

Report of Highways Asset Manager

Report to The Chief Officer (Highways and Transportation)

Date: 28 January 2020

Subject: Leeds City Council Skid Resistance Strategy

Are specific electoral wards affected? If yes, name(s) of ward(s):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Has consultation been carried out?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are there implications for equality and diversity and cohesion and integration?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Will the decision be open for call-in?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does the report contain confidential or exempt information? If relevant, access to information procedure rule number: Appendix number:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Summary

1. Main issues

- In 2016 the Well Managed Highway Infrastructure – a code of practice was published by the UK Roads Liaison Group, in Section B.5.6 it states;
 - “The maintenance of adequate levels of skidding resistance on carriageways, footways and cycle routes is a most important aspect of highway maintenance, and one that contributes significantly to network safety, particularly for cyclists, motorcyclists and equestrians. However, whilst the frequency of accidents is expected to increase as skidding resistance falls, the effect will be more pronounced for more ‘difficult’ sites and there is no skidding resistance boundary at which a surfacing passes from being ‘safe’ to ‘dangerous’. Difficult sites are those where the geometry, for example, bends, junctions, roundabouts, steep gradients, pedestrian crossings and traffic signals increase the risks of skidding accidents.”
 - “Authorities should publish their Skid Resistance Strategy as part of their Asset Management Framework. The strategy, should be informed by risk assessment.”
- The West Yorkshire Authorities plus York City Council (WY+Y) agreed to work together to formalise a processes to monitor skid resistance, identifying roads where lack of grip is a potential issue, prioritising sites for required improvement and ensuring that these improvements are incorporated in the forward programme of works. Regular surveys together with a skid resistance strategy based on the current

standards, enables a procedure that can help reduce road casualty rates. WY+Y have produced a Common Skid Resistance Policy and a Skid Resistance Procedure, which meets the requirements of the Code of Practice, and ensures consistency of approach between neighbouring authorities (referred to in recommendation 5 of the Code of Practice).

- The Leeds City Council Skid Resistance Strategy has been developed to formalise these processes and comprises a WY+Y Common Skid Resistance Policy and a Leeds Procedure document.
- The implementation of this strategy will target skid resistance improvements at those roads most in need, thereby improving safety for all road users on the road network Leeds City Council are responsible for maintaining. Adoption of this strategy should reduce the number and severity of road traffic collisions, and the Council's potential liabilities.

2. Best Council Plan Implications (click [here](#) for the latest version of the Best Council Plan)

- This strategy will help to ensure that decisions made with regards to skid resistance on new road surfaces are consistent, improve the safety of the highway network and contribute to The Best Council Plan 2019/20 to 2020/21 in improving transport connections, safety, reliability and the resilience of the city's infrastructure.
- A well maintained highway infrastructure contributes to the Best Council Plan by facilitating an accessible network for getting into and around the city easier. A better maintained network improves safety of all road users, and reduces disruption which will result in a reduction in carbon emissions.

3. Resource Implications

- The Strategy proposes that the annual automated survey data be analysed through an external asset management programme. This takes the data and combines it with the latest collision data published on the data.gov.uk website, to identify a number of sites for review. The review considers the collisions of around 1000 sites where low skid resistance could have been a contributing factor. These sites are then scored and detailed site investigation is carried out on the top 200 sites (this may be more depending on the scores). The review takes around a month for an individual officer, and the detailed site investigations can be undertaken at a rate of 10 per day depending on location and travel distance between sites, which should wherever possible be carried out by two officers, for safety reasons. These investigations are analysed through the external asset management programme to provide treatment options for those sites.

Recommendations

The Chief Officer (Highways and Transportation) is requested to:

- a) approve the adoption and implementation of the Leeds City Council Skid Resistance Strategy (including the West Yorkshire plus York Common Skid Resistance Policy) to manage skid resistance on the existing Leeds City Council's road network. The strategy will also apply to any new roads and any works undertaken by developers, to ensure that these works are constructed in accordance with the information contained in the strategy.

1. Purpose of this report

- 1.1 The purpose of this report is to introduce and approve the adoption and implementation of the Leeds City Council Skid Resistance Strategy.

2. Background information

- 2.1 Skid resistance is an important property relating to the safe passage of highway users, particularly in damp or wet conditions. Over the course of a road's life the surface can lose some of its characteristics associated with grip. Effective maintenance of the highway network includes the requirement to systematically monitor the skid resistance of the road surface and to take a proactive approach so that the skid resistance across the network is maintained to an appropriate standard.
- 2.2 Skid resistance survey machines are Sideway Force Coefficient Routine Investigation Machines known as SCRIM.
- 2.3 Whilst the council as Highways Authority provides and manages the adopted road infrastructure, it is important that drivers/riders ensure that their driving takes account of the prevailing conditions and that their vehicles, including tyres are in good condition.

3. Main issues

- 3.1 In 2016 the Well Managed Highway Infrastructure – a code of practice was published by the UK Roads Liaison Group, in Section B.5.6 it states;
- “The maintenance of adequate levels of skidding resistance on carriageways, footways and cycle routes is a most important aspect of highway maintenance, and one that contributes significantly to network safety, particularly for cyclists, motorcyclists and equestrians. However, whilst the frequency of accidents is expected to increase as skidding resistance falls, the effect will be more pronounced for more ‘difficult’ sites and there is no skidding resistance boundary at which a surfacing passes from being ‘safe’ to ‘dangerous’. Difficult sites are those where the geometry, for example, bends, junctions, roundabouts, steep gradients, pedestrian crossings and traffic signals increase the risks of skidding accidents.”
 - “Authorities should publish their Skid Resistance Strategy as part of their Asset Management Framework. The strategy, should be informed by risk assessment.”
- 3.2 The West Yorkshire Authorities (plus York City Council) agreed to work together to formalise a processes to monitor skid resistance, identifying roads where lack of grip is a potential issue, prioritising sites for required improvement and ensuring that these improvements are incorporated in the forward programme of works. Regular surveys together with a skid resistance strategy based on the current standards, enables a procedure that can help reduce road casualty rates. WY+Y have produced a Common Skid Resistance Policy and a Skid Resistance Procedure, which meets the requirements of the Code of Practice, and ensures consistency of approach between neighbouring authorities (referred to in recommendation 5 of the Code of Practice).
- 3.3 The Leeds City Council Skid Resistance Strategy comprises two parts, the WY+ Y Common Skid Resistance Policy and a Leeds City Council Skid Resistance Procedure.

West Yorkshire plus York Common Skid Resistance Policy.

- 3.4 The constituent local authorities of the West Yorkshire Combined Authority – Leeds City Council, Kirklees Metropolitan Borough Council, Bradford Metropolitan District Council, Calderdale Metropolitan Borough Council and Wakefield Metropolitan District Council with the inclusion of City of York Council, have developed a West Yorkshire plus York Common Skid Resistance Policy. A common policy ensures consistency on cross boundary networks, such as the West Yorkshire Key Route Network, whilst the format allows each local authority the autonomy to manage their network appropriate to the local conditions in accordance with their skid resistance procedure.
- 3.5 The objective of the West Yorkshire plus York Common Skid Resistance Policy is to:
- Maintain a consistent approach to the provision of skid resistance across the strategic road network, so that road users find consistent friction characteristics when accelerating, braking and cornering.
 - Provide a level of skid resistance appropriate to the nature of the road environment at each location. The appropriate level is determined from a combination of, network-wide analysis of crash history, consideration of friction demands by road users and local judgement of site specific factors by suitably experienced engineers.
- 3.6 To achieve this each constituent authority will:
- Formalise processes for monitoring skid resistance across its Classified A Road network on an ongoing basis.
 - Identify deficient sites using skid resistance survey methods for further investigation.
 - Use accident data on sites identified for further investigation to determine whether inadequate skidding resistance could be a factor.
 - Recommend appropriate actions to negate risks.
 - Prioritise skid resistance deficient sites for improvement works based on where the greatest risks lie.
 - Ensure improvements to skid resistance deficient sites are incorporated into the annual highway maintenance works programme, within the resources available

Leeds City Council Skid Resistance Procedure.

- 3.7 The Leeds City Council Skid Resistance Procedure details how the strategy and common skid resistance policy will be implemented.
- 3.8 In 2016 the Well Managed Highway Infrastructure – a code of practice was published, in Section B.5.6 it states;
- “Authorities should publish their Skid Resistance Strategy as part of their Asset Management Framework. The strategy, should be informed by risk assessment.”
- 3.9 In 2015 Highways England published an updated comprehensive methodology for managing carriageway skid resistance on motorways and trunk roads and this is set out in their design standard, HD 28/15. This methodology forms a basis for the Leeds City Council Skid Resistance Procedure. However, this is adapted to reflect local needs and resource constraints.

- 3.10 In August 2019 the document HD28/15 was replaced by CS 228. Whilst the majority of the CS 228 document is identical to HD28/15, there is an important omission from the HD28/15 document that is referenced in the Councils' skid policy. Namely, the removal of Annex 7 – An alternative method procedure for identifying sites requiring detailed investigation, leaving only Highways England's Crash Model which cannot presently be applied outside the motorway and trunk Road network.
- 3.11 A research project has been proposed to the DfT to research, calibrate and produce a crash model for Local Roads. It is envisaged that this model will not be available for the foreseeable future (12-24 months).
- 3.12 Therefore, in the interim, the user community have agreed to continue to follow the process detailed in the Council's Skid Resistance Policy and Procedure documentation.
- 3.13 In summary the methodology is as follows:
- Skid resistance surveys will be undertaken annually on defined parts of the highway network which are referred to as the SCRIM Network.
 - The current SCRIM Network is the Classified A Road network. NB: This network definition is subject to review once maintenance hierarchies have been defined during the implementation of the new Code of Practice for Well Managed Highway Infrastructure. In anticipation of change we are surveying and investigating skid resistance on the B and C class road network.
 - The defined network will be assigned Investigatory Levels depending on a range of factors such as the speed limit and geometry of the road.
 - Skid resistance data for a particular section of road (a site) will be scrutinised and compared against its Investigatory Level.
 - Sites where skid resistance falls at or below the Investigatory Level will be identified for further investigation.
 - The further investigation will take into account other factors such as whether there is road traffic crash history at the site to establish whether remedial treatment is necessary.
 - Where remedial treatment is deemed to be of benefit, sites will be prioritised using a risk assessment approach and inserted into a work programme for action within the resources available.
- 3.14 The above methodology will be applied on an ongoing basis so that skid resistance across the highway network is monitored and managed appropriately. The methodology is highly dependent on the use of external asset management software. Without access to this software the SCRIM data assessments, accident data review, detailed investigations and remedial treatment identification would not be possible.
- 3.15 The Leeds City Council Skid Resistance Procedure document sets out the technical detail for the application of this methodology.

4. Corporate considerations

4.1 Consultation and engagement

- 4.1.1 Highways & Transportation Officers have been consulted and input into both the Policy and Procedure.

4.1.2 We will continue to work with Our WY+Y partners, other authorities and external parties who attend the skid resistance user group meetings (presently chaired by Kirklees Metropolitan Borough Council) to ensure that the strategy, policy and procedures are kept up to date with changes to legislation and working practices.

4.2 Equality and diversity / cohesion and integration

4.2.1 No equality screenings are required.

4.3 Council policies and the Best Council Plan

4.3.1 This strategy will help to ensure the decisions made with regard to skid resistance on road surfaces are consistent, improve the highway network and contribute to The Best Council Plan 2019/20 to 2020/21 in improving transport connections, safety, reliability and the resilience of the city's infrastructure.

4.3.2 A well maintained highway infrastructure contributes to the Best Council Plan by facilitating an accessible network for getting into and around the city easier. A better maintained network improves safety of all road users, and reduces disruption which will result in a reduction in carbon emissions.

Climate Emergency

4.3.3 The adoption of the strategy will help create a safer road environment, reducing road traffic collisions and the resultant congestion and vehicle emissions.

4.4 Resources, procurement and value for money

4.4.1 The required surveys (SCRIM and Scanner) as well as the administration and processing fees to use the external asset management system will be funded through the Highway Infrastructure Maintenance Programme's (Machine Condition Surveys allocation). Which is subject to approval on an annual basis.

4.4.2 Where it is not possible for the 200+ annual detailed site inspections to be carried out by Council Officers, an external contractor will be used to ensure that these are carried out within the required timescales.

4.5 Legal implications, access to information, and call-in

4.5.1 The implementation of the strategy will target skid resistance improvements at those roads in need, thereby improving safety for all road users on the network the Council are responsible for maintaining. It will also support legal and national requirements in their safe operation, in particular the Council's duty under Section 41 and special defence under Section 58 of the Highways Act 1980.

4.5.2 The Chief Officer (Highways and Transportation) has been delegated the authority to approve the recommendations contained within this report as identified in the Constitution, Part 3, Section 3c.

4.5.3 This report is not eligible for call in.

4.6 Risk management

4.6.1 The adoption of strategy contributes to providing real help for communities by reducing the potential for road traffic collisions. The Council is using a risk and data

led approach to how it manages the highway infrastructure including skid resistance whilst taking account of the resources that are available.

5 Conclusions

- 5.1 The strategy will help to ensure the decisions made with regards to skid resistance on road surfaces are consistent and in accordance with the latest national standards, thereby improving the highway network, road safety and the resilience of the city's infrastructure.
- 5.2 The implementation of this strategy will target skid resistance improvements at those roads most in need, thereby improving safety for all road users on the road network Leeds City Council are responsible for maintaining. Adoption of this strategy should reduce the number and severity of road traffic collisions, and the Council's potential liabilities.

6 Recommendations

- 6.1 The Chief Officer (Highways and Transportation) is requested to:
 - a) approve the adoption and implementation of the Leeds City Council Skid Resistance Strategy (including the West Yorkshire plus York Common Skid Resistance Policy) to manage skid resistance on the existing Leeds City Council's road network. The strategy will also apply to any new roads and any works undertaken by developers, to ensure that these works are constructed in accordance with the information contained in the strategy.

7 Background documents¹

7.1 Leeds City Council Skid Resistance Strategy

Including:-

- West Yorkshire plus York Common Skid Resistance Policy
- Leeds City Council Skid Resistance Procedure

¹ The background documents listed in this section are available to download from the council's website, unless they contain confidential or exempt information. The list of background documents does not include published works.