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Northumberland
County Council

COMMITTEE: **COMMUNITIES AND PLACE OVERVIEW AND SCRUTINY**

DATE: 25TH JULY 2018

IMPLEMENTATION OF THE REVISED HIGHWAY MAINTENANCE CODE OF PRACTICE, "WELL-MANAGED HIGHWAY INFRASTRUCTURE" : ASSET PERFORMANCE AND FINANCIAL MANAGEMENT, PRIORITIES AND PROGRAMME.

Report of Interim Executive Director of Place: Paul Johnston

Cabinet Member for Environment and Local Services: Councillor Glen Sanderson

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Purpose of Report

This report is the fifth in a series of reports updating the Committee of progress in developing and documenting the County Council's response to the revised Highway Maintenance Code of Practice 'Well-Managed Highway Infrastructure' (revised Code).

This particular report provides an overview of issues relating to performance management and financial management arrangements including how our programmes are developed and prioritised.

Recommendations

It is recommended that the Committee note the content of the report and comment on the improvement actions to be included in the revised Transport Asset Management Plan (TAMP) and whether the Committee feel that these, together with the current approaches described in the report, adequately meet the requirements of recommendations 26 to 31 within the revised Code.

Link to Corporate Plan

This report is relevant to the following priorities included in the NCC Corporate Plan 2018/2021
How - "We want to be efficient, open and work for everyone"
Living - "We want you to feel safe, healthy and cared for"
Enjoying - "We want you to love where you live"
Connecting - "We want you to have access to the things you need"

Key issues

This report is the fifth in a series of reports updating the Committee of progress in developing and documenting the County Council's response to the revised Highway

Maintenance Code of Practice 'Well-Managed Highway Infrastructure' (revised Code) and covers 6 recommendations that focus on performance and financial management.

We carry out performance management by gathering significant amounts of data relating to highway assets and using that data to help us make decisions about managing the network.

For our carriageways we operate an accredited Pavement Management System (PMS) based on the national standard known as United Kingdom Pavement Management System (UKPMS). This system has been developed to analyse the network condition and support development of work programmes.

We have been inspecting our bridges and monitoring their condition for over 50 years and in 2005 when the previous Code of Practice was launched we implemented Bridge Condition Indicators (BCI).

We also carry out a significant amount of benchmarking to enable us to understand how we and our assets are performing in comparison to regional colleagues, as well as at a national level. We have subscribed to the National Highways and Transport Public Satisfaction Survey (NHT) since its inception in 2008.

This performance and benchmarking data is then used to inform life cycle planning and prioritisation decisions that help the development programmes for maintaining the network.

The County Council works on a four year medium term financial plan (MTFP) which is refined and approved each year at the February Full Council budget meeting. Both revenue and capital funding are included in this budget setting process and for highways we also use the DfT's 6 year LTP settlement to help determine future funding scenarios.

In order to ensure that we make the best use of the available funding from DfT we use life cycle planning. This helps us to demonstrate that maintenance interventions meet our statutory obligations and provide value for money over the whole life of an asset, whilst delivering the priorities in the Council's Corporate Plan and our LTP.

The Council considers its priorities through the development of its 4 year Corporate Plan which service departments translate into their annual service statements. Our works programmes are developed on an ongoing basis to deliver statutory responsibilities and corporate priorities.

For sometime we have been prioritising planned work over reactive work. This approach provides a more robust way of dealing with long term improvement to the network and has also helped us to manage reductions to our revenue budget over the last ten years, which have been necessary in order for the Council to achieve the significant revenue savings it has faced since local government re-organisation in 2009 and the subsequent period of austerity.

The Committee are requested to comment on the improvement actions to be included in the revised TAMP (detailed on Page 15 of the report) and whether the Committee feel that these together with the current approaches described in the report adequately meet the requirements of recommendations 26 to 31 within the revised Code.

Background

This report is the fifth in a series of reports updating the Committee of progress in developing and documenting the County Council's response to the revised Highway Maintenance Code of Practice 'Well-Managed Highway Infrastructure' (revised Code). This will culminate with the production of a revised Transport Asset Management Policy and Strategy document and a report to Cabinet on 9th October 2018 detailing the Council's response to the 36 recommendations in the revised Code.

Within the revised Code there are six recommendations that are relevant to this report, two relating to asset performance and four relating to financial management, including priorities and programming.

To support our asset management processes we carry out performance management by gathering significant amounts of data relating to highway assets, this includes user satisfaction/customer feedback information from highway users. That data is then used to help us make financial decisions regarding whole life costing, priorities and opportunities to bid for additional funding.

ASSET PERFORMANCE

Recommendation 26 - **Performance Management Framework**
"*A performance management framework should be developed that is clear and accessible to stakeholders as appropriate and supports the asset management strategy."*
Recommendation 27 - Performance Monitoring
"The performance of the Asset Management Framework should be monitored and reported. It should be reviewed regularly by decision makers and when appropriate, improvement actions taken."

We have undertaken performance management since the late 1990's when Best Value indicators were introduced nationally as a basis for highway maintenance capital funding allocations. The current funding allocation methodology is discussed later in this report.

Setting and measuring performance levels is important to our asset management process as it:

1. Ensures linkages between the corporate plan, asset management strategy, levels of service and maintenance operations.
2. Provides a systematic approach to measuring progress of our asset management strategy against our levels of service and service standards.
3. Allows decision making about how funding will be used to deliver the levels of service and service standards.
4. Facilitates communication with stakeholders by demonstrating performance against their requirements.
5. Helps to demonstrate any issues caused by the amount of funding that is available.

Data is captured on performance scorecards which cover everything from highway asset condition and pothole responses to customer satisfaction. Some data is collected monthly whilst other data, such as overall condition data and public satisfaction surveys, is collected annually. The performance scorecards are evaluated on a monthly basis and this helps to guide future decisions regarding service delivery.

We also carry out a significant amount of benchmarking to enable us to understand how we and our assets are performing in comparison to regional colleagues, as well as at a national level. The key source of data being the National Highways and Transport Public Satisfaction Survey (NHT) which we have undertaken since 2008.

Key performance indicators from the Service Plan are also reported at a corporate level on the Corporate Performance system which enables Senior Managers, Elected Members and the public to view the most recent and historic performance. This is publically available at
http://performance.northumberland.gov.uk/LevelTwo/default.aspx?GroupID=29

For each of our key assets, such as carriageways, condition monitoring is carried out in accordance with our local needs as well as being based on national reporting rules and parameters. A list of our asset groups is attached as Appendix 1.

Performance Management for Key Asset Groups

Carriageways

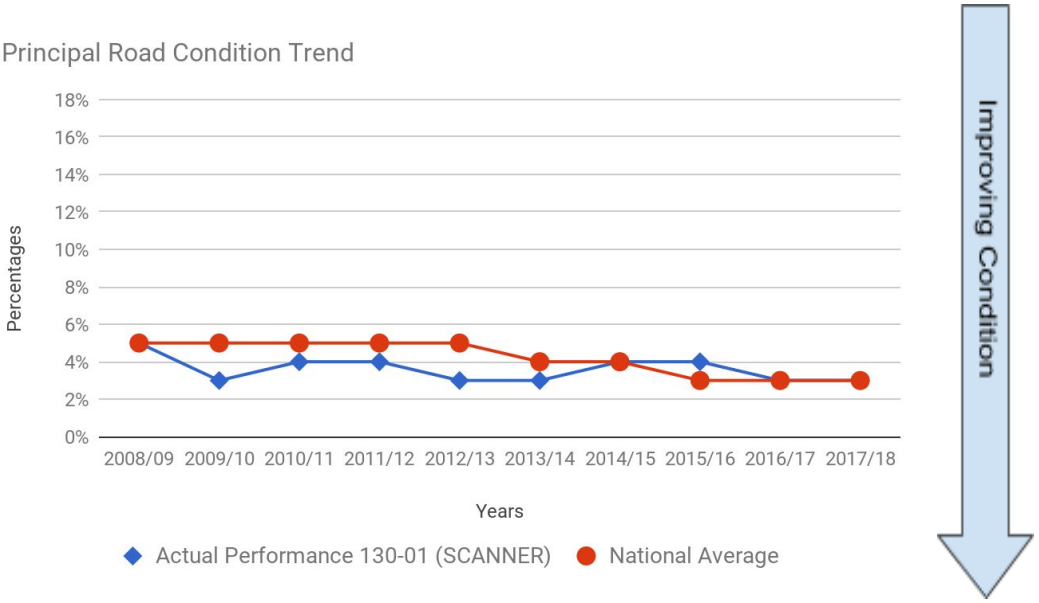
Northumberland operates an accredited Pavement Management System (PMS) based on the national standard known as United Kingdom Pavement Management System (UKPMS) that has been developed to analyse the network condition of road carriageways.

The UKPMS holds a map based representation of the road network which provides the framework against which all data is held e.g. inventory including length, width, construction details, maintenance treatment history, location of individual assets such as kerbs, gullies, signs, road markings etc. and condition data.

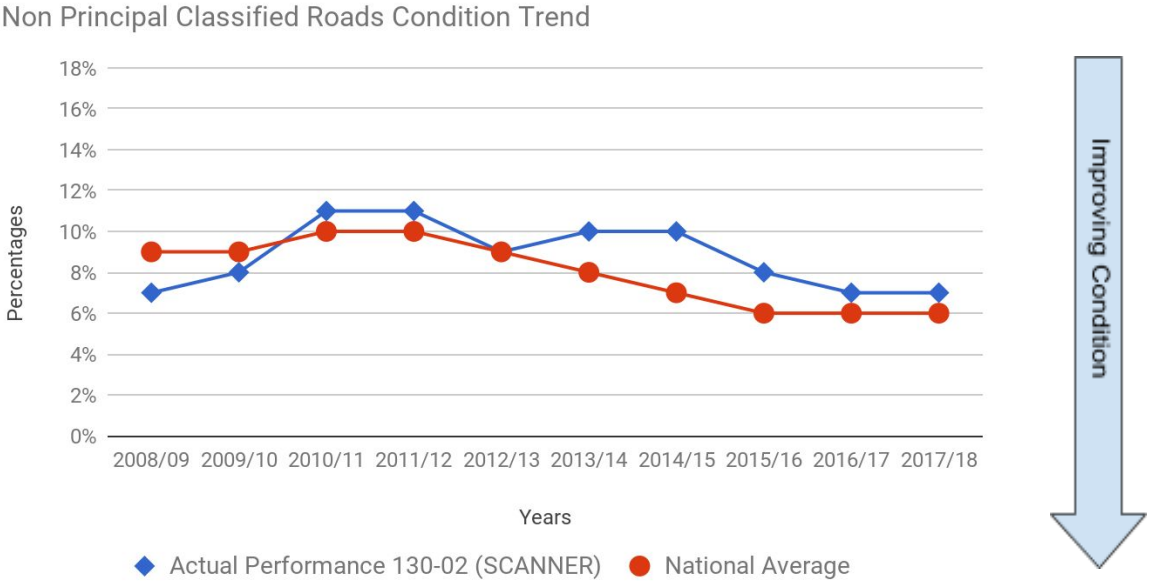
A system of rules and parameters for each road class provide a benchmark condition against which the actual condition data is compared. UKPMS provides a condition index for each 10 metre section of road, the higher the number, the worse the condition. Alongside this it also recommends a method of repair, known as the maintenance treatment, that if applied will improve the condition of the section of road.

Condition surveys are carried out using an accredited SCANNER survey vehicle to assess the surface condition of the classified ‘A’, ‘B’ and ‘C’ road networks. In line with national reporting standards we carry out surveys of all the A and B road network in one direction each year (50%) and half of the C road network in one direction (25%) on an annual basis. This means that single-year variances must be treated with caution as we are not measuring the condition of the same roads every year and therefore it is better to monitor trends over a longer period to give a more reliable view.

The condition of our classified network over the past 10 years is shown in the graphs below. The graphs show the percentage of our network where maintenance should be considered and therefore a higher number represents a poorer network condition. The 2017/18 figure is 3%, which is in line with the national average. It should be noted that 2017/18 data was collected in August 2017 before the 17/18 winter period.



Across Northumberland our principal roads, A roads, have seen a gradual improvement over the reporting period and, within the expected tolerances, the condition is comparable with the national average.

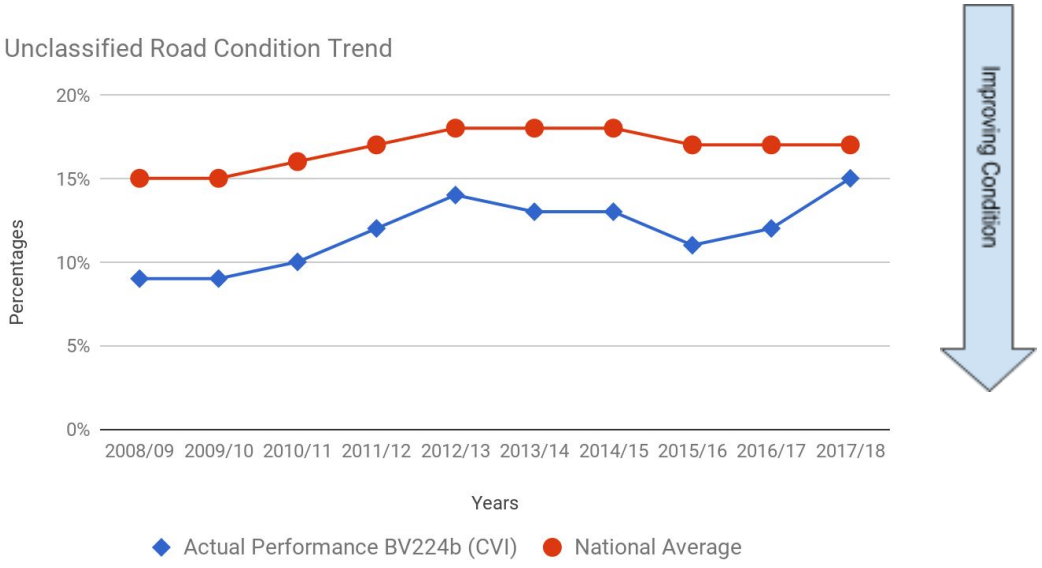


For our B and C roads we saw the condition worsen after the extreme snow falls of winter 2010/11 with a peak level of 11%. Since then their overall condition has improved and remained static at 7% over the last two years. Again, within anticipated tolerances our performance is comparable with national condition at 6%. For the latest published national information on road condition in England click here.

It should be noted that 2017/18 data was collected in May 2017 before the 17/18 winter period and that as all roads are not surveyed each year there may be lags in change in condition shown by the indicator.

Whilst the collection of condition data and its analysis for unclassified roads is no longer compulsory we have maintained this activity so that we can continue to proactively manage this element of the network. Unclassified roads make up approximately half of our network and by virtue of its historic evolution it is the most likely to suffer from a rapid decline in condition due to periods of extreme weather.

We record the condition of our unclassified road network by carrying out Coarse Visual Inspections (CVI) that are carried out by an accredited officer from a slow moving vehicle and cover the full width of the road, defects are recorded on a hand-held device. Surveys are carried out on a four year cycle with 25% of the unclassified network surveyed each year. As with the classified network this means that single-year variances must be treated with caution as we are not measuring the condition of the same roads every year and therefore it is better to monitor trends over a longer period to give a more reliable view.

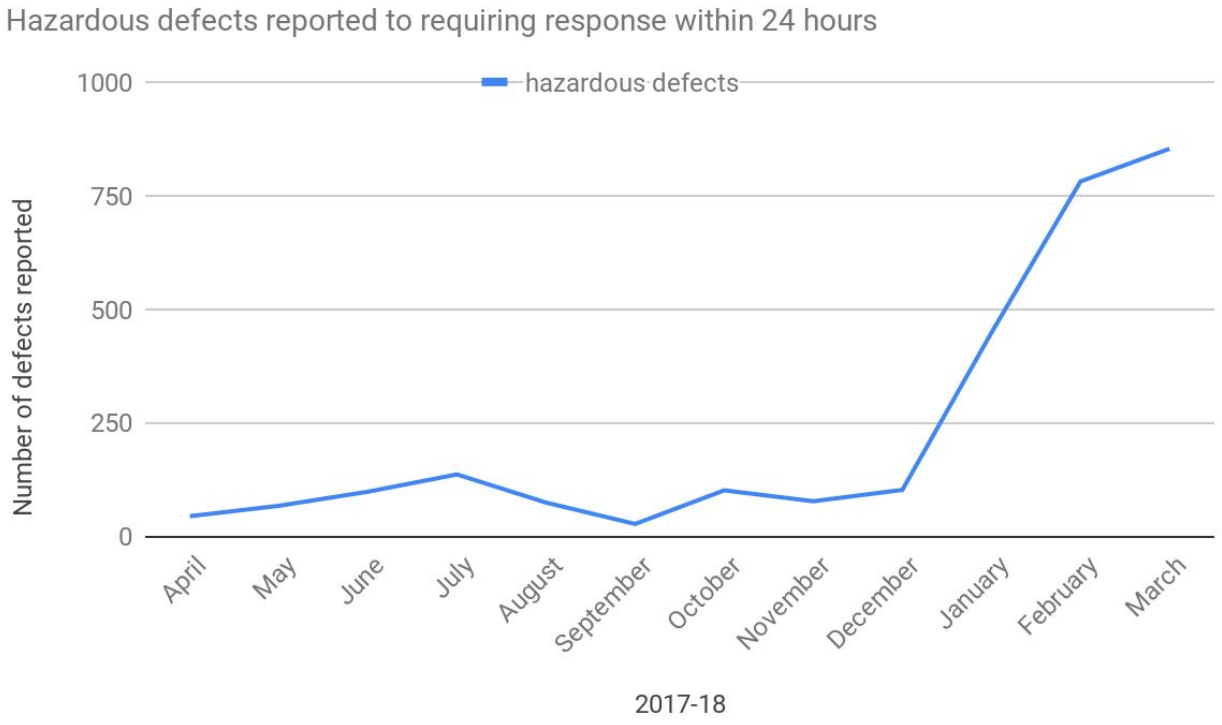


In line with national condition we have seen a deterioration on these roads over the past few years and this could be attributed to the severe floods of summer 2012 and winter 2015/16. As explained earlier, the reported figures are compiled from data from 4 years of surveys, if we look at data from only the 2017 survey the proportion of unclassified roads requiring maintenance would increase from 15% (4 year average) to 25% (last year's data).

The unclassified road network forms around half of our network and therefore a drop in condition is a matter of concern.

Alongside the condition data discussed above, we collect data about potholes and defects that are reported by members of the public and from inspection. We also collect performance data relating to insurance claims to help us monitor where such issues are occurring and their frequency. We are normally able to meet our targets for defect repair times, but in times of significant deterioration, such as the recent winter period, the timescale to repair the increased number of defects can increase and performance results can be lower than our target.

Although, there is no direct correlation between the condition survey data described above and pothole figures, the graph below illustrates the impact an extreme weather event has on the network, with the number of hazardous defects reported as requiring response within 24 hours increasing significantly during the harsh winter months in early 2018.



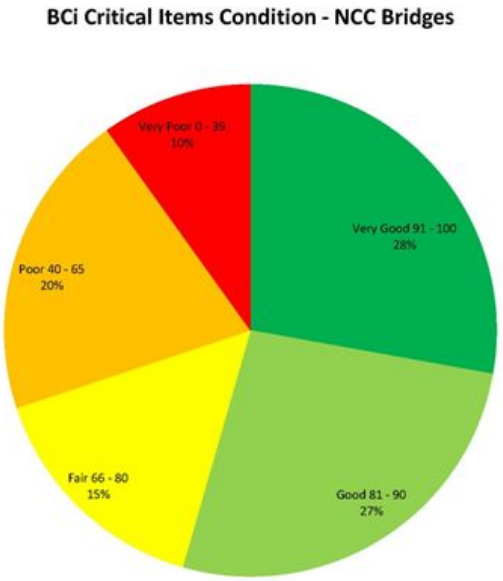
Structures, including bridges, culverts, fords and retaining walls

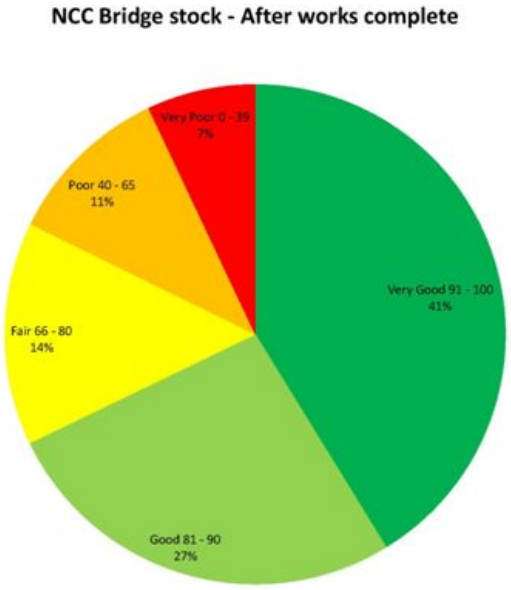
We have been inspecting our bridges and monitoring their condition for over 50 years and in 2005 when the previous Code of Practice was launched we implemented Bridge Condition Indicators (BCI). These indicators measure the condition of every element of a structure and identify which element is critical to the bridge's structural performance. Each structure is given a score ranging from '0 - very poor' up to '100 - very good'. The indicators for each structure are then amalgamated to provide an overview of the bridge stock condition. Since we started monitoring BCIs in Northumberland the average condition has remained static in the region of 80%.

Since the 1990s we have carried out structural assessments on all of our bridges to ensure that they are capable of carrying the traffic that uses them. Those structures that are not up to standard are put on our Interim Measures programme and inspected on a more frequent basis to monitor performance until funds become available to strengthen the

structure or implement a weight restriction. 84 bridges are currently under interim measures, which has shown a decrease over time.

In 2012 the Council invested in a management information system,‘BridgeStation’ as a complete asset management tool for bridges and highway structures. BridgeStation combines asset management, performance management and prioritisation functions.This system allows a great number of scenarios to be investigated and the optimum solutions to be identified. Lifecycle and performance evidence from BridgeStation was used in 2015 to demonstrate that current funding was not sufficient to maintain our masonry arches and to successfully secure an additional £6.7m of DfT Challenge Fund / Corporate capital for our Masonry Arch Refurbishment Programme (MARP).The following charts indicate the actual condition of the overall bridge stock before the MARP works were carried out and the predicted condition when works are completed.





Footways and Cycleways

We use the national standard survey for measuring the condition and performance of these assets, called the Footway Network Survey (FNS). It provides data needed to assess and target maintenance schemes or to identify where more detailed investigations are needed, as well as supporting accurate reporting of the condition and value of the footway asset.

The FNS survey is used as a network condition tool to identify where more detailed information may be required to support and validate treatment decisions and scheme identification. Work began in September 2015 on delivering the surveys which are carried out by our own trained officer.

The officer reports the condition of the footway in one of four condition levels:
1. As new
2. Aesthetically impaired
3. Functionally impaired
4. Structurally unsound

With current resources we can only survey a small proportion of the network, approximately 65 km on an annual basis which equates to 3% of the footway network.To help supplement this survey and provide better performance data we are moving towards a position where highway inspectors will also record their assessment of footway general condition after carrying out their safety inspections.

The information that has been collected to date shows that approximately 10% of the network surveyed since 2015 is either structurally unsound or functionally impaired and this data has been used to help prioritise footway repair schemes.

Street Lighting

For our street lighting asset we know the age and structural condition of our columns and monitor the number of faults that we receive and the time taken to fix them. The Mayrise system holds the inventory of all elements of the lantern, column and electrical testing. This data was used to successfully secure the corporate capital for the street lighting replacement programme which is both converting all lanterns to new LED lanterns and also replacing all of the older columns. Whilst improving the condition of our street lighting stock this programme will also provide a significant reduction in electricity costs and maintenance for the authority. Performance data on street lighting faults is collected and analysed. Once the current project is complete work will re-commence on routine data gathering analysis on asset condition.

Public Satisfaction and Perspectives

To support the technical data that we gather on the condition and performance of the network we have also subscribed to the National Highway and Transport Survey (NHT) since it was introduced in 2008. The NHT Survey collects public perspectives on, and satisfaction with, Highway and Transport Services and provides a unique, standardised, collaboration between Highway Authorities across the UK. This enables us to get the best

use out of comparison, knowledge sharing, and the potential to improve efficiencies by the sharing of good practice. Being a longstanding member of the NHT gives us:

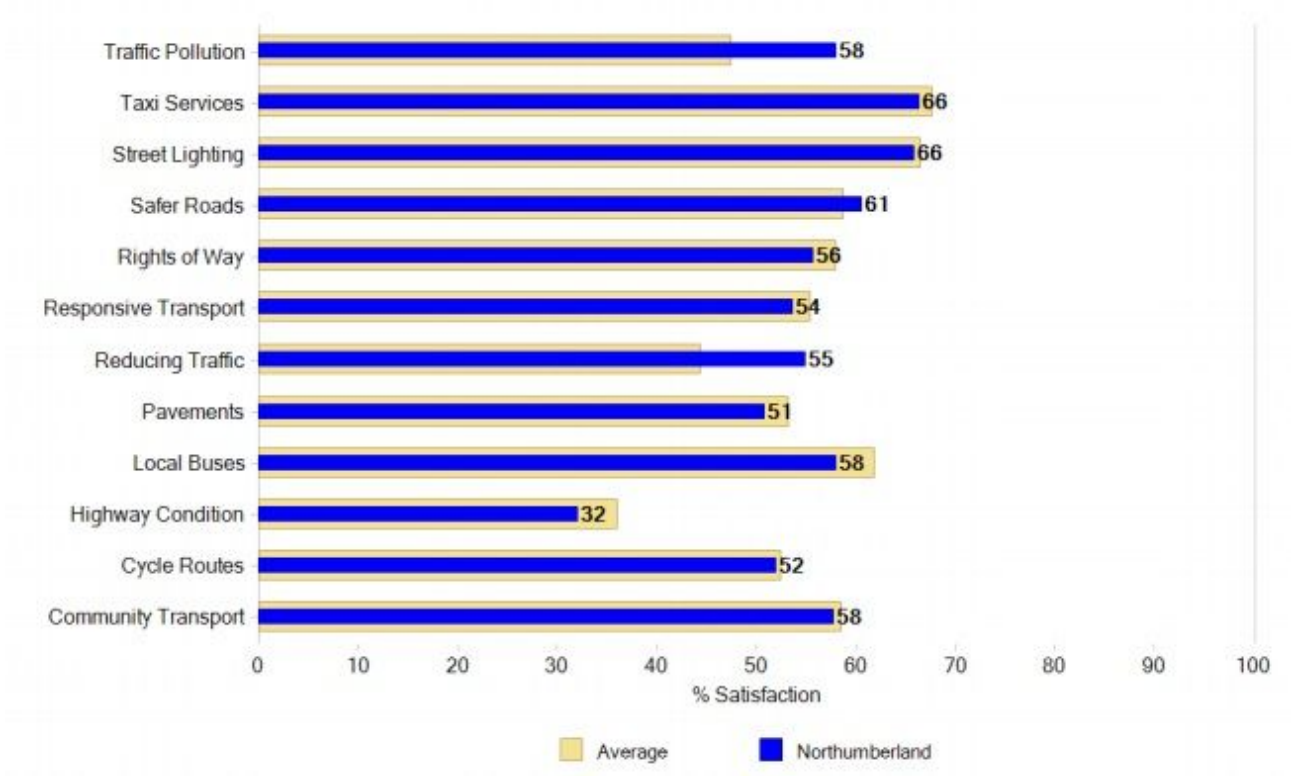
- A better understanding of how we are performing in the eyes of the public
- A consistent datum for setting service levels and a means of measuring the impact of service improvements
- Access to the best performers and the opportunity to learn from the good practice of others
- Full transparency of data for benchmarking purposes which helps us to document that we are performing at level 3 (the highest level) for the DfT's Highway Maintenance Incentive Fund.

In 2017 the total number of participants who completed the survey was 982 residents which is an increase of 120 participants compared to the previous year. The key results to note from the 2017 survey are:

Residents views on the relative importance of different areas of service are shown below.

- Safer roads - 97% (in-line with national average)
- Highways condition - 96% (1% above average)
- Pavements - 93% (1% below average)
- Street lighting - 86% (2% below average)
- Reducing traffic - 83% (2% below average)
- Cycling routes/facilities - 66% (4% below average).

Residents views on their satisfaction with different areas of service are shown below. Overall satisfaction is 50% which is just below national average. Satisfaction levels compared to national averages are shown in the graph below.



The 2018 survey is being carried out at present and results will be provided to us in the autumn. Details of our other benchmarking work are set out in Appendix 2.

This performance and benchmarking data is then used to inform life cycling planning and prioritisation decisions that help the development programmes for maintaining the network.

FINANCIAL MANAGEMENT, PRIORITIES AND PROGRAMMES

Recommendation 28 - Financial Plans
"Financial plans should be prepared for all highway maintenance activities covering short, medium and long term time horizons."
Recommendation 29 - Life Cycle Plans
"Lifecycle planning principles should be used to review the level of funding, support investment decisions and substantiate the need for appropriate and sustainable long term investment."
Recommendation 30 - Cross Asset Priorities
"*In developing priorities and programmes, consideration should be given to prioritising across asset groups as well as within them."*
Recommendation 31 - Works Programming
"A prioritised forward works programme for a rolling period of three to five years should be developed and updated regularly".

The County Council works on a four year medium term financial plan (MTFP) which is refined and approved each year at the February Full Council budget meeting. Both revenue and capital funding are included in this budget setting process and for highways we also use the DfT's 6 year LTP settlement to help determine future funding scenarios.

Revenue Funding

Revenue funding is used for routine and reactive maintenance including any emergency response that is required to ensure that the network is kept safe and available for its users.

The revenue budget is spent in the following ways:

1. Service costs include staff time for carrying out highway safety inspections, responding to complaints and enquiries, dealing with licences, enforcement, investigation, third party claims and legal matters.

2. Routine maintenance costs include cyclic maintenance activities such as grass cutting, grip /ditch clearance, gully emptying.

3. Reactive maintenance include activities undertaken in response to highway safety defects or emergencies. Typical defects would include potholes, edge of carriageway defects, damaged or missing signs, street lighting faults, damaged or missing guardrails and safety fences. We also react to flooding and other severe weather events and road traffic incidents.

Capital Budget

Highway maintenance capital grant funding is currently awarded to each local authority based on DfT's funding strategy for the local road network, this is a major part of the Local Transport Plan (LTP) funding. The current funding strategy covers the spending period from 2015/16 to 2020/21 and provides some certainty in the scale of funds that are available for future programmes. Structural repairs and treatments that replace or extend the life of an asset are classified as capital expenditure.

Within the current spending period there are four elements to maintenance funding:

Needs basis – the majority of funding is distributed on a "needs basis" with a total of £4.7 billion available across England for the six year period. The formula to determine the needs basis includes information on key highway assets types, such as road, footway and cycleway lengths, and the number of bridges and street lights.

Incentive basis – this element of the DfT's funding mechanism seeks to reward those authorities that can demonstrate evidence of supporting the pursuit of efficiencies and embedding asset management principles or commitment to adopt these practices over time.

The Government has set aside £578 million for the Incentive Element Fund scheme over this six year funding plan. The money which an authority receives from the Incentive fund depends upon their response to a self-assessment process including 22 questions with the questions grouped into five themes: Asset Management; Resilience; the Customer: Benchmarking and Efficiency; and Operational Delivery. The questions are designed to enable authorities to assess their progress on the asset management journey with each question scoring a band 1, 2 or 3.

The Council has been able to demonstrate that we are working at Band 3, the highest band, by providing evidence that outcomes have been achieved in the required key areas as part of a continuous programme of development. This means that we have secured the maximum amount of funding that is available to us.

Challenge Fund – DfT have made available £600 million over the funding period for major maintenance projects through the Challenge Fund.

Northumberland has been successful in securing additional funding from this pot and is one of only 7 authorities nationally to have been successful in both Tranche 1 and 2. The total project budgets consist of Challenge Fund capital and corporate capital. In 2015 we secured £5.6m of funding towards a £6.7million project aimed at improving the condition of 130 masonry arch bridges across the county and in 2017 we secured an additional £5 million towards a £6.5m project for repair and strengthening of rural roads which were deteriorating at an increased rate due to the level of heavy traffic using them. These routes are on our Resilient Road Network and are also key timber routes supporting the local economy.

Pothole Fund - Since 2016/17 DfT have also been providing annual allocations through the Pothole Fund. This is capital funding and therefore needs to be spent on patch repairs or preventative treatment rather than on individual pothole repair.

Table 1 below shows the budget allocations that the Council has received in capital grant funding since 2015, with indicative amounts provided by the DfT for the remaining two years of the Government's current funding plan period.

Table 1 - DfT LTP Maintenance Settlements 2015 to 2021

	2015/16 £000	**2016/17 £000**	**2017/18 £000**	**2018/19 £000**	***2019/20 £000**	***2020/21 £000**
Maintenance Formula	17,443	15,991	15,507	14,036	*14,036*	*14,036*
Incentive Fund	*n/a*	997	1,491	2,946	*2,946*	*2,946*
Challenge Fund 1	998	2,500	2127	*n/a*	*n/a*	*n/a*
Challenge Fund 2	*n/a*	*n/a*	5,000	*n/a*	*n/a*	*n/a*
Pothole Fund	*n/a*	1,111	2,259	1,850	*1,300*	*1,300*
NPIF	*n/a*	*n/a*	2,990	*n/a*	*n/a*	*n/a*
Integrated Transport	1,695	1,695	1,695	1,695	*1,695*	*1,695*
Total Budget	**20,136**	**22,294**	**31,069**	**20,527**	***19,977***	***19,977***

***** *- Figures shown in italics for years 2019/20 and 2020/21 are DfT's indicative figures*
n/a *- denotes that funding was not available in that year*

In 2015/16 we were also successful in securing an additional grant of £14.6m to address exceptional damage to our network that was caused by the severe flooding during storms Desmond and Eva.

Historically, Northumberland's LTP highway maintenance budgets have been allocated and managed against types of maintenance activities such as principal road maintenance, surface dressing, micro surfacing and general refurbishment work. In order to help demonstrate how we are delivering against our TAMP policy and strategy it is proposed that in future budgets allocations are also identified against asset groups as well as types of work.

Life Cycle Plans

In order to ensure that we make the best use of the available funding from DfT we use life cycle planning. This helps us to demonstrate that maintenance interventions meet our statutory obligations and provide value for money over the whole life of an asset whilst delivering the priorities in the Council's Corporate Plan and our LTP.

Going forward investment options will be further developed for key assets, these options will:

- Assess the impact of different levels of funding on asset performance.
- Investigate current and future levels of funding required to achieve a given condition for the asset.
- Identify the levels of funding required to minimise whole life costs.
- Allocate resources to assets and treatment types to manage whole life costs.

We are proposing to make further use of the Lifecycle Planning Toolkits developed by the DfT through the Highway Maintenance Efficiency Programme (HMEP) to support purposely developed modules in our asset management systems.

We use life cycle planning, as detailed in Appendix 3, to build on our performance management and help us to make decisions about where funding should be targeted. Good examples of the use of life cycle planning are the successful bids for challenge funding. As mentioned above, through our use of life cycle planning we have been successful in securing an additional £13.2m to help improve the condition of our network, £10.625m of which through the DfT's Challenge Fund and £2.575m from Council corporate capital match funding.

Priorities and Programmes

The Council considers its priorities through the development of its 4 year Corporate Plan which service departments translate into their annual service statements. Our works programmes are developed on an ongoing basis to deliver statutory responsibilities and corporate priorities.

For sometime we have been prioritising planned work over reactive work, this provides a more robust way of dealing with long term improvement to the network and has also helped us to manage reductions in revenue budgets. The MTFP sets out how much revenue and capital funding is available over the plan period and we use the LTP four year implementation plan to guide our longer term programming for planned works.

In developing our LTP capital programmes for each asset group we use condition data that is gathered and monitored on an annual basis, and external reports, to identify candidate schemes for consideration. These candidate schemes are then prioritised for inclusion in an asset programme. During the early summer period we write to all county councillors and all our town and parish councils to ask them to send us their priorities for the areas that they represent. These priorities are then considered alongside performance data, insurance claim data and input from Highway Inspectors and other Area staff.

Our current prioritisation process for LTP maintenance has been in place since 2011/2012 when we decided to move away from assessing solutions to a system of assessing "issues". For example, if a bridge has failed either because of its structural assessment or through its condition then we would assess the impact of losing the structure, this would include the impacts of any disruption that may be caused for residents, businesses and visitors. Once the issue has been prioritised then we will research the possible solution options and carry out an options appraisal which could include replacing or strengthening the bridge, applying a weight restriction or even possibly closing the road.

The key criteria used to assess each issue are:

1. Priorities at the Strategic Council level
   (are corporate priorities being addressed)
   - Consequences related to the issue
   - Likelihood of the consequence happening

2. Priorities at the Transport Network level
   (can the traveling public use the network in the way they need)
   - What disruption will be caused if the issue is not addressed
   - What is the level of hierarchy for the asset

3. Priorities at the Asset Maintenance level
   (are good asset management principles being applied)
   - Whole life cost implications of not addressing the issue
   - Does the issue require addressing to rectify design standard issues?
   - What is the useful remaining life of the asset in question

It is recommended that we continue with this current prioritisation methodology as it has been effective when prioritising and developing future works programmes, supports our Corporate Plan and our risk based approach to managing the highway assets.

Once the draft programmes have been developed for the asset groups they are then considered against the available budget and optimised into the final draft programme before being presented to Local Area Council (LAC) meetings for comment.

Feedback from the LACs is considered before the final annual programme is approved in advance of the next financial year starting.

Looking to the longer term horizon we are always reviewing our condition data and financial plans to help prioritise where programmes are likely to change in future.

TAMP PERFORMANCE IMPROVEMENT AREAS

When revising the TAMP to reflect the recommendations in the revised Code there are a number of key improvement areas that need to be considered. It is requested that the Committee, having considered the content of the report, consider whether these are the improvement areas which should be included in the TAMP:

1. Improve the data provided on the web to ensure that our customers understand our aims, objectives and levels of service
2. Further strengthen use of data to focus services towards areas of most need
3. Give greater priority to addressing long term demands in order to minimise whole life costs and deliver improved value for money

In addition we would seek the committee's comments on the following:

1. Is the current performance framework adequate?
2. Are corporate priorities suitably included in our prioritisation methods?

Implications

Policy	Implementation of the new Code will involve a review of current policies and service standards.
Finance and value for money	The revised Code and asset management principles ensure that value for money is embedded in the way we work, this includes whole life costing and a proactive maintenance regime.
Legal	As a Highway Authority, the County Council has a number of legal obligations. Demonstrating that the County Council maintains the public highway in compliance with the Code is essential to be able to counter third party claims, the expectation is that courts will look upon the code as good practice and in testing the legal test of reasonableness.
Procurement	N/A
Human Resources	N/A
Property	The Code promotes the adoption of an integrated asset management approach to highway infrastructure assets, including carriageways, structures, footways, lighting and drainage.
Equalities (Impact Assessment attached) Yes ☐ No ☐ N/A ☐	The Code considers the needs of all highways users
Risk Assessment	The Code reinforces risk management principles and considers the risks arising from various levels of maintenance relating to the function of the asset, its safety and its long term sustainability
Crime & Disorder	N/A
Customer Consideration	The Code considers the needs of all highways users
Carbon reduction	The impact of highway infrastructure maintenance activities in terms of whole life carbon costs is considered when determining appropriate interventions, materials and treatments.
Wards	All

Background papers:

Communities and Place Overview and Scrutiny Reports
24 January 2018
Implementation of the Revised Highway Maintenance Code of Practice, “Well-Managed Highway Infrastructure”
28 March 2018
Implementation of the Revised Highway Maintenance Code of Practice, “Well-Managed Highway Infrastructure” - Network Hierarchy
8 June 2018
Implementation of the Revised Highway Maintenance Code of Practice, “Well-Managed Highway Infrastructure” - Review of Transport Asset Management Plan - Policy & Strategy
27 June 2018
Implementation of the Revised Highway Maintenance Code of Practice, “Well-Managed Highway Infrastructure” - A Risk Based Approach to Highway Management and Feedback on Network Hierarchy Consultation

Report sign off.

Senior Officer	**Initials**
Finance Officer	AM
Monitoring Officer/Legal	N/A
Human Resources	N/A
Procurement	N/A
I.T.	N/A
Executive Director	PJ
Portfolio Holder(s)	GS

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Appendices

Appendix 1 - TAMP Asset Groups
Appendix 2 - Benchmarking Information
Appendix 3 - Life Cycle Planning

Appendix 1 - TAMP Asset Groups

Within the TAMP we have eight asset groups, these groups were prioritised approximately 10 years ago and were also split into two categories in order to represent our key asset groups and those that provide a supporting role for the travelling public. The asset groups are set out below:

Key Assets
Carriageways provide for vehicular traffic
Structures, including bridges, culverts, fords and retaining walls, provide a means of crossing obstacles and supporting the rest of the network
Footways, footpaths, cycleways and bridleways provide for non vehicular traffic
Lighting – including street lights and the illumination of signs provides lighting for the network

Supporting Assets
Drainage including manholes, catchpits, ditches, gullies, filter drains and pipework, drain water from the surface and the fabric of the network
Restraint Assets including safety fences and pedestrian barriers restrain or protect network users
Traffic Management Information Assets – including lit and unlit signs, bollards, road markings, studs, traffic signals, crossings and road humps, provide information relating to the use of the network
Soft landscaping includes verges, planted areas, trees, hedges and other boundaries

Appendix 2

Benchmarking

We carry out benchmarking both regionally and nationally which allows us to identify examples of best practice and provide better outcomes for the general public, including improved cost efficiency.

We are active members of the following benchmarking groups:-

Association of Public Service Excellence (APSE) - Performance Networks

In 2013, Northumberland County Council re-joined with Roads, Highways and Winter Maintenance membership of the Association for Public Service Excellence (APSE) performance network, which involves making an annual benchmarking data submission for comparison with other authorities. APSE publishes benchmarking reports of statistical family groups which are fed back to senior managers on an annual basis. Senior managers and performance staff attend APSE Highways and Performance Seminars on a regular basis and, over the years, staff have also presented at APSE Seminars to demonstrate our highways management and performance good practice.

In December 2017, Northumberland County Council was announced by APSE Performance Networks as one of the finalists for the 'Most Improved' Award in the Highways, Roads and Winter Maintenance category (Link: http://www.apse.org.uk/apse/index.cfm/events/previous-seminars/2017-seminars/apse-performance-networks-seminar-2017/awards-winners/)

Northumberland County Council were also finalists for the Street Lighting and Winter Maintenance categories in the Highways, Street Lighting and Winter Maintenance Innovation Awards 2017 (Link: http://www.apse.org.uk/apse/index.cfm/research/apse-awards-publications/2017/highways-innovation-awards-2017/highways-innovation-awards-2017/).

National Highways and Transport Survey (NHT) - Customer Satisfaction Survey

The NHT collects public perspectives on and satisfaction with, highways and transportation services provided by local authorities. Northumberland has participated in the survey since 2008, and in 2017 the total number of participants who completed the survey was 982 residents which is an increase of 120 participants compared to the previous year.

National Highways and Transport Survey - CQC Efficiency Network

Cost and quality data is collected from participating local authorities and this data is combined with customer data from the NHT Customer Satisfaction Survey. The CQC model brings together the views of customers with quality and cost data for individual local authorities across the country.

Highways Direct Management Group (DMG) Benchmarking Group

This Group consists of 17 local authority members who have direct management responsibility for the delivery of highways services. Out of the 17 members in the group,

for Northumberland, there are 4 APSE Family Group members as well as 5 CIPFA Family Group members. This is the third year for data collection and analysis.

The most recent and relative benchmarking information from APSE, CQC, NHT and DMG, is summarised in a presentation to the Technical Services Management Team and is used during our service planning process.

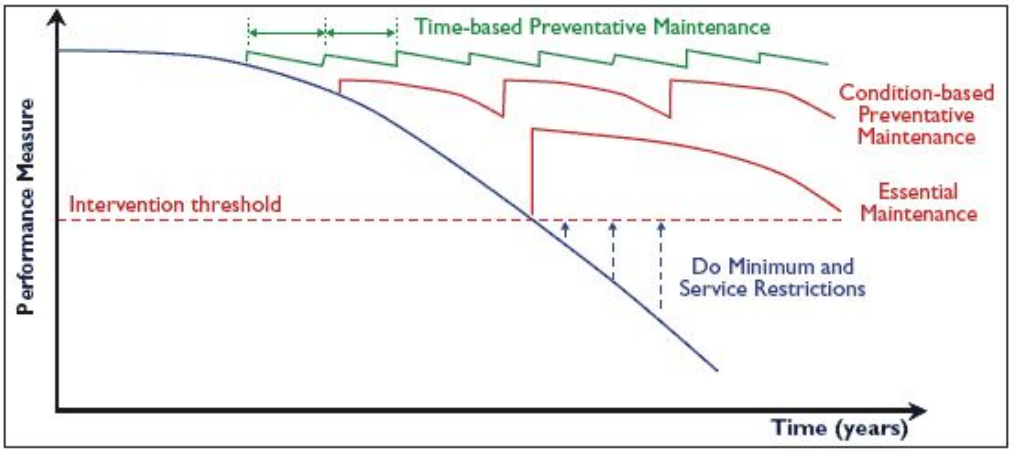
A Highways Management Information site has been created which provides easy access for managers to strategy documents, performance data and benchmarking information across the delivery areas.

Appendix 3

Life Cycle Planning

The purpose of a life cycle plan is to document how a particular asset (e.g road category, bridge type - masonry arch) is managed and maintained throughout its life cycle. Being aware of the maintenance needs we can then, with regard to its current condition identify various strategies to either maintain the asset at its current condition, improve to a higher level of condition or allow it to deteriorate.

Model Demonstrating the Principles of Effective Life Cycle Planning



For example, it is essential that carriageway maintenance is considered thoroughly to ensure that the available funds can be allocated most effectively.

Taking into account the kind of surfacing materials, the type of road and the amount and type of traffic, the ideal frequency of road resurfacing is between 10 and 20 years. This maintains an appropriate level of grip, which is vital for road safety, and guards against freeze thaw effects by maintaining a weatherproof seal on the road surface.

It is recommended that the County continue with the approach of investing significant annual allocations of the maintenance funding on surface dressing and other preventative maintenance treatments. This follows the asset management principles of intervening at the right time in the life cycle of the carriageway with a lower cost treatment that restores the surface to nearly new.