NRA HD 28

Management of Skid Resistance
• Managing the Network in terms of its overall Pavement performance in terms of IRI, LPV3, Rut Depth, and Cracking
• Managing the Network in terms of its Skidding Resistance in terms of its Coefficient of SCRIM
Management of Skid Resistance - Previously

- An informal approach was taken to the Management of Skid Resistance
- Categories
  - 0 to 10% Sr values < 40 Green
  - 10 to 20% Sr values < 40 Yellow
  - 20 to 50% Sr values < 40 Blue
  - 50 to 100% Sr values < 40 Red
- Funding – NP & NS Annual Resurfacing
• Volume 7: Pavement Design and Maintenance
• First Maintenance Standard to be adopted in Ireland from UK DMRB Vol. 7
• Title: Management of Skid Resistance
Philosophy

• Provision of appropriate levels of skid resistance treated primarily as an asset management issue rather than road safety engineering

• Standard does not address identification of all locations where road safety engineering measures could help to reduce accidents
Broad Principles

- Site categories with higher risk of accident should have higher Investigatory Levels
- Low traffic roads have lower Investigatory Levels than high traffic roads
- Initially, set Investigatory Levels for the network based on site category type and traffic level
- Review ILs at least every 3 years
Currently

- The entire National Road Network is surveyed in one direction annually and data processed.
- The entire National Road Network has been categorised and all 16,000 “event” locations have been identified and recorded.
- IL levels have been assigned to each site category.
### Site Categories and IL – HD28/11

<table>
<thead>
<tr>
<th>Site category and definition</th>
<th>Investigatory Level at 50km/h</th>
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<tbody>
<tr>
<td></td>
<td>0.30</td>
</tr>
<tr>
<td>A Motorway</td>
<td></td>
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<tr>
<td>B Dual carriageway non-event</td>
<td></td>
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<tr>
<td>C Single carriageway non-event</td>
<td></td>
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<tr>
<td>G1 Gradient 5-10% longer than 50m</td>
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<tr>
<td>G2 Gradient &gt;10% longer than 50m</td>
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<tr>
<td>K Approaches to traffic signals. pedestrian crossings</td>
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<tr>
<td>Q Approaches to and across major and minor junctions</td>
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<tr>
<td>R Roundabout</td>
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<tr>
<td>S1 Bend radius &lt;250m – dual carriageway</td>
<td></td>
</tr>
<tr>
<td>S2 Bend radius &lt;250m – single carriageway</td>
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</tbody>
</table>

- Traffic > 250 commercial vehicles / lane / per day
- Traffic < 250 commercial vehicles / lane / per day
Procedure

1. Categorise sites (Table 4.1) and assign initial Investigatory Levels
2. Define/review local criteria for setting Investigatory Levels
3. Network changes or >3 years since Investigatory Level review?
   - No
   - Yes → Review/revise Investigatory Level
4. CSC at or below Investigatory Level?
   - No → Carry out SCRIM survey(s) and calculate CSC for site
   - Yes → Carry out site investigation in prioritised order
   - Yes → No further action until next CSC measurement
Procedure

Treatment needed?

Yes

Erect warning signs if required

Identify and cost suitable treatment strategy

Prioritise and treat sites, taking account of budget and programme considerations

Site treated?

No

Consider revising Investigatory Level

No further action until next CSC measurement

No

Add to next year’s programme

Yes

Remove warning signs

No further action until next CSC measurement
Very Important Warning!

- Investigatory Levels are set solely to trigger Investigations at the locations identified
- They are **NOT** an indication of inadequate skid resistance
- They are **NOT** Intervention Levels, requiring immediate intervention and improvement, and there are no Intervention Levels defined under HD28/11
Investigatory Levels (IL)

• Measured value above IL, no investigation required
• Measured value below IL, investigate to determine if:
  • Surface treatment is required to reduce risk of skidding accidents in wet conditions
  • Some other form of action is required
  • Site should be kept under review
Desk Top Study

- Site Location
- Pavement Condition Data
- Collision Data
Site Observations

- Visual Assessment
- Road Users
- Road Layout
- Markings, Signs and Visibility
- Additional Information
Recommendation

- Treatment
- Other Measures
- Additional Routine Maintenance
- No Treatment / No Further Action
- Review of Investigatory Levels
After Site Investigation

- **Targeted** use of signs
- Warning signs only erected if a treatment to improve skid resistance is recommended
- Warning signs removed as soon as no longer required
Summary

• Management of Skid Resistance of National Road network from Asset Management viewpoint
• Standardised Equipment
• Investigatory Levels based on Site Categories
• Targeted Site Investigations
• Prioritised treatments based on accident saving and cost-effectiveness
Some Examples
Some Examples
Some Examples
The End

Thank You