Transport for NSW

Standard

Bicycle Facilities

Version 1.0

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Standard governance

Owner: Lead Stations and Buildings Engineer, Asset Standards Authority

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Approver: Executive Director, Asset Standards Authority on behalf of the ASA Configuration Control Board

Document history

Version	Summary of Changes
1.0	First issue.

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Preface

The Asset Standards Authority (ASA) is an independent unit within Transport for NSW (TfNSW) and is the network design and standards authority for defined NSW transport assets.

The ASA is responsible for developing engineering governance frameworks to support industry delivery in the assurance of design, safety, integrity, construction, and commissioning of Transport assets for the whole asset life cycle. In order to achieve this, the ASA effectively discharges obligations as the authority for various technical, process, and planning matters across the asset life cycle.

The ASA collaborates with industry using stakeholder engagement activities to assist in achieving its mission. These activities help align the ASA to broader government expectations of making it clearer, simpler, and more attractive to do business within the NSW transport industry, allowing the supply chain to deliver safe, efficient, and competent transport services.

The ASA develops, maintains, controls, and publishes a suite of standards and other documentation for TfNSW transport assets. Further, the ASA ensures that these standards are performance-based to create opportunities for innovation and improve access to a broader competitive supply chain.

Sydney's Cycling Future presents a new direction in the way we plan, prioritise and provide for bicycling facilities in Sydney. This standard sets out the minimum requirements for bicycle parking and storage facilities, as bicycle parking facilities form part of the 'Bike and Ride' initiative of *Sydney's Cycling Future*.

This document has been developed by the ASA in consultation with other TfNSW divisions and agencies and has been approved by the ASA Configuration Control Board.

This standard supersedes the bicycle facilities requirements of ESB 003 *Station Functional Spaces*, Version 1.1 and is a first issue.

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1. Introduction

Bicycle facilities include bicycle racks, bicycle shelters, bicycle sheds and bicycle lockers. Secure access bicycle sheds at transport interchanges and bicycle racks near the public transport entrances enable the customers to continue their journey, who use both bicycles and public transportation in their commute.

2. Purpose

The purpose of this standard is to define the types of bicycle facilities that can be installed at transport interchanges. This standard specifies the design and location requirements of such facilities.

2.1. Scope

This document sets out the minimum design requirements for the installation of bicycle facilities.

2.2. Application

This standard applies to all relevant personnel involved in the planning, designing, installing and dismantling of bicycle facilities.

The requirements of this standard apply to all new bicycle facilities and upgrades or alterations to existing bicycle facilities at stations and interchanges for heavy rail.

This standard can be considered suitable for bicycle facilities at public transport services other than heavy rail.

3. Reference documents

The following documents are cited in the text. For dated references, only the cited edition applies. For undated references, the latest edition of the referenced document applies.

Australian standards

AS 2890.3 Parking facilities – Part 3: Bicycle parking

Transport for NSW standards

ESB E001 Low Voltage Electrical Standards

RSS-001 Stations (available on request)

T HR EL 08001 ST Safety Screens and Barriers for 1500 V OHW Equipment

T HR SY 10000 GU Overview of Rail Security Standards and Interpretation Guide

Legislation

The Heritage Act, 1977

Other reference documents

Austroads 2014, Cycling Aspects of Austroads Guides, publication no. AP-G88-14

NSW State Agency Heritage Guide

Sydney's Cycling Future – Cycling for everyday transport

TfNSW Section 170 Heritage and Conservation Register

4. Terms and definitions

The following terms and definitions apply in this document:

ASA Asset Standards Authority

bicycle locker an individual customer demanded facility to enclose one bike (as defined in AS 2890.3)

bicycle rack (bike rack) a rack as defined in AS 2890.3

bicycle shed a secure access bicycle storage facility (as defined in AS 2890.3)

bicycle shelter an undercover bike rack

CPTED crime prevention through environmental design

interchange a location where it is possible to change within a transport mode or between transport modes

TfNSW Transport for New South Wales

5. Heritage requirements

The *Heritage Act, 1977* is designed to protect, maintain and manage environmental heritage in NSW, including items of archaeological significance. When changes are proposed to items that have heritage significance, one of the following applies:

- for those items listed on the *State Heritage Register*, the provisions of the *Heritage Act* shall be followed
- for items listed on TfNSW *Section 170 Heritage and Conservation Register*, the heritage management principles and relevant asset management guidelines that are outlined in the NSW *State Agency Heritage Guide* shall be followed

Proposals to introduce new bicycle facilities into a heritage listed precinct, or in the vicinity of a listed item, shall take the heritage significance of the precinct or the items into proper account. Designs for all new elements shall be developed to ensure that any negative heritage impacts

likely to result from the proposal are minimised, and that identified heritage values are not unduly compromised.

Proposals for bicycle facilities that are required to be located in the vicinity of heritage-listed precincts shall be developed in consultation with the relevant approval authorities, including the nominated operator and maintainer or the regulatory authority, or both as applicable. Designs for bicycle facilities shall demonstrate how heritage issues have been addressed as part of the planning process before designs are finalised and submitted for approval or for construction. The scale, form, bulk, configuration and appearance of bicycle facilities shall relate appropriately to the existing site features and characteristics. New construction materials, finishes and colours shall complement those that are prevalent locally, both in the built environment and the surrounding landscape.

6. Urban design requirements

Designers developing proposals for the introduction of new bicycle facilities at transport interchanges, stations or stops shall consider the following urban design factors:

- customer circulation routes are safely maintained and not impeded
- visibility and natural surveillance is maintained in the public domain, in accordance with crime prevention through environmental design (CPTED) principles
- suitable connections to existing active transport links, local neighbourhood, public open space, and activity centres are provided and the potential for future connections is considered in consultation with local government authorities or relevant state government agencies as applicable
- environmental impacts are minimised and the potential for including alternative energy sources is explored
- opportunities for celebrating and interpreting local history and local environmental character are incorporated where appropriate

7. Location requirements

Bicycle facilities shall be installed at locations near public transport entry points.

They shall not be located inside the rail corridor.

To ensure that bicycle facilities are convenient to use, they shall be installed and located as follows:

- externally to the interchanges, stations or stops with direct access along the most frequently utilised paths to the public transport entry points and exit points

- in such a way that cyclists can legally ride to the facility without obstructing other customers Consideration shall be taken in identifying the best possible location which allows cyclists to legally ride to the facility.
- in one consolidated facility at each entry point, requiring minimal walking and at grade
- in open, well illuminated areas that promote passive surveillance and are not surrounded by dense vegetation or structures
- a clear distance of 5 m or more is available from the facility's closest point to the major thoroughfare's nearest point to minimise both obstruction and congestion of pedestrians or motor vehicle traffic
- in such a way that emergency exit points are not obstructed
- easily located with appropriate wayfinding signage
- cleaned on a regular basis as that of a surrounding station and interchange area
- accessible to police and emergency services personnel

Where any bicycle facility is constructed directly adjacent to the railway corridor fence and there is a potential for electrification, appropriate consideration in the design shall be provided and shall comply with T HR EL 08001 ST *Safety Screens and Barriers for 1500 V OHW Equipment.*

8. General requirements

The selection of bicycle facilities shall be fit for purpose and be provided based on interchange and customer demand or patronage.

Bicycle parking facilities, for example, bicycle racks, bicycle lockers, bicycle shelters and bicycle sheds shall have the following common design requirements:

- designed to optimise whole of life costs and have a minimum design life of 25 years
- be brightly lit
- be designed in accordance with AS 2890.3 *Parking facilities – Part 3: Bicycle parking*
- comply with RSS-001 *Stations*

9. Bicycle racks specific requirements

Bicycle racks shall comply with the following:

- requirements of AS 2890.3 and *Cycling Aspects of Austroads Guides*
- have undercover protection
- enable bicycles to be supported upright in a minimum of two places with the front wheel prevented from turning and tipping the bicycle over

- allow for the frame and at least one wheel to be locked to the rack with either an U-type lock or cable lock
- allow positioning of the bikes for front-in parking or rear-in parking or both where the space is available
- be accessible to all bike sizes, including racing bikes, mountain bikes, hybrid bikes, electric bikes, upright bikes and cruising bikes
- be durable, corrosion resistant and vandal resistant
- be manufactured from a suitable material, finish and surface coating, which is corrosion resistant and that reduces damage to bicycles

  Surface coating shall be either hot dipped galvanised or powder coated steel.

Bicycle racks shall be securely fixed through the substrate to the pavements with tamper proof bolting mechanism that prevents theft or forced removal of the rack. The fixing details shall have safety features that prevent the customers from tripping hazard.

10. Bicycle shelters and sheds specific requirements

Bicycle shelters and sheds should be robust to minimise the risks of vandalism.

Bicycle sheds and shelters shall comply with the following:

- allow for non-intrusive security inspection of the facilities' contents
- be safe and easy to use, free of protruding elements that can injure users or compromise functionality
- have vandal resistant locks and doors for optimum security
- have the surfaces and finishes coated properly, which help in easy removal of graffiti; for example, through the application of permanent anti-graffiti coatings or otherwise surfaces shall be applied with non-sacrificial anti-graffiti coatings
- have racks which allow the frame and both wheels of a bicycle to be conveniently and effectively locked in accordance with AS 2890.3
- have the racks arranged adjacent to the external walls or screens to prevent damage to the bicycles
- have the minimum illumination levels for optimum operation, as recommended by a security risk assessment
- have external lighting to minimise glare
- have vandal-proof light emitting diode (LED) fittings
- have power sourced from a suitable power supply, if solar power is found to be inadequate

- have the electrical power supply conforming to ESB E001 *Low Voltage Electrical Standards*
- have all visible welds smoothed off
- have wayfinding signage leading to the facility

10.1. Typical specifications for bicycle sheds

Acceptable materials and sizes for secure enclosed bicycle sheds are shown in Table 1.

Table 1 – Secure bicycle shed specifications

Parameter	Description
Minimum dimensions	• height: 2400 mm • length and width to suit the number of bicycles to be stored • eave overhang in all directions: 200 mm minimum
Roof	Colorbond or similar material, except for heritage sites where heritage approval determines the finish
Roof drainage	Eaves, gutters, down pipes and leaf guards as required
Walls	Reinforced galvanised mild steel wire mesh
Slab	Finished floor level to have a minimum of 100 mm above external ground and sloped down to external slab. Reinforced concrete with broom finish, sealed with an appropriate sealant
Building frame	Structural steel Earthing and bonding requirements addressed as required
Finish	Hot dipped galvanised or powder coated
Gate	Construction to match enclosure unless stated otherwise
Lock	Opal card access is the preferred option unless otherwise stated in the contract design specification
Racks	Horizontal and vertical bike placement is permitted, subject to the Australian standard