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Document History

Version	Date	Author(s)	Reviewer(s)	Notes
1.0	Oct 2018	Ben Tyrrell	n/a	Incorporation of changes from v0.9 review
0.9	Aug 2018	John Proust	Ben Tyrrell	Minor changes

Review Requirements

Since this strategy will be applied for the first time in financial year 2018/19, it will be reviewed as a whole in financial year 2019/20 (i.e. after one year of implementation) in order to fully assess the first year of implementation.

Following this first review this document will be assessed as a whole on a three-yearly basis, or when HD28 is amended by the Department for Transport.

Review and/or update requirements for specific aspects of the strategy are detailed in the appropriate place throughout the document, and may result in a different frequency to the whole document review mentioned above. To facilitate the review process, these specific review requirements are outlined with a green box, e.g.:

Data Management Requirements

All inputs to, and outputs from, the operation of this Skid Resistance Strategy shall be managed in accordance with South Tyneside Council's data management requirements. It is important to retain key information for the proper implementation of this strategy, to enable effective review and improvement, and to demonstrate all actions taken to manage skid resistance.

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1.	INTRODUCTION

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- Analyse skid resistance data to identify sites at which skid resistance may require further investigation
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3. Defining the SCRIM Survey Network

3.1 The SCRIM Survey Network

The SCRIM survey network is that part of the highway network on which skidding resistance will be managed according to this strategy.

The Council have defined their SCRIM survey network as all classified roads (i.e.: DfT class A, B and C) within their adopted highway network – this is shown in Figure 2 below. By including all classified roads within the SCRIM survey network, the Council is taking a conservative approach to managing skidding risk. Analysis of accidents on the Council's network shows that 73% of all accidents 2015-17 occurred on the classified network, further supporting this approach (the proportion is identical when considering only the last three years).

Figure 2: Map of South Tyneside's SCRIM Survey Network



Skid resistance surveys will not be routinely undertaken on parts of the network other than the SCRIM survey network. Skid resistance measurement of sites not on the SCRIM survey network may be undertaken when requested by the maintenance engineer as a result of reported incidents.

The SCRIM Survey Network will be regularly reviewed as part of the whole strategy review, and/or in the following specific cases:

- After significant changes to the highway network (including to network hierarchies)
- When there are a significant number and/or a significant variation of recorded accidents or other relevant recorded incidents, complaints, etc.

Where possible, such sites will be appended to the routine annual SCRIM survey programme. These sites will be reviewed to determine whether they should be added directly to the SCRIM survey network in future years.

Details of the SCRIM survey network (including Site Categories and corresponding Investigatory Levels – see below) shall be maintained in appropriate formats and stored using appropriate methods, including within the Council's highways asset management systems. These details shall be provided to SCRIM surveying contractors applied. If highest potential Investigatory Levels in this case are identical, then the Site Category highest up the Table shall be applied (B is highest on the table, S2b the lowest).

- Site categories will be applied to all lanes of a carriageway with traffic running in the same direction therefore, all lanes of a carriageway should be considered when identifying what Site Category will be applied.
- Small sections up to 50m classified as "Non-Event" (Site Categories B or C) may be merged with adjacent sections – the small section will then be classified with the Site Category of the section it is merging into. This is a conservative approach since the "Non-Event" categories are the lowest risk. The purpose of this is to avoid small low-risk sections, which will complicate the application of this Strategy with little to no benefit to skid resistance risk.¹

¹ Note that this merging rule is not present in HD 28/15 (the SRN is unlikely to have many small "Non-Event" sections), and is introduced here to improve applicability to a local highway authority network.

Site Categories shall be set based on the guidance in this strategy in conjunction with the detailed guidance in Annex 5 of HD 28/15 (NB: the differences between the Site Categories specified in this strategy and those specified in HD28/15 should be taken into account).

3.3 Setting Investigatory Levels

Investigatory Levels (ILs) represent a pre-defined limit below which investigation may be required: above this limit, skid resistance is considered to be satisfactory; at or below this limit

Table 2: Investigatory Levels by Site Category and relative risk

		Inv	vestigat	tory Lev	vel (L/S	/H risk))
Site C	Category Code & Description	0.30	0.35	0.40	0.45	0.50	0.55
В	Non-event carriageway with one-way traffic	L	S	Н			
С	Non-event carriageway with two-way traffic		L	S	Н		
Q	Approaches to and across minor and major junctions. Approaches to roundabouts and traffic signals.				L	S	н
К	Approaches to pedestrian crossings and other high-risk situations.					S	н
R	Roundabouts ¹			L*	S	Н	
G1	Gradient of 5-10% longer than 50m ²			L*	S	Н	
G2	Gradient of >10% longer than 50m ²				L	S	н
S1	Bend radius <250m – 40 mph carriageway with two-way traffic				L	S	Н
S2	Bend radius <100m - 30 mph carriageway with two-way traffic ⁴				L	S	Н

4. Measuring Skid Resistance

4.1 Performing Routine Skid Resistance Surveys

Skid resistance for routine surveys will be measured using a SCRIM (Sideways-Coefficient Routine Investigation Machine). Exceptionally, alternative measurement systems may be used for the sole purpose of detailed investigation of local sites (see 5.2, pg 19) if the Council is satisfied that the system is suitable for purpose and operators are suitably qualified and experienced.

5. Site Risk Assessment & Investigations

5.1 Initial Site Risk Assessment

All sites where the measured CSC is at or below the corresponding IL shall undergo the initial site risk assessment process as described below. Identification of sites at which there is a SCRIM deficiency will be undertaken as soon as is reasonably practical, and within no more than six weeks from receipt of all relevant processed data. Other sites may be put forward for initial risk assessment where increased skidding crash levels have been observed.

The objective is to provide a risk assessment of these sites with regards to the risk of a skidding incident. This risk assessment will enable prioritisation of sites for detailed onsite investigations.

Risk assessment will be carried out using the risk-based site scoring system in Table 3 below – this is taken directly from HD 28/15 (Table A.7.1, Annex 7) with no deviations. Table 3 must be used in conjunction with the accompanying guidance notes. Table 4 provides an initial guideline for determining the likely impact of a crash based on the applicable Site Category, for use in the risk assessment.

Other factors which relate to risk such as speed limit, road classification and traffic levels are considered when defining Site Categories and IL's, as detailed in the corresponding sections above.

Number of crashes ¹	0	1	2	3+	
Score	0	4	8	12	
Likely impact of a crash ²	Slight	Slight/serious	Serious	Serious/fatal	
Score	1	2	3	4	
Skid resistance Difference (SD) ³	>0	0 and >-0.05	-0.05 and >-0.10	-0.10 and >-0.15	-0.15
Score	0	1	3	6	12
Site has SD 0 and poor					

Table 3: Risk-based site scoring system

assessment process updated if relevant).

Where such actions are recommended in a Site Investigation report, they should be implemented

Appendices

Appendix 1 Explaining Skid Resistance

Skid resistance is a measure of the frictional properties between the tyre of a moving vehicle and the road surface which directly affect the ability of a driver to slow / stop the vehicle. As such, it is a key component of road safety.

Appendix 2 Site Investigation Form

Based on the template from HD 28/15, Annex 6.

This form is designed to be cd

	Note w visible.	hether traffic signals are operating correctly and are clearly		
Markings, Signs and Visibility				
Are markings and signs clear and effective in all conditions?	Note old pavement markings which have not been fully removed. Check sign reflectivity where possible. Consider appropriateness and clarity of signage and road markings.			
Are roadside objects protected from vehicle impact?				
Clear sight lines/visibility of queues/ vegetation	Consider sight lines through junction/accesses. Is there enough visibility of likely traffic queues? Does/will vegetation growth affect visibility or obscure signage?			
Additional Information and Other Observations				
Recommendations (please refer to Sections 6 and 6.3 of this Strategy)				
Is treatment required to improve skid resistance?	Y/N	If so: why, and what type of treatment is recommended.		
Should the site risk rating be changed?	Y/N	If so: why, and what is the recommended change.		

References

Document	Publisher and Retrievable Location

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