways & footpaths
- Street lighting
- Structures

Asset Group Summary: Carriageways																				
	Statistics	Commentary																		
The Asset	<ul style="list-style-type: none"> ▪ The Highland Council road network is 6,729.5km long. ▪ An estimated 1,742km of roads are built on peat. ▪ The asset has grown in size by 164km (2.5%) since 1999. 																			
Service Expectations	<p>There are no specific customer surveys carried out on the road asset which can be used to gauge the level of customer expectations.</p> <p>THC Annual Performance Survey 2009 shows 'Road repairs and potholes' and 'Winter maintenance' to be important services. However, satisfaction with these services is low.</p>	<p>Specific road asset customer survey to be developed as part of the RAMP project.</p> <p>Roads and potholes receive the highest numbers of comments in the survey.</p>																		
Condition	<ul style="list-style-type: none"> ▪ 2008 SRMCS Road Condition Indicator (RCI): 34.5% of roads to be considered for maintenance treatment. ▪ 2008 results placed Highland 15th in Scotland. 	<p>The method of undertaking the SRMCS has changed over the last 5 years making the comparison of results undependable.</p> <p>The sample of U class roads used in the Highland area has an effect on the overall SPI results.</p>																		
Historical Investment	<p>Historical Roads expenditure:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Capital £000s</th> <th>Revenue £000s</th> </tr> </thead> <tbody> <tr> <td>2004/05</td> <td>9,241</td> <td>11,254</td> </tr> <tr> <td>2005/06</td> <td>9,705</td> <td>11,599</td> </tr> <tr> <td>2006/07</td> <td>10,001</td> <td>12,904</td> </tr> <tr> <td>2007/08</td> <td>9,371</td> <td>13,824</td> </tr> <tr> <td>2008/09</td> <td>11,741</td> <td>12,624</td> </tr> </tbody> </table>	Year	Capital £000s	Revenue £000s	2004/05	9,241	11,254	2005/06	9,705	11,599	2006/07	10,001	12,904	2007/08	9,371	13,824	2008/09	11,741	12,624	<p>Capital schemes can be spread over a number of financial years, therefore funding figures for a specific year may not be directly related to the output.</p>
Year	Capital £000s	Revenue £000s																		
2004/05	9,241	11,254																		
2005/06	9,705	11,599																		
2006/07	10,001	12,904																		
2007/08	9,371	13,824																		
2008/09	11,741	12,624																		
Valuation	<p>The Gross Replacement Cost (GRC) of the carriageway asset has been calculated at approximately £2,556,000,000 (£2.56 Billion).</p>	<p>The depreciated replacement cost and the annualised depreciation will be developed as part of the RAMP project.</p>																		
Future Investment	<p>Anticipated future funding levels were not available at the time of writing this version.</p> <p>However, THC were taking part in a SCOTS project to calculate the backlog of road maintenance in Scotland and these figures should be available for inclusion in the next RAMP.</p>	<p>Funding levels will be included in future versions of the RAMP.</p>																		

Asset Group Summary: Carriageways		
Forward Works Programme	<p>No formal forward works programme for 2010/11 existed at the time of writing this RAMP.</p> <p>Lists of outstanding works required are maintained but cannot be fully funded at current budget levels.</p>	<p>Surface dressing and resurfacing programmes are produced annually when budgets are set.</p>
Level of Service	<p>Levels of service have yet to be agreed.</p> <p>The performance measurement currently used is the SPI for the percentage of the road network which should be considered for maintenance treatment (34.5% for 2008/09).</p>	<p>Other, relevant service levels to be developed as part of the SCOTS RAMP project.</p>

Table 6.6.1: Carriageway LCP Summary

The current issues associated with this asset group and our plans to manage/address these issues are summarised below.

Current Issues	Current Strategies
<ul style="list-style-type: none"> ➤ Roads built around 40 years ago are nearing the end of their useful lives. 	<ul style="list-style-type: none"> ➤ Continued involvement in Capital Programme review.
<ul style="list-style-type: none"> ➤ Large lengths of surface treatments will be due for renewal at the same time. 	<ul style="list-style-type: none"> ➤ Monitor situation and stagger renewal as budgets allow.
<ul style="list-style-type: none"> ➤ SRMCS survey produces varied result depending on the sample of network surveyed. 	<ul style="list-style-type: none"> ➤ Continue to monitor results and support implementation of a separate indicator for class U.
<ul style="list-style-type: none"> ➤ Existing policies relating to the maintenance and management of the asset require to be updated. 	<ul style="list-style-type: none"> ➤ Review policies and implement new ones as the RAMP project progresses.

Table 6.6.2: Carriageway Issues Summary

Asset Group Summary: Footways & footpaths		
	Statistics	Commentary
The Asset	<p>The length of the Highland Council footway network is estimated at 1,700km.</p>	<p>Footway length estimated from road network lengths.</p>

Asset Group Summary: Footways & footpaths														
Customer Expectations	<p>There are no specific customer surveys carried out on the footway & footpath asset which can be used to gauge the level of customer expectations.</p> <p>THC Annual Performance Survey 2009 shows the satisfaction with 'Street cleaning' and 'Pavement maintenance' to have improved in recent years.</p>	Specific road asset customer survey to be developed as part of the RAMP project.												
Condition	There is currently no formal condition assessment undertaken on the footways and footpaths asset.	To be developed as part of the SCOTS project.												
Historical Investment	<p>Historical footway expenditure:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Revenue £000s</th> </tr> </thead> <tbody> <tr> <td>2004/05</td> <td>372.8</td> </tr> <tr> <td>2005/06</td> <td>361.5</td> </tr> <tr> <td>2006/07</td> <td>275.5</td> </tr> <tr> <td>2007/08</td> <td>161.7</td> </tr> <tr> <td>2008/09</td> <td>232.9</td> </tr> </tbody> </table>	Year	Revenue £000s	2004/05	372.8	2005/06	361.5	2006/07	275.5	2007/08	161.7	2008/09	232.9	Detailed information relating to investment is not currently available.
Year	Revenue £000s													
2004/05	372.8													
2005/06	361.5													
2006/07	275.5													
2007/08	161.7													
2008/09	232.9													
Valuation	The Gross Replacement Cost (GRC) of the footway asset has been estimated at approximately £179,400,000 (£179.4 Million).	The depreciated replacement cost and the annualised depreciation will be developed as part of the RAMP project.												
Future Investment	Anticipated future funding levels were not available at the time of writing this version.	Funding levels will be included in future versions of the RAMP.												
Forward Works Programme	<p>Annual programmes of work are produced, based on available budgets.</p> <p>Capital programme was under review at the time of writing this document. Details will be included in future versions of the RAMP.</p>	No long term programmes exist for maintenance works on footways & paths. A prediction of future funding needs will be developed as data becomes available.												
Level of Service	<p>Levels of service have yet to be agreed.</p> <p>There are no SPIs applicable to the footways and footpaths asset.</p>	Levels of service and local performance indicators to be developed as part of the SCOTS RAMP project.												

Table 6.6.3: Footways/paths LCP Summary

The current issues associated with this asset group and our plans to manage/address these issues are summarised below.

Current Issues	Current Strategies
➤ Limited data exists for the asset.	➤ Undertake data collection as resources permit.
➤ No formal condition assessment undertaken.	➤ Develop condition assessment as part of the SCOTS project.
➤ Lack of investment and forward planning for maintenance.	➤ Annual programme of structural maintenance exists but is not long term.

Table 6.6.4: Footways/paths Issues Summary

Asset Group Summary: Street lighting																																				
	Statistics					Commentary																														
The Asset	The asset comprises:- <ul style="list-style-type: none"> ➤ 48,800 lighting columns ➤ 2,020 feeder pillars ➤ 2,600 internally illuminated signs ➤ 800 illuminated bollards ➤ 49 sets of traffic signals ➤ 86 sets of other crossing installations 					The asset has grown by approximately 3% per annum up to 2007. Growth has then slowed in the following years.																														
Customer Expectations	The annual customer survey undertaken by the Council shows a consistent level of satisfaction with street lighting since 2003. A high number of street lighting enquiries are reported through the CRM system. This gives an indication of the number of faults reported by the public.					Specific road asset customer survey, including street lighting, to be developed as part of the RAMP project.																														
Condition	An annual programme allows for the structural testing of approximately 1,000 columns. Electrical testing and lantern cleaning are also undertaken.					Structural testing interval is greater than that recommended by industry.																														
Historical Investment	Historical Lighting expenditure (excluding energy costs): <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Cost Category</th> <th>2004/05</th> <th>2005/06</th> <th>2006/07</th> <th>2007/08</th> <th>2008/09</th> </tr> <tr> <td></td> <td>£000s</td> <td>£000s</td> <td>£000s</td> <td>£000s</td> <td>£000s</td> </tr> </thead> <tbody> <tr> <td>Revenue</td> <td>1,321.3</td> <td>1,484.4</td> <td>1,240</td> <td>1,339.2</td> <td>1,297.1</td> </tr> <tr> <td>Capital</td> <td>703</td> <td>633</td> <td>490</td> <td>471</td> <td>796</td> </tr> <tr> <td>Total</td> <td>2,024.3</td> <td>2,117.4</td> <td>1,730</td> <td>1,810.2</td> <td>2,093.1</td> </tr> </tbody> </table>					Cost Category	2004/05	2005/06	2006/07	2007/08	2008/09		£000s	£000s	£000s	£000s	£000s	Revenue	1,321.3	1,484.4	1,240	1,339.2	1,297.1	Capital	703	633	490	471	796	Total	2,024.3	2,117.4	1,730	1,810.2	2,093.1	Energy costs have risen significantly over recent years.
Cost Category	2004/05	2005/06	2006/07	2007/08	2008/09																															
	£000s	£000s	£000s	£000s	£000s																															
Revenue	1,321.3	1,484.4	1,240	1,339.2	1,297.1																															
Capital	703	633	490	471	796																															
Total	2,024.3	2,117.4	1,730	1,810.2	2,093.1																															
Valuation	The Gross Replacement Cost (GRC) of the street lighting asset has been calculated at approximately £119,600,000 (£119.6 Million).					The depreciated replacement cost and the annualised depreciation will be developed as part of the RAMP project.																														

Asset Group Summary: Street lighting		
	Statistics	Commentary
Future Investment	Anticipated future funding levels were not available at the time of writing this version.	Funding levels will be included in future versions of the RAMP.
Forward Works Programme	An annual programme of planned lighting works is produced depending on the budget available.	No long term works programmes exist. Advanced co-ordination of large projects would aid planning of replacements.
Level of Service	Levels of service have yet to be agreed. 2008/09 SPIs for the lighting asset show 94.9% of street lights were repaired within 7 days and 45.9% of columns are over 30 years old.	To be developed as part of the SCOTS RAMP project.

Table 6.6.5: Street Lighting LCP Summary

The current issues associated with this asset group and our plans to manage/address these issues are summarised below.

Current Issues	Current Strategies
➤ Lack of investment leading to a high percentage of columns over 30 years old.	➤ Ongoing confirmation of age profile of columns to provide reliable data.
➤ Growth of lighting infrastructure adding pressure to existing budgets.	➤ Monitor asset growth.
➤ Rising energy costs.	➤ Savings have been made by purchasing un-metered electricity through the Scottish Procurement contract.
➤ Staff retention issues.	➤ Monitor vacancies.

Table 6.6.6: Street Lighting Issues Summary

Asset Group Summary: Structures																				
	Statistics	Commentary																		
The Asset	<ul style="list-style-type: none"> ▪ The number of structures contained within the database is summarised below. <ul style="list-style-type: none"> ▪ Bridges 2053 ▪ Footbridges 7 ▪ Retaining walls 767 Total 2827 <p>Asset growth figures are currently unavailable.</p>	The figures are derived from the database where information is checked during inspections. Existing records are estimated to be 80% accurate.																		
Customer Expectations	<p>There are no specific customer surveys carried out on the structures asset which can be used to gauge the level of customer expectations.</p> <p>The number of CRM enquiries relating to the structures asset is low.</p>	Specific road asset customer survey, including structures, to be developed as part of the RAMP project.																		
Condition	<p>Bridge Condition Indicator (BCI) values are produced from inspection findings.</p> <p>The current assessment status of the bridge stock is detailed in the table below.</p> <table border="1"> <thead> <tr> <th>Assessment Status</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Bridges which have either passed their load assessment or have been strengthened/replaced or have been permanently restricted</td> <td>532</td> </tr> <tr> <td>Bridges subject to temporary weight restriction, in lieu of strengthening</td> <td>8</td> </tr> <tr> <td>Bridges which still require strengthening or replacement</td> <td>255</td> </tr> <tr> <td>Bridges which still require load assessment</td> <td>641</td> </tr> <tr> <td>Bridges not in the assessment programme</td> <td>617</td> </tr> <tr> <td>Total</td> <td>2053</td> </tr> </tbody> </table>	Assessment Status	Number	Bridges which have either passed their load assessment or have been strengthened/replaced or have been permanently restricted	532	Bridges subject to temporary weight restriction, in lieu of strengthening	8	Bridges which still require strengthening or replacement	255	Bridges which still require load assessment	641	Bridges not in the assessment programme	617	Total	2053	Current inspection intervals are greater than those recommended in the ACoP due to lack of resources. Therefore, stock condition indicators are not reported as more information is required to produce realistic results.				
Assessment Status	Number																			
Bridges which have either passed their load assessment or have been strengthened/replaced or have been permanently restricted	532																			
Bridges subject to temporary weight restriction, in lieu of strengthening	8																			
Bridges which still require strengthening or replacement	255																			
Bridges which still require load assessment	641																			
Bridges not in the assessment programme	617																			
Total	2053																			
Historical Investment	<p>Capital investment from the Roads maintenance budget is detailed below:</p> <table border="1"> <thead> <tr> <th>Cost Category</th> <th>2004/5</th> <th>2005/6</th> <th>2006-07</th> <th>2007/8</th> <th>2008/9</th> </tr> </thead> <tbody> <tr> <td>Capital</td> <td>£000s</td> <td>£000s</td> <td>£000s</td> <td>£000s</td> <td>£000s</td> </tr> <tr> <td>Capital Structures - Bridges</td> <td>264</td> <td>625</td> <td>2,070</td> <td>613</td> <td>931</td> </tr> </tbody> </table>	Cost Category	2004/5	2005/6	2006-07	2007/8	2008/9	Capital	£000s	£000s	£000s	£000s	£000s	Capital Structures - Bridges	264	625	2,070	613	931	Further work is required to obtain data on the expenditure from the Capital programme and revenue budget.
Cost Category	2004/5	2005/6	2006-07	2007/8	2008/9															
Capital	£000s	£000s	£000s	£000s	£000s															
Capital Structures - Bridges	264	625	2,070	613	931															
Valuation	<p>The Gross Replacement Cost (GRC) of the structures asset has been estimated at £515,000,000 (£0.515 Billion).</p>	The depreciated replacement cost and the annualised depreciation will be developed as part of the RAMP project.																		

Asset Group Summary: Structures																				
	Statistics	Commentary																		
Future Investment	<p>Anticipated future funding levels were not available at the time of writing this version.</p> <p>A long term maintenance and management investment strategy does not currently exist for the structures asset.</p>	Funding levels will be included in future versions of the RAMP.																		
Forward Works Programme	<p>No formal forward works programme for revenue exists at the time of writing this RAMP for 2010/11.</p> <p>A 10 year capital programme for all Council services is currently being developed and is therefore not available for inclusion in this version of the RAMP.</p>	Revenue programmes are produced annually when budgets are known but are subject to change depending on inspection results.																		
Level of Service	<p>Statutory Performance Indicators:-</p> <table border="1"> <thead> <tr> <th>Performance Indicator</th> <th>2004/05</th> <th>2005/06</th> <th>2006/07</th> <th>2007/08</th> <th>2008/09</th> </tr> </thead> <tbody> <tr> <td>Number of Council bridges with a weight or width restriction</td> <td>6</td> <td>8</td> <td>4</td> <td>5</td> <td>7</td> </tr> <tr> <td>Percentage of Council bridges with a weight or width restriction</td> <td>0.83</td> <td>1.10</td> <td>0.55</td> <td>0.66</td> <td>0.89</td> </tr> </tbody> </table> <p>Local performance indicators have yet to be developed.</p>	Performance Indicator	2004/05	2005/06	2006/07	2007/08	2008/09	Number of Council bridges with a weight or width restriction	6	8	4	5	7	Percentage of Council bridges with a weight or width restriction	0.83	1.10	0.55	0.66	0.89	Local performance indicators to be developed as part of the SCOTS RAMP project.
Performance Indicator	2004/05	2005/06	2006/07	2007/08	2008/09															
Number of Council bridges with a weight or width restriction	6	8	4	5	7															
Percentage of Council bridges with a weight or width restriction	0.83	1.10	0.55	0.66	0.89															

Table 6.6.7: Structures LCP Summary

The current issues associated with this asset group and our plans to manage/address these issues are summarised below.

Current Issues	Current Strategies
➤ Lack of information regarding the retaining wall asset.	➤ Use of asset management database to electronically capture data as resources permit.
➤ Fallen behind in bridge assessment programme.	➤ Undertake assessments as resources permit. Strengthen or replace structures through the capital programme.
➤ Backlog of maintenance and repair work on structures.	➤ Prioritise maintenance work required on structures.
➤ Not complying with recommended inspection regime.	➤ Interim inspection regime with longer intervals.

Table 6.6.8: Structures Issues Summary

7.0 Financial Summary

Geàrr-chunntas Ionmhasail

7.1 Council Budget Information

Fiosrachadh mu Bhuidseat na Comhairle

All Local Authorities are currently facing budget challenges with an expected reduction in government funding of around 12% over the next four years.

Due to the anticipated reduction in funding producing a £60 million gap, The Highland Council is targeting revenue savings of £80 million over the next three financial years to provide options. All Highland Council services have been asked to propose revenue savings of 5%, 6% and 6% respectively over the 2010/11 to 2012/13 financial years. For 2010/11, a reduction in Capital of £12.359 million (-24%) has been reported. Future years are currently unknown.

In December 2009, the Council agreed savings for the four smaller services which are the Chief Executive's, Finance, Housing and Property and Planning and Development. The proposed savings for ECS, Social Work and TECS were confirmed at a special meeting of the Council in February 2010 along with the proposed budget for 2010/11. The reader is directed to interrogate the [Council website](#)^(RR10) for further information relating to savings. Table 7.1.1 shows the overall TECS budget for 2010/11. Budget breakdowns for roads activities were not available at the time of writing this report.

	Budget 2010/11 £m	Increase/ (Decrease) £m	Increase/ (Decrease) %
TEC Services	64.251	(2.446)	(3.7)

Table 7.1.1: Overall TECS budget 2010/11

The Budget Brief 2009-2010 publication is available on the Council website under [Council Tax](#)^(RR11). The document contains summaries of the Council's Revenue and Capital budgets for 2009/10. The document is dated March 2009 and the information contained in the document was correct at the time.

When available, capital funding information is also provided in more detail on the Council website. The current document is the Council's 'Four Year Capital Investment Programme to 2011/12' which is available under the [Budget Strategy, Policy & Taxation^{\(RR12\)}](#) part of the Finance section of the website. The information contained in the document was correct at the time it was produced.

7.2 Sources of Funding and Budget Allocations

Tobraichean Maoinachaidh is Riarachaidhean Buidseit

At the end of 2008, the Council put arrangements in place to enable a multi-year budget approach. This was to allow for improved planning within services and increase efficiency savings.

The main sources of funding and how budgets are allocated are detailed below.

Revenue

Revenue funding is dependant on the Council Tax level and the allocated grant from Government. Approximately 80% of the Highland Council's revenue funding comes from the Scottish Government allocation. The remainder of the required budget comes from Council Tax.

The Council's budget is allocated to each Service on the previous year's base budget, uplifted for pay awards, pension increases and general inflation increases plus specific Service growths and pressures. The Service budgets are reduced to take account of efficiencies and savings targets notified by the Council's Budget Information Group. TEC Services is therefore allocated a budget target which forms the basis of the Service base budget for the forthcoming financial year. The Service budget is then allocated to the various TECS activities based on both the resources (staffing/workforce/plant, etc.) and the previous year expenditure patterns, adjusted to reflect the agreed Service efficiency and savings targets. Once the base budget has been

allocated to each activity, budget holders are then advised of their requisite budget for the ensuing year.

The amounts stated under each budget heading are the responsibility of the relevant budget holder. The allocation of planned and reactive maintenance under each heading is determined by the budget holder.

Capital

Capital funding is used for the acquisition, creation or major improvement of fixed assets, the benefit of which will accrue to the Council and its community over a number of years.

Capital funding sources include:-

- borrowing
- capital receipts from the sale of assets
- capital met from current revenue
- external contributions
- capital grants from the Scottish Government
- grants from other bodies, e.g. ERDF.

The budget allocation process for Capital projects across all services in Highland is currently under review. The Capital Planning Officers Group (CPOG) has been tasked with reviewing the process to enable the production of a ten year programme which will be reconsidered after the first five years. The ten year programme is being produced as part of the implementation of the Capital Review process which includes option appraisal. Outline Business Cases (OBC) are developed by each service for projects which have been identified for inclusion in the programme review. As yet, the review has not been completed and therefore details of any revised Capital projects relating to the road asset cannot be included in this version of the RAMP.

Grants obtained from the government or other bodies are usually for specific projects and as such, would be ring fenced for the project. Examples of grant aided funding sources are:-

- European Regional Development Fund,
- Scottish Government Strategic Timber Transport Fund,
- Scottish Government Cycling, Walking and Safer Streets Projects.

Other Income

Income is received from pay and display car parks.

Developer contributions vary depending on the nature and size of the development. Contributions are used for the purpose as stated in the relevant Section 75 agreement of the Town and Country Planning (Scotland) Act 1997.

7.3 Historical Expenditure

Caiteachas Eachdraidheil

Not all budget headings are split into planned and reactive maintenance and therefore, unless stated otherwise, any reported figures are totals. A review of budget headings is required to ensure useful information can be extracted from the system. (IA R11)

Details of funding of the Roads service since 2004 is provided in the relevant lifecycle plans in appendix D and in appendix E. Figures shown are the original ones and have not been amended for inflation.

7.4 Long Term Funding Requirement

Riatanas Maoineachaidh Fad-ùine

An important aspect of asset management is to demonstrate the impact of available maintenance funding on the asset. This requires estimation of future funding requirements which depends on asset maintenance and renewal frequencies as well as unit costs. As maintenance and renewal frequencies are linked to levels of service, they will be revised as levels of service are developed. (IA10)

The data required to produce long term funding estimations is not available for all assets. Long term funding estimations will be produced as data capture progresses. (IA R7)

7.5 Predicted Available Short – Term Funding

Maoineachadh geàrr-ùine a thathar an dùil a bhios ri fhaotainn

Due to the recent budget saving targets, the predicted short term funding is expected to decrease. Budgets for 2011/12 and 2012/13 are expected to be agreed in autumn 2010.

7.6 Asset Valuation

Luachadh So-mhaoin

Accurate asset valuation requires a robust and complete inventory. As discussed in [section 2](#) of this plan, gaps in inventory have been identified. Where practicable, an estimate of inventory information has been made to enable valuations to be completed.

The table below is a summary of the valuation information contained in appendix E. It should be noted that the summary contains only valuation information for the main assets. Excluding land value, the current Gross Replacement Cost (GRC) for the whole road asset has been estimated at £3,500,000,000 (£3.5 billion).

Asset Type	Quantity	Gross Replacement Cost
Carriageway	6,730 km	£2,556.2 M
Footway	1,700 km (est.)	£179.4 M
Street Lighting	All	£119.6 M
Structures		
Bridges & culverts	2053 no.	£429.3 M
Footbridges	7 no.	£1.5 M
Retaining walls	767 no.	£84.1 M
Total		£3,370.1 M

Table 7.6.1: Main Assets Valuation Summary

8.0 Risk Management

Stiùireadh Cunnairt

This section summarises how the Council’s risk management strategy is applied to the management of the road asset. It identifies where risk associated with the road asset are recorded, identifies the major risks associated with the asset and outlines how they are currently being controlled.

8.1 Context: Corporate Risk Management Strategy

Co-theacsa: Ro-innleachd Stiùireadh Cunnairt Corporra

Risk management is part of the Council’s Corporate Governance Policy. The philosophy and objectives are detailed within the Council’s Risk Management Strategy document. It sets out the risk management process and identifies the various roles and responsibilities members and officers have to achieve delivery of the ethos. The risk management process is detailed in [Figure 8.1.1](#) below.

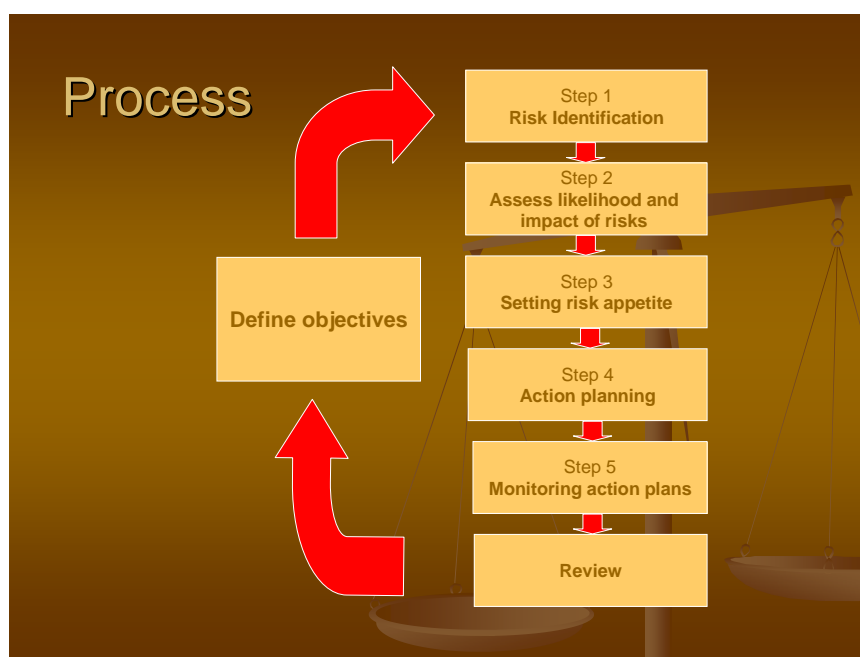


Figure 8.1.1: Risk Management Process

Risks are identified at both corporate and service levels. They are assessed and prioritised resulting in identification of the key risks. Risks are then managed through the development of action plans which are incorporated into

service plans and the Council's performance framework. Quarterly Performance Reports containing risk information are discussed by the service management who use them to monitor the risks. They are then presented to the Chief Executive. Service and Operational Plans are also managed by Senior Managers.

8.2 Risk Identification

Comharrachadh Cunnairt

There are various forms of risk from strategic corporate risks to specific asset ones. Corporate risks are identified at the top management level and specific service related risks can be identified either at management or officer level. This ensures that all potential impacts from every level are identified and addressed.

8.3 Risk Categorisation

Seòrsachadh Cunnairt

General headings are used to prompt the identification of risks. However, not all risks may fit into a particular category and can also be identified separately or they may fit into more than one category. There are 13 corporate risk categories which are:-

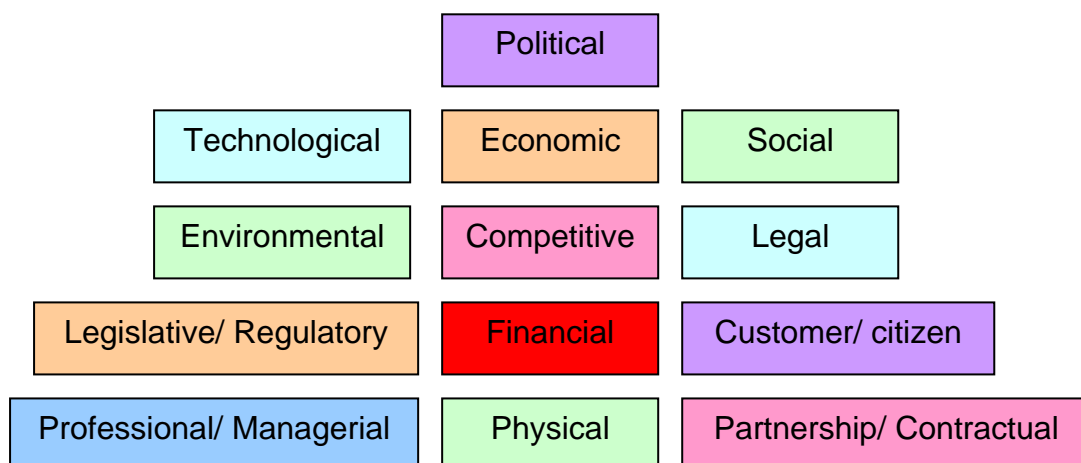


Figure 8.3.1: Corporate Risk Categories

8.4 Risk Evaluation

Measadh Cunnairt

The Council has adopted the STORM© methodology to evaluate identified risks. It uses a 6 x 4 matrix to prioritise risks. Risks are evaluated according to their likelihood of occurring and the severity of the impact if they do occur. This provides a spread of risks over the matrix which can be further prioritised by introducing a tolerance line. The tolerance line dictates the risks which are adequately managed (below the line) and those which require to be actively managed (above the line).

For TECS, the risk matrix has been reproduced in [Figure 8.4.1](#) below. The numbers within the matrix relate to the risks identified in the risk register (see [Table 8.7.1](#)).

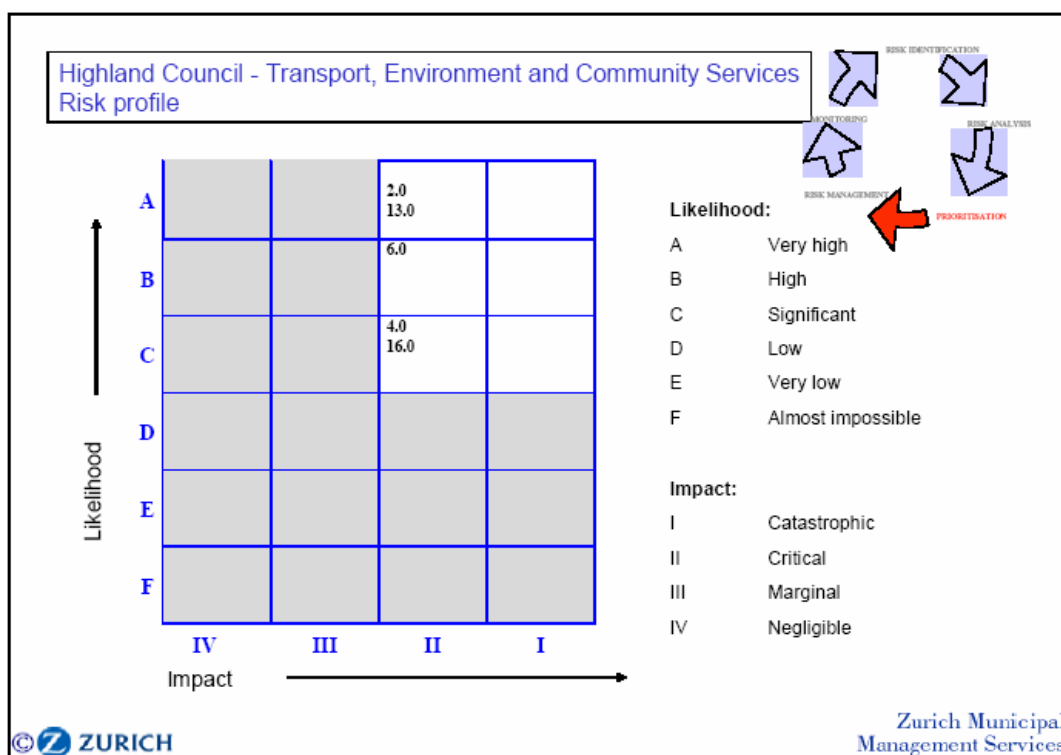


Figure 8.4.1: Risk Matrix

8.5 Risk Control

Smachd Cunnairt

To manage risks, there are three main options which are used. These are to:-

- transfer risk – through insurance/ outsourcing/ partnerships
- control risk – mitigate through appropriate measures
- accept risk – understand and live with risk

Not all risks are suitable to be transferred and the transferring of risk may introduce new ones. Most risks can be controlled but not completely eliminated. It is therefore essential to mitigate any impacts and ensure that the residual risk is monitored. In certain circumstances, some risks require to be tolerated if controls are unable to be put in place.

Each Service Plan contains information on the risks appropriate to that particular service. The TECS Service Plan therefore contains information on the risks attributable to the service including who is responsible for managing them. Some risks are corporate ones which apply to more than one, or all, of the Council's Services.

8.6 Review and Reporting

Ath-bhreithneachadh is Aithris

Reviewing risks and controls is a key aspect of the risk management process. Risks are reported and reviewed at the TECS Quarterly Performance Review which is attended by Senior Management. At a more corporate level, the Director of Finance produces annual reports on service risk management plans which are considered by the Audit and Standards Committee.

An improvement action has been identified to introduce a formal process to review the developing roads risk register. (IA R13)

Currently, no specific software is used to hold information on risk. As part of the Performance Management update, the introduction of a software package which has the capacity to include risk information is being investigated.

8.7 Risk Register

Clàr Cunnairt

A specific risk register for the road asset has yet to be developed (IA R14). However, the TECS Service Plan May 2009 contains a risk register for the service and is reproduced in the table below. Not all of the risks in the table relate to the road asset as TECS is responsible for many public services.

TECS Risk No	Risk Rating	SERVICE RISKS	Risk Owner
		Above the line	
2	A2	Liability to meet legislative requirements around landfill allowance trading scheme	Head of Waste Management
4	C2	Consequences of serious food and water borne disease outbreak	Head of Environmental Health & Trading Standards
6	B2	Level of Infrastructure maintenance required, in relation to Bridges, Structures, Lighting Columns and Harbours	Head of Transport & Infrastructure
7	C2	Succession planning including recruitment difficulties of both staff and experienced external consultants	Head of Environmental Health & Trading Standards/ Head of Transport & Infrastructure /Head of Business Support/ Head of Roads & Community Works
13	C2	Consequences of events which invoke our obligations relating to Business Continuity Planning (e.g. Pandemic 'Flu)	Director of TECS/All Heads of Service
16	C2	Consequences of climate change	Head of Transport & Infrastructure

Table 8.7.1: TECS Risk Register

8.8 Major Asset Risks

Cunnartan Mòra So-mhaoin

The main risks pertaining to the road asset will be confirmed through the development of the risk register. (IA R14)

9.0 Improvement Plan

Plana Leasachaidh

9.1 Milestones

Clachan-mìle

An improvement action plan has been created to support this RAMP and is included in appendix F. Improvement action plans for each asset group are included in the relevant lifecycle plan in appendix D. For the 12 months following implementation of this plan, the key milestones are as follows:

No.	Milestone	Target Date	Improvement Action Plan Reference
1.	Develop an asset information management strategy to define the information required, including the method for collecting and updating the asset register. Develop data management procedures for all major asset groups.	2011	C4, C9, C13 F3, F5, F10, F12 SL4, SL5, SL7, SL8, SL11 S2, S3, S4
2.	Develop roads risk register including formal process for review.	2011	C27, C28, C29, F20, F21, F22, SL17, S24 R13, R14
3.	Identify policies to be updated and implement a programme for completion.	2011	C1, C12, F9, SL10, S12, S13
4.	Develop a formal process for setting levels of service, define them and set targets.	2011	C16, C20, C22, F13, F15, S14, R6, R8, R10
5.	Develop local performance indicators, a formal process for review and set targets.	2011	C15, C30, F13, F23, SL18, S25

Table 9.1.1: Milestones

9.2 Progress Reporting

Aithris air Adhartas

The progress of each milestone will be reported to the Infrastructure Asset Management Planning Team, the RCW Management Team and will be included in the Quarterly Performance Report.

10.0 Management and Control of the Plan

Stiùireadh is Smachd air a' Phlana

10.1 Responsibilities for Delivery

Dleastanasan airson Lìbhrigeadh

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. The following details those with responsibilities for delivering the RAMP.

Position	Name	Role
TECS Committee Members		Approval of the RAMP.
Director of TECS	N Gillies	Infrastructure Asset Management Champion.
Head of RCW	R Guest	Promote development of RAMP and allocate and prioritise RCW resources to allow implementation of asset management strategies.
Head of T&I	S MacNaughton	Allocate and prioritise T&I resources to allow implementation of asset management strategies.
RCW Manager	C Kemp	Lead development of improvement actions. Link maintenance strategies to corporate objectives. Oversee risk management.
Area RCW Managers	R Evans C Stewart J Tolmie	Implement and support development of asset management strategy.
Senior Engineer (Asset Management)	E Maciver	Co-ordinate asset management, development of the RAMP and implementation of various improvement actions.

Position	Name	Role
Asset Champions		
TBC	TBC	Carriageways
TBC	TBC	Car Parks
TBC	TBC	Cycleways/paths
TBC	TBC	Drainage
TBC	TBC	Environmental
TBC	TBC	Footways/paths
TBC	TBC	Intelligent Transport Systems
Lighting Manager	A Matheson	Lighting Lifecycle plan for lighting asset group, implement relevant improvement actions.
TBC	TBC	Road Markings
TBC	TBC	Road Restraint Systems
TBC	TBC	Signs
TBC	TBC	Street Furniture
Chief Structural Engineer	DGC MacKenzie	Structures Lifecycle plan for asset group, implement relevant improvement actions.
TBC	TBC	Traffic Signals

Table 10.1.1: Roles and Responsibilities

10.2 Updating the RAMP

Ag Ùrachadh PSSR

The RAMP consists of various sections and appendices which will be reviewed and updated individually. The main RAMP document will be reviewed annually for the first three years and on a three year cycle thereafter. The appendices will be updated as necessary and reviewed at least annually.

11.0 References

Teisteanasan

References throughout the document are listed below:

No.	<u>Main RAMP document</u>
RR1	Roads (Scotland) Act 1984
RR2	CSS Framework for Highway Asset Management, TSO, 2004
RR3	Draft Corporate Asset Management Plan (Res/134/07) http://www.highland.gov.uk/yourcouncil/committees/strategiccommittees/resources/2007-11-28-res-min.htm
RR4	TECS Service Plan http://www.highland.gov.uk/yourcouncil/yourservices/transportenvironmentandcommunityservices/
RR5	Strengthening the Highlands, The Programme of The Highland Council 2009-2011, The Highland Council http://www.highland.gov.uk/yourenvironment/roadsandtransport/transportplanning/localtransportstrategy.htm
RR6	The Highland Council Performance Information http://www.highland.gov.uk/yourcouncil/howyourcouncilperforms/
RR7	Forestry Commission Agreed Routes http://maps.forestry.gov.uk/imf/imf.jsp?site=TTAR
RR8	Climate Change Information http://www.highland.gov.uk/yourenvironment/sustainabledevelopment/climatechange/
RR9	Single Outcome Performance Report 2008/09, The Highland Council http://www.highland.gov.uk/NR/ronlyres/1C38108E-98ED-414B-8F65-6141BC21195D/0/SOARReportSep09.pdf
RR10	The Highland Council Special Meeting February 2010 http://www.highland.gov.uk/yourcouncil/committees/thehighlandcouncil/2010-02-11-hc-ag.htm
RR11	Council Tax Information http://www.highland.gov.uk/yourcouncil/counciltax/

- RR12** The Highland Council Budget Strategy, Policy & Taxation website
<http://www.highland.gov.uk/yourcouncil/finance/corporatefinance/budgetstrategyandtaxation/>

Carriageways Lifecycle Plan

- RC1** The Highland Council List of Public Roads
<http://www.highland.gov.uk/yourenvironment/roadsandtransport/roads/listofadoptedroads.htm>
- RC2** The Highland Council Adopted Road Lengths
<http://www.highland.gov.uk/yourenvironment/roadsandtransport/roads/statistics.htm>
- RC3** Code of Practice for Highway Maintenance Management, Roads Liaison Group, TSO, 2005
- RC4** Council Performance Information
<http://www.highland.gov.uk/yourcouncil/howyourcouncilperforms/>
- RC5** Strengthening the Highlands, The Programme of The Highland Council 2009-2011, The Highland Council
<http://www.highland.gov.uk/yourenvironment/roadsandtransport/transportplanning/localtransportstrategy.htm>
- RC6** TECS Service Plan
<http://www.highland.gov.uk/yourcouncil/yourservices/transportenvironmentandcommunityservices/>
- RC7** The Highland Council Road Safety website:
<http://www.highland.gov.uk/yourenvironment/roadsandtransport/roadsafety>

Footways & Footpaths Lifecycle Plan

- RF1** The Highland Council List of Public Roads
<http://www.highland.gov.uk/yourenvironment/roadsandtransport/roads/listofadoptedroads.htm>
- RF2** The Highland Council Adopted Road Lengths
<http://www.highland.gov.uk/yourenvironment/roadsandtransport/roads/statistics.htm>

- RF3** Code of Practice for Highway Maintenance Management, TSO, 2005
- RF4** Council Performance Information
<http://www.highland.gov.uk/yourcouncil/howyourcouncilperforms/>
- RF5** Strengthening the Highlands, The Programme of The Highland Council 2009-2011, The Highland Council
<http://www.highland.gov.uk/yourenvironment/roadsandtransport/transportplanning/localtransportstrategy.htm>
- RF6** TECS Service Plan
<http://www.highland.gov.uk/yourcouncil/yourservices/transportenvironmentandcommunityservices/>
- RF7** The Highland Council Road Safety website
<http://www.highland.gov.uk/yourenvironment/roadsandtransport/roadsafety>

Street Lighting Lifecycle Plan

- RSL1** Well-lit highways, Code of Practice for Highway Lighting Management, Roads Liaison Group, TSO, 2004
- RSL2** Council Performance Information
<http://www.highland.gov.uk/yourcouncil/howyourcouncilperforms/>
- RSL3** Strengthening the Highlands, The Programme of The Highland Council 2009-2011, The Highland Council
<http://www.highland.gov.uk/yourenvironment/roadsandtransport/transportplanning/localtransportstrategy.htm>
- RSL4** TECS Service Plan
<http://www.highland.gov.uk/yourcouncil/yourservices/transportenvironmentandcommunityservices/>
- RSL5** Controlling Light Pollution and Reducing Lighting Energy Consumption, Guidance Note, Scottish Executive, 2007
- RSL6** BS 5489 Code of Practice for the design of road lighting, BSI, 2003

- RSL7** Energy Reduction – Street Lighting TEC/87/08
<http://www.highland.gov.uk/yourcouncil/committees/strategiccommittees/transportenvironmentalandcommunityservices/2008-11-20-tec-min.htm>
- RSL8** Street Lighting - Energy Reduction in Existing Installations
TEC/23/09
<http://www.highland.gov.uk/yourcouncil/committees/strategiccommittees/transportenvironmentalandcommunityservices/2009-03-19-tec-min.htm>
- RSL9** Single Outcome Agreement
<http://www.highland.gov.uk/yourcouncil/soa/>
- RSL10** The Highland Council Carbon Management Plan
<http://www.highland.gov.uk/yourenvironment/sustainabledevelopment/>
- RSL11** Institution of Lighting Engineers Technical Report 22 Managing a Vital Asset: Lighting Supports, 2007
- RSL12** Institution of Lighting Engineers Technical Report 19 The Effectiveness of Lantern Cleaning, 1989

Structures Lifecycle Plan

- RS1** Management of Highway Structures - A Code of Practice, Roads Liaison Group, TSO, 2005
- RS2** Strengthening the Highlands, The Programme of The Highland Council 2009-2011, The Highland Council
<http://www.highland.gov.uk/yourenvironment/roadsandtransport/transportplanning/localtransportstrategy.htm>
- RS3** Water Environment (Controlled Activities) (Scotland) Regulations 2005

Appendices

Pàipearan-taice