

North Yorkshire County Council

Business and Environmental Services

Executive Members

23 April 2021

Skid Resistance Investigatory Levels

Report of the Assistant Director – Highways and Transportation

1.0 Purpose Of Report

- 1.1 To seek authorisation to update the skid resistance investigatory levels on the County's Category 2, 3a and 3b carriageway network.

2.0 Background

- 2.1 The maintenance of adequate levels of skidding resistance on carriageways is an important aspect of highway maintenance given it contributes significantly to the safe usage of the network.
- 2.2 The existing Skid Resistance Policy was developed in 2006 and subsequently updated in October 2017. This policy was established in line with the Design Manual for Roads and Bridges (DMRB) note HD28/04 - the standard for Skidding Resistance on the National Strategic Road Network (Trunk Roads and Motorways). This standard was removed in 2015 and has been superseded in the DMRB by document [CS228](#), outlining the standards for skid resistance. As with all documents within the DMRB, the standards outlined are based on Motorways and All Purpose Trunk Roads. However they provide a useful reference point from which Local Highway Authorities can develop appropriate local policies and standards.
- 2.3 In order to measure skid resistance of the network a SCRIM* survey (Sideways Force Coefficient Routine Investigation Machine – Industry Standard skid resistance survey) is used. SCRIM surveys are carried out annually in each direction on all Cat 2, 3a and 3b roads (a length of about, 2184km or about 25% of the total NYCC network length). This coverage includes all the A roads in the County.

3.0 Investigatory Levels

- 3.1 The requirements for skidding resistance vary across the network, dependent upon local factors, surface characteristics and the road geometry. As such, sites are categorised based on their characteristics into a site category. Each site category is then assigned an investigatory level (IL).
- 3.2 ILs are a pre-defined limit of minimum acceptable skid resistance. SCRIM measurements greater than the limit are considered satisfactory, while those equal to or less than the limit will trigger further investigation in line with the existing NYCC skid resistance policy.
- 3.3 An IL must be assigned to every part of the surveyed network by selecting an appropriate Site Category and associated IL.

- 3.4 A recommendation within CS228 states that “A procedure shall be put in place for reviewing the IL at least every three years”. The three yearly reviews only determine that the Site Category is appropriate and is generally completed using video and GIS based data. The NYCC network requires an update of site categories and ILs to ensure that they remain relevant. Informal reviews of the ILs and site categories have been carried out, however there is a need to carry a full formal review.
- 3.5 It is proposed to review the existing Site Category ILs to ensure that they are in line with those outlined within CS228. Using collated network information and survey data, the appropriate site category and associated IL would then be allocated to individual 10m lengths of the Cat2,3a and 3b network. Given changes to the network since the adoption of the skid resistance policy, we are seeking to ensure that site categories and associated ILs have been amended to reflect new road layouts and infrastructure, for example new junctions, speed limit changes, new pedestrian crossings etc.
- 3.6 It is proposed to carry out this review of ILs ahead of the 2021 surveying season to allow for collated results in 2021 to be compared against updated site category and IL data. The revised IL and site category information would then feed in to a wider review of the NYCC Skid Resistance Strategy.

4.0 Existing IL Information

- 4.1 The site category and IL thresholds were established in 2006 when the existing skid resistance policy was introduced as part of the Highway Maintenance Plan. See table below illustrating the existing ILs:

Site Category	Situation	SCRIM CSC/Grip Number Investigatory Levels at 50km/hr							
		0.30 0.35	0.35 0.41	0.40 0.47	0.45 0.53	0.50 0.59	0.55 0.65	0.60 0.71	0.65 0.76
A	Motorway								
B	Dual Carriageway non-event								
C	Single Carriageway non-event								
Q	Approaches to and across minor/major junctions, approaches to roundabouts								
K	Approaches to pedestrian crossings and other high risk situations								
R	Roundabout								
G1	Gradient 5–10% longer than 50m								
G2	Gradient > 10% longer than 50m								
S1	Bend radius <500m Dual Carriageway								
S2	Bend radius <500m Single Carriageway								

5.0 Revised Investigatory Levels

5.1 It is proposed that the following ILs, which are in line with CS228, are adopted by NYCC. They are consistent with the approach taken by other local highway authorities. These proposals have been prepared by NYCC officers alongside our network-surveying contractor (Perfect Circle) and have been reviewed against information prepared by WSP.

Site Category	Definition	Investigatory Level					
		0.30	0.35	0.40	0.45	0.50	0.55
A	Motorway						
BR	Non-event carriageway with one-way traffic						
BU							
CR	Non- event carriageway with two-way traffic						
CU							
QR	Approaches to and across minor and major junctions, approaches to roundabouts and traffic signals						
QU							
KR	Approaches to pedestrian crossings and other high-risk situations						
KU							
KS	Extents of school warning signs*						
RR	Roundabout						
RU							
G1R	Gradient 5-10%, longer than 50m						
G1U							
G2R	Gradient >10%, longer than 50m						
G2U							
S1R	Bend radius <500m – carriageway with one-way traffic						
S1U							
S2R	Bend radius <500m – carriageway with two-way traffic						
S2U							

Note - Sites with R = Rural (speed limit greater than 40mph). Sites with U = Urban (speed limit 40mph or lower)

*School warning signs is a proposed new category

- 5.2 The main differences from the existing ILs, is that site categories are split into Urban/Rural sub categories to differentiate between speed limits above or below 40mph. Rural (R) carry a higher investigatory level in all site categories. Approach lengths for site categories Q and K to be 50m.
- 5.3 If more than one site category is appropriate, then the site category with the highest recommended IL will be selected. If the highest recommended IL for the site categories are the same, then the category highest up the table shall be selected (A being the highest on the table and S2 the lowest).
- 5.4 An additional sub category for parts of the network within the extent of school warning signs is also proposed. This an enhancement of the existing ILs and brings routes close to schools in line with the IL for pedestrian crossing approaches on urban roads.

- 5.5 This proposed approach is easier to understand and provides a clear distinction between site categories and urban / rural roads within the same site category, reflecting the increased skid risk associated with increased vehicle speeds.
- 5.6 In line with the existing Skid Resistance Policy updated in 2017, following a site investigation, it may be necessary to amend the IL at a specific location. Should this be needed, a plan of the specific location alongside the proposed amendment as part of the site investigation recommendation will be supplied to our SCRIM contractor for them to update the IL to the specified level.

6.0 Financial Implications

- 6.1 There is an additional cost of £54K to carry out the IL review. It is proposed that this is funded from the existing network condition survey budget in 2021/22 and the additional cost is managed as part of the wider programme management process.
- 6.2 By carrying out a full review in 2021/22, subsequent three yearly reviews of the IL network will be less onerous and as a result will be delivered at a lower cost.

7.0 Equalities Implications

- 7.1 Consideration has been given to the potential for any adverse equality impacts arising from the recommendations. Officers consider that there are no adverse impacts arising from the recommendations in this report.
- 7.2 A copy of the 'Record of Decision that Equality Impact Assessment is not required' form is attached as Appendix A.

8.0 Legal Implications

- 8.1 The County Council, in its capacity as the Local Highway Authority, Street Authority and Local Traffic Authority must act in accordance with a wide range of statutory powers and duties imposed by legislation.
- 8.2 The proposed amendments to the Skid resistance policy have been developed in line with the relevant legislation such as the Highways Act 1980, the New Roads and Street Works Act 1991, the Road Traffic Regulation Act 1984, the Transport Act 2000, the Traffic Management Act 2004 and the Flood and Water Management Act 2010.

9.0 Climate Change Implications

- 9.1 A climate change impact assessment has been carried out, see Appendix C. We do not envisage any climate change impacts as a result of the recommendations to this report.

10.0 Recommendation(S)

- 10.1 It is recommended that the Corporate Director BES in consultation with the BES Executive Members:
- i. Approve the revised Skid Resistance Investigatory Levels in line with DMRB guidance note CS228
 - ii. Approve addition of an additional site category for parts of the network within the extent of school warning signs

BARRIE MASON
Assistant Direct Highways and Transportation

Author of Report; James Gilroy

Background Documents: CS228 Skidding Resistance – Standards for Highways - [50d43081-9726-41e8-9835-9cd55760ad9e \(standardsforhighways.co.uk\)](#)

Initial equality impact assessment screening form (As of October 2015 this form replaces 'Record of decision not to carry out an EIA')			
This form records an equality screening process to determine the relevance of equality to a proposal, and a decision whether or not a full EIA would be appropriate or proportionate.			
Directorate	Business and Environmental Services		
Service area	Highways & Transportation		
Proposal being screened	Skid Resistance Procedure		
Officer(s) carrying out screening	James Gilroy		
What are you proposing to do?	Revise North Yorkshire's skid resistance investigatory Levels,		
Why are you proposing this? What are the desired outcomes?	To bring the skid resistance investigatory levels on the category 2,3a,3b road network in line with the latest national standards		
Does the proposal involve a significant commitment or removal of resources? Please give details.	No		
Impact on people with any of the following protected characteristics as defined by the Equality Act 2010, or North Yorkshire County Council's additional agreed characteristic			
As part of this assessment, please consider the following questions:			
<ul style="list-style-type: none"> To what extent is this service used by particular groups of people with protected characteristics? Does the proposal relate to functions that previous consultation has identified as important? Do different groups have different needs or experiences in the area the proposal relates to? 			
If for any characteristic it is considered that there is likely to be a significant adverse impact or you have ticked 'Don't know/no info available', then a full EIA should be carried out where this is proportionate. You are advised to speak to your Equality rep for advice if you are in any doubt.			
Protected characteristic	Yes	No	Don't know/No info available
Age		✓	
Disability		✓	
Sex (Gender)		✓	
Race		✓	
Sexual orientation		✓	
Gender reassignment		✓	
Religion or belief		✓	
Pregnancy or maternity		✓	
Marriage or civil partnership		✓	
North Yorkshire County Council additional characteristic			
People in rural areas		✓	
People on a low income		✓	
Carer (unpaid family or friend)		✓	
Does the proposal relate to an area where there are known	No, the proposals do not negatively affect any groups of people.		

inequalities/probable impacts (e.g. disabled people's access to public transport)? Please give details.				
Will the proposal have a significant effect on how other organisations operate? (e.g. partners, funding criteria, etc.). Do any of these organisations support people with protected characteristics? Please explain why you have reached this conclusion.	No, the proposals have no effect on how other organisations work.			
Decision (Please tick one option)	EIA not relevant or proportionate:	✓	Continue to full EIA:	
Reason for decision	The proposals will ensure North Yorkshire County Council maintains a consistent and auditable approach to strategic asset management in line with current Codes of Practice.			
Signed (Assistant Director or equivalent)	Barrie Mason			
Date	14/04/21			

Climate change impact assessment

The purpose of this assessment is to help us understand the likely impacts of our decisions on the environment of North Yorkshire and on our aspiration to achieve net carbon neutrality by 2030, or as close to that date as possible. The intention is to mitigate negative effects and identify projects which will have positive effects.

This document should be completed in consultation with the supporting guidance. The final document will be published as part of the decision making process and should be written in Plain English.

If you have any additional queries which are not covered by the guidance please email climatechange@northyorks.gov.uk

Please note: You may not need to undertake this assessment if your proposal will be subject to any of the following:

Planning Permission
Environmental Impact Assessment
Strategic Environmental Assessment

However, you will still need to summarise your findings in in the summary section of the form below.

Please contact climatechange@northyorks.gov.uk for advice.

Title of proposal	Skid Resistance Investigatory Levels
Brief description of proposal	To seek authorisation to update the skid resistance investigatory levels on the County's Category2, 3a and 3b carriageway network.
Directorate	BES
Service area	Highways and Transportation
Lead officer	James Gilroy
Names and roles of other people involved in carrying out the impact assessment	
Date impact assessment started	07.04.2021

Options appraisal
 Were any other options considered in trying to achieve the aim of this project? If so, please give brief details and explain why alternative options were not progressed.
 No other options were considered

What impact will this proposal have on council budgets? Will it be cost neutral, have increased cost or reduce costs?

Please explain briefly why this will be the result, detailing estimated savings or costs where this is possible.

There will be an increase in expenditure in 2021/22 of £54k to ensure that all parts of the Cat 2, 3a and 3b network have skid resistance investigatory levels in line with national standards.

How will this proposal impact on the environment?		Positive impact (Place a X in the box below where relevant)	No impact (Place a X in the box below where relevant)	Negative impact (Place a X in the box below where relevant)	Explain why will it have this effect and over what timescale? Where possible/relevant please include: <ul style="list-style-type: none"> • Changes over and above business as usual • Evidence or measurement of effect • Figures for CO₂e • Links to relevant documents 	Explain how you plan to mitigate any negative impacts.	Explain how you plan to improve any positive outcomes as far as possible.
Minimise greenhouse gas emissions e.g. reducing emissions from travel, increasing energy efficiencies etc.	Emissions from travel		x				
	Emissions from construction		x				
	Emissions from		x				

APPENDIX B

<p>How will this proposal impact on the environment?</p> <p>N.B. There may be short term negative impact and longer term positive impact. Please include all potential impacts over the lifetime of a project and provide an explanation.</p>	<p>Positive impact (Place a X in the box below where</p>	<p>No impact (Place a X in the box below where relevant)</p>	<p>Negative impact (Place a X in the box below where relevant)</p>	<p>Explain why will it have this effect and over what timescale?</p> <p>Where possible/relevant please include:</p> <ul style="list-style-type: none"> • Changes over and above business as usual • Evidence or measurement of effect • Figures for CO₂e • Links to relevant documents 	<p>Explain how you plan to mitigate any negative impacts.</p>	<p>Explain how you plan to improve any positive outcomes as far as possible.</p>	
	running of buildings						
	Other		x				
Minimise waste : Reduce, reuse, recycle and compost e.g. reducing use of single use plastic		x					
Reduce water consumption		x					
Minimise pollution (including air, land, water, light and noise)		x					
Ensure resilience to the effects of climate change e.g. reducing flood risk, mitigating effects of drier, hotter summers		x					

<p>How will this proposal impact on the environment?</p> <p>N.B. There may be short term negative impact and longer term positive impact. Please include all potential impacts over the lifetime of a project and provide an explanation.</p>	<p>Positive impact (Place a X in the box below where</p>	<p>No impact (Place a X in the box below where relevant)</p>	<p>Negative impact (Place a X in the box below where relevant)</p>	<p>Explain why will it have this effect and over what timescale?</p> <p>Where possible/relevant please include:</p> <ul style="list-style-type: none"> • Changes over and above business as usual • Evidence or measurement of effect • Figures for CO₂e • Links to relevant documents 	<p>Explain how you plan to mitigate any negative impacts.</p>	<p>Explain how you plan to improve any positive outcomes as far as possible.</p>
Enhance conservation and wildlife		X				
Safeguard the distinctive characteristics, features and special qualities of North Yorkshire's landscape		X				
Other (please state below)		x				

Are there any recognised good practice environmental standards in relation to this proposal? If so, please detail how this proposal meets those standards.

No

Summary Summarise the findings of your impact assessment, including impacts, the recommendation in relation to addressing impacts, including any legal advice, and next steps. This summary should be used as part of the report to the decision maker.

We do not anticipate any impacts on climate impact change from this proposal

Sign off section

This climate change impact assessment was completed by:

Name	James Gilroy
Job title	Team Leader Highway Asset Management
Service area	Highways and Transport
Directorate	BES
Signature	J Gilroy
Completion date	07.04.2021

Authorised by relevant Assistant Director (signature): **Barrie Mason**

Date: 14/04/21