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## SPECIAL REQUIREMENTS

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This document is named “Tweed Shire Council, Development Design Specification D9 - Cycleway and Pathway Design”.

ORIGIN OF DOCUMENT, COPYRIGHT
This document was originally based on AUS-SPEC - Development Design Specification D9 - Cycleway and Pathway Design, March 2002 (Copyright SWR-TM). Substantial parts of the original AUS-SPEC document have been deleted and replaced in the production of this Tweed Shire Council Development Specification. The parts of the AUS-SPEC document that remain are still subject to the original copyright.

VERSIONS - D9 CYCLEWAY AND PATHWAY DESIGN

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<th>CLAUSES AMENDED</th>
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<td>Update reference specifications and standard drawings</td>
<td>D9.03, Various</td>
<td>13 August 2014</td>
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<td></td>
<td>Revised design standards to be consistent with Austroads, D1 and standard drawings</td>
<td>D9.10, Table D9.1 (deleted)</td>
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GENERAL

D9.01 SCOPE

1. This specification sets out requirements to be used in the design of various types of cycleways and pathways.

2. All relevant design principles contained in the Austroads Guide referenced below must be integrated in the design of cycleways and associated infrastructure. This specification serves as a companion document to the Austroads Guide extended to incorporate basic requirements for pathways.

D9.02 OBJECTIVES

1. This specification aims to set standards and document requirements related to the provision of cycleways and pathways which encourage pedestrian activities and cycling for transportation and recreational purposes. Cycleways and pathways are to be safe and convenient and shall maintain a satisfactory level of service for all pathway users.

D9.03 REFERENCE AND SOURCE DOCUMENTS

In cases of conflict or contradiction, unless otherwise specified, the provisions of this Specification will prevail over all reference documents and prevail over all Tweed Shire Council Standard Drawings.

(a) Council Specifications

DCP-A5 - Subdivision Manual
D1 - Road Design
D13 - Engineering Plans (Subdivisions)
CP22 - Section 94 Contributions Plan No. 22 “Cycleways”

(b) Australian Standards

AS 1428 - Design for access and mobility
AS 1742 - Manual for uniform traffic control devices
AS 1742.9 - Bicycle facilities
AS 1742.10 - Pedestrian control and protection
AS 2890 - Parking facilities
AS 2890.3 - Bicycle parking facilities

(c) Other

AUSTROADS - Guide to Road Design Part 6A: Pedestrian and Cyclist Paths
- Cycling Aspects of Austroads Guides

(d) Tweed Shire Council Standard Drawings that apply to this section:

S.D. 013 Footpath & Cycleway Details
S.D. 014 Standard Kerb Ramp Details
S.D. 016 Bike Path Slowdown Control – ‘Z’ Chicane
D9.04 CONSULTATION

1. The Designer is encouraged to consult with Council, the Developer's Landscape Architects/Designers and relevant authorities prior to and during the preparation of cycleway and pathway design.

D9.05 PLANNING CONCEPTS

1. The process of subdivision design will determine the general subdivision lot layout; road, pathway and cycleway networks; and is dealt with in DCP-A5.

Development Design Specification D1 – ROAD DESIGN provides requirements for the provision of pathways and cycleways in standard road cross sections.

Council also has specific requirements for cycleways and pathways in Council's Bicycle Plan. The Designer will need to enquire about such requirements and provide for any nominated paths within the development proposal.

2. The Designer should familiarise himself with cycleway geometric design requirements in terms of:
   
   (a) width
   (b) grade
   (c) stopping sight distance
   (d) change in grade
   (e) horizontal curvature
   (f) crossfall and drainage
   (g) superelevation
   (h) sight distance on horizontal curves

   These requirements are discussed in the AUSTROADS Guide.

3. Footpaths and cycleways adjacent to roads shall be protected from illegal encroachment by moving or parked vehicles by the provision of vertical faced kerb or other suitable physical barriers.

D9.06 CYCLEWAY AND PATHWAY TYPES

1. Cycleways can be provided on road and off road. The Austroads Guide provides detailed descriptions, warrants, widths, pavement marking etc for the majority of these cycleways.

Note: The Australian Road Rules 1999 provide for use of roadway footpaths by juvenile cyclists. Council expects that designers will include relevant safety and geometric requirements in normal street cross section design.
2. Common alternative cycleway types include:

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<th>Off Road</th>
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<tr>
<td>Shared Parking/Bicycle Lanes</td>
<td>Shared Bicycle/Pedestrian Pathway</td>
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<tr>
<td>Wide Kerbside Lanes</td>
<td>Segregated Pathway</td>
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<tr>
<td>Shared Traffic Lanes</td>
<td>Exclusive Cycleway</td>
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<tr>
<td>Exclusive Bicycle Lane</td>
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The AUSTROADS Guide provides advice on the suitability of pavement conditions, drainage pit grates etc for on road cycleways.

AUSTROADS Guide

3. Common pathway types include:

| Exclusive Pedestrian Pathways | Shared Bicycle/Pedestrian Pathways |

By definition pedestrian pathways are "off road" in that pedestrian facilities routinely designed adjacent to roadways are termed footpaths and are designed to meet criteria outlined in Council's Subdivision Code and typically related to road cross section detailing.

Footpaths

4. Pathways by comparison diverge from the road alignment either within the road reserve or across land reserves. Pathways can be provided in conjunction with overland floodways or retention basins.

Land Reserves

5. For visibility and safety reasons, roadside footpaths shall be located at least one metre from property boundaries at vehicle access points.

D9.07 PROVISIONS FOR CYCLEWAYS AND PATHWAYS AT STRUCTURES

1. Designers shall consider the best way to cater for the uninterrupted movement of cyclists and pedestrians at proposed and existing structures wherever possible. Structures include bridges and underpasses over rivers, roads or railways. The Austroads Guide provides information on:

(a) acceptable widths and clearances

(b) types of cycleways and pathways

(c) handrails

(d) bicycle bridges

(e) approach ramps, etc.

2. Suitable kerb ramps satisfying the requirements of the Disability Discrimination Act 1992 and AS 1428 shall be provided at kerb crossing points.

D9.08 SIGNAGE AND PAVEMENT MARKING

1. The Designer shall provide adequate signposting design for cycleways and pathways.
2. Signs and pavement marking will provide for the safe and convenient use of the facility. The signs and pavement marking will comply with AS 1742.9 and AS 1742.10 and are subject to Local Traffic Committee approval.

D9.09 END OF JOURNEY FACILITIES

1. Consideration must be given to the design of adequate facilities at common destinations of bicyclists and pedestrians so as to encourage cycleway and pathway usage.

2. Such facilities could include:

   (a) seats
   (b) standby areas
   (c) secure bicycle parking
   (d) picnic facilities

3. Bicycle parking installation design should meet appropriate criteria discussed in the Austroads Guide and be fabricated to meet AS 2890-3.

D9.10 MINIMUM DESIGN STANDARDS

1. Cycleways and pathways shall be designed to comply with AUSTROADS and TSC requirements as referenced below:

   Path width - refer S.D.013
   Crossfall - refer S.D.013
   Horizontal Clearances - refer AUSTROADS Guide to Road Design Part 6A
   Grade - refer AUSTROADS Guide to Road Design Part 6A
   Integration with other cross sectional elements and services - refer D1, Tables D1.7 and D1.8

D9.11 DOCUMENTATION

1. See Development Design Specification D13 for details of required documentation and plans.

D9.12 FOOTPAVING

(a) Concrete is the preferred material for cycleway and pathway pavement construction. For details on concrete cycleway/pathway pavement design requirements see Standard Drawing S.D.013 Footpath and Cycleway Details.

(b) Pavers may be considered for approval provided they are placed on a concrete slab for the extent of this surface treatment in the public realm.

(c) Stamped concrete has been found to have inconsistent depth and texture and is not permitted, due to pedestrian safety and liability issues.
(d) Stencilled concrete may be considered for approval provided the texture is safe for pedestrians and cyclists.