



Parking Strategy

Including Amendment No. 1



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Adoption

Date adopted by Council:	Development & Environmental Services Committee Meeting No. 4/96 held on 7th May 1996
Date notification in newspaper:	22nd May 1996.

Amendments

Amendment #1:	Adopted at Council Meeting No. 4/98 held on 19 May 1998. Council's decision advertised in newspaper, 27 May, 1998.
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A General Advice to Applicants

A.1 Citation

This plan may be cited as “Marrickville Development Control Plan No. 19—Parking Strategy” and shall constitute a Development Control Plan pursuant to Section 72 of the Environmental Planning and Assessment Act, 1979 as amended and has been prepared in accordance with the Regulation under the Act.

In accordance with Clause 20(4) of Environmental Planning and Assessment Regulation 1994, this Plan shall come into force on the 22nd of May, 1996.

A.2 Aims and Objectives

The aim of this Development Control Plan (DCP) is to achieve development that provides adequate provision for off street car parking and ensures the effective use and design of such parking facilities.

This DCP is intended to be a comprehensive guide for applicants of the minimum car, servicing and bicycle standards required by for development in the area.

The specific objectives of this plan are:

1. To improve the integration between land use and existing transport networks.
2. To facilitate the safe entry and exit of vehicles and pedestrians.
3. To ensure the effective design of parking areas.
4. To provide convenient and safe parking for residents, workers and visitors and ensure the safety of pedestrians in the design of car parking areas.
5. To encourage the use of bicycle as an alternate form of transport for work and non-work trips and enable the implementation and development of strategies contained in the Marrickville Bicycle Plan.
6. To ensure the provision of adequate delivery and service areas and the orderly and effective operation of delivery and service areas within developments.
7. To promote recognition and acceptance within the community of the equal rights of persons with disabilities to access buildings and areas required to be accessible.
8. To ensure that an appropriate level of public parking facilities are provided for use by shoppers and workers within the Marrickville Business Centres.
9. To maintain the visual and environmental quality of the built environment.
10. To ensure that car parking provision meets business and community demand.

A.3 Land to which this plan applies

This plan applies to the Marrickville Council area and details specific requirements to ensure a satisfactory standard of development in the area.

A.4 Relationship to other Instruments, Plans and Policies

This plan should be read in conjunction with:

1. Marrickville Planning Scheme Ordinance
2. State Environmental Planning Policy No. 11—Traffic Generating Developments
3. Roads and Traffic Authority's Guide to Traffic Generating Developments
4. Australian Standard 2890.1-1993—Off-street car parking
5. Australian Standard 2890.2-1989—Commercial vehicle
6. Australian Standard 1668.2-1991—Mechanical ventilation in Buildings
7. Other relevant Australian Standards.

This DCP may be amended from time to time by the Council. Proposed amendments are required to be advertised and exhibited in draft form, and any submissions made to Council will be considered in the review of the plan.

This DCP supersedes the Code for the off street parking, loading and unloading of vehicles.

Where there are any inconsistencies between this plan and other council policies, codes or development control plans (DCPs), this DCP overrides the other guidelines and controls.

B Parking Strategy

B.1 Car Parking and Bicycle Storage Requirements

B.1.1 Objectives

- To facilitate the safe entry and exit of vehicles to and from properties.
- To ensure the efficient design of car parking areas.
- To provide convenient and safe parking for residents, workers and visitors and ensure the safety of pedestrians in the design of car parking areas.
- To improve the integration between land use and existing transport networks.
- To encourage the use of bicycles as an alternate form of transport for work and non-work trips and ensure the provision of secure storage areas.

B.1.2 Requirements

Different types of development generate different vehicle generation rates. The table below provides vehicle parking requirements for specific land uses. The Council also seeks to encourage the use of the bicycle as an alternate form of transport, for work and non-work trips and the promotion of ecologically sustainable development initiatives.

LAND USE	CAR PARKING REQUIREMENT	BICYCLES	
		Resident	Visitor
RESIDENTIAL		Resident	Visitor
Boarding house	1 space / 10 beds plus 1 space/resident caretaker	1/4 bedrooms	1/16 bedrooms
Dwelling houses	1 space/dwelling		
Dual occupancy			
(a) GFA less than 125m ²	1 space/dwelling		
(b) GFA 125m ² or more	2 spaces/dwelling		
Public housing	1 space/dwelling		
Residential Flat Buildings			
Dwelling	1 space/dwelling		
<i>plus visitor car parking</i>	1 space per 4 dwellings		1/10 dwellings
'Small' dwelling in Business Zones (<i>no visitor car parking</i>)	0.5 space/dwelling		
Casual Accommodation—Motels	1 space/unit + 1 space/two (2) employees plus restaurant: 1 space/45m ² GFA	Patrons: 1/40 units	

LAND USE	CAR PARKING REQUIREMENT	BICYCLES	
OFFICE AND COMMERCIAL		Employment	Patron
Commercial premises and offices	1 space/45m ² GFA	1/200m ² GFA	1/750m ² GFA over 1000m ²
General business, retail shops and retail floor area		1/300m ² GFA	1/500m ² GFA over 1000m ²
up to 500m ² GFA	1 space/45m ²		
500-750m ² GFA	11 spaces + 1 space/30m ² over 500m ²		
750-1000m ² GFA	19 spaces + 1 space/25m ² over 750m ²		
Over 1000m ²	30 spaces + 1 space/20m ² over 1000m ²		
INDUSTRIAL		Industry	Warehouse
Industry, bulk stores and warehouses	1 space/90m ² GFA	1/150m ² GFA	1/1000m ² GFA
REFRESHMENTS		Employment	Patron
Catering and Reception rooms	1 space/3 guests		
Licensed Hotels	1 space/6m ² bar, lounge and dining floor areas plus 1 space/2 bedrooms plus 1 space per manager/caretaker	4/100m ² lounge, bar & beer garden	
Licensed and Non Licensed Clubs	1 space/6m ² bar, lounge and dining floor areas plus 1 space/6 seats in auditorium plus 1 space/3 employees	4/100m ² lounge, bar & beer garden	
Take away food shops	1 space/45m ² GFA		
Restaurants	1 space/45m ² GFA	1/100m ² GFA	Two (2)
Drive in Take Away Food Facilities		1/100m ² GFA	Two (2)
Frontage State or Regional Road	Minimum 30 spaces		
Developments with no on-site seating	12 spaces/100m ² GFA		
Developments with on-site seating	12 spaces/100m ² GFA, plus greater of: 1 space/5 seats (internal or external), or 1 space/2 seats (internal)		
Developments with on-site seating and drive through facilities	1 space/2 seats (internal) or 1 space/3 seats (internal and external), whichever is greater plus queuing area for 5 to 12 cars		
EDUCATIONAL ESTABLISHMENTS		Student	Visitor
Primary and Secondary Schools	1 space/two teachers plus 1 space/three employees	1/5 students over Year 4	
Colleges	1 space/two teachers plus 1 space/ten full-time students	1/20 full-time students	
Place of assembly/worship	1 space/ten seats or 1 space/20m ² GFA, whichever is greater		1/20 seats

LAND USE	CAR PARKING REQUIREMENT	BICYCLES	
COMMUNITY SERVICES		Employment	Visitor
Mortuary/Funeral Parlour	1 space/5 seats plus loading facility		1/20 seats
Hospital	1 space/three beds (visitors) plus 1 space/2 employees plus 1 space/doctor plus ambulance facility	1/15 beds	1/30 beds
Nursing/Convalescent Homes	1 space/10 beds (visitors) plus 1 space/two employees plus 1 space/ambulance	1/15 beds	1/30 beds
Professional Consulting Rooms	2 spaces/surgery	One (1)	1/3 practitioners
Child Care Centres	1 space/two employees plus a drop off/pick up facility	1/4 employees	
RECREATIONAL FACILITIES		Employment	Visitor
Bowling alley	2 space/alley		1/alley
Squash Courts	2 spaces/court		1/court
Tennis Courts	2 spaces/court		1/court
Bowling greens	30 spaces for first green plus 15 spaces per additional green		2/green
Gymnasiums/Health/Fitness Centres	4.5 spaces/100m ² GFA	1/400m ² GFA	1/200m ² GFA
VEHICLE RELATED USES		Employment	Visitor
Car repair stations <i>Spaces to be provided between front of building and street alignment. No parking required within building</i>	4 spaces/workbay plus 1 space per two employees with a minimum provision of ten (10) spaces	1/5 employees	
Panel beaters, spray painters and the like <i>Spaces to be provided between front of building and street alignment. No parking required within building</i>	1 space per 40m ² GFA with a minimum provision of ten (10) spaces	1/5 full-time employees	
Motor showroom	1.5 spaces/200m ² of site area plus 4 spaces/workbay plus 1 space/two (2) employees plus provision for car float	1/5 employees	
Service station	Minimum of ten (10) spaces, or 5 spaces per 100m ² GFA—convenience store plus 4 spaces/workbay, whichever is greater plus 2 spaces plus 1 space/15m ² over 80m ² GFA	1/5 employees	Two

B.1.3 Design Criteria

B.1.3.1 Access and Parking areas

A critical element in the effective use of parking areas is appropriately dimensioned parking bays and access aisles.

Council's requirements are provided below and diagrams are also provided to assist in the preparation of plans for development applications.

(a) Parking spaces

The minimum space for off street parking spaces shall be 5.4 metres in length by 2.5 metres in width and clearly marked to be easily identified by users. If parking spaces are affected by columns then they should be designed in accordance with Section 5.2 of AS 2890.1-1993.

(b) Headroom

Headroom is the vertical distance measured from the surface level of the parking area and the lowest point of any structure above that parking area.

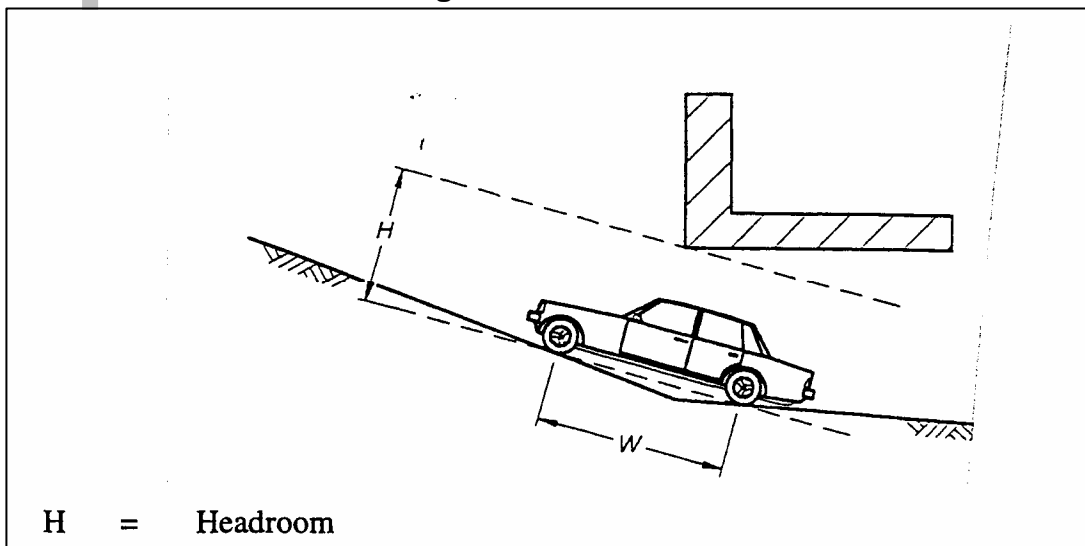
An important aspect of headroom which should be checked is at the beginning or end of the ramp as shown in Figure 1.

Note: Clearance should be measured to the lowest appurtenance on the roof, that is, beams, fire sprinklers, signs, lighting fixtures, ventilation ducts etc.

Minimum height clearance

- | | | |
|---|--|------------|
| • | Standard height clearance | 2.3 metres |
| • | Designated parking areas for persons with disabilities | 2.5 metres |

Figure 1: Critical Headroom



Source: AS 2890.1-1993

(c) Aisles

Minimum aisle widths ensure direct vehicle movements in and out of parking spaces and enable the effective function of parking areas.

The minimum permissible driveway width is detailed in Table 1 depending on the on-site parking layout selected Figure 3 provides examples of parking layouts and dimensions.

**Table 1: Minimum permissible Parking Bay Clear Opening Width
Width of Car Parking Spaces**

PERMISSIBLE DRIVEWAY OR AISLE WIDTH	90° PARKING SPACE WIDTH	60° PARKING SPACE WIDTH	45° PARKING SPACE WIDTH	30° PARKING SPACE WIDTH	0° PARKING SPACE WIDTH * **
2.9m				2.5-3.2m	
3.0m				2.3m	6.3m
3.1m				2.1m	
3.3m			3.2m		6.1m
3.5m			2.6m		
3.7m			2.5m		5.9m
3.9m			2.4m		
4.0m		3.2m			
4.3m		2.6m			
4.6m		2.5m			
4.9m		2.4m			
5.0m	3.2m				
5.4m	2.6m				
5.8m	2.5m				
6.2m	2.4m				

Source: AS 2890.1-1993

Note: Minimum aisle width for two way movement is 5.5m

Two-way aisle movement is only recommended for 90° parking

* Unobstructed end spaces shall be 5.4m

** Add 300mm in cases of obstructed end spaces.

(d) Ramps

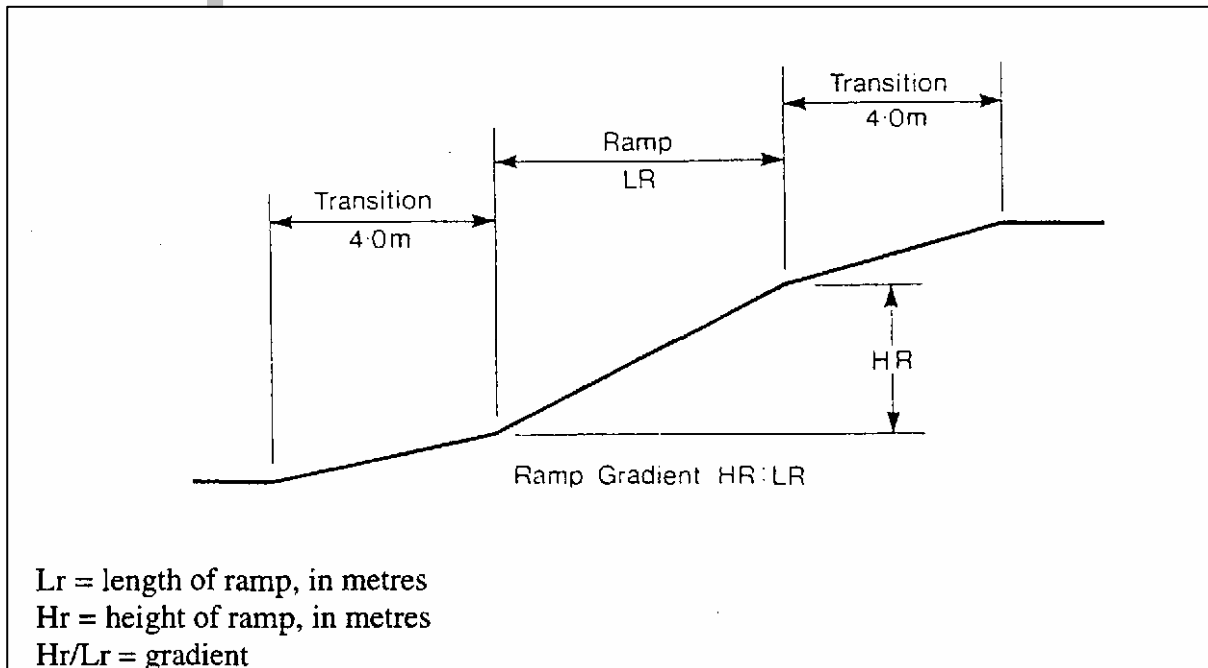
To allow convenient and safe exit and entry by vehicles the ramp's design requirements should satisfy the following criteria:

- Maximum gradient—1 in 6 or 16.7% if greater than 20 metres
- Maximum gradient—1 in 5 or 20% if less than 20 metres
- Maximum change in grade or any metre length—1 in 8 or 12.5%.

To allow vehicle drivers adequate visibility of pedestrians:

- Maximum grade at property boundary—1 in 20 or 5% within 5 metres of the property boundary.

Figure 2 shows the method for calculating gradients on ramps.

Figure 2: Gradients of Ramps

Source: RTA Guide to Traffic Generating Developments

(e) Access Requirements

Public safety is the main consideration when planning the location of access to a development. The location of access depends on the type of road frontage, sight distance, intersections and potential vehicle/pedestrian conflicts.

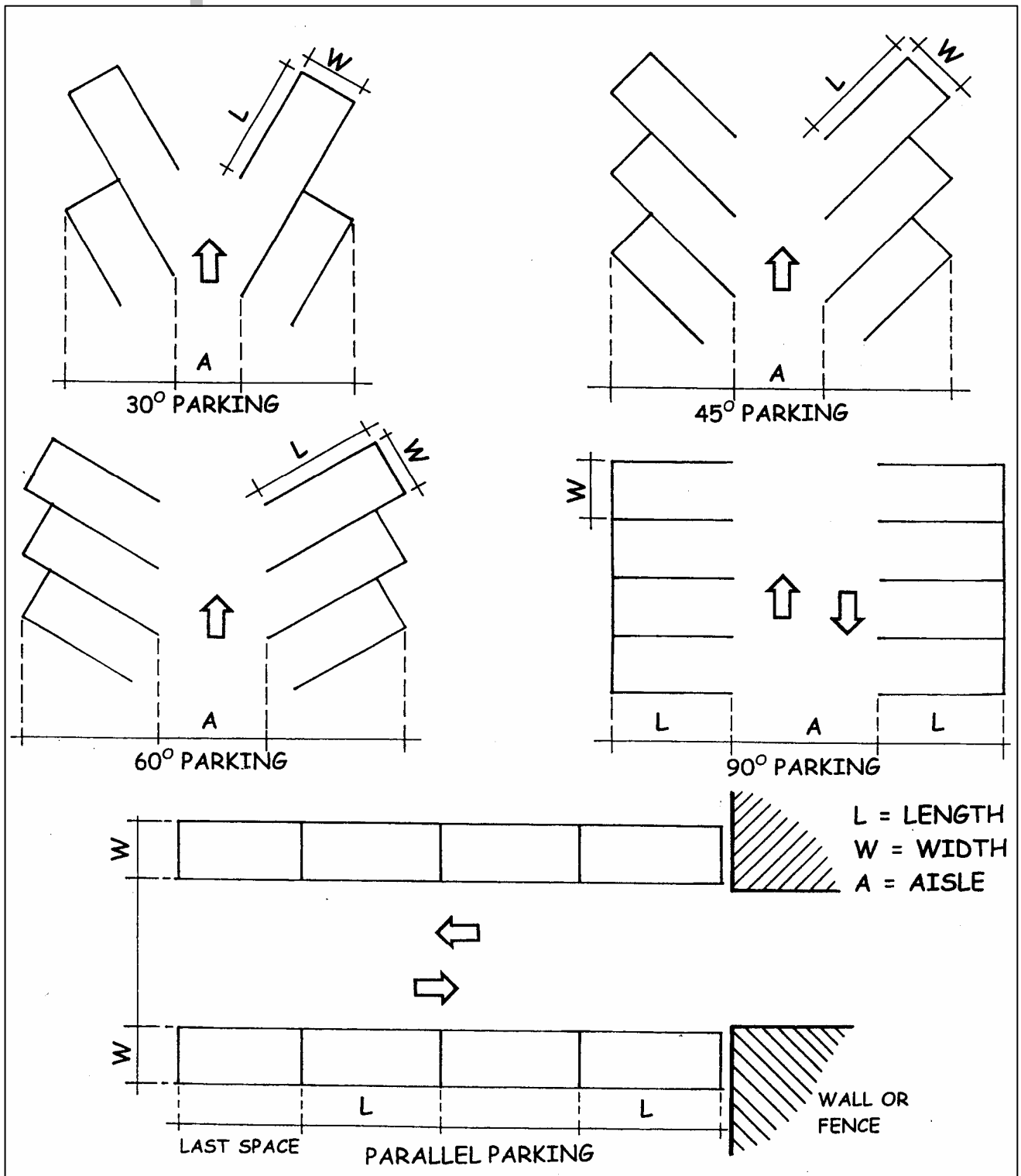
Potential conflicts associated with driveways are often proportional to the traffic generating potential of the development which they serve. Where possible, avoid positioning driveways with high traffic volumes in the following locations:

- on major roads
- close to intersections
- opposite other developments generating a large amount of traffic (unless separated by a median)
- where there is a heavy and constant pedestrian movement along the footpath
- where right turning traffic entering the facility may obstruct through traffic
- where traffic using the driveways interferes with or blocks the operations of bus stops, taxi ranks, loading zones or pedestrian crossings.

The following general design principles must be considered when planning access driveways for developments:

- separate ingress and egress vehicular driveways should be arranged to enable vehicular flow in a clock-wise direction
- avoid reversing movements into or out of public streets (except in the case of individual dwelling houses)
- avoid arrangements which may result in on-street queuing
- position each driveway so that it is clear of all obstructions, e.g. poles, trees, which may prevent drivers from having a timely view of pedestrians
- design each driveway so that it is relatively level within 3 metres of the site boundary or any pedestrian way; the recommended maximum grade is 5%
- signpost each driveway with appropriate entry, keep left signs and stop signs on exit.

Figure 3: Parking Layout and Dimensions



(f) Selection of driveway types

The RTA has adopted seven types of access driveways—type 1 to 5 for cars (or light vehicles) and types 6 and 7 for heavy vehicles as shown in Table 2 and Table 3.

Table 2: Driveway Type

Road Frontage	NUMBER OF CAR PARKING SPACES SERVED BY THE DRIVEWAY					
	Less than 25	25-100	101-300	301-600	More than 600	Heavy Vehicles
Major	1-2	2-3	3-4	4	5	7
Minor	1	1-2	2-3	3-4	4	6

Table 3: Driveway Dimensions

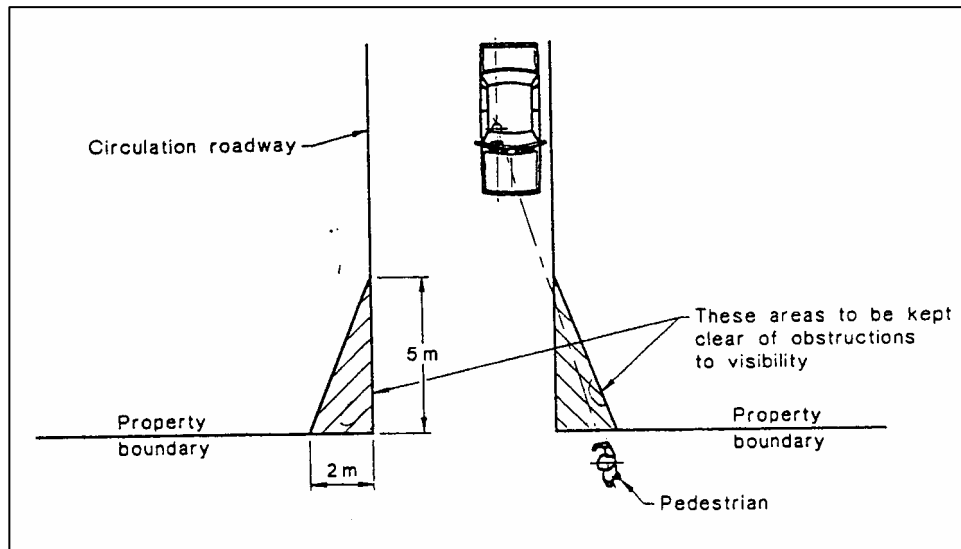
TYPE	ENTRY WIDTH	EXIT WIDTH	MINIMUM SEPARATION OF DRIVEWAYS	SPLAY AT KERBLINE	KERB RETURN TURNOUT RADIUS
	W	S		S	R
1	3-6m	combined	NA	0.5m	-
2	6-9m	combined	NA	1m	-
3	6m	4-6m	1-3m	1m	2-9m
4	6-8m	6-8m	1-3m	1m	2-9m
5	Direct feed from a controlled intersection via a dedicated public roadway				
6	8-10m	8-10m	3m	1m	2-9m
7	10-12m	10-12m	3m	1m	2-9m

(g) Sight Distance

Clear sight lines shall be provided at the property line to ensure adequate visibility between vehicles on the driveway and pedestrians on the frontage and the footpath.

Figure 4 shows the sight distance requirements at driveway exits.

Figure 4: Sight Distance at Driveways



Source: AS 2890.1-1993

(h) Security

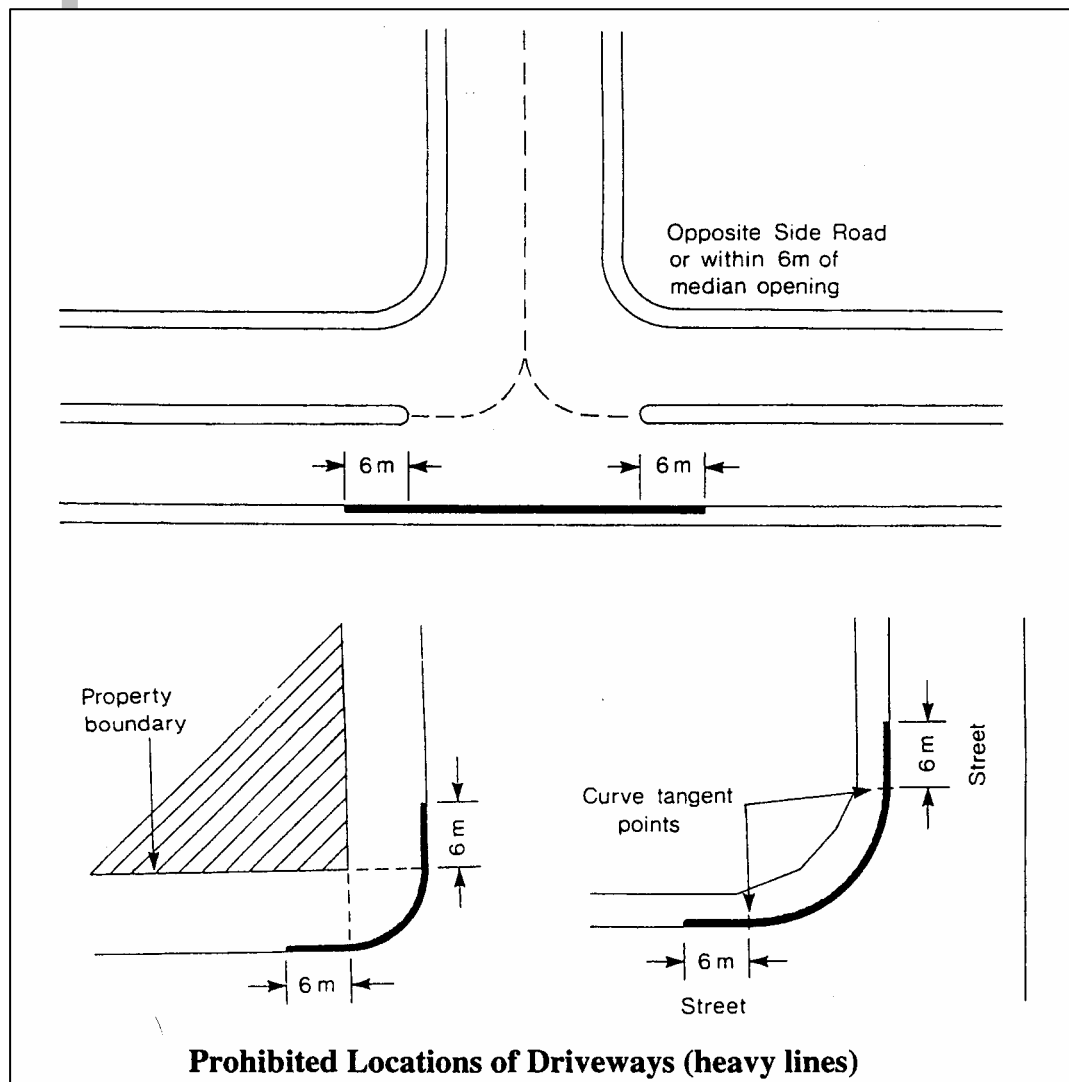
Where security measures are provided in car parking areas such details should be provided on development applications plans submitted to Council.

The location of boom gates should allow sufficient queuing areas for vehicles entering the site and visitor spaces should be provided which allow unobstructed access to visitor parking areas.

(i) Distance from intersections

Access driveways shall not be provided in the sections of kerb shown in Figure 5 by heavy black lines, at uncontrolled intersections of sub-arterial, collector or local roads with each other or with an arterial road.

Figure 5: Distance from Intersections



Source: RTA Guide to Traffic Generating Developments

B.2 Delivery and Service Areas

B.2.1 Objectives

- To ensure the provision of safe and adequate delivery and service areas.
- To ensure the orderly, efficient and effective operation of delivery and service areas within developments.

B.2.2 Requirements

Provision of facilities for delivery and service vehicle areas ensures the orderly, efficient and effective operation of developments.

Developments which generate delivery and service vehicle activities shall provide a service area for the loading and unloading of goods to be sited wholly within the property to ensure that no interference is caused to the safety and movement of pedestrians and the parking and circulation of vehicles in that area. Loading facilities for existing buildings with particular site constraints will be assessed on the merits of the case.

(a) Type of Development

Developments which generate delivery and service vehicle activities shall provide at least one service area for the loading/unloading of goods. The minimum vehicle parking area shall be 7.5m by 3m. This is a minimum standard.

The design of service and circulation areas shall take into consideration the type of vehicles delivering to the premises and the type of goods being handled.

(b) RTA Guidelines

The RTA guidelines provide details for the provision for delivery and service vehicle areas. The minimum requirements which are to be implemented are detailed in Table 4, however, where a proposed development does not comply with these requirements, it is essential that the applicant demonstrate to Council that the objectives of this DCP will not be compromised.

Table 4: Delivery and Service Vehicle Areas

TYPE OF DEVELOPMENT	MINIMUM REQUIREMENTS
Commercial premises	One truck space per 4,000m ² GFA up to 20,000m ² GFA plus one truck space per 8,000m ² thereafter (50% of spaces adequate for trucks)
Department stores	One truck space per 1,500m ² GFA up to 6,000m ² GFA plus one truck space per 3,000m ² thereafter (all spaces adequate for trucks)
Supermarkets, shops and restaurants	One truck space per 400m ² GFA up to 2,000m ² GFA plus one truck space per 1,000m ² thereafter (all spaces adequate for trucks)
Wholesale, Industrial	One truck space per 800m ² GFA up to 8,000m ² GFA plus one truck space per 1,000m ² thereafter (all spaces adequate for trucks)
Hotels and Motels	One service vehicle space per 50 bedrooms or bedroom suites up to 200 plus one space per 100 thereafter plus one space per 1,000m ² of public area set aside for bar, tavern, lounge and restaurant (50% of spaces adequate for trucks)
Residential flat buildings	One service vehicle space per 50 flats (above first 50) or home units up to 200 plus one space per 100 thereafter plus one space per 1,000m ² of public area set aside for bar, tavern, lounge and restaurant (50% of spaces adequate for trucks)
Other uses	One service vehicle space per 2,000m ² (50% of spaces adequate for trucks)

The Council will determine the delivery and service requirements for existing buildings on the merits of the case, including the existing site constraints. The applicant is to

demonstrate to Council that the objective of this DCP will not be compromised by the proposed development.

B.2.3 Design Criteria

B.2.3.1 Delivery and Service Areas

Developments which generate delivery and service vehicle activities shall provide a service area for the loading and unloading of goods. Loading facilities for existing buildings with particular site constraints will be assessed on the merits of the case.

(a) Type of Development

Developments which generate delivery and service vehicle activities shall provide at least one service area for the loading/unloading of goods. The minimum service area shall be 7.5 metres by 3 metres. This is a minimum standard.

The design for service areas shall take into consideration the type and size of vehicles using the service areas and the type of goods being handled. Loading dock areas must be located on level surfaces away from gradients and vehicle ramps.

The service areas must be sited wholly within the property and designed to ensure that no interference is caused to the safety and movement of pedestrians and the parking and circulation of vehicles in that area.

The following design principles should be considered in the design of service vehicle areas (as detailed in the RTA guidelines):

- the layout of the service area should be designed to facilitate operations relevant to the development
- service areas must be a physically defined area which is not used for other purposes, such as storage of goods and equipment or parking areas
- separation of service vehicle and car movements should be a design objective
- all vehicles should enter and leave the property in a forward direction
- internal circulation roadways should be adequate for the largest vehicle anticipated to use the site.

Table 5 details minimum vehicle dimensions to be used in the design of service bay areas.

Table 5: Service Vehicle Dimensions

VEHICLE TYPE	LENGTH	WIDTH	HEIGHT	TURNING CIRCLE (KERB-TO-KERB)
Station Wagon	4.7m	1.9m	1.4m	11m
Utilities	4.7m	1.9m	1.4m	11m
Van	5.4m	2.1m	2.5m	13.5m
Small rigid truck	6.6m	2.1m	4.3m	14.4m
Max. rigid truck	11m	2.5m	4.3m	21.7m
Max. articulated truck	17.5m	2.5m	4.3m	16.2m

(b) Manoeuvring Areas

Manoeuvring areas should be designed to ensure direct movement to parking bays and loading areas. The RTA guidelines provide vehicle turning areas and should be consulted in the design stage to ensure satisfactory manoeuvring areas.

Templates of vehicle turning circles and loading bay manoeuvring areas are provided in Appendix sheets A.G.

Note: Templates are provided with AS 2890.1-1993 and AS 2890.2-1989

B.3 Access for People with Disabilities

B.3.1 Objective

- to provide access to buildings and areas required to be accessible for people with disabilities which will promote recognition and acceptance within the community of the equal rights of people with disabilities.

B.3.2 Requirements

In respect of the requirements for accessible buildings or areas required to be accessible, the following requirements should be satisfied in the design of buildings and areas required to be accessible:

- Disability Discrimination Act (DDA) 1993
- Building Code of Australia

Note: Part D3—Access for People with Disabilities

- Relevant Australian Standards

Note:

- Australian Standard 1428.1-1993
Design for Access and Mobility (Part 1—General Requirements for Access—Buildings)
- Australian Standard 2890.1-1993
Off-street Parking (Part 1—Car Parking Facilities)

- Council's Checklist for People with Disabilities

A copy of the checklist is available from the office of the council.

B.3.3 Design Criteria

Access for People with Disabilities

Buildings required to be accessible must be designed to enable access for people with disabilities.

Figure 6 details design requirements for accessible parking areas for people with disabilities.

Figure 7 details vertical clearance in car parks required to provide accessible parking areas for people with disabilities.

The requirements in Council's Checklist for People with Disabilities should be satisfied, in particular the following matters:

Checklist

CAR PARKING (AS Pt. 13 & AS 2890.1-1993)

Are designated parking space(s) close to accessible building entrances/wheelchair lifts and connected to them by a continuous path of travel per AS 1428.1?

Are parking space(s) level (<1 in 40) parallel to or at 90° to the angle of parking? (<1 in 33 permissible for outdoor bitumen areas)

Are parking spaces a minimum of 3200mm wide (may include any permissible adjacent, level and unobstructed space not used for parking)?

Do parking spaces have an unobstructed headroom of 2500mm?

Are parking space(s) well-lit, clearly linemarked on the ground and signposted with the international symbol?

Is direction of the accessible parking space(s) indicated at entrance of the carpark?

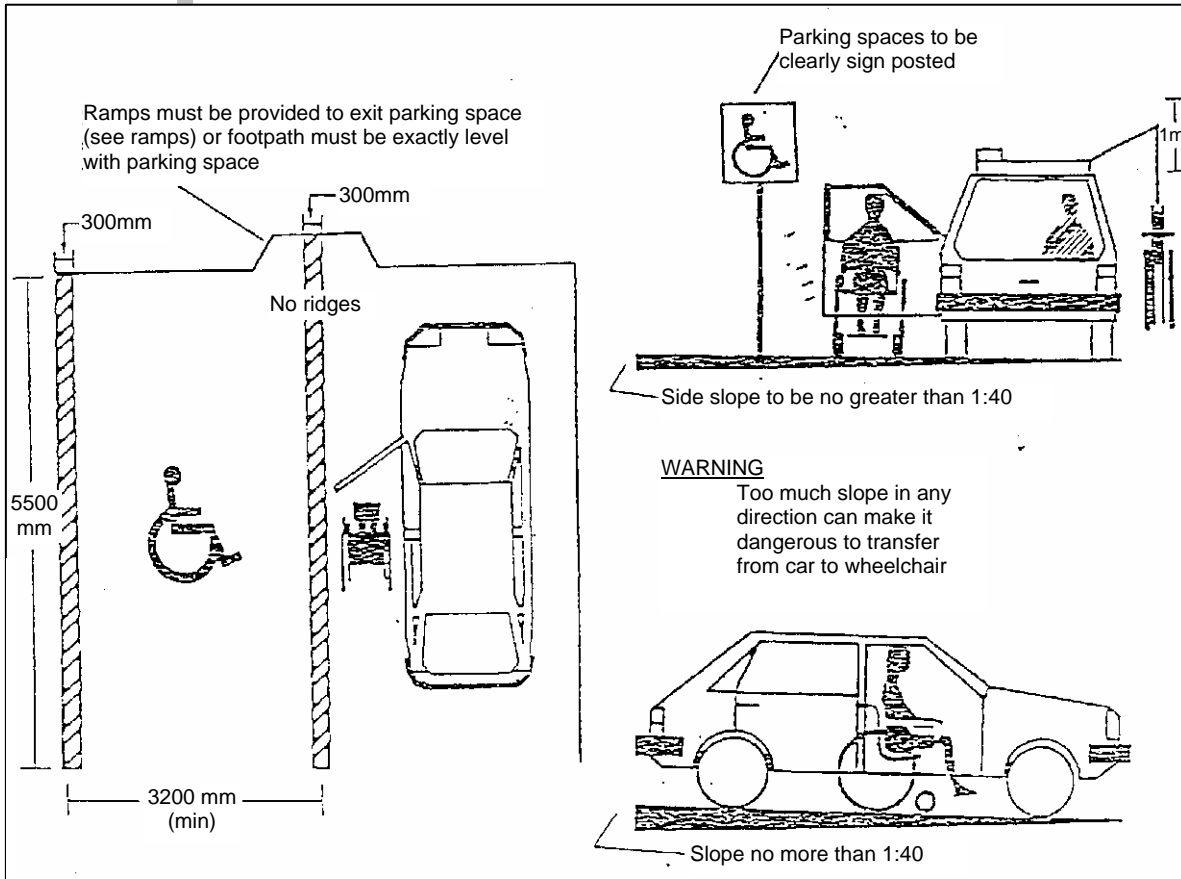
SIGNS (AS Pt 14)

Are Access signs posted, and located in a position where they are clearly seen, e.g.;

- Entrance(s)/Exits
- Car Parks
- Other Accessible facilities

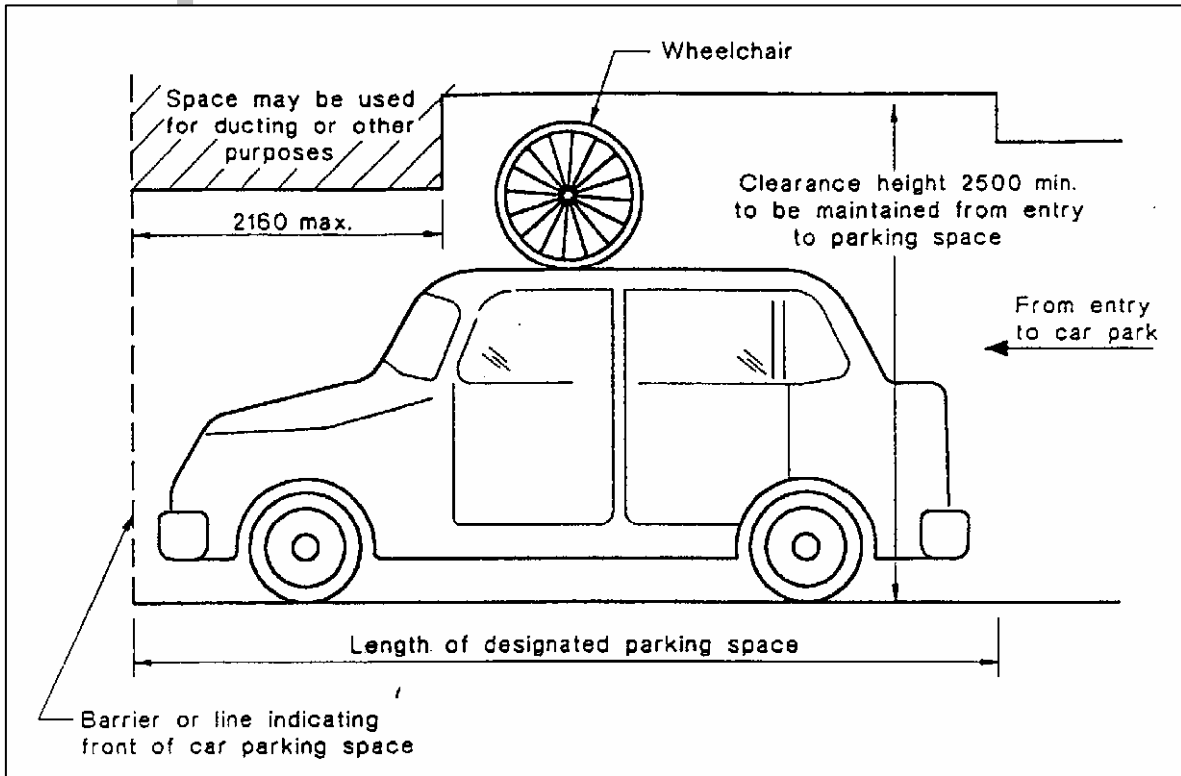
Is international symbol used?

Figure 6: Accessible Parking Areas



Source: Marrickville Council Checklist for People with Disabilities

Figure 7: Accessible Parking Areas—Vertical Clearance in Car Parks



Source: AS 2890.1-1993

B.4 Landscaping

B.4.1 Objectives

- To provide trees which assist in reducing the effects of Global Warming and associated inclement weather, through the absorption of pollutants and providing shade which reduces heat transfer.
- To break up large areas of hard surfaces, improving the amenity of the area and providing visual relief.
- To screen car parking areas from neighbouring residences and public areas.
- To enhance the streetscape and environmental quality of the built environment.
- To provide shade to improve driver comfort.

B.4.2 Requirements

The following measures are to be undertaken when landscaping a site:

- The landscape plan is to show the hydraulic concept including overland flow paths, detention areas, stormwater inlet pits and any other relevant information. A conceptual plan is to be submitted at Development Application stage and resolved at Building Application stage.
- Open air car parking and loading areas are to be landscaped on both the perimeters and throughout the car park. The minimum width of perimeter landscaping is to be 1.5m, the preferred width is 3m, excluding kerbing. The minimum size of single tree planting areas within the car park is to be a circle of 1.2m diameter or a square of 1m x 1m. Shrub planting between car parking spaces is to be a minimum width of 0.6m, excluding kerbing.
- Perimeter landscaping of multi-storey car parking areas should be a minimum width of 3m and consist of predominately large trees. Large trees are considered to be 12m and over in height.
- Car parks are to be located to minimise the impact on street and neighbourhood amenity.
- Provide landscape habitat for native bird life within industrial car parking areas.
- It is preferable to use native species indigenous to the area.
- Include planting in the area between the site boundary and the building of new and existing developments.
- Landscaping must not result in excessive obstruction to the free flow of air to and from enclosed car parks which are naturally ventilated in accordance with AS 1668.2.
- Landscaping should screen the car park from neighbouring residences and public areas.
- Within 10 years of planting car park shade trees are to provide 50% shade coverage of the total paved surface area of the car park. This will be measured on the solar angle at midday.
- Silt arrestors are to be incorporated into the drainage system to prevent pollutants from entering the water ways.
- Car parking areas within residential flat building and medium density housing developments are to be unit paved or constructed of a combination of suitable paving material such as concrete. Council prefers the use of permeable materials where suitable.

B.4.3 Design Criteria

B.4.3.1 Appropriate Planting

Landscape planting within car parks should include canopy tree planting and low shrub or ground cover planting.

Appropriate tree species to use in car parking areas are species which:

- do not drop fleshy fruit, gum or large branches
- do not branch below two metres as a mature tree (if low branching species are used they will require under pruning).
- do not have bulbous root systems which overly lift pavement, or opportunist root systems which interfere with underground services.

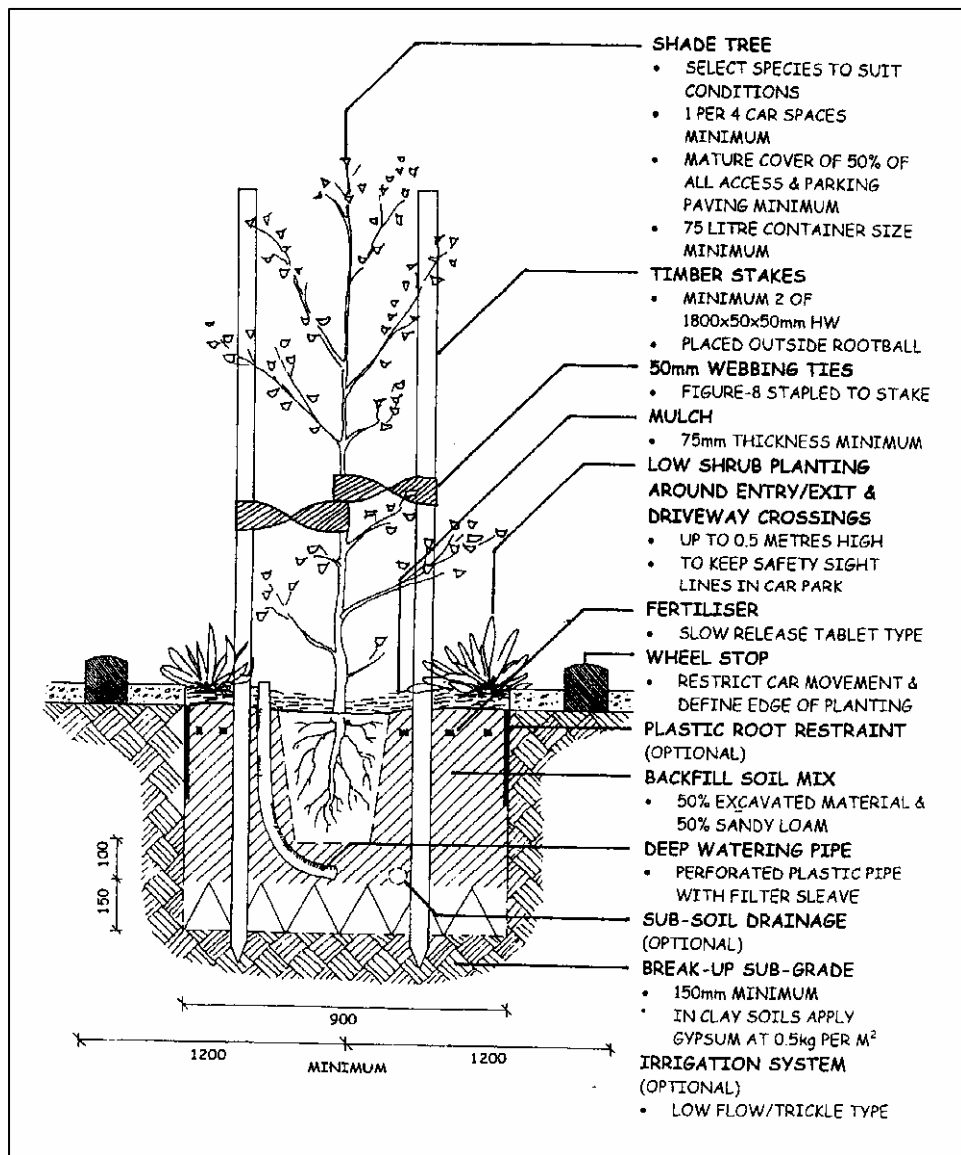
Appropriate shrub and ground cover species are:

- species which do not exceed 1.3m in height.
- are hardy pollution tolerant species which require low maintenance.

B.4.3.2 Planting Layout

Trees are to be planted in the centre of the planter beds as illustrated in Figure 8. This will ensure that over hanging branches do not obstruct passing vehicles or pedestrians.

Figure 8: Car Parking Planting Detail

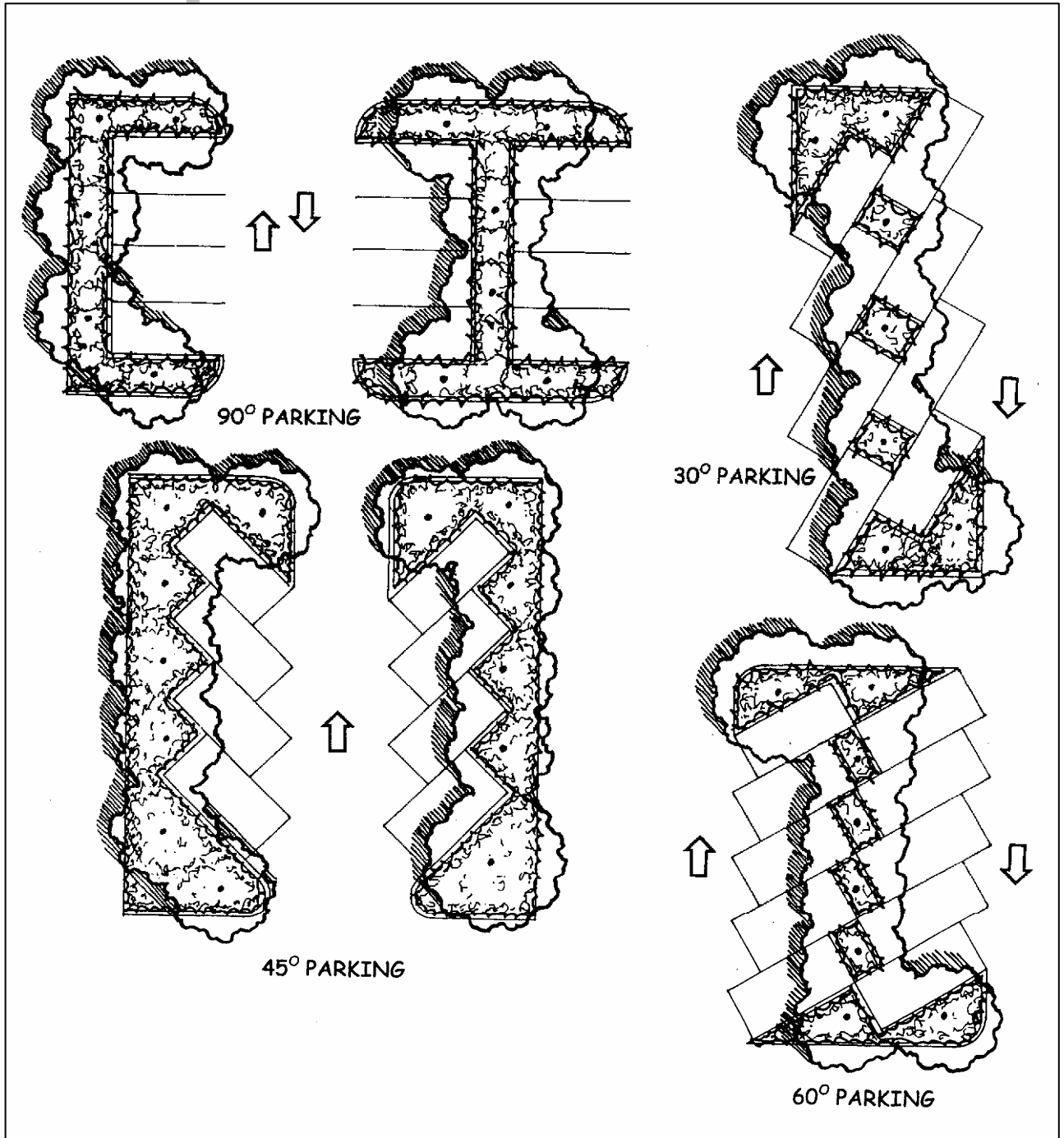


Low plantings (below 500mm) should be used around lighting, signage and bollards. To ensure the safety of vehicles and pedestrians using the car park, low planting should also be used around entry/exit points within two metres of a driveway crossing.

Landscaping areas are to be indicated on the plans lodged with the Development Application. A detailed landscaping plan will be required to be submitted for approval by Council prior to the release of building plans.

Figure 9 provides examples of car parking layouts with landscaped areas.

Figure 9: Examples of Car Parking Layouts with Landscaped Areas



B.5 Bicycle Facilities

B.5.1 Objectives

- To encourage the use of bicycles as an alternate form of transport for work and non-work trips.
- To implement and develop the strategies contained in the Marrickville Bicycle Plan.
- To ensure the provision of functional and secure bicycle storage areas and related facilities.

B.5.2 Requirements

(a) Application

The requirements in this Plan apply to new developments which have a gross floor area greater than 500m².

(b) Bicycle Parking Facilities

Australian Standard AS 2890.3-1993 (Parking Facilities - Part 3 Bicycle Parking Facilities) details the types of bicycle facilities which should be provided for users.

Parking for cyclists comes under three broad categories:

- All day parking for employees and students
- All day parking at public transport stations
- Short term parking for visitors to shopping centres, retail and office uses and public/private buildings.

There are three types of parking facilities which are considered to be acceptable depending on the frequency of use which are indicated in Table 6.

Appropriate bicycle storage areas must be provided to ensure adequate security to prevent theft. Design details should be provided on development application plans submitted to Council.

Table 6: Classification of Bicycle Parking Facilities

CLASS	SECURITY LEVEL	DESCRIPTION	MAIN USER TYPE
1	High	Fully enclosed lockers suitable for all day parking	Bike and ride commuters at railway and bus stops
2	Medium	Locked compound with communal access using duplicate keys suitable for all day parking	Regular employees, students, regular bike and ride commuters
3	Low	Facility to which the bicycle frame and wheels can be locked	Shoppers and visitors to public offices

Source: AS 2890.3

(c) General Requirements

To ensure that parking devices are functional and secure the following matters should be taken into consideration:

- both wheels and frame should be locked to the device without damaging the bicycle
- no interference to pedestrian movement
- open to public view to improve security
- easily accessible from bicycle lane or road.

(d) Showers and lockers

The Council in the assessment of development applications for all new buildings shall take into consideration the provision of adequate shower and locker facilities for bicycle users. Such facilities are also available for use by persons who exercise during lunch or walk to work and are therefore considered to be for the benefit of all employees.

B.5.3 Design Criteria

B.5.3.1 Types of Parking Devices

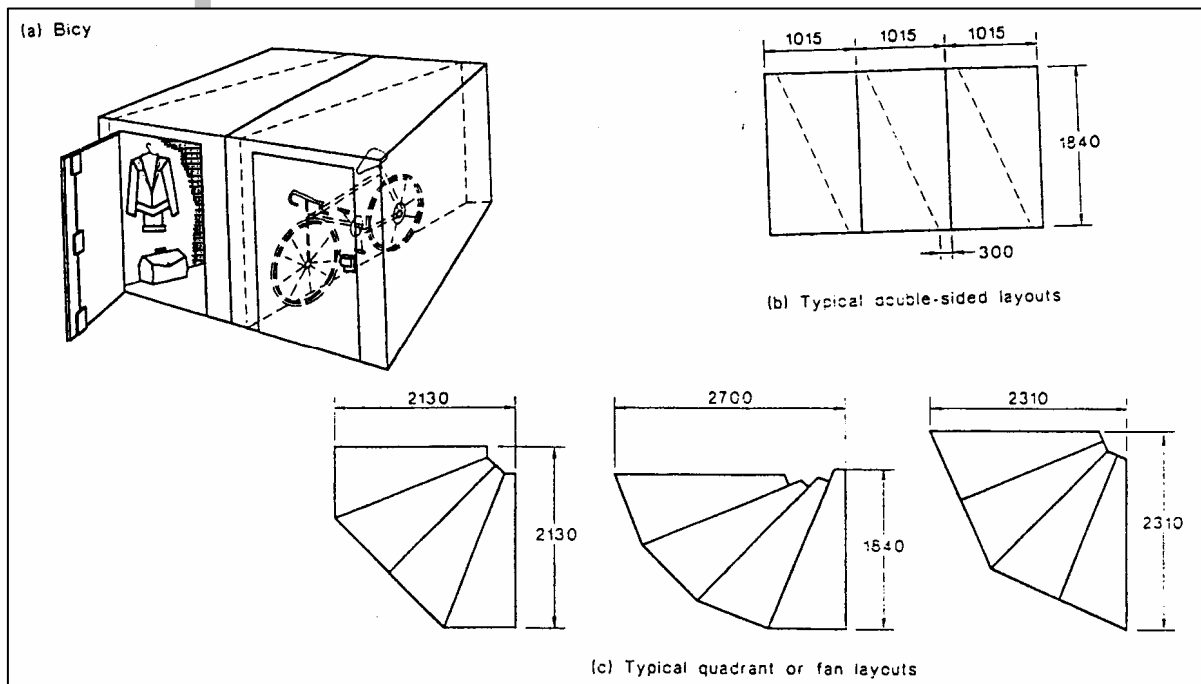
The following list from AS 2890.3-1993 provides guidelines for the appropriate types of parking devices that should be used for bicycle parking. The Council will consider other options which satisfy the objectives of this plan.

(a) Bicycle lockers

Bicycle lockers offer a secure level of bicycle parking. They are appropriate for all day parking and have the additional benefit of providing storage for helmet and other equipment.

Lockers should be located in areas which provide security lighting to reduce the likelihood of damage to such facilities. Suitable locations include public transport stations and they may also be suitable for employee parking in commercial buildings. Design and typical layouts are shown in Figure 10.

Figure 10: Bicycle Lockers



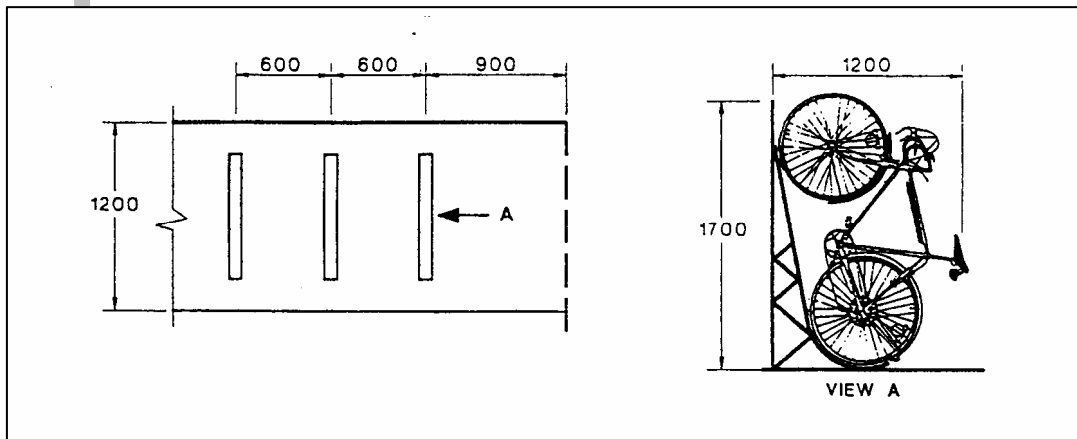
Source: AS 2890.3

(b) Bicycle enclosures

Bicycle enclosures offer a medium level of security in that bicycles can be locked within an enclosure, however, other users have access to such areas. They are suitable for all day parking and may be covered to protect against wet weather.

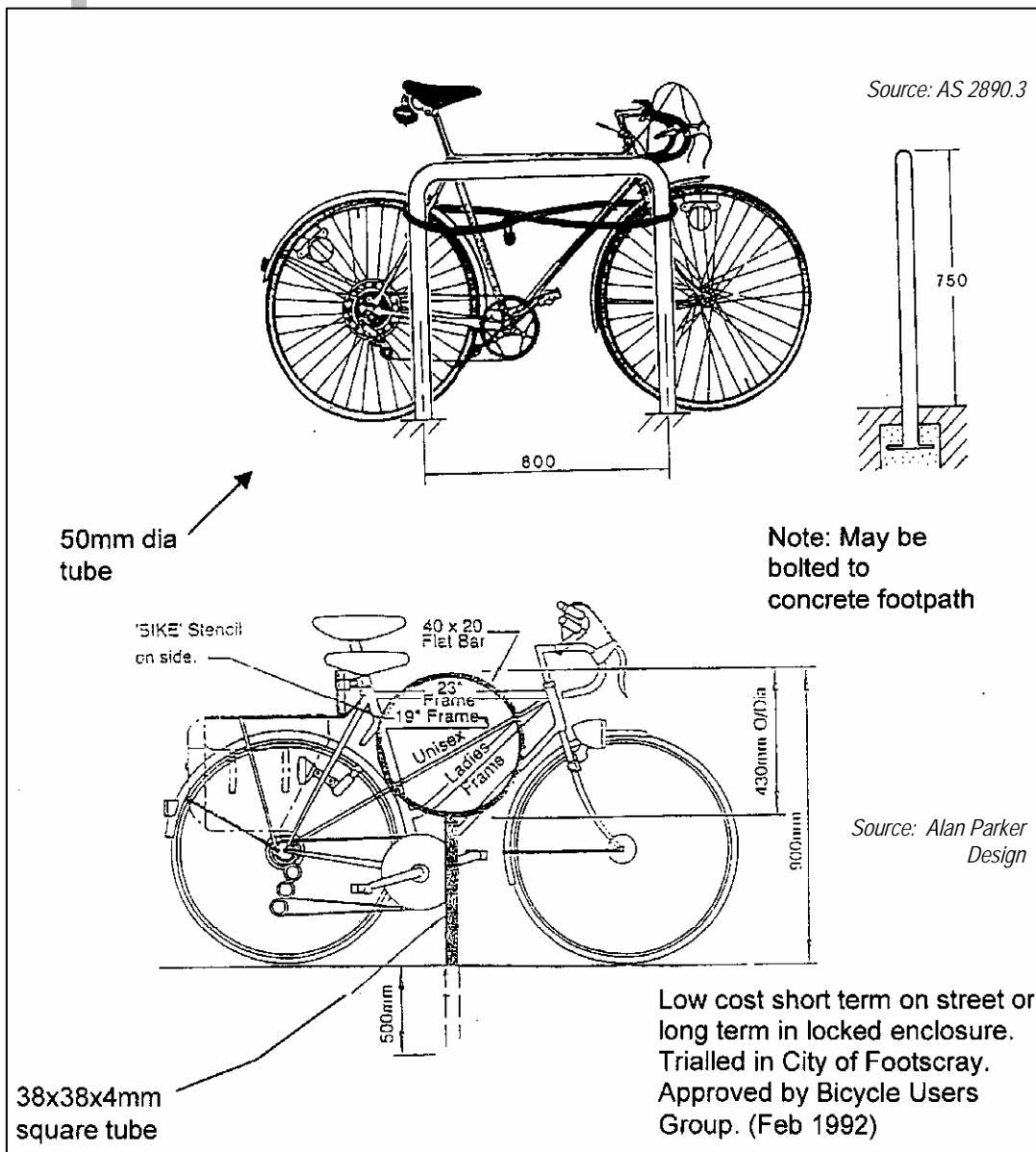
Security lighting should be provided to encourage use and deter damage. Suitable locations include public transport stations and employee parking. Figure 11 shows a device suitable for vertical storage which may be appropriate in areas where space is limited.

Figure 11: Bicycle Storage—Vertical Racks



Source: AS 2890.3

Figure 12: Examples of Parking Rail Designs



Source: AS 2890.3

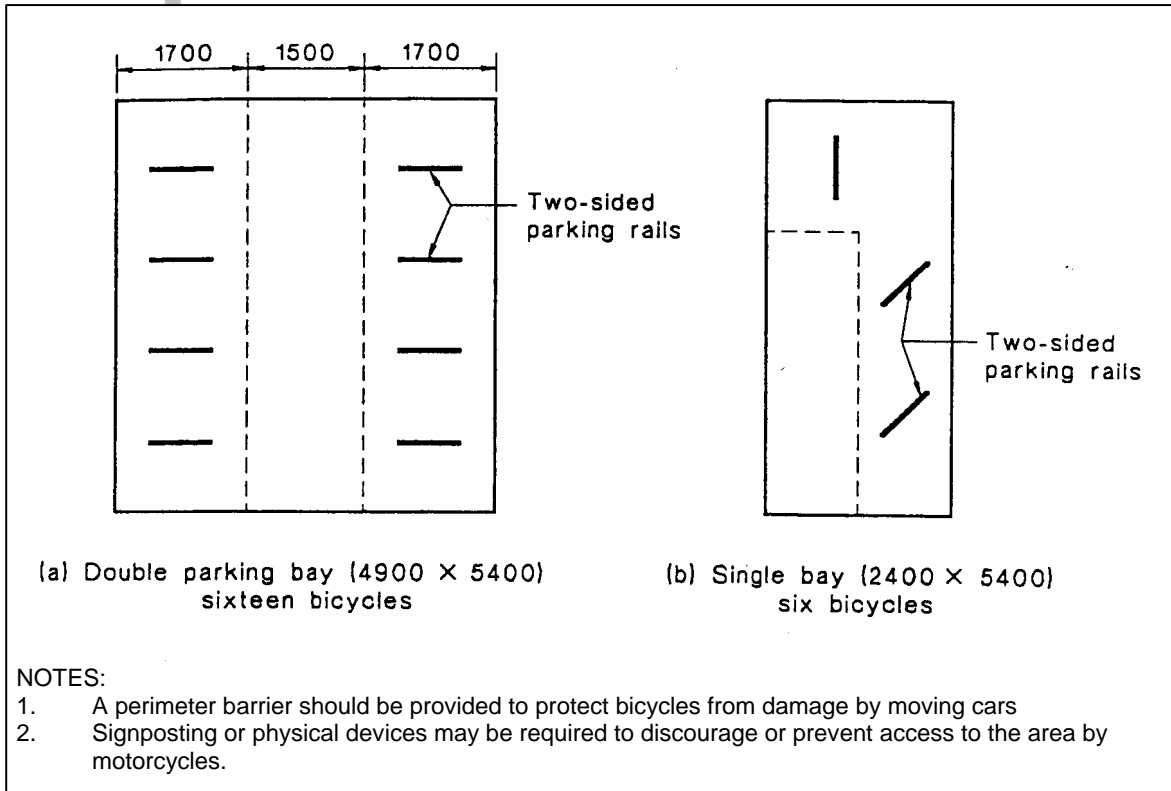
Source: Alan Parker Design

(c) Bicycle Parking rails

Bicycle parking rails are an effective and low cost device for bicycle parking. They enable bicycles to be secured at the frame and both wheels and may be provided in accessible areas which are open to public view.

Figure 12 shows examples of parking rail designs. Figure 13 shows the conversion of car parking spaces to bicycle parking utilising bicycle rails.

Figure 13: Car Parking Space Conversion for Bicycle Parking



Source: AS 2890.3

B.6 Variations to this Plan

The Council has the ability to approve development that does not comply with the provisions of this DCP. In general, it is recognised that a particular control or standard may not be appropriate or relevant in a particular case. Where a proposed development does not comply with a provision of this DCP, it is essential that the applicant sets out the reasons in the documentation supporting the application. Such reasons should include the manner in which overall objectives are achieved.

Justification Statement for Variation

A supporting statement should address the following matters:

1. What requirements or design criteria are being varied?
2. How do you satisfy the purpose of the requirements or design criteria?
3. What reasons do you provide to vary the requirement or design criteria?

B.7 Waiving Off-Street Car Parking

B.7.1 Matters for Council's consideration in determining whether or not to waive off street parking unable to be provided on site for development

In determining whether or not to waive additional off street car parking required for developments under the provisions of this Development Control Plan unable to be provided on site, Council will take the following matters, as are of relevance, into consideration:

Type of Development

- The size and type of development and the degree of traffic impact of the development on the surrounding locality and peak parking and traffic activity periods for the proposed development.

Site Characteristics

- Existing site and building constraints which may affect the provision of off street car parking facilities.
- The practicality of providing off street car parking.

Public and Alternate Forms of Transport

- The availability of public transport and/or alternative forms of transport, that is:
 - off peak and peak hour services
 - proximity to transport facilities.
- Whether the development includes facilities which facilitate the use of alternative transport or minimises the need for vehicle use, e.g.
 - bicycle storage and/or parking
 - pedestrian protection
 - links to improve access to public transport or local services
 - provision of a local service.
- The potential for future improvements to:
 - public transport
 - pedestrian links and cycling facilities.

Locality Analysis

- The availability of on-street car parking in the immediate locality and in nearby public car parking facilities.
- The location of other land uses such as schools, local services, employment centres, retail and recreational facilities, and whether their proximity would reduce the need for vehicle trips.
- Competing parking demand from adjoining developments considered to be significant traffic generators.

Service/benefits local community

- The origin and destination of the services provided by the proposed development and the degree to which it contributes to servicing the local community.
- Whether the proposed development contributes to the vitality and viability of the locality, particularly applicable to Business Zones.

Demographic considerations

- Description and evaluation of the demographics of the locality where that development is taking place, including the targeted market for the development. Matters which may be relevant include:
- social economic levels
 - stage of family life cycle, age structures
 - household formations and occupancy rates
 - car ownership rates.

Safety

- The safety of vehicles, pedestrians and cyclists.

Heritage and Urban Design considerations

- Whether the proposed development contributes to the heritage conservation and character of the building and its setting.

Objectives of DCP

The proposed development is consistent with the aims and objectives of the Parking Strategy DCP.

B.7.2 Traffic Impact Study

It may be advisable for applicants to engage the services of a suitably qualified traffic consultant to address the traffic and parking implications of proposed developments. A Traffic Impact Study should provide the following information which is outlined in the *RTA Guide to Traffic Generating Development, December 1993*. A summary of the matters for consideration is provided below and must accompany a Development Application, which is considered to be a significant traffic generating development. The Traffic Impact Study should be prepared by a suitably qualified traffic consultant:

Introduction

- Background to Development Application and Traffic Study
- Scope of Report

Existing Conditions

- Location of Site
- Current Land Use and surrounding locality
- Existing road network
- Traffic flows in affected areas
- Public transport facilities
- Pedestrian and cycling access and provision
- Existing parking facilities
- Conditions within the surrounding locality and opportunities for improvement

Proposed Development

- Nature of Development including:
 - gross floor area
 - number of employees (indication mode of travel)
 - hours of operation
- Access, circulation and parking provision
- Pedestrian and cycling facilities, including accessibility for persons with disabilities

Impact of Proposed Development

- Traffic Generation (all vehicle movements)
- Traffic distribution and assessment
- Impact of generated traffic
- Public transport
- Impact on pedestrian and cyclists
- Recommended works and improvements

Additional matters

A Traffic Impact Study should also address those matters that, as are of relevance, Council will take into consideration in waiving off street car parking unable to be provided on site and how the proposal satisfies those matters.

B.7.3 Parking Credits

The Council will apply parking credits where there is a change of use to an existing building, or an existing building is being altered.

Except in exceptional circumstances, credits will not be applied where a site is being significantly or fully redeveloped.

Credits will be based on the parking requirements detailed in this plan. Development consents which detail parking credits will be taken into consideration in the assessment of Development Applications, and determined by Council on the basis that the objectives of this plan are not compromised.

Example

Current use:	first floor residential with no parking provision	
Parking requirement—	1 space per dwelling	= 1 space
	Credit (1 space required – no space)	= 1 space
Proposed use:	convert first floor to commercial use (135m ²)	
Parking requirement—	1/45m ² for commercial	= 3 spaces
Final Requirement with Credit		
	Proposed parking requirement (3 space) – Credits (1 space)	
	Final requirement	= 2 spaces

B.7.4 “Rounding Off” Car Parking Requirements

In calculating the total car parking requirement which results in a fractional answer (e.g. 5.4 spaces), the Council will “round up” any requirement of 0.5 and “round down” any requirement below 0.5. For example, a calculated requirement of 2.49 spaces would be rounded down to a requirement of 2 spaces whereas a calculated requirement of 2.5 spaces would be rounded up to 3 spaces.

B.8 Consultation and Submission Requirements

B.8.1 Consultation

Persons making submissions to Council are advised to consult with Council's Development and Environmental Services Section prior to the lodgement of a development application.

Preliminary plans for discussion should detail the following matters:

- entry and exit points to the site;
- number of car parking spaces proposed including layout design; and
- type and size of vehicles using site and suitable loading areas.

In the case of developments that are likely to cause a significant increase to traffic generation in an area, it is advisable to arrange an appointment with Council's Development Control Unit to discuss the likely traffic impacts of the proposed development.

B.9 Definitions

Definition extracts from the Marrickville Planning Scheme Ordinance:

Boarding-house includes a house let-in-lodgings or a hostel but does not include a motel.

Car repair station means a building or place used or intended for use for the purpose of carrying out repairs to motor vehicles or agricultural machinery, not being -

- (a) body building;
- (b) panel beating which involves dismantling; or
- (c) spray painting other than of a touching-up character.

Child care centre means a building or place used or intended for use as a child care centre within the meaning of Part VII of the Child Welfare Act, 1939.

Club means a building used or intended for use by persons associated, or by a body incorporated, for social, literary, political, sporting, athletic or other lawful purpose, whether of the same or of a different kind and whether or not the whole or a part of such building is the premises of a club registered under Part X of the Liquor Act, 1912.

Commercial premises means a building or place used or intended for use as an office or for other business or commercial purposes, but does not include a building or place, elsewhere specifically defined in this clause or a building or place used or intended for use as a purpose elsewhere specifically defined in this clause or for a roadside stall.

Dwelling means a room or suite of rooms occupied or used or so constructed or adapted as to be capable of being occupied or used as a separate domicile.

Dwelling-house means a building containing one but not more than one dwelling.

Educational establishment means a building used or intended for use as a school, college, technical college, academy, lecture hall, gallery or museum, but does not include a building used or intended for use wholly or principally as an institution.

Floor space includes all wall thicknesses, ducts, vents, staircases and lift wells, but does not include -

- (a) any car parking space in the building provided to meet the standards required by the responsible authority (but not such space provided in excess of such standards) or any internal access thereto;
- (b) space used for the loading or unloading of goods; and
- (c) lift towers, cooling towers, machinery and plant rooms and any storage space related thereto.

Hospital means a building or place used as a -

- (a) hospital
- (b) sanatorium
- (c) health centre;
- (d) nursing home; or
- (e) home for aged persons, infirm persons, incurable persons or convalescent persons, whether public or private, and includes a shop or dispensary used in conjunction therewith, but does not include an institution.

Hotel means any premises specified in a publican's licence issued under the Liquor Act, 1912.

Industry means -

- (a) any manufacturing process within the meaning of the Factories, Shops and Industries Act, 1962;
- (b) the breaking up or dismantling of any goods or any article for trade or sale or gain or as ancillary to any business; or
- (c) the winning of extractive material.

Motel means a building or buildings, not being a hotel, a boarding-house or a residential flat building, substantially used or intended for use for the overnight accommodation of travellers and the vehicles used by them whether or not the building or buildings are also used or intended for use in the provision of meals to such travellers or the general public.

Motor showroom means a building or place used or intended for use for the display or sale of motor vehicles and accessories.

Place of Assembly means a public hall, theatre, cinema, music hall, concert hall, dance hall, open-air theatre, drive-in theatre, music bowl, or any other building of a like character used as such and whether used for the purposes of gain or not, but does not include a place of public worship, an institution or an educational establishment.

Place of Public Worship means a church, chapel or other place of public worship or religious instruction or place used for the purpose of religious training.

Professional consulting rooms means a room or a number of rooms forming part of, attached to, or within the curtilage of, a dwelling-house and used or intended for use by not more than three legally qualified medical practitioners or by not more than three dentists within the meaning of the Dentists Act, 1934, who practise therein the profession of medicine or dentistry respectively and, if more than one, practise in partnership, and who employ not more than three employees in connection with such practice.

Public building means a building used or intended for use as offices or for administrative or other like purposes by the Crown, a statutory body, a council or by an organisation established for public purposes.

Recreation establishment means a building or place used or intended for use for the purpose of a health farm, religious retreat house, rest home, riding school, youth camp or for any other recreational or sporting purpose and whether used for the purpose of gain or not, but does not include a place of assembly or a recreational facility.

Recreational facility means a billiard saloon, table tennis centre, squash court, gymnasium, health studio, bowling alley, fun parlour or any other building of a like character used or intended for use for indoor recreation whether used for the purpose of gain or not, but does not include a place of public assembly.

Refreshment room means a restaurant, cafe, tea room, eating house or the like.

Residential flat building means a building containing 2 or more dwellings situated on a single allotment of land.

Service Station means a building or place used or intended for use for the fuelling of motor vehicles involving the sale by retail of petrol, oils and other petroleum products whether or not the building or place is also used or intended for use for any one or more of the following purposes: -

- (a) the sale by retail of spare parts and accessories for motor vehicles;
- (b) washing and greasing of motor vehicles;
- (c) installation of accessories;

- (d) repairing and servicing of motor vehicles involving the use of hand tools provided that such repairing and servicing shall not include top overhaul of motors, body building, panel beating, spray painting, or suspension, transmission or chassis restoration.

Shop means a building or place used or intended for use for the purpose of selling, exposing or offering for sale by retail goods, merchandise or materials, but does not include a building or place elsewhere specifically defined in this clause or a building or place used or intended for use for a purpose elsewhere specifically defined in this clause or for a roadside stall.

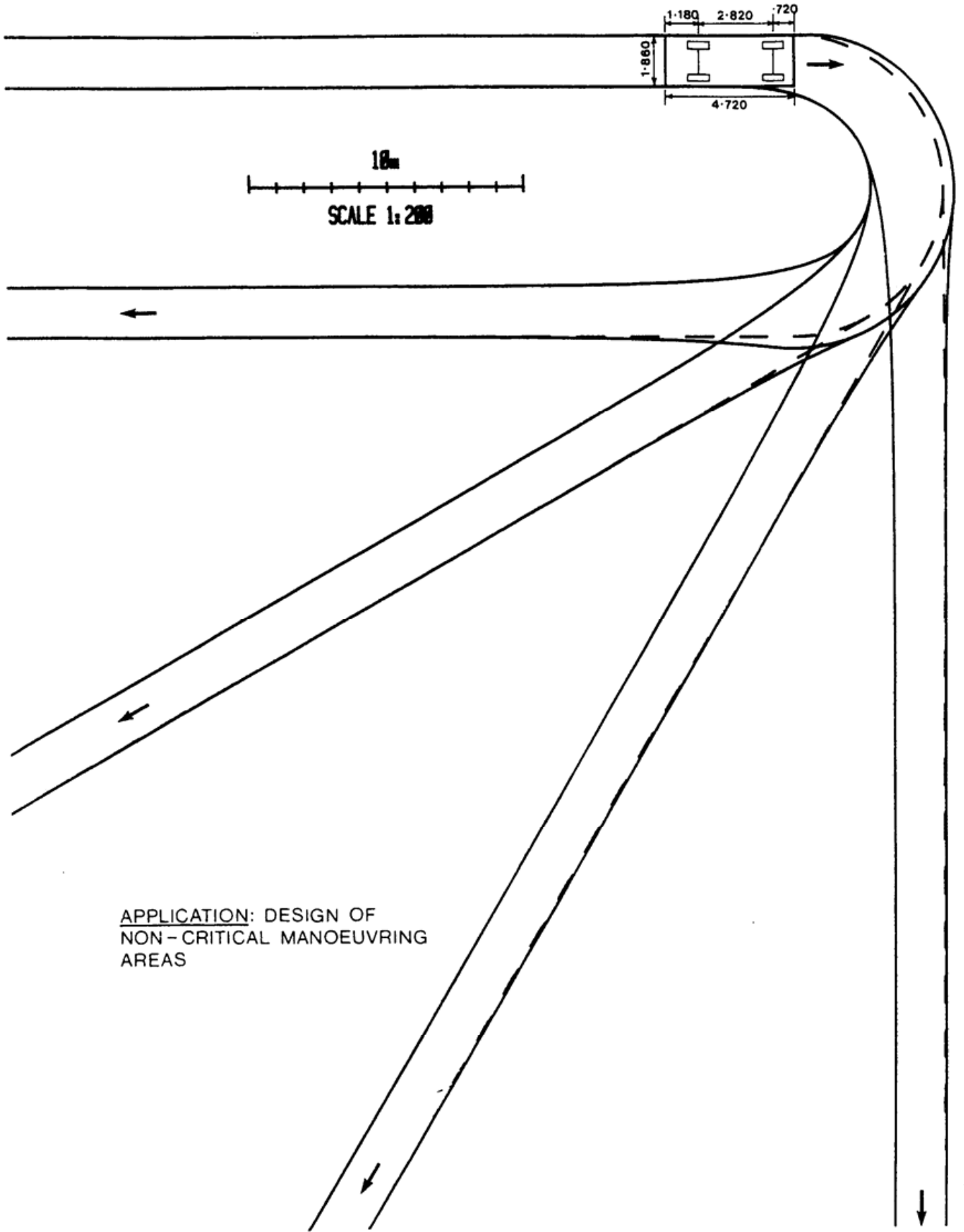
Site area, in relation to an allotment of land the subject of an application for consent under this Ordinance, means the area of that land, excluding therefrom any land upon which the development to which the application relates is not permitted by or under this Ordinance.

Small dwelling means a dwelling, the floor space of which is less than 55 square metres.

Traffic means pedestrians, motor vehicles, and bicycles.

Warehouse means a building or place used or intended for use for the storage of goods, merchandise or materials pending their sale and distribution to persons engaged in the retail trade.

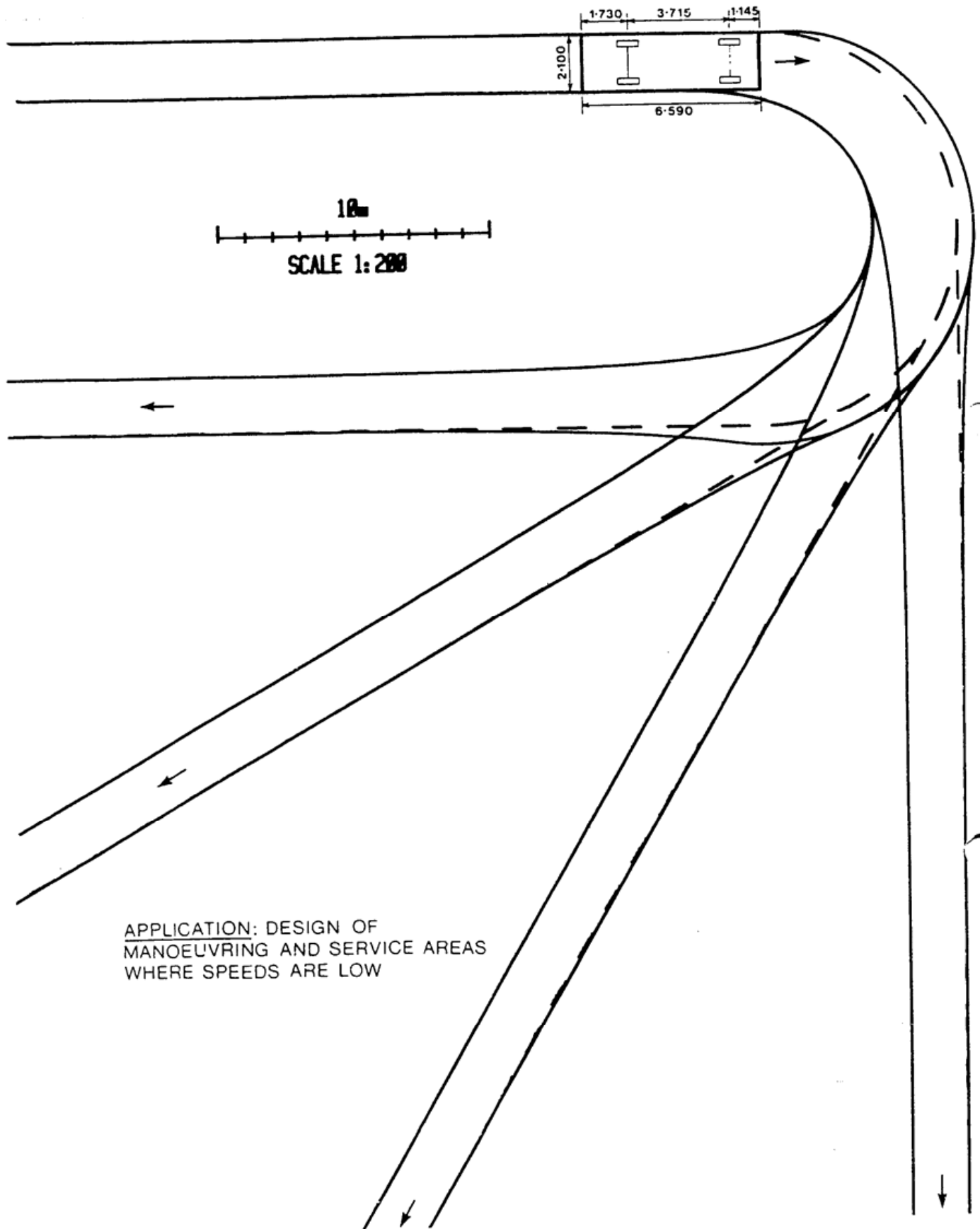
Appendix A: 85% Design Car—Minimum Turning Circle 11.0m



APPLICATION: DESIGN OF
NON - CRITICAL MANOEUVRING
AREAS

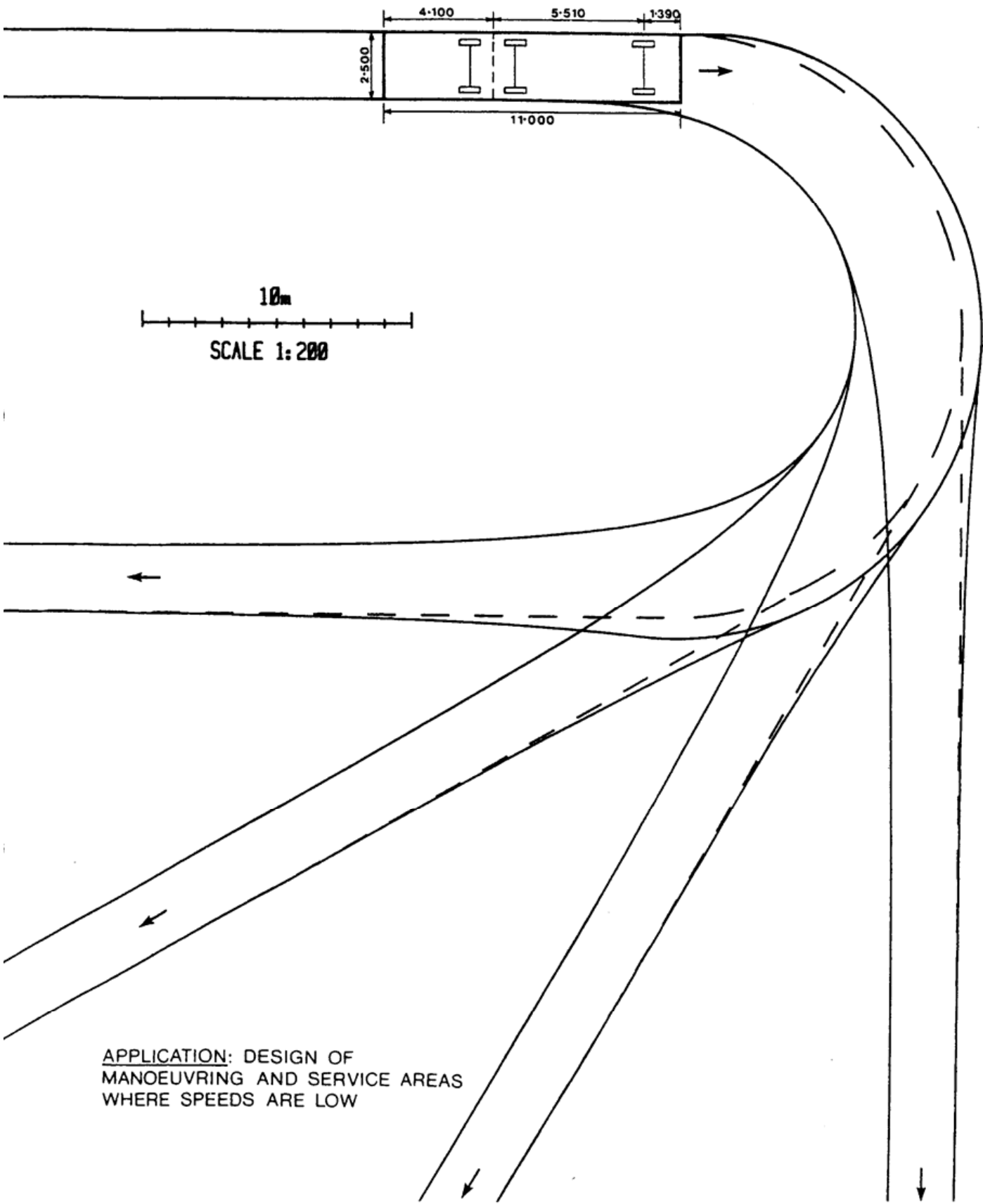
Source: RTA Guide to Traffic Generating Developments 1984 Edition

Appendix B: Design Small Rigid Truck—Minimum Turning Circle 14.4m



Source: RTA Guide to Traffic Generating Developments 1984 Edition

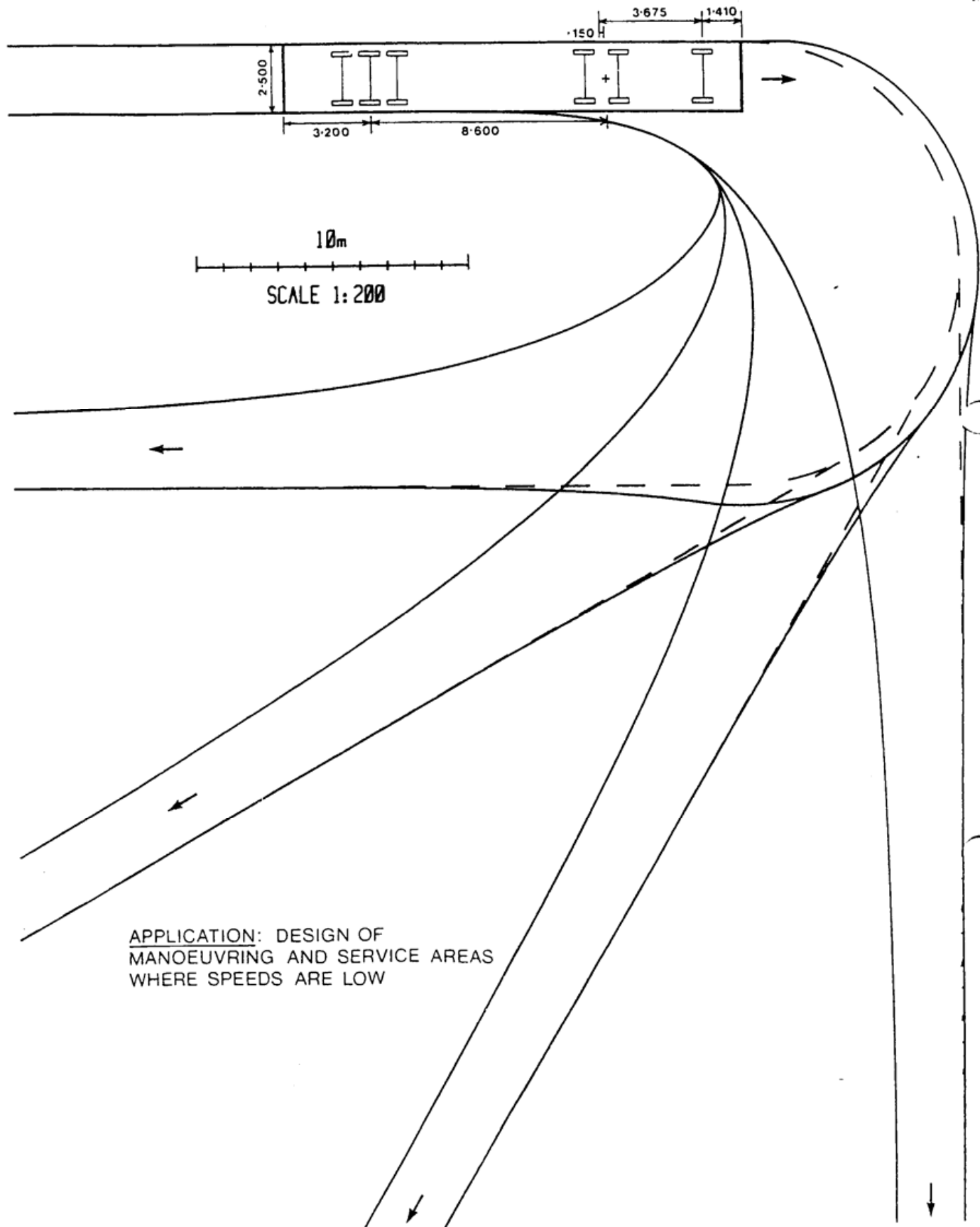
Appendix C: Design Large Rigid Truck—Minimum Turning Circle 21.65m



APPLICATION: DESIGN OF
MANOEUVRING AND SERVICE AREAS
WHERE SPEEDS ARE LOW

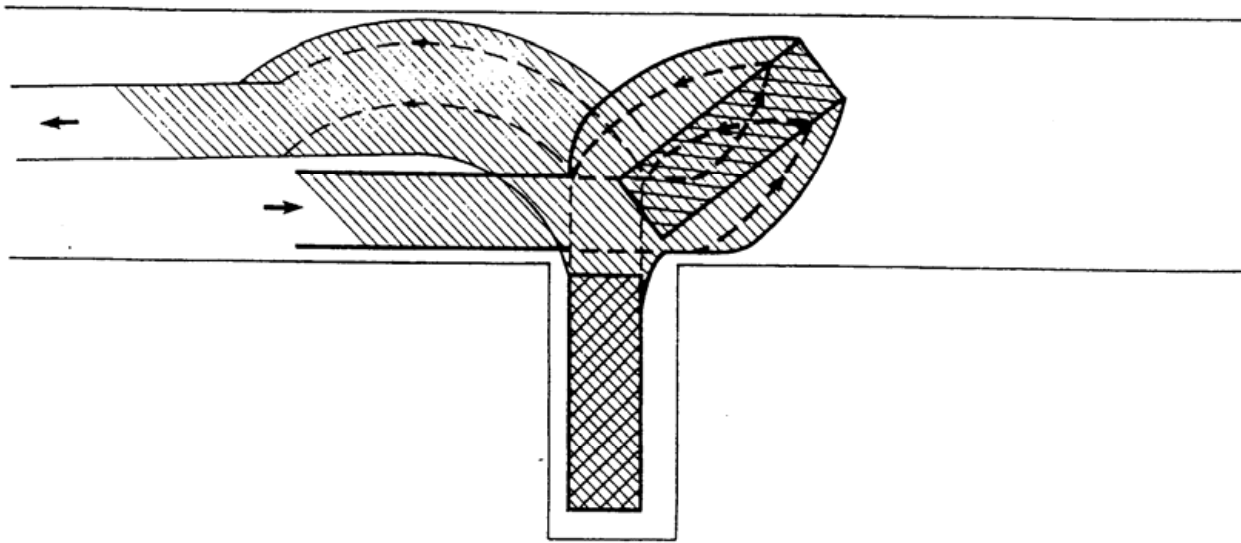
Source: RTA Guide to Traffic Generating Developments 1984 Edition

Appendix D: Design Large Semi-Trailer—Minimum Turning Circle 16.2m

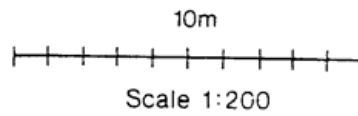


Source: RTA Guide to Traffic Generating Developments 1984 Edition

Appendix E: Design Small Rigid Truck—Critical Loading Bay Manoeuvring Area

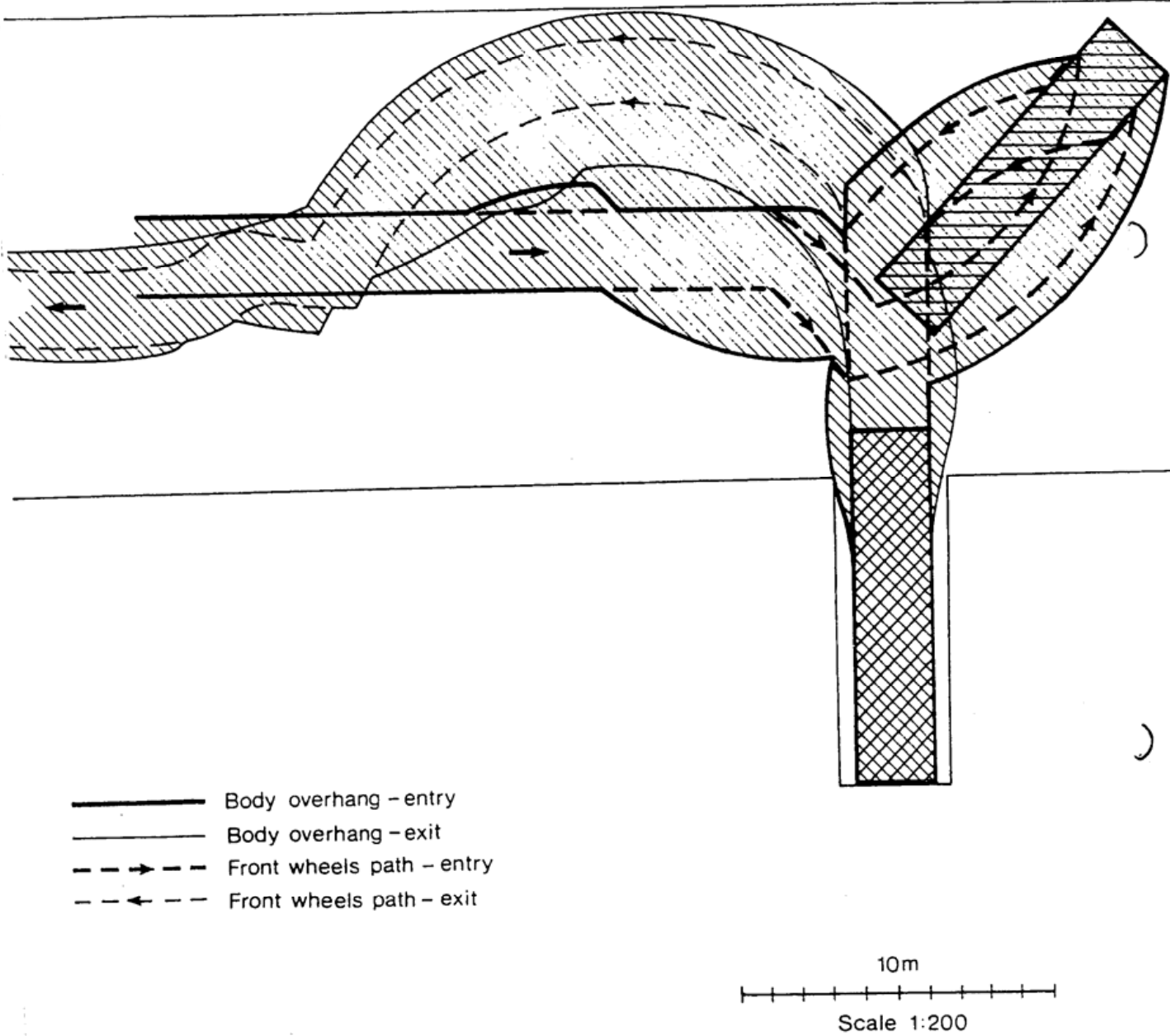


- Body overhang - entry
- Body overhang - exit
- - - -> Front wheels path - entry
- - - -< Front wheels path - exit



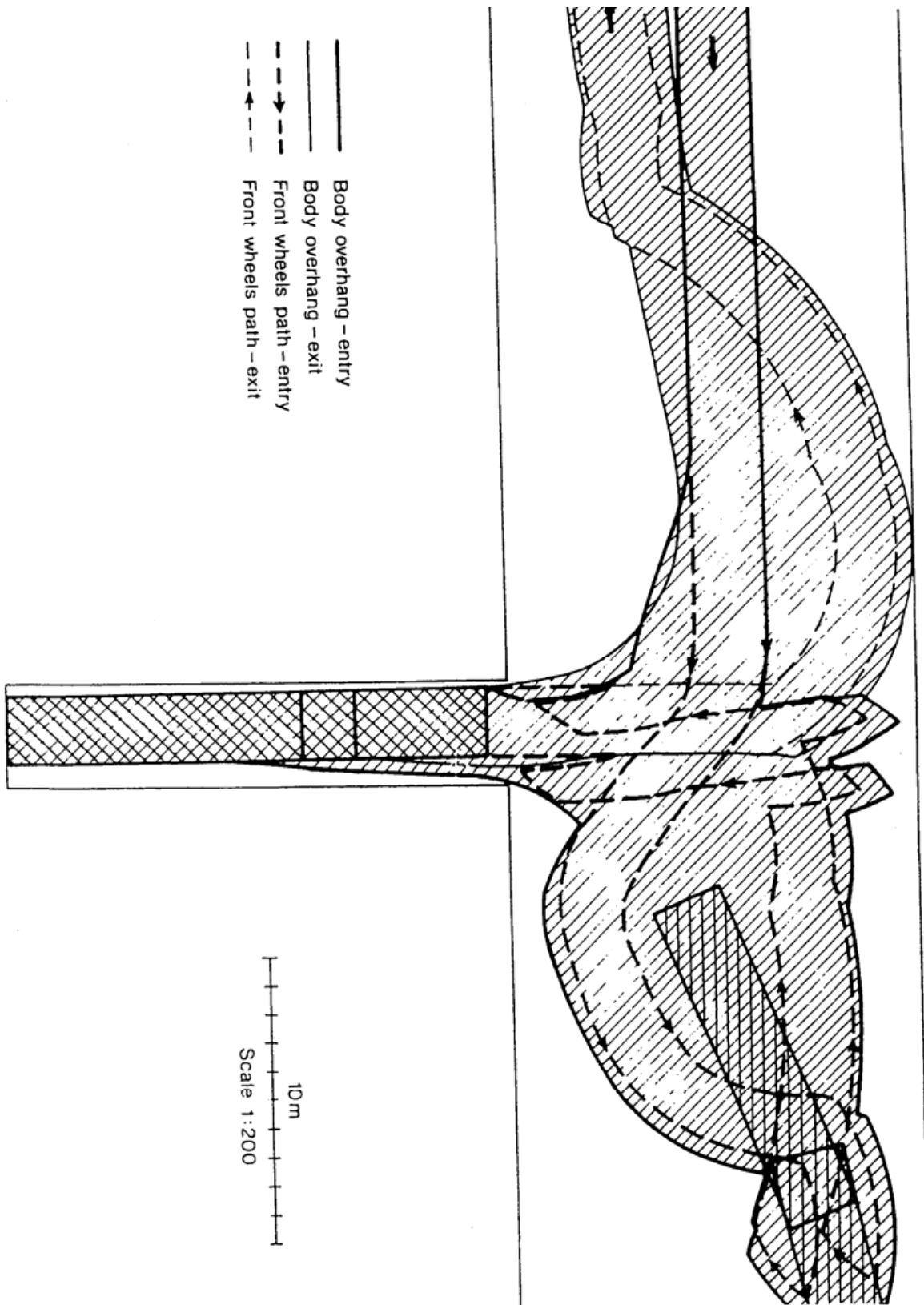
Source: RTA Guide to Traffic Generating Developments 1984 Edition

Appendix F: Design Large Rigid Truck— Critical Loading Bay Manoeuvring Area



Source: RTA Guide to Traffic Generating Developments 1984 Edition

Appendix G: Design Large Semi-Trailer— Critical Loading Bay Manoeuvring Area



Source: RTA Guide to Traffic Generating Developments 1984 Edition