



# Northumberland

## County Council

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

**DATE: 27TH 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 of Interim Executive Director of Place:** Paul Johnston

**Cabinet Member for Environment and Local Services:** Cllr Glen Sanderson

---

### **Purpose of Report**

The report sets out how we intend to update the risk based highway defect management inspection regime taking account of the revised code of practice.

This report also provides an update on the outcome of the recent consultation that has taken place with key stakeholders regarding the network hierarchy.

### **Recommendations**

It is recommended that the committee:

1. Comment upon the proposed risk based highway defect management inspection regime based upon the revised Network Hierarchies.
2. Note the response to the highway network hierarchy consultation.

### **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**

The report sets out the proposals for the risk based approach to inspection regimes and defect responses.

We have identified inspection regimes for each of the road categories within the new road hierarchy.

There are no changes to the footway or cycleway inspection frequencies.

New response times for inspection of 3rd party reports of defects are proposed.

Defect intervention levels and repair response times are also identified.

It was reported to Committee on the 28th March 2018 that a systematic review had been undertaken on our Highway Maintenance Hierarchy.

We carried out a comprehensive stakeholder consultation exercise between the 23rd April 2018 and 1st June 2018 which has resulted in some minor amendments being carried out to individual road categories.

## **Background**

This report is the fourth 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.

### **1. Risk Based Approach to Highway Management**

One of the key developments in the revised Code is that, unlike previous codes, it is not prescriptive in terms of service levels and standards that a highway authority should provide, for example, the frequency of inspections or the time required to repair defects. Instead, the Code requires authorities to adopt a risk based approach which considers the appropriate levels of service in accordance with local needs and priorities.

#### **1.1 Competency and Training**

All Highway Inspectors are trained and accredited to LANTRA Highway Inspection standards, they receive both general and specific training on a broad spectrum of highway maintenance related activities, including legal considerations that affect highways and the duties of the Highway Authority, basic knowledge of the materials, components and techniques used in construction and maintenance of the highway, recognition of common failures of highway construction and understanding the possible causes and defect recognition.

They also receive specific training in relation to the importance of records in making an effective legal defence, the fundamentals of Highway Law and its influence on the

management of the Highway for the benefit of users, the requirements for collecting accurate evidence and data, attendance and participation in mock trials in order to gain confidence in presenting evidence in court etc.

In order to help demonstrate ongoing inspector development and competence in addition to appraisals, training records etc. and to provide an assurance that inspections are being undertaken to a consistent standard we intend to introduce inspection audits with ad hoc audits to be undertaken across all operating areas.

Since 2014 we have had a Highway Inspection Manual to help guide inspectors and develop consistency of delivery across the authority. We will be taking the opportunity over the next 3 months to work with our inspectors to improve this guidance, so that we make best use of their knowledge and experience and ensure their ownership of the manual.

## **1.2 Risk Based Approach to Inspection Regimes**

Recommendation 16 of the revised Code states that “A risk-based inspection regime, including regular safety inspections, should be developed and implemented for all highway assets.”

This is not something new for the Council, in 2006/7 the council implemented a risk based approach to its highways service delivery. At that time we undertook a review of our policies and operational practices, and worked with the Scrutiny TAMP Working Group to agree the most appropriate approach for the future. We implemented a functional hierarchy and based our highway inspection process around this.

The risk based processes that we implemented at that time included the following:

- Identified network inspection frequencies
- Identified defect intervention criteria
- Identified repair response times

In the past 10 years, since 2008, we have seen more unprecedented flood events and extreme winters. This is not unique to Northumberland and the recent “Beast from the East” is yet another example of an extreme climatic event which has culminated in national concerns about the condition of the highway network and in particular the number of potholes that are forming on our highway networks.

Alongside these issues, in recent years we have also seen a significant change in the way that people use social media and the internet to report issues across Northumberland.

The number of third party reported safety related defects that we are now seeing, combined with easier access to reporting mechanisms, has meant that our inspectors are increasingly having to travel to many locations in an ad hoc rather than planned manner, which has resulted in the current inspection process becoming inefficient, in fact, at the current time more defects are being reported by members of the public than are being identified during planned safety inspections. Part of this is due to repeat reports and we also need to review our management systems to minimise the possibility of repeat reports of the same defect during the identification / defect repair process timescale.

We have held a number of workshops with a wide variety of officers, our internal insurance team and our external insurers, Zurich, in order to review the inspection and defect repair response regime. Alongside this work we have also worked collaboratively with neighbouring authorities to ensure that our processes are aligned with theirs.

Having carried out this review the following inspection regimes are proposed.

### 1.2.1 Carriageway Inspection Regime

In order to review the carriageway inspection frequencies we have applied the 9 new categories to the road network and assessed the risk associated with each category with due regard to our previous target inspection frequencies.

Whilst these safety inspections are discussed as “Carriageway” inspections our Inspectors are trained to pick up defects on the other associated asset groups which includes visible drainage assets, traffic management assets, restraint assets and landscaping assets at the same time. These inspections will also pick up safety concerns relating to visible elements of bridges, retaining walls and street lights. Technical inspections of bridges, retaining walls and street lighting are described later in the report.

The following table contains the frequency of our proposed safety inspection regime.

Road Category	Name	Approximate Proportion of Network	Proposed Inspection Frequency	Change from existing frequency
1	Major Road Network	7%	Monthly	none
2	Resilient Road Network	9%	Monthly	none
3	Main Distributor	1%	Monthly	none
4	Secondary Distributor	5%	Monthly	none
5	Major Link	10%	3 monthly	none
6	Minor Link	21%	6 monthly	increase
7	Local Access (through route)	16%	Annual	none
8	Local Access (dead end)	26%	Annual	none
9	Unsurfaced	5%	None	reduce

- Category 6 - Minor Link Roads, it is proposed to increase the frequency of safety inspections from annual to 6 monthly in order to better manage reported defects
- Category 9 - Unsurfaced Roads, it is proposed to cease carrying out the current

annual safety inspections. This will align management of these roads with the management of our Public Rights of Way network.

Any unsurfaced routes that provide access to residential properties will be categorised as either category 7 or 8.

In order to compensate for unforeseen circumstances such as flooding, severe winter weather, or sickness we are proposing to build some flexibility into the inspection process. On an annual basis all inspection dates will be timetabled in accordance with the frequencies set out above. These inspections must then be complete within the tolerances set out below.

Frequency of Inspection	Inspection Tolerance
Monthly	Within +/- 1 week of the due date
Quarterly	Within +/- 2 weeks of the due date
Six Monthly	Within +/- 4 weeks of the due date
Annual	Within +/- 6 weeks of the due date

### 1.2.2 Footway and Cycleway Inspection Regime

Having reviewed the footway and cycleway networks alongside public defect reports we do not intend to amend any footway or cycleway inspection frequencies, the current inspection frequencies are identified in **Appendix 1**.

We are currently gathering data so that we can identify which of public housing related footways should be included in the footway network and therefore should be subjected to highway safety inspections.

Car parks are heavily used by pedestrians and therefore we are considering them under this asset group. We currently inspect off street car parks that have traffic regulation orders on them in an ad hoc manner. In order to improve the management of these car parks it is proposed that these car parks will be inspected generally on the same timeframe as the road leading to the car park. A list of the car parks to be inspected can be located via the following hyperlink

<http://www.northumberland.gov.uk/Highways/Parking.aspx#parkinglocationscharges>

### 1.2.3 Bridges / Structures Inspection Regime

The current inspection regime incorporates general inspections that are carried out for all bridges every two years. Alongside this the larger, more complex structures have Principal Inspections and Special Inspections (e.g. diving) on an ad hoc basis determined by the bridge asset engineers. As part of our risk based management approach those bridges that have failed their structural assessment are placed on our interim measures programme. These bridges are then inspected on a 6 monthly rolling programme to

ensure the safety of the travelling public.

Retaining walls defects and issues are identified through the carriageway inspections set out above.

We believe that this inspection regime is appropriate and do not intend to make any changes.

#### **1.2.4 Street Lighting Inspection Regime**

We undertake routine statutory electrical inspections to all illuminated assets on an annual basis. We believe that the inspection regime is appropriate and do not intend to change it.

#### **1.2.5 Inspections for Regulatory Purposes**

In addition to the maintenance of the highway infrastructure, the highway maintenance service also comprises regulation and enforcement activities. The most significant of these involves responsibilities and requirements under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004.

Other important regulatory duties include:

- management of the Highway Register
- management of public rights of way
- dealing with encroachment on the highway
- dealing with illegal and unauthorised signs
- licensing skips, hoardings, temporary closures and other authorised occupation of the highway
- construction of vehicle crossings
- illegal parking on verges and footways
- adoption of new highways

#### **1.2.6 Service Inspections**

Service or Detailed Inspections are designed primarily to establish the programmes of routine maintenance tasks not requiring urgent execution (e.g. pre-surface dressing patching, patching, haunching, drainage provision). A programme of condition surveys (e.g. SCANNER, Coarse Visual Inspection [CVI], Griptest and Footway Network Survey [FNS]) have been introduced to give an overall picture of the condition of the network for carriageways, footways and cycleways in Northumberland and have superseded the use of Service Inspections as the primary source for identifying required maintenance works.

We do not undertake general service inspections for highways other than those for regulatory purposes under the New Roads and Street Works Act 1991 and the Traffic Management Act 2004 as mentioned above due to existing pressures on the revenue budget.

During the process of reviewing our TAMP Policy and Strategy, we have re-established the need to implement a service inspection regime for our safety fencing asset in order to ensure that it is fit for purpose and that it complies with current design guidelines.

Nationally new methods of potential inspection are currently being trialled using a variety of new technologies, including survey equipment mounted on refuse vehicles, and these

developments and their effectiveness are being kept under review to see if they would be applicable to Northumberland going forward.

### 1.2.7 Third Party Defect Reports Inspection Regime

We refer to any defects reported to us by the public as third party defect reports. These can be reported to us in a number of ways, by phone, by letter, by e-mail or via the County Council website.

Historically these have all been inspected in the order in which they have been reported, however, we have also taken the opportunity to assess the demand placed upon the service by customer service reports and have subsequently identified a range of prioritised response times from the day the council receives the report.

<b>Road Category</b>	<b>Name</b>	<b>Target for inspecting customer reports</b>
1	Major Road Network	2 working days
2	Resilient Road Network	2 working days
3	Main Distributor	2 working days
4	Secondary Distributor	2 working days
5	Major Link	5 working days
6	Minor Link	5 working days
7	Local Access (through route)	5 working days
8	Local Access (dead end)	5 working days
9	Unsurfaced	15 working days

There may be times when we need to respond to reports of dangerous incidents more quickly. When someone reports a defect via the web they will see an alert explaining under which circumstances they should telephone us. The current scripts used by Customer Service will also be amended so that when people report defects we are able to obtain as much relevant details as possible to enable their prioritisation for inspection/repair.

### 1.3 Respond and Repair

Recommendation 19 of the revised Code of Practice states that “A risk-based defect repair regime should be developed and implemented for all highway assets.”

The Council carried out a risk assessment in 2007 and response times for repairing defects were developed through this process to allow more efficient programming of repairs and maximise the effective use of available resources.

The risk matrix used to undertake the risk assessment was based upon the corporate risk assessment model. Whilst there have been minimal changes the risk matrix that was developed in 2007 has been reviewed and amended to reflect the new road hierarchy.

### 1.3.1 Defect Intervention Levels

An extract from the delegated decision report “Risk Analysis of Highway Defects” dated August 2007 is attached as Appendix 3, the first section provides details of defect intervention levels and the second section details the risk assessment methodology. We do not intend to change any of these details. A detailed risk matrix of defects / response times covering all defect types and reflecting the new road hierarchy will be prepared for use by the highway inspectors.

Whilst the new Code of Practice has moved away from the term ‘intervention’ level and reintroduced the term ‘investigatory’ level we have decided to retain the phrase ‘intervention’ level because for categories 1, 2H and 2M we have determined the response time for repair, it is only the category 2L defect that may be subject to investigation.

### 1.3.2 Defect Intervention Response Times

Again the use of response times for defects is not a new concept to the County Council as we implemented a risk based approach about 10 years ago (delegated decision report “Risk Analysis of Highway Defects” dated August 2007) which covers all highway defects. We have taken the opportunity to review our current response times in relation to defect intervention levels. In conjunction with officers from our Insurance team we have concluded that no changes to the current defect response times are required and these remain as follows:

Defect Category		Description	Response Time
1	1VH	Defects which are deemed to represent an urgent or imminent serious risk to highway users due to their nature, extent and location, or which may lead to short-term deterioration of the highway network if not repaired.	Repair or make safe within 2 hours
	1H		Repair, or make safe, within 24 hours
2	2H	Defects, which following a risk assessment, are deemed not to represent an immediate or imminent hazard to highway users, or risk of structural deterioration, but which may still have safety implications but to a lesser degree than Category 1 defects.	Repair within 14 days
	2M		Repair within 28 days
	2L		Based upon the risk of deterioration before the next



			planned inspection <b>Either:</b> Repair during next available programme <b>Or:</b> schedule a further inspection to monitor condition <b>Or:</b> review at next inspection
--	--	--	---

The following are examples of such defects that will be made safe or repaired within 2 hours where they present an immediate and critical hazard to highway users: -

- Major debris or spillage
- Critically unstable trees, structures, street lighting columns, bollards or other similar items causing danger of collapse onto the highway
- Exposed live electrical wiring
- Carriageway collapse or comparable severe surface defect with very high probability of loss of control
- Missing or seriously defective ironwork with very high probability of injury to users
- Footway or cycleway collapse, or comparable severe surface defect with very high probability of injury to users

### 1.3.3 Defect Repair Regime

For all category 1 defects we have identified two response options, we can either make safe which can be done with appropriate traffic management (e.g. signs, cones and barriers etc.) or repair.

Where a make safe repair has been undertaken a further risk based assessment will be made to determine what repair is required within a planned programme of minor repairs. The type and quality of repair is based upon an engineering evaluation and considers the many variables that relate to a local road situation eg. hierarchical categorisation, residual life, magnitude of defect and pavement type.

## 2.0 Feedback from the Network Hierarchy Review Consultation

It was reported to Committee on the 28th March 2018 that a systematic review had been undertaken on our Network Hierarchy and the categorisation of Northumberland's road network. In accordance with the committee's endorsement, we have carried out a stakeholder consultation exercise. This was held between the 23rd April 2018 and 1st June 2018 and details were sent to:

- All County Council Members
- All Town and Parish Councils
- Other key stakeholders such as the North East Timber Group and the Regional

- Freight Partnership
- Neighbouring Authorities

The information was placed on our website and has been made available to the general public.

During the consultation information reports were also presented at our Local Area Councils as well as the Town and Parish Council Liaison Working Group.

The Consultation was undertaken utilising a web-hosted platform and provided mapping that identified each of the proposed classifications together with the facility to provide feedback and respond to the following questions:

- 1) Comments about the appropriateness of the Resilient Road Network
- 2) Do you agree with the category definitions for the hierarchy? Yes or no, if no, why not?
- 3) Please identify any roads or streets for which you think we may have incorrectly identified the category. For each case please provide some supporting text based evidence.

A summary of the feedback is provided below and details are provided in Appendix 4.

During the consultation, feedback was received from a wide range of stakeholders. In general the consultation was well received and in particular we received positive comments about the mapping system used.

No changes have been proposed to the draft hierarchy descriptions and it is therefore proposed that these will be adopted. (see Appendix 5)

A few comments were received regarding critical infrastructure to be considered for the Resilient Road Network, for example access to RAF Boulmer. We also received feedback about some of the roads at the lower end of the hierarchy. Following the consultation a number of Local Access (Dead end) roads have been moved into the Local Access (through route) category.

A separate meeting was held on the 23rd May 2018 with the Timber Transport Group to explain the principles and outcomes of the road hierarchy review. We intend to align the agreed timber routes map with the resilient road network in particular to ensure that the use of other routes for timber extraction is subject to prior consultation & agreement of a Timber Transport Management Plan to mitigate any adverse impacts etc. This will place an increased requirement on the timber industry but reflects the level of concern generated by communities who are affected by timber transport activities and the need for greater consideration of mitigation measures/controls. The Group was receptive to the principles and scope of the resilient road network but were somewhat concerned about the additional work that this would impose upon them but were happy to commit to continuing with quarterly meetings.

### Implications

<b>Policy</b>	Implementation of the new Code will involve a review of current policies and service standards.
---------------	---

<b>Finance and value for money</b>	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.
<b>Legal</b>	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.
<b>Procurement</b>	N/A
<b>Human Resources</b>	N/A
<b>Property</b>	The Code promotes the adoption of an integrated asset management approach to highway infrastructure assets, including carriageways, structures, footways, lighting and drainage.
<b>Equalities</b> (Impact Assessment attached) Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	The Code considers the needs of all highways users
<b>Risk Assessment</b>	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
<b>Crime &amp; Disorder</b>	N/A
<b>Customer Consideration</b>	The Code considers the needs of all highways users
<b>Carbon reduction</b>	The impact of highway infrastructure maintenance activities in terms of whole life carbon costs is considered when determining appropriate interventions, materials and treatments.
<b>Wards</b>	All

### Background papers:

Implementation of the Revised Highway Maintenance Code of Practice, "Well-Managed Highway Infrastructure". Review of Transport Asset Management Plan- Policy & Strategy. Communities and Place Overview and Scrutiny 6th June 2018.

Delegated Decision Report, Risk Analysis of Highway Defects, 6th August 2007.

## Report sign off.

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

## Author and Contact Details

Dale Rumney - Principal Programme Officer  
Dale.Rumney@northumberland.gov.uk

## Appendices

Appendix 1 - Footway and Cycleway Inspection Frequencies

Appendix 2 - Extracts from Delegated Decision Report, Risk Analysis of Highway Defects,  
6th August 2007

Appendix 3 - Feedback on Hierarchy Consultation

Appendix 4 - Network Hierarchy