

## Darwin Shared Path & Bicycle Lane Technical Notes

### 6. Definition of the design bicycle

#### Objective

The objective of the *Darwin Shared Path & Bicycle Lane Technical Notes* is to provide direction and guidance for the planning and delivery of cycling facilities within the City of Darwin area. These technical notes are also intended to provide information for other stakeholders including the NT Government, cycling groups and the community.

#### References

Throughout this document, references have been made to the following technical standards and guidelines:

- AS 2890.3-2015 *Parking facilities Part 3: Bicycle parking*
- Austroads *Guide to Road Design Part 6A: Pedestrian and Cyclist Paths* (2009)

The technical note should be read in conjunction to these documents.

#### Introduction

This technical note provides definition of the design bicycle. The information is compiled from multiple sources detailing the standard specifications and type of bicycle commonly used as a design template.

Bicycle lanes and parking facilities come in all shapes and sizes and it is important to ensure that these facilities are able to accommodate a large range of bicycles types and users. The design bicycle provides the dimensions and operating envelope of a standard, commonly used bicycle and is intended to be the base on which bicycle facilities are to be designed against.

#### Design bicycle

The design bicycle is based on two components













- The physical dimensions of the bicycle and;
- The operating space of the bicycle

The physical dimension of the bicycle governs the maximum overall bicycle dimension to be used for design purposes in the provision of bicycle parking facilities.

The operating space governs the operating envelope (for the bicycle and user) to be used to construct the appropriate width and height of facility required for cyclists under various conditions.

*The design bicycle for all Technical Notes is a "Bicycle and Child Trailer" as per the table below.*

APPENDIX A  
DIMENSIONS OF VARIOUS BICYCLE TYPES  
(Informative)

Type	Diagram	Dimensions, mm			Special features
		Length	Width	Height	
Standard bicycle		1800	600	1200	
Child's bicycle		1500	500	600–900	Small size, lower top tube
Folding bicycle		1500	600	1200	Small size, lower top tube (at or below 500 mm)
Tandem		2750	600	1200	Length, reduced manoeuvrability
Adult tricycle		1800	800	1200	Width, reduced manoeuvrability
Recumbent bicycle/tricycle		2000	750–1000	1300	Length, width, reduced manoeuvrability
Hand cycle		1800	800	1000	Length, width, height, reduced manoeuvrability
Cargo bicycle		2550	650	1300	Length, height, reduced manoeuvrability
Cargo tricycle		2100	870	1300	Length, width, height, reduced manoeuvrability, weight
Bicycle and tagalong		2900	600	1200	Length, height, reduced manoeuvrability, weight
Bicycle and child trailer		3000	800	1200	Length, width, height, reduced manoeuvrability, weight
Bicycle with child seat		1800	600	1400	Height

SOURCE: AS2890.3 PARKING FACILITIES PART 3: BICYCLE PARKING

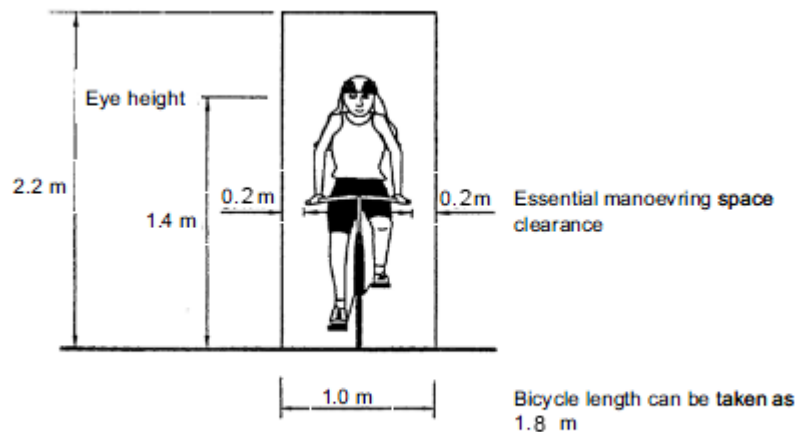
### Catering for Bicycles of Different Dimensions

The use of larger or differently shaped bicycles, e.g. cargo bicycles, bicycle trailers and recumbent bicycles, is increasing and these users need to be catered for in the design of bicycle infrastructure and parking facilities. Particular areas of concern are pinch points (i.e. clearance between sign posts, light poles, or path obstructions designed to prevent vehicular access) and bicycle parking.

The below extract from AS2890.3 provides information on dimension for different types of bicycles and these should be considered by the designer.

### Operating space of the design bicycle

The dimensions given below describe the area within which a bicycle and rider may operate. It does not consider additional clearance to obstacles, either vertical or horizontal, nor additional characteristics required to complete turns or similar manoeuvres.



SOURCE: AUSTRROADS GUIDE TO ROAD DESIGN PART 6A: PEDESTRIAN AND CYCLE PATHS

### Design of Pram Ramps for Shared Paths (not footpaths)

To cater for the design bicycle on shared paths, that is, "Bicycle and Tagalong", the pram ramps shall be constructed in accordance with Northern Territory Government Standard Drawing CS3302 ([https://dipl.nt.gov.au/\\_data/assets/pdf\\_file/0009/447264/cs3302.pdf](https://dipl.nt.gov.au/_data/assets/pdf_file/0009/447264/cs3302.pdf)) and further refer to "8. Kerb Ramp and Positioning" document.