

Notes for the Specification for the Design, Construction and Maintenance of Cycling and Shared Path Facilities

These notes provide additional advice for the construction, maintenance and operation of cycling and shared path facilities on the state highway network or local road corridors that are maintained and managed by the NZ Transport Agency (Transport Agency).

The specification has been developed for the purpose of the state highway network, but may be used as a guide by local government.

This specification does not currently apply to footpaths (Sept, 2018) but work is underway to better understand the design, construction and maintenance requirements for footpaths given the recent shift in funding policy.

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1 Glossary

The table below provides clarification on definitions used within the specification. Definitions are consistent with the Transport Agency’s Cycling Network Guidance.

Table 1.1 Definitions	
TERM	DEFINITION
Asset Owner	Is responsible for the forward works planning items associated with the renewal of the pavement, surfacing and associated assets (signs, marking and cycling furniture) of the cycling facilities.
Asset Maintenance Owner	Is responsible for the ongoing operational maintenance items which includes but is not limited to detritus, potholes, vegetation, edge break and surface bumps.
Road User	A user of the network (e.g. someone who travels on a state highway, such as a pedestrian, cyclist, motorcyclist or motorist)
Customer	Is a road user, a person and/or a community affected or influenced by any of the Principal’s operations within the network area.
Cycling Facility	Infrastructure that is cycling-specific, such as sealed shoulder (cycling), cycling lanes, separated cycling paths, shared paths, grade separation and bike parking.
At Grade Crossing Point	Any point on the network that has been designed to assist pedestrians, cyclists, equestrians, etc to cross the roadway. This may include assets such as pedestrian island, zebra crossing, raised pavement platform, specific signage, tactile paving, barriers, fences, signalised services, other traffic calming and management assets.
Cycle Lane	Cycle lanes are special vehicle lanes painted and marked within the carriageway, motor vehicle drivers may use the lane in certain circumstances such as to access parking or to turn at intersections or driveways.
Cycle Furniture	Street furniture specific to cyclists (ie, bike stands)
Cycle Path	Part of the road that is physically separated from the roadway that is intended for the use of cyclists, but which may be used also be pedestrians. Encompasses separated cycleways, shared paths and cycle-only paths.
Footpath	A portion of the road reserve set aside for the use of pedestrians only. This specification does not currently apply to footpaths.
State Highway Cycle Network	Is the identified and agreed cycle routes on the state highway network that are frequently used or promoted. It includes sections of State Highway that are part of the New Zealand Cycle Trail (both Great Rides and Heartland Rides), popular sports routes as identified by usage heat maps and local knowledge, and strategic urban cycling networks as defined by local authorities.. Refer to regional State Highway Cycle Network maps for defined network.

Sealed Shoulder (cycling)	Is a sealed shoulder that has been identified as a cycle facility as part of the 'State Highway Cycle Network'. The sealed shoulder will provide space and an appropriate surface for cycling outside the general traffic lanes. Sealed shoulders also have other purposes such as pull-off areas for breakdowns. They are generally provided on higher speed rural roads.
Separated Cycleways	Separated cycleways are facilities exclusively for cycling. They involve some form of physical separation from motor traffic and are generally situated on or adjacent to the roadway, usually within the road reserve. The separation may involve horizontal and/or vertical components.
Shared Paths	A shared path is an area separated from a roadway, that may be used by some or all the following persons at the same time: pedestrians, cyclists, riders of mobility devices and riders of wheeled recreational devices.
NZCT Inc	New Zealand Cycling Trail Incorporated
New Zealand Cycling Trail (NZCT)	An initiative started by the New Zealand Government and managed by the Ministry of Business Innovation and Employment (MBIE) to create a series of iconic cycling routes throughout the country.
New Zealand Cycling Trail – Heartland Rides	Heartland Rides are part of the NZCT which is managed by NZ Transport Agency, in partnership with Ministry of Business Innovation and Employment (MBIE) and NZCT Inc.
New Zealand Cycling Trail – Great Rides	Great Rides are part of the NZCT network and are managed by Ministry of Business Innovation and Employment (MBIE) with input from NZTA and NZCT Inc.
Pedestrian	Any person on foot or using a powered wheelchair or scooter or a wheeled means of conveyance propelled by human power, other than a cycle.

2 Planning and Design

Development of cycling networks must be in accordance with current NZTA documents.

2.1. General Principles

- The state highway should not act as an impediment to allow walking and cycling movements.
- Determining the appropriate cycling or shared path facility as part of a project business case will depend on whether the state highway corridor is the primary route as identified in the agreed regional cycling plan
- A lower standard of facility on the state highway may be considered where a better alternative facility is on an adjacent local road corridor as part of the agreed regional cycling plan.
- A cycling facility should be at least as smooth as the traffic lane so that a person on a bike chooses to use them

2.2. Walking and Cycling Facility Planning and Design

Technical guidance on the planning, concept and detailed design of any facility must be in accordance

with current NZTA documents (e.g. NZTA Cycling Network Guide, Pedestrian Planning and Design Guide).

<https://www.nzta.govt.nz/walking-cycling-and-public-transport/cycling/cycling-network-guidance/>

<https://www.nzta.govt.nz/resources/pedestrian-planning-guide/>

3 Asset Ownership and Maintenance

This section sets out the principles for determining the maintenance responsibilities of cycling and shared path facilities between the Transport Agency and a Local Road Controlling Authority in areas where their respective networks interface.

This document shall be read in conjunction with the associated maintenance boundary maps displaying the boundaries between the areas for which the Transport Agency and the Local Authority Road Controlling Authority have maintenance responsibilities, as displayed on the map spatial system.

The walking and cycling facilities' boundaries should be located in such a manner that boundaries of responsibility are clear and practical for all aspects, including designation, construction, renewal, maintenance and operation.

Prior to the construction and completion of cycling and shared path facilities, the maintenance responsibilities must be agreed and approved by the appropriate representative as it may differ from the Road Controlling Authority constructing the works. This is documented in the respective NZTA/Local Authority maintenance boundary agreements that are the responsibility of the NZTA System Design and Delivery – System Management.

3.1. Legal Responsibility

It is the Transport Agency's statutory objective under the Land Transport Management Act 2003 to undertake its functions in a way that contributes to an effective, efficient, and safe land transport system in the public interest as set out in the Land Transport Management Act 2003. This and other legislation, such as the Land Transport Act 1998, determines our roles and provides the authority for us to act. Other forms of legislation – regulations and rules – set out our powers for a range of activities, from establishing toll roads to implementing driver and vehicle requirements.

Under the Land Transport Management Act 2003 we have the following functions:

- Contribute to an effective, efficient, and safe land transport system in the public interest.
- Manage the state highway system, including planning, funding, design, supervision, construction, and maintenance and operations.
- Manage funding of the land transport system, including auditing the performance of organisations receiving land transport funding.

The Transport Agency is a requiring authority for state highways and cycleways. Under the Government Rounding Powers Act 1989, the Transport Agency has sole powers of control for all purposes of all state highways.

3.2. General Principles

The Transport Agency will maintain all cycling and shared path facilities within its designations and/or state highway corridor (including the pavement surfacing, pavement markings, sweeping, the replacement of lighting luminaires and electricity charges) unless agreed otherwise with the Local Authority Road Controlling Authority.

The Local Authority Road Controlling Authority will maintain all cycling and shared path facilities outside of the Transport Agency's designations and/or state highway corridor, unless agreed otherwise with the Transport Agency.

It is the intention of the Transport Agency to optimise the road user experience and to minimise the cost of service delivery where possible. Therefore, the Transport Agency may, in some instances agree to take responsibility for maintenance of cycling and shared path facilities outside of its designation, or vice versa to delegate responsibility for assets within its control to a Local Authority Road Controlling Authority.

4 Funding of Cycling and Shared Path Facilities

Cycling and shared path facilities that are proposed as part of a state highway, regional and/or local road improvement can qualify for funding from the road improvement activity class:

- Work category 321: New traffic management facilities
- Work category 322: Replacement of bridges and structures
- Work category 323: New roads
- Work category 324: Road improvements
- Work category 325: Seal extension
- Work category 331: Property purchase – state highways
- Work category 332: Property purchase – local roads
- Work category 333: Advance property purchase
- Work category 341: Low cost, low risk roading improvements
- Work category 357: Resilience improvements.

Where opportunities are identified to make safety improvements on the State Highway Cycle Network as part of planned road resealing or pavement rehabilitation (including increasing shoulders to meet target width), funding can be sought as 'Associated Improvements' as part of Work Category 341: Low cost, low risk roading improvements.

Cycling and shared path improvement projects that are standalone and cost over \$1,000,000 can qualify for funding from the walking and cycling activity class:

<https://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activityclasses-and-work-categories/walking-and-cycling/>

- Work category 452: Cycling facilities

5 Maintenance Funding of Cycling and Shared Path Facilities

Refer to the NZ Transport Agency Planning and Investment knowledge base for further guidance.

<http://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activity-classes-and-work-categories/>

5.1.4.1 Work Category 111 Sealed pavement maintenance

<https://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activity-classes-and-work-categories/road-maintenance/work-category-111-sealed-pavement-maintenance/>

Provides for the routine care of sealed pavements to maintain their structural integrity and serviceability. This work category includes the maintenance of sealed and un-sealed shoulders, so where the cycling network is comprised of road shoulders, WC 111 is the appropriate source for maintenance funding.

5.2. Work Category 122 Traffic services maintenance

<http://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activity-classes-and-work-categories/road-maintenance/work-category-122-traffic-services-maintenance/>

Provides for the cycle lane pavement markings, traffic signs and signals and the operation, maintenance and power costs of belisha beacons and lighting at pedestrian crossings

5.3. Work Category 124 Cycle path maintenance

<http://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activity-classes-and-work-categories/road-maintenance/work-category-124-cycle-path-maintenance/>

Provides for the operation, maintenance and renewal of the pavement and facilities associated with cycle paths, including the operation of associated lighting.

5.4. Work Category 125 Footpath maintenance

<http://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activity-classes-and-work-categories/road-maintenance/wc-125-footpath-maintenance/#introduction>

Provides for the maintenance and renewal of public footpaths and facilities associated with public footpaths, such as pedestrian network connections, including stairs, alleyways and off-road connections.

5.5. Work Category 212 Sealed road resurfacing

<https://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activity-classes-and-work-categories/road-maintenance/work-category-212-sealed-road-resurfacing/>

This work category provides for the planned periodic resurfacing of sealed roads and where the cycling network is comprised of road shoulders, WC212 is the appropriate source of resurfacing funding.

5.6. Work Category 214 Sealed road pavement rehabilitation

<https://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activity-classes-and-work-categories/road-maintenance/work-category-214-sealed-road-pavement-rehabilitation/>

This work category provides for the replacement of, or restoration of strength to, sealed pavements where other forms of maintenance and renewal are no longer economic. Where the cycling network is comprised of road shoulders, 214 is the appropriate source of pavement rehabilitation funding.

5.7. Work Category 222 Traffic services renewals

<http://www.nzta.govt.nz/planning-and-investment/planning-and-investment-knowledge-base/activity-classes-and-work-categories/road-maintenance/work-category-222-traffic-services-renewals/>

Provides for cycle lane pavement markings and traffic signs and signals.

6 Monitoring and Data Reporting

The project manager must ensure that the monitoring methods aligns with the Urban Cycleways Programme National monitoring and data reporting requirements document, which includes the collection of baseline and usage data.

<https://www.nzta.govt.nz/assets/resources/ucp-national-monitoring-and-data-reportingrequirements/ucp-monitoring-requirements-and-guidance.pdf>

The project manager is required to implement an appropriate monitoring system to track the usage of a new cycling facility and the impact on the wider network. This will require the incorporation of costs associated with the establishment of monitoring into project budgets.

7 Maintenance and Operational Requirements

People who cycle are vulnerable road users and are likely to be seriously harmed if they are involved in a crash due to the road condition, as such the on-going maintenance of the road corridor and cycling facilities are critical.

Maintenance defects like loose glass or potholes are significant hazards for cyclists who are more susceptible to minor changes in the road surface and these faults can lead to serious injuries.

Temporary traffic management can also create a hazard for cyclists, and must be installed and operated according to the Code of Practice for Temporary Traffic Management.

Sweeping requirements for the State Highway Cycling Network should be determined by the Network Managers, System Management and be detailed in each Network Outcome Contract (NOC). Where maintenance contract requirements relating to drainage already result in regular sweeping, additional activity may not be required but existing sweeping activity may need to be adjusted to include cycling facilities (eg. Cycle lanes or sealed shoulders). Sweeping following storm events is particularly important for the State Highway Cycle Network and current practices to clear traffic lanes of debris following storm events, must be extended to include walking and cycling facilities.

The frequency of any additional sweeping required (including for off-road shared paths) should be determined by key factors such as topography, the volume of heavy vehicles carrying loads that cause debris, cyclist volumes and history of complaints. Any regular sweeping activities required should be identified and written into NOCs.

8 Other Reference Publications

8.1. NZTA Cycling Network Guidance

<https://www.nzta.govt.nz/walking-cycling-and-public-transport/cycling/cycling-network-guidance/>

The NZ Transport Agency launched the Cycling Network Guidance online in July 2016. The guide aims to promote a consistent, best-practice approach to cycling network and route planning throughout New Zealand. It sets out a principles-based process for deciding what cycling provision is desirable, and provides best-practice guidance for the design of cycle facilities.

8.2.NZTA Pedestrian Planning and Design Guide

<https://www.nzta.govt.nz/resources/pedestrian-planning-guide>

The Pedestrian planning and design guide is New Zealand's comprehensive official guide to planning and design for walking. It sets out ways to improve New Zealand's walking environment.

8.3.The New Zealand Cycling Trail Design Guide

<http://nzcyclingsail.com/wp-content/uploads/2015/08/NZCT-Cycling-Trail-Design-Guide-v4-Feb-2015.pdf>

The Guide was first published in February 2010 to assist people involved in planning, designing or building cycling trails that would make up the New Zealand Cycling Trail (NZCT).

7.4 Code of Practice for Temporary Traffic Management

<https://www.nzta.govt.nz/resources/code-temp-traffic-management>

This is the standard reference for all temporary traffic management on state highways and local roads. It includes levels of temporary traffic management, signs and forms used, and a series of sample traffic management plans.

7.5 Traffic Control Device Manual

<https://www.nzta.govt.nz/resources/traffic-control-devices-manual/>

This manual provides guidance on industry best practice, including, where necessary, practice mandated by law in relation to the use of traffic control devices.

7.6 Safer Journeys for People Who Cycling – Cycling Safety Panel Final Report

<http://www.saferjourneys.govt.nz/assets/Safer-journeys-files/Cycling-safety-panel-final-report.pdf>

This document details the recommendations the Panel considers will make New Zealand's roads safer for cyclists. The recommendations are based on a thorough investigation of the nature and causes of cycling crashes in New Zealand. The Panel has consulted widely with interested stakeholders and this final report considers their feedback.