

# PAVEMENT SPECIFICATION GUIDELINES FOR CYCLING ROUTES

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This document provides guidelines for pavement specifications for primary cycling routes including cycle lanes and cycle paths, shared paths and separated cycleways, as well as pavement shoulders where cycling demand is high and where a high level of service is desired. For a secondary or minor route in a cycling network, a lower level specification may be appropriate.

## DESIGN LIFE

1. Pavement design life – the pavement design should provide a design life of 25 years assuming the deterioration will primarily be environmental. For cycle-lanes the design traffic loading should match that for the adjacent vehicle carriageway. Cycleways should consider all potential heavy vehicle loading and be designed for a minimum of 1000 Equivalent Standard Axles. Asphalt, concrete and granular pavements are all acceptable construction solutions. Surfacing should provide a minimum of 8 years maintenance free service.

## CONSTRUCTION REQUIREMENTS

2. All asphalt surfacing used in cycle lanes and cycle paths should meet the requirement of the [NZ Transport Agency specification M10](#) particularly the minimum thickness requirements and compaction requirements.
3. All basecourse materials should meet the [NZ Transport Agency specification M4](#), either for AP40 or AP20 material.
4. Chipsealing should follow the procedures in [Chipsealing in New Zealand](#) (Transit *et al.* 2005). For cycle lane and cycle paths. Only grade 5 or grade 6 chips should be used when chipsealing.

## MAINTENANCE REQUIREMENTS

### Potholes

5. There should be no potholes. Potholes should be maintained as per the applicable Network Outcomes Contract or the Road Controlling Authority specifications with the exception that the pothole should be defined as having a diameter greater than 100 mm.

### Edgebreak

6. Edgebreak should be maintained as per the applicable Network Outcomes Contract or the Road Controlling Authority specifications.

### Roughness

7. Roughness should be at a level that all cycle users can ride comfortably irrespective of bike type and speed of travel. A new construction should have an average roughness

of 1.94 IRI (50 NAASRA) and a maximum roughness of 2.69 IRI (70 NAASRA). In addition, the requirements of clause 8 below should apply.

8. The finished surface should be a maximum of 5 mm above kerbs, pavement edge treatment and battens and should nowhere hold water. The gap under a 3 metre straight edge placed longitudinally should not exceed 5 mm with a cumulative total of all visible gaps of not more than 10 mm. The gap under a 1 metre straight edge placed transversely should not exceed 5 mm with a cumulative total of all visible gaps of not more than 7 mm.

## Skid resistance

9. For cycle lanes the skid resistance should meet the requirements of [NZ Transport Agency specification T10](#). Cycle paths should meet the T10 requirements for site category 5 but should be only measured at the completion of construction rather than annually.
10. Utility access covers should not be located in the cycle wheel path, however, where this cannot be avoided then the cover should provide the same level of skid resistance as the surrounding pavement.

## SURFACE DEBRIS

11. Loose material should be removed whenever it is regarded as a traffic or cycling hazard. Not more than 50 loose chips are left on any 2 m<sup>2</sup> area of the sealed carriageway for all chip sizes except for grades 5 and 6. No more than 100 loose chips are left on any 2 m<sup>2</sup> area of the sealed carriageway for grades 5 and 6. Rubbish should be treated as per state highway requirements.

## PAVEMENT REPAIRS

12. Reinstatement should not increase the roughness, as defined in Clauses 7 and 8 above, of the cycleway or cycle lane, this should be measured at the completion of construction and again two years later. Underground services should not be placed in the cycleway. If utilities have to be placed or repaired then the surfacing reinstatement should be for the full width of the cycleway and the reinstatement levels should meet the requirements of clauses 7 and 8 as well as the [NZ Transport Agency specification M10](#).