

Highway asset management policy - Revision 2018



Directorate: Development and Environment

1. Executive summary

A good Highway network is essential for a successful economy and society. It provides access to jobs, services and schools, gets goods to the shops and allows us to make the most of our free time. In North Somerset the gross replacement cost of the highway asset has been estimated to be over £2.3 billion.

We have one of the lowest highway spends in the country, yet surveys show our carriageway condition is good compared to other authorities. This position has been achieved by revising our approach to highways maintenance to maximise value:

- Moving from reactive to proactive work
- Continuing to move away from “worst first” towards a “whole life” approach

The asset management whole life approach we already use has the same effect as an additional £1m annual investment compared to using the worst first approach.

Our changing approach has been validated by the May 2011 Audit Commission report “[Going the Distance](#)”, the Highways Management Efficiency Programme report in April 2012 “[Prevention and a Better Cure](#)” and the May 2013 Highways Management Efficiency Programme document “[Highway Infrastructure Asset Management Guidance](#)”.

At North Somerset Council “*quality places*” is one of our 3 aims. This is set out in a vision which promotes an environment which strives to look for new ways of working and continuous improvement.

The Highways and Transport service have identified our overall purpose as “To facilitate the safe and expedient movement of people and goods”. In a wide ranging service asset management is at the core.

To support this priority we undertake to proactively manage our highway assets in a safe, efficient and sustainable way. We will deliver a service which treats all road users in a consistent, fair and transparent manner in accordance with published strategies and plans. **Our key objective is to *arrest the deterioration of the network whilst implementing an asset management approach.***

This in turn is supported by our [Joint Local Transport Plan](#) where one of four supporting indicators is: “Maintenance – roads... where maintenance should be considered”.



2. Introduction

The highway network is almost certainly the most valuable asset managed by any local authority, and the asset used most extensively by the whole community. The replacement cost of our highway asset has been estimated at over £2.3 billion.

A good transport network is essential for a successful economy and society. It provides access to jobs, services and schools, gets goods to the shops and allows us to make the most of our free time. Local roads are the primary element of the transport network and play a key role in delivering the services people want and need. In order to fulfil its potential, it is crucial that our local highway network is adequately maintained.

Continuing growth in traffic and its attendant problems has brought an increasingly widespread recognition of the importance of highway maintenance and the high value placed on it both by users and the wider community. Conversely, public concern is increasing about the failure to invest adequately and effectively in highway maintenance and the implications for safety and journey reliability which can be seen from recent NHT public satisfaction surveys.

2.1 Current status

We have one of the lowest highway spends in the country, yet condition surveys indicate our carriageway condition is good compared to other West of England authorities and authorities nationally. We have achieved this position by revising our approach to highways maintenance to maximise value:

- moving from reactive to proactive work, spending money on improvements not on failure demand
- continuing to move away from a “worst first” towards a “whole life” approach

Our changing approach has been validated by the May 2011 Audit Commission report [“Going the Distance”](#), the Highways Management Efficiency Programme report in April 2012 [“Prevention and a Better Cure”](#) and the May 2013 Highways Management Efficiency Programme document [“Highway Infrastructure Asset Management Guidance”](#).

Despite this good work, above average expectations from residents in North Somerset¹ means that satisfaction rates recorded by the NHT surveys are not as good as we would like and there is a need to further improve our service delivery and network condition.

¹ NHT Survey 2016, “Q1. How important, if at all, do you consider Highway Maintenance” rated this very or fairly important NSC Scored 96 compared to Unitary Average of 95.1



Based on our revised approach, investment in the highway network was increased over five years to address the backlog.

3. Background

3.1 Joint Transport Asset Management Plan (JTAMP)

In 2008 we joined with Bristol City (BCC), South Gloucestershire (SGC) and Bath and North East Somerset (BaNES) Council's to create a JTAMP. This built on our previous relationships creating a Joint LTP and sharing resources with BaNES when re-issuing the term maintenance contract.

The JTAMP team produced the last revision in [December 2011](#). We are continuing to work together to deliver transport investment through the West of England Local Enterprise Partnership.

3.2 South West Survey Consortium

In 2012 we joined other south west highway authorities in the South West Survey Consortium. This consortium shares the costs involved in procuring condition surveys and creates a forum for sharing best practice and innovation.

The consortium's efficiencies has enabled us to extend the collection of condition data well beyond the national minimum requirements (see section 5.1) and has provided video images during the surveys without increasing the overall costs of surveying.

A key piece of work that the consortium has completed is to review unclassified/ lower hierarchy C roads data to develop a weighting set for unclassified roads. This is necessary to allow proper comparison between roads and will enable consistent reporting of condition data on unclassified roads. As this work is shared across the region direct comparison with adjacent highway authorities will be possible, where if we did this independently it would not.

3.3 Investment strategy

In 2011 we commissioned a review of our highway budgets. This review quantified the funding needed to achieve a variety of outcomes: from managed decline to reducing the backlog within a year. In 2014 we renewed this work, the headlines from this review showed that:

- to maintain a steady state of network condition will require annual funding of approximately £6.2m, a £2m increase over current levels and £0.9m increase since 2011.



- the current backlog is aprox £47.2m and even if this was removed we would require £4.1m per year to maintain a steady state of network condition.
- current funding levels will see a significant decline in measured condition over 10 years

Using this information we recognised that aiming to reduce the backlog remains unrealistic, set the objective to *arrest the deterioration of the network* and continued our strategy to achieve this objective. While developing this strategy we identified that the asset management principles of early intervention and a whole life approach were critical in achieving this.

We developed the original investment strategy during 2012/13, this built on the work already done to justify targeted investment into the network. The strategy identified that the asset management whole life approach we already use has the same effect as an additional £1m annual investment compared to the worst first approach. The 2014 review shows the continued validity of the approach.

In 2013 we took initial steps by maintaining an annual £1m investment from our capital fund and increasing revenue funding by £200k target at early intervention for 2014/15. With an increase in LTP funds for highway maintenance our backlog of repairs have been reduced so as now that our annual capital investment can be slowly reduced.

Through 2013 we worked to increase understanding and acceptance of the investment strategy and the asset management approach throughout the council. Moving away from a worst first approach can be counterintuitive, but we received good support from Senior Managers and Local Members. Focus has now turned towards improving public understanding, with an initial description in the welcome to February 2014's '[North Somerset Life](#)' (see page 3).

In 2015 the Council has further demonstrated its support of an asset management approach to highway maintenance by increasing its planned capital expenditure in the MTFP by £1.5M for the next 3.

3.4 Other improvements

Alongside the investment strategy we have been carrying out other work to improve our asset management practices. The highway service has been restructured and in 2011 an Asset Manager was appointed, followed in 2014 by an Asset Management Engineer. This



additional resource has improved our ability to implement asset management principles and deliver the required efficiencies.

In 2013, having identified that the network hierarchy in use was insufficient, we started a project to review the network hierarchy. Previously the network was broken down into A, B, C class and unclassified with the only other distinction being those roads which are part of the Primary Route Network and those which are not. The objective of the review is to increase the number of levels within the hierarchy to allow systematic prioritisation within and between each class. This is particularly useful with c-class and unclassified roads where some quiet rural c-class roads are seen as requiring less priority than other busy urban unclassified roads. This work has progressed well and the new hierarchy was introduced during 2015.

4. Policy

North Somerset Council recognises that a good transport network is essential for a thriving local community and a successful economy. Our roads are a key element of this network and provide access for local residents and businesses, and visitors to jobs, services, schools and shops. Well maintained roads and footways are important for all users including private and public transport, pedestrians and cyclists.

North Somerset believes that an effective asset management strategy is core to making the best use of its highway maintenance budget and help deliver the best long term outcomes for its local communities by contributing to the delivery of the Aims in the corporate plan:-

- Prosperity and opportunity
- Health and wellbeing
- Quality places

These aims link to key shared priorities in North Somerset Partnerships Sustainable Community Strategy and the Council's Asset Management Strategy will seek to:-

Developing Strong Inclusive Communities

We aspire to all our residents being satisfied with their local area and having access to a full range of essential facilities and services. A comprehensive asset management strategy will allow us to continue to understand the needs of our communities and maintain our roads in a cost effective manner whilst maintaining an affordable council tax.

Developing a Prosperous Economy and Enterprising Community



North Somerset considers that a comprehensive transport network is essential to support economic vitality and thereby increase employment in the area. It allows businesses to thrive encouraging further investment, and contributes to North Somerset being a place where people want to live or visit. We will identify the need for new infrastructure to achieve this and our asset management strategy is essential to help make well informed, long term, sustainable decisions for an effectively maintained highway network.

Ensuring Safer Communities

An effective asset management strategy will support our road safety programme and help reduce the number of road traffic accidents. A well maintained highway network will assist vulnerable users accessing services and encourage residents to walk and cycle more, leading to healthier living.

Living Within Environmental Limits

North Somerset recognises the need to minimise waste and reduce the amount of material taken to landfill. An asset management strategy will help achieve this by making the most appropriate and sustainable intervention at the right time and making the most efficient use of our assets. Maintaining our highways in a more effective manner will make the best use of constrained budgets and will support the use of more sustainable forms of transport, such as walking, cycling and public transport.

5. Approach

To deliver the asset management approach we have developed an asset management strategy to document our existing good practice and provide a structure for areas where we need to improve.

5.1 Carriageway condition surveys

Highway authorities are required to carry out condition surveys on the classified network at set frequencies. We have taken the decision to increase the required frequency such that every road is surveyed every year with directions reversed on alternate years to ensure no data is greater than two years old.

We have taken a further step to, where possible, carry out mechanised surveys on all public adopted highway such that each unclassified road is surveyed in at least one direction at least every other year. Where it is not practical to undertake these surveys using Mini Scanner or MRM, visual surveys are used; this is currently only on 20% of the network and we are trying to reduce this further.

The decision has been made to move away from visual surveys towards mechanised surveys to maximise consistency and repeatability. With slightly lower costs there is also



efficiency in using mechanised surveys. Working with other southwest highway authorities we have developed a weighting set for this revised approach (see section 3.2).

5.2 Scheme identification

Following the asset management approach we have moved away from worst first scheme selection and now use a more refined approach. While the initial phase does indeed look for sections which are below a threshold condition, this threshold is much higher than previously, generating a much larger number of potential schemes.

Each potential scheme is automatically given a suggested maintenance treatment based on the survey data; we then verify this through site investigation and make changes where necessary. Having verified the maintenance treatment we add budget estimates and are ready to prioritise the list.

5.3 Scheme prioritisation

Our prioritisation uses a variety of factors, and the range of data sources used will be increased to take account of further factors such as corporate priorities identified by the Executive, customer feedback, recent maintenance costs and rate of deterioration.

At present our prioritisation looks at:

- The extent of the road which is at or below a threshold condition. This increases the priority of schemes which have a greater proportion in poor condition and is the historic worst first approach.
- The range of condition within an identified scheme. This adds weight for schemes which aren't below the threshold condition, but which are nearing this condition.
- The breakdown of the condition, looking at rutting, cracking, longitudinal profile and texture individually. The weighting attributed to each measure is different on different road classifications and is varied to match our service objectives.
- On A and B Roads the skid resistance as measured by SCRIM surveys. This introduces a measure to prioritise schemes which have safety defects. We cannot use this weighting on other roads as we do not collect the data.
- A calculated benefit cost ratio. This includes scheme costs and life expectancy in a manner which will prioritise low cost intervention over high cost intervention and long life intervention over short life intervention.
- Balancing priorities across different road classes

Our prioritisation weighting sets are not static and will be refined through use to maximise effectiveness and value for money. Further refinements will also be made as the hierarchy project is implemented.



We recognise that because of the comparatively poor condition of parts of our road network it is very susceptible to adverse weather and in some locations its condition can deteriorate rapidly, and this will not have been identified by previous condition surveys which are at least 12 months old. Therefore, we will ring fence 5% of the annual budget for permanent repairs identified in-year.

5.4 Scheme selection

Having prioritised the list we select schemes for the three year programme based on that prioritisation. However there are further refinements to be made to ensure that our draft programme is effective, deliverable and meets the objectives of asset management.

- We specifically identify additional early intervention schemes funded from the increase in revenue budget.
- We coordinate with other transport priorities in the area, such as corporate priorities identified by the Executive, casualty reduction or cycle improvements to deliver multiple or coordinated schemes in the same location together (this is being moved to an earlier phase in the prioritisation process).
- We coordinate with utilities through HAUC to manage the disruption to road users.
- We ensure that our contractors are capable of delivering the programme, this is specifically important with an increase in the quantity of weather dependant work.

5.5 Reactive maintenance

While reducing the need for reactive works through proactive intervention, improvements are still being made to reactive processes. Materials, maintenance techniques and works management are all areas where improvements are being investigated. For example the use of Smart Gangs to carry out permanent pothole repairs on the first visit has been a change in approach that achieves the repair in a more efficient and long lasting way.

6. Asset management data

In addition to the extensive history of condition data used to identify, select and prioritise schemes we have a significant quantity of other data and are working to realise the potential of that data to support our asset management objectives.

- In addition to the commissioned condition surveys Area Officers carry out regular routine safety inspections on the network. The results of these inspections are recorded within our asset management database, including a history of maintenance activities.
- One of the main reasons for the public to contact us is to raise concerns about the condition of the highway. The records of these contacts and resulting actions contain a wealth of information which we can access. Whilst relying too heavily on



this data can lead back to the historic worst first approach, carefully managed, the data can be used to verify and fine tune our prioritisation process.

- In 2009 we commissioned a detailed asset collection survey which populated our asset management database with information on a number of asset types. We are still working to maximise the effective use of this data.

6.1 Highways laboratory

We have an in-house highways laboratory which manages site investigation coring and material testing. The capacity of the laboratory is being developed with accreditation for new tests achieved and further plans for greater integration into our core highway service. This will increase the quality control of new surfacing others as well as our own works and technical knowledge readily available during all stages of scheme identification and implementation.

7. Review

This policy will be reviewed annually as part of our commitment to continuous improvement.

Council documents can be made available in large print, audio, easy read and other formats. Documents on our website can also be emailed to you as plain text files. Help is also available for people who require council information in languages other than English. For more information contact: 01934 888888 or see www.n-somerset.gov.uk