Newcastle City Council

Highway Asset Management Plan

Document Information

Title	Highway Asset Management Plan
Author	Garry Simpson - Principal Engineer, Pamela Holmes - Principal Engineer
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Document History

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Contents

1.0 Introduction

1.1 Definition of Highway Asset Management

The definition of asset management adopted by Newcastle City Council (NCC) is that contained within the Highway Infrastructure Asset Management Guidance document as published by the Highway Maintenance Efficiency Programme and UK Road Liaison Group:

> *"Asset management has been widely accepted by central and local government as a means to deliver a more efficient and effective approach to management of highway infrastructure assets through longer term planning, ensuring that standards are defined and achievable for available budgets. It also supports making the case for funding and better communication with stakeholders, facilitating a greater understanding of the contribution highway infrastructure assets make to economic growth and the needs of local communities."*

Some key aspects of asset management are:

- **A Strategic Approach**

  Taking a longer-term view of how the authority manages its assets. Such a systematic approach may transcend annual budget cycles and are essential if NCC is to maximise the long-term benefits of the resources available.

- **Optimal Allocation of Resources**

  Local authorities have a statutory duty to pursue best value. Expenditure must be prioritised to ensure corporate objectives can be effectively delivered within budgetary constraints. Asset management assists this process by enabling the allocation of resources based upon assessed need.
  The use of lifecycle planning, the minimisation of whole life costs and decision making informed by an appreciation of risk and benefit are key asset management components that will help NCC allocate resources to where they are likely to provide the best long-term benefits.

- **The Expectations of Customers**

  The development of levels of service for each of the highway assets means that it is possible to explicitly take account of the needs and aspirations of service users.

1.2 Drivers for Highway Asset Management

There are many drivers for the implementation of a Highway Asset Management Plan (HAMP), which include:

- Evidence of strategic thinking and long term planning with regard to maintenance and management of the highway infrastructure
- Satisfactory explanation to stakeholders of a fair and reasonable way of allocating limited operational, maintenance and improvement resources

- The introduction of Whole of Government Accounts (WGA) and Resource Accounting and Budgeting (RAB), whereby local authorities are to be required to provide financial forecasting and valuation information to central government
- In order to meet both national and local outcomes as specified within the single outcome agreement
- Recommendations from the DfT to produce a TAMP, which may affect future funding allocations.

1.3 Newcastle City Council's Highway Asset Management Plan

The introduction of a fully developed asset management approach cannot be achieved overnight. Time is required to collect relevant asset data, to analyse both new and existing data, to consult upon the outcome and to modify management practices progressively, improving skills and performance.

This plan represents the second phase of this improvement process. Since the publication of the initial Highway Asset Management Plan, in 2006, NCC have made significant progress in implementing asset management practices and in undertaking the improvement actions identified in the initial Highway Asset Management Plan (HAMP).

This, Highway Asset Management Plan, the second for NCC, revises the HAMP document in view of the changes made in the intervening period, the current thinking on asset management practice and goes on to identify further improvements necessary in order to fully implement an asset management approach.

NCC's second Highway Asset Management Plan intended to cover a five year period from 2015. It contains a number of appendices which will be reviewed together with the plan on an annual basis. The appendices will be updated as necessary with the intention of fully redrafting the plan earlier than the five year period if any significant material changes to the plan are required.

1.4 Transport Asset Management

The development of the HAMP is seen by NCC as an integral part of the Transport Asset Management Plan that includes maintenance, operation, improvement and other non-highways related transportation matters.

Ongoing work within other English authorities has highlighted that the "Framework for highway asset management" published by the CSS that defines the scope of Highway Asset Management Plans (HAMPs) and provides guidance on how they might be developed and implemented does not fully represent current thinking and best practice. Guidance notes issued by the Department for Transport (DfT) for developing the 3rd generation Local Transport Plans (LTP3) required that councils report progress on the development of their Transport Asset Management Plans (TAMPs).

Work necessary for the effective maintenance of highway assets (the purpose of the HAMP) has an inevitable impact on the expeditious movement of traffic across the network (the purpose of the Network Management Plan). It is considered that by integrating these two documents together with other highway and non-highway related transportation matters under a Service Management Plan, NCC will have in place the essential ingredients of a TAMP.

The improvement actions identified within both the HAMP and the NMP combined with the information contained in an annual status and options report will feed into the improvement planning process and the outputs from this will then enable a co-ordinated programme of improvements across service areas rather than in isolation.

1.5 Goals and Objectives of the Highway Assets

1.5.1 Highway Asset Management Policy

Our asset management approach to highway maintenance enables greater value for money to be delivered by taking a long term view on investment decisions. This approach will maximise the benefits for future prosperity and quality of place by ensuring the right investments are made in the highway network at the right time.

As a highway authority we have a duty to maintain the highway, our Asset Management policy sets out how we will fulfil this duty. This policy meets the Councils Plan's. Following are the key priorities;

- **A Working City**

  We fully recognise the vital role the highway network has to play in Newcastle's economic vitality and will endeavour to maintain access to education, employment and local services. Improving the local environment by enhancing accessibility through improving the condition of the roads and pavement can help to stimulate the local regeneration and economy of local centres of employment (e.g. local shopping).

- **Decent Neighbourhoods**

  Our priority will be to provide a safe, well managed, maintained highway network for all who use it. Working with local communities and Ward Members we will help improve their local environment and create decent neighbourhoods. We will make a visible difference to road and pavement condition in important community areas.

- **Tackling Inequalities**

  Our asset management approach will focus on accessibility to ensure that communities are not prevented from reaching their full potential. We will improve roads and pavements that reflect the local needs to enable communities to overcome inequalities in accessibility, whilst taking into account the evidence of road and pavement condition. We will improve accessibility for older people and people with disabilities by improving pavements in areas heavily used by residents in those groups.

- **A Fit for Purpose Council**

  Our asset management approach will enable evidence based decisions to be made for the investment in the highway network. This systematic approach will ensure that a long term view is taken to ensure that the right decisions are made for the highway network.

1.5.2 Highway Asset Management Aims

In respect of the management of its assets the City aims:

- To ensure that their highway assets meet their service delivery needs in terms of their condition, suitability, sufficiency, cost, location, safety and their environmental impact.
- To protect the financial and environmental value of the assets used and to seek best value by striving for lower lifetime costs.
- To ensure compliance with relevant legislation and regulations affecting assets.
- To release assets that do not meet service delivery needs and reinvest the proceeds in the maintenance and modernisation of services.
- To maximise the benefits to Newcastle of the deployment of the Council's assets through working in partnership with other agencies, to develop community focussed solutions.

1.6 Strategic Document Framework

NCC has developed a strategic document framework that details the relationship between the various strategic documents within the council, how this relates to the highway asset management plan and is detailed in a Strategic Management Plan.

2. Asset Description

2.1 Highway Assets Covered

The highway network comprises a number of diverse assets and the principles of asset management are to be applied to all of these components within the groupings set out in the following table;

Table 2.1 – Newcastle City Council Highway Asset Groupings

Asset Group	Asset Elements
Carriageways	Carriageways, road gullies, road markings and street cleaning
Footways, Cycleways and Hard Verges	Footways, cycleways (dedicated and shared use), hard paved verges, footway gullies and street cleaning
Structures	Bridges, subways, culverts, retaining walls, high mast lighting columns, tunnels, stairs, river walls & revetments
Traffic Signals	Signalised junctions, pedestrian crossings, school crossing lights, SCOOT and UTC systems
Signs, Barriers and other Street Furniture	Advance direction signs, direction signs, warning signs, information signs, sign posts, street name plates, non-illuminated bollards, seats, council owned bus shelters, highway fences, pedestrian barriers, safety barriers, and other street furniture
Highway Green Spaces	Grass verges, trees, hedges, flower and shrub beds, and planters located within the highway
Highway Drainage	Piped drainage systems, manholes and gully connections to combined drains maintained by others
Street Lighting	Columns, lamps, cabling, feeder pillars, illuminated sign units, subway lights, illuminated bollards
Winter Maintenance	Salt storage areas, gritters and grit bins

2.2 The Size of the Asset

The amount of the assets managed by NCC are reviewed annually and detailed in the Annual Status and Options Report.

2.3 Assets Not Covered by this Plan

Assets that have been specifically excluded from this plan are;

1. Public Rights of Way

2. Private Roads

3. Private Bridges

4. Water related infrastructure other than structures that do not form part of the road network

2.4 Asset Growth

The size of the highway asset within Newcastle City (as reported to Government) has changed only slightly over the last 5 years.

The only notable growth has been the addition of approximately 16 Km (2%) of unclassified road. It is expected that this additional infrastructure will have only a minor effect on the long term maintenance funding requirements.

There are no expectations of significant asset growth over the next 5 years.

3.0 Community Requirements

3.1 Public Satisfaction Surveys

NCC regularly take part in local and national public satisfaction surveys, including the following;

- National Highways and Transportation (NHT) Public Satisfaction Survey
- Newcastle Residents Survey

The planned participation in surveys and results of the latest consultation exercises are shown in the Annual Status and Options Report.

3.1.1 National Highways and Transportation (NHT) Survey

Newcastle City Council regularly take part in local and national public satisfaction surveys for example the National Highways and Transportation (NHT) Public Satisfaction Survey and other surveys as required.

The NHT Public Satisfaction Survey is conducted by Ipsos Mori, with questionnaires sent to a minimum sample of 4,500 households in each participating local authority area.

This survey of adults in Newcastle aims to measure use of and satisfaction with a range of issues around roads, paths and public transport. Residents are asked about priorities in terms of spend on the highways and transport services councils provide. The survey looks at;

- **How satisfied the public is with our service?** *Taking everything into account, how satisfied or dissatisfied are you with your transport and highways service?*
- **Where our performance gaps are?** *Which road and transport services do you regard as most important and how satisfied are you with delivery of these services?*
- **How the public rate key aspects of service?** What do you think about local bus services, community transport, cycle routes and facilities, traffic levels and congestion, road safety, road and pavement condition, street lighting etc.?

3.1.2 Newcastle Residents Survey

The Residents Surveys are undertaken to monitor residents' perception of;

- The council and the services it provides
- Their views on the city
- Views on their local area

- Their quality of life

The Resident Survey is also used to provide monitoring information at ward level to contribute to ward plans and local indicators at city level.

3.2 Use of Consultation Results

The results of the consultation exercises are utilised to inform the strategic direction of the HAMP investment options and monitor performance of the services. However the lack of available funding has severely limited the benefits of the NHT survey whereas in the past improvements in condition would have been targeted it is now only possible to manage the continuing deterioration of the asset.

4.0 Future Demands

4.1 Traffic Growth

The Traffic section keeps records of traffic volumes from a number of permanent and temporary counter sites. The annual Status and Options Report shows the latest details of the 12 hour traffic flow figures from 1974 to date for both the inner and outer cordon, along with a breakdown of the classification of vehicles such as goods vehicles and motorcycles etc.

The figures show a steady increase in traffic flow through the 70's, 80's and 90's but this has tailed off over the last decade where there has been a slight decrease in traffic flows. It is anticipated that the existing traffic levels will remain in this region for the next 5 years.

4.2 Traffic Composition

The Annual Status Report shows the majority of traffic is composed of private cars (81%) this has remained consistent over the last 13 years. There has been a small increase in the amount of light goods vehicles using the City's roads and a slight reduction in the amount of heavy goods vehicles over this time. The figures also show an increase in the amount of pedal cycle traffic over the ten year period however this still only makes up 1% of the road traffic. It is anticipated that the traffic composition levels will remain in this region for the next 5 years

The present traffic composition is not expected to change substantially over the 5 year duration of this plan with the exception of pedal cycle traffic. This is anticipated to increase over the next 5 years due to the investment in the cycling infrastructure funded from the City Centre Cycling Ambition Fund.

4.3 Utility Activity

Utility activity can have a major effect on the maintenance and management of the highway assets, although not yet quantified, it is believed that there is a significant increase in the number of defects found following the disturbance of the carriageway or footway surface due to utilities. This is apparent even when the utility has reinstated the surface to the required standard.

All statutory undertakers are responsible for carrying out their own reinstatements although these may be contracted and/or sub-contracted to others. This can cause programming problems where different contractors are responsible for different aspects of the reinstatement.

At present the authority enforces a 2 year guarantee period on all re-instatements and 3 years for those entailing deep excavations.

The number of statutory undertaker openings undertaken within the last 5 years is detailed in the Annual Status and Options Report.

Utility works can also have an effect on the maintenance and management of electrical and drainage assets particularly buried cables or pipes, where they are damaged by the works, in some cases the damage to the council's apparatus goes unreported and is only found when problems occur.

Where statutory undertakers have caused damage to council assets it is NCC practice to endeavour to reclaim the costs of repair or replacement from the responsible party. However this is not always possible which results in an additional financial burden being placed upon the council.

4.4 Climate Change

NCC signed the Nottingham Declaration on Climate Change in September 2006 which effectively states that the Council accepts the evidence that the climate is changing and will have far reaching implications for the community of Newcastle.

In light of this NCC has committed to producing and implementing a climate change strategy and action plan, and have also prepared a Declaration on Climate Change which is now publicly available on the council's website.

NCC has developed a climate change strategy that details how the City Council is working to mitigate the production of greenhouse gases which cause climate change, (primarily CO2) and how the City Council is beginning to interpret the likely impacts of climate change and plan to adapt to these.

Highways and Local Services have identified a number of initiatives that will assist in the reduction of CO2 emissions, those that relate to the management of the highway infrastructure are detailed in Appendix B. Full details can be found in the departmental Climate Change Adaptation and Mitigation Response Programme.

Also included in the Climate Change Adaptation and Mitigation Response Programme are details of the possible effects that climate change may have on the maintenance requirements of the asset. A summary is shown in Appendix B.

Although a number of possible effects of climate change have been identified the extent to which any of these will come to pass is impossible to predict at this time. Flooding is considered a priority therefor an investment has been made available to mitigate against the effects of flooding. Investment decisions in other areas is impractical at the present time.

Continued monitoring of the progress of climate change and the effect that this is having on the built environment will enable the identification of any necessary changes and investment needed in advance of serious problems being incurred.

Material specifications will be in line with industry standards that are expected to develop over time to mitigate against the effects of climate change as predictions become more reliable. Mitigation measures will be considered at the design stage when implementing improvements and maintenance.

4.5 Changes in Legislation

At this time NCC have no knowledge of any proposed changes to legislation that may have an effect on the maintenance and management of the highway assets.

5.0 Asset Investment Strategies

In response to the issues reported in sections 1 to 4 NCC has developed a number of investment strategies for the major asset groups set out in the Annual Status and Options Report. These will be reviewed annually and updated as required.

The overall Investment in the highway asset in this plan is expected to reduce compared with previous levels of investment. Potential increases in Government funding for highways in future years may be offset by the efficiency savings Local Authorities are expected to make in response to reductions in general Government funding.

6.0 Service Standards

The service standards that users can expect from the councils road assets during this plan are shown in the Annual Status Report. The target levels for the plan period take account of the future demands in Section 4 and investment of the figures shown in section 5. The risks that may prevent these target figures being met are given in section 8.

6.1 Service Standard Targets

This plan is based upon targeting the delivery of specified service standards as shown in the Annual Status and Options Report.

7.0 Financial Summary

7.1 Highway Asset Valuation

The latest valuation of the transport asset is shown in the Annual Status Report.

7.2 Historical Expenditure and Predicted Future Funding

The Annual Status Report also details the historical spend on the maintenance of the highway assets. The predicted future funding levels needed to achieve the service standard targets shown in section 6 using the investment strategies set out in section 5 are reviewed regularly and produced in the Annual Status and Options report for each asset group.

Transport assets deteriorate slowly. The effect of changes in funding levels is not always immediately evident. To ensure that the councils decisions about funding acknowledge predicted future conditions the strategies in this plan have been compiled using 20 year predictions of condition. The 20 year period is designed to cover a reasonable number of replacement cycles for most of the assets. The predictions enable strategies to be created to look at the whole life cost of maintaining the asset.

Using long term predictions means that decisions about funding levels can be taken with due consideration of the future maintenance funding liabilities that are being created.

8.0 Risk Management

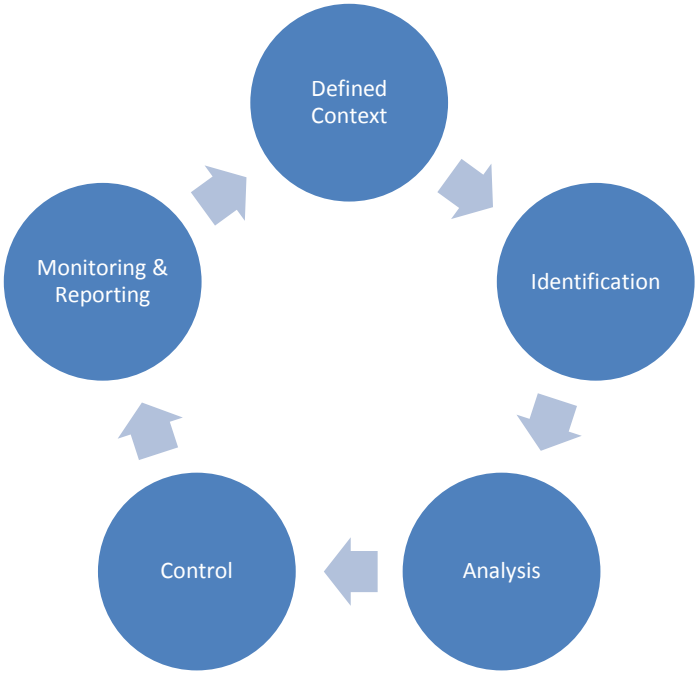
8.1 Risk Management Strategy

NCC has developed a corporate risk management strategy full details of which can be found on the Council's Intranet. The Council defines risk as;

'The impact of uncertainty on the achievement of its objectives and desired outcomes'.

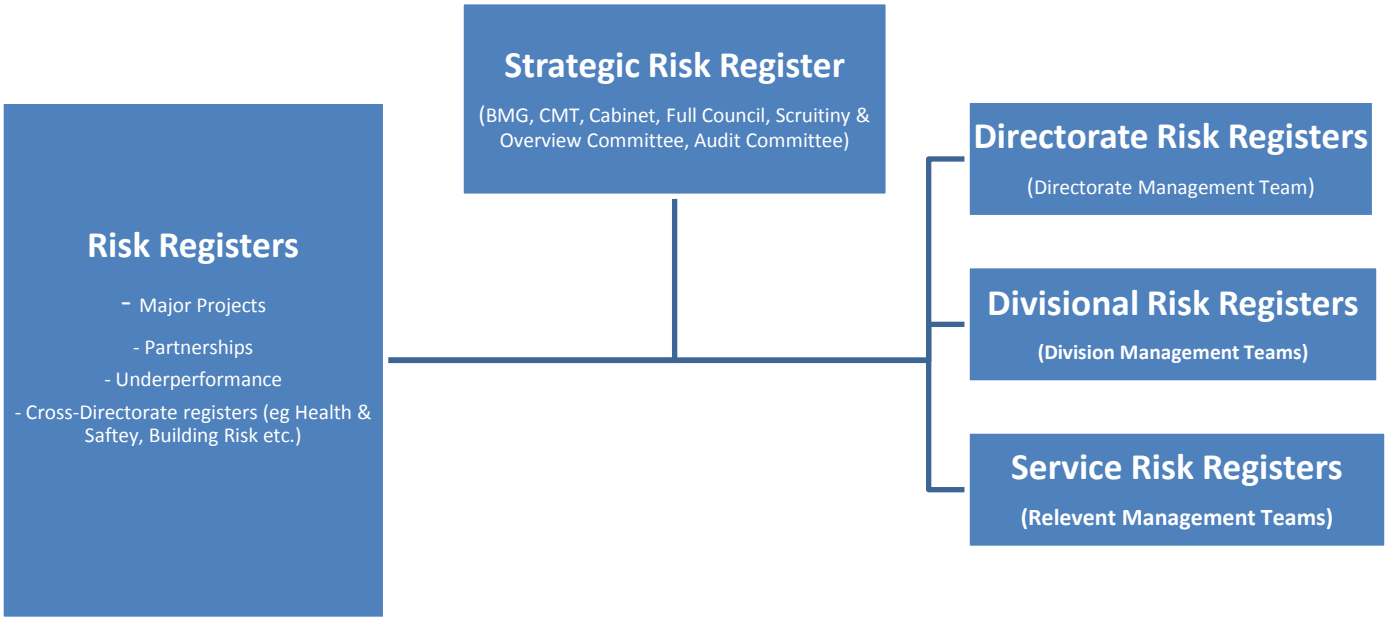
The key risk management process, outlined fully in the Council's Risk Management Toolkit, enables those involved to pragmatically assess what may affect their ability to achieve objectives through a continual process of risk identification, analysis, monitoring and control.

The risk management process, summarised below, is cyclical and has 5 stages which are carried out on a periodical basis and recorded in a Risk Register:



The information highlighted via the Risk Management process is captured on an electronic Risk Register. The majority of Risk Registers are updated on at least a quarterly basis by the relevant Management Team or more frequently as required, particularly in programmes and/or projects.

Significant risks which need to be escalated or made visible elsewhere in the Council are highlighted via the following routes;



* *reported at regular intervals or as appropriate*

Further detail on applying the Risk Management process is provided in the Risk Management Toolkit

Specific identified risks that relate to the highway asset management function can be found below .

8.2 Risks to This Plan

The risks that could prevent the achievement of the standards specified in this plan (section 6) are:

Plan Assumption	Risk	Action If Risk Occurs
The plan is based upon winters being normal	Adverse weather will create higher levels of detects and deterioration than have been allowed for.	Budgets and predictions will be revised and this plan updated if abnormally harsh winters occur.
Available budgets have been assumed as shown in section 7	External pressures mean that government reduce the funding available for highways	Target service standards will be revised to affordable levels
Construction inflation will remain at level similar to the last 5 years.	Construction inflation will increase the cost of works (particularly oil costs as they affect the cost of road surfacing materials)	Target service standards will be revised to affordable levels.
Levels of defect and deteriorate are based on current data which is limited for some assets (e.g. footways)	Assets deteriorate more rapidly than predicted and the investment required to meet targets is insufficient.	Split between planned and reactive maintenance budgets will be revised.
Resources are available to deliver the improvement actions	Pressures on resources mean that staff are not allocated to service improvement tasks such that the predicted benefits cannot be fully achieved	Target dates will be revised and reported.

9.0 Improvement Plan

9.1 Improvement Action Plan

An improvement action plan has been created to support this plan and is included in Appendix D.

9.2 Progress Reporting

An annual status and options report will be produced which will present a summary of the council's road assets as at the time of publication, it will;

1. detail the money spent on the asset
2. detail the amount of works undertaken for the money spent
3. describe the current condition of the asset
4. detail the service that the asset and a range of budgets are able to provide
5. present the options available for the future
6. report on the progress made in developing asset management practice against the milestones listed above

The report will complement the Highway Asset Management Plan (HAMP). It will provide information that will enable choices to be made about future levels of investment in the highway asset.