



SPECIFICATION FOR SKID RESISTANCE DEFICIENCY INVESTIGATION AND TREATMENT SELECTION

1. SCOPE

This specification outlines the process for identifying skid resistance deficiencies and provides guidelines for prioritising the programming of resurfacing treatment.

2. INVESTIGATORY LEVELS (IL's)

The IL's for different site categories are shown in Table 1. Site categories 1, 2 and 3 are defined as High Demand and sites 4 and 5 as Low Demand. These demand levels impact on the treatment selection.

Table 1

Investigatory Skid Resistance Levels

Site Category	Site Definition	Investigatory Level (SFC)*	Demand Category
1	Approaches to railway level crossings, traffic lights, pedestrian crossings, roundabouts.	0.55	High Demand
2	Curve < 250m radius Down gradients > 10%	0.50	High Demand
3	Approaches to road junctions Down gradients 5 - 10% Motorway junction area	0.45	High Demand
4	Undivided carriageway (event - free)	0.40	Low Demand
5	Divided carriageways (event - free)	0.35	Low Demand

*SFC = Sideways Force Coefficient

3. MODIFICATION OF THE INVESTIGATORY LEVEL

Where crashes occur as a result of 'loss of control' or 'skidding in the wet' and the road surface at the site has a SCRIM value at or above the IL, it may be necessary to review the IL. Guidelines for modifying Skid Resistance Levels at selected sites are outlined in the Notes to this specification. A sensible approach must be taken when modifying the default IL's to ensure that they are modified only where required.

4. ANALYSIS OF SKID RESISTANCE DEFICIENCIES

To determine the priority for treating sites which are deficient in skid resistance generate a report entitled "SCRIM Deficiency by Seal Length and Site Category" from the RAMM database. This report identifies sites where the average deficiency is greater than or equal to the threshold level (difference between the SCRIM value and the IL; currently ≥ 0.1) over the site category length, within a seal length.

Refer to the SCRIM Deficiency Report User Guidelines which sets out the three levels for analysing the deficiencies. These levels determine the priority for addressing the deficient lengths:

Level 1 Site Categories with an average deficiency over the total length of the site category.

Level 2 Rolling average deficiencies within a site category.
Use criteria outlined for High and Low Demand sites in Table 2 to determine the minimum length for treatment.

Table 2

<i>Demand Category</i>	<i>Criteria</i>
High Demand (Site Categories 1, 2 & 3)	≥ 5 consecutive 10m lengths, (ie a ≥ 50 m continuous length) which has a deficiency \geq the threshold value, (currently ≥ 0.1 below the IL)
Low Demand (Site Categories 4 & 5)	≥ 10 consecutive 10m lengths, (ie a ≥ 100 m continuous length) which has a deficiency \geq the threshold value, (currently ≥ 0.1 below the IL)

Level 3 Isolated intermittent lengths of deficiency not identified in Levels 1 or 2. These skid deficient lengths are still potentially hazardous and must be investigated for treatment as soon as practicable as part of routine highway maintenance.

From the sites identified in the report, ensure the following have been subtracted:

- sites which are already included in the forthcoming resurfacing programme; and
- sites that have been treated to improve the surface texture depth. These include activities such as “burning” to remove excess bitumen at flushed sites.

5. TREATMENT SELECTION

Determine the appropriate treatment with due consideration to the minimum Polished Stone Value Requirements and Resurfacing Lengths as outlined below.

5.1 Polished Stone Value Requirements

All resurfacing shall be performed with aggregate that has an appropriate polished stone value (PSV) to maintain the skid resistance above the IL for the design life of the surface. The following equation gives the relationship between skid resistance and PSV:

$$PSV = 100 * SR + 0.00663 * CVD + 2.6$$

SR = Investigatory Level value for the site in units of SFC

CVD = flow of commercial vehicles per lane per day. In this case a commercial vehicle is any vehicle that has a weight of 3.5 tonnes or more.

PSV = Polished Stone Value of aggregate

5.2 Resurfacing Lengths

To determine the length to be resurfaced, refer to Chapter 3 of Austroads Rural Road Design. This chapter provides details on road geometry factors to be considered when determining an appropriate length to be treated. The length should be consistent for areas with high friction demand and due consideration given to geometric traps (e.g. a sudden tight curve amongst higher speed curves).