Australian Capital Territory

Planning and Development (Draft Variation No 301) Consultation Notice 2010

Estate Development Code

Notifiable instrument NI2010–300

Made under the

***Planning and Development Act 2007,* section 63 (Public consultation—notification) and section 64 (Public consultation—notice of interim effect etc)**

Draft Variation No. 301 to the Territory Plan (see ***Annexure A***) proposes the replacement of the residential subdivision development code with a new estate development code.

You can get copies of draft variation documents:

- online at www.actpla.act.gov.au (note free internet access is available at ACT public libraries)
- at ACTPLA's customer service centre, 16 Challis Street, Dickson between 8.30am and 4.30pm.

Written comments from the public are invited by **COB Monday 16 August 2010**.

Comments should include reference to the draft variation, a return postal address and be addressed to Manager, Development Policy Section.

Comments can be:

- delivered to ACTPLA's customer service centre at the above address
- mailed to ACTPLA, GPO Box 1908, Canberra ACT 2601
- emailed to terrplan@act.gov.au

Copies of comments received will be made available for public inspection on ACTPLA's website as indicated above for no less than 15 working days after the closing date.

The draft variation does not have interim effect and therefore section 65 of the *Planning and Development Act 2007* does not apply. The current Territory Plan will continue to apply while the variation remains in draft form.

Kelvin Walsh
Delegate of the ACT Planning and Land Authority

15 June 2010

Planning & Development Act 2007

Draft Variation to the Territory Plan Number 301

Estate Development Code:

Replacement of existing
Residential Subdivision Development Code,
incorporating limited provisions
for subdivision in commercial and industrial areas
and minor change to Crime Prevention through
Environmental Design General Code

June 2010

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1. INTRODUCTION

1.1 Summary of the proposal

The draft variation proposes replacing the current Residential Subdivision Development Code with a new Estate Development Code. It follows an extensive review of the Residential Subdivision Development Code.

The Territory Plan currently includes provisions for assessing Estate Development Plans (EDPs) for residential zones only. The new code will also apply to EDPs for commercial and industrial zones.

1.2 The draft variation process

The Commonwealth's *Australian Capital Territory (Planning and Land Management) Act 1988* allows the Legislative Assembly to make laws to establish a Territory Planning Authority and for that Authority to prepare and administer a Territory Plan. The *Planning and Development Act 2007* established the ACT Planning and Land Authority (ACTPLA) as the organisation that prepares and administers the Territory Plan. ACTPLA is also responsible for reviewing the plan and proposing amendments as necessary.

The Territory Plan has a written statement and a map. The written statement has a number of parts: governance; strategic directions; zones; precinct codes; general codes; overlays; definitions; structure plans; concept plans and development codes for future urban areas.

The Territory Plan Map represents the applicable land use zones (under the categories of Residential, Commercial, Industrial, Community Facility, Urban Parks and Recreation, Transport and Services and Non Urban), precincts and overlays.

Draft variations to the Territory Plan are prepared in accordance with the *Planning and Development Act*. After draft variations are released submissions from the public are invited. At the end of the consultation period, ACTPLA submits a consultation report and a recommended final variation to the Minister for Planning.

The Minister has the discretion to determine if referral to the Legislative Assembly Standing Committee on Planning, Public Works and Territory and Municipal Services is warranted prior to approval, depending on the nature and significance of the proposal. If the draft variation is referred to the Committee, the Minister must consider the committee's findings before deciding whether to approve the draft variation. If the Minister approves the variation, the variation and associated documents will be tabled in the Legislative Assembly within five sitting days. Unless disallowed by the assembly within five sitting days, the variation commences on a day nominated by the Minister.

1.3 This document

This document contains the background information in relation to the proposed variation. It comprises the following parts:

- Part 1 - This **Introduction**.
- Part 2 - An **Explanatory Statement**, which gives reasons for the proposed variation and describes its effect.
- Part 3 - The **Draft Variation**, which details the precise changes to the Territory Plan that are proposed.

1.4 Public consultation

The public is invited to comment on the draft variation. Subject to consideration of responses received, the exhibited draft variation may be revised before ACTPLA submits the draft variation to the Minister for Planning for approval in accordance with the *Planning and Development Act*.

The documents relating to this draft variation may be obtained from:

- www.actpla.act.gov.au/tools_resources/legislation_plans_registers/plans/territory_plan/current_territory_plan_variations
- ACTPLA's Customer Service Centre, 16 Challis Street, Dickson between 8:30am to 4:30pm weekdays.

Note that free internet access is available at all ACT Public Libraries.

Written comments are invited by **COB 16 August 2010.** Comments addressed to the Manager, Development Policy Section should include a reference to this draft variation and a return postal address.

Comments can be:

- mailed to GPO Box 1908, Canberra ACT 2601
- delivered to ACTPLA's Customer Service Centre at 16 Challis St Dickson
- emailed to terrplan@act.gov.au

Copies of all written comments received will be made available for public inspection at ACTPLA's Customer Service Centre, Dickson, during normal office hours for not less than 15 working days after the closing date.

2. EXPLANATORY STATEMENT

2.1 Background

As part of the reform of the ACT planning system, a restructured Territory Plan came into effect on 31 March 2008. Under the earlier plan, assessment of residential subdivision relied heavily on the guidelines for *Planning and Design of Residential Estates*. While these guidelines were largely incorporated into the 2008 Territory Plan, much of the related policy content remained unchanged.

In 2009 ACTPLA began a review of the policy content of the Territory Plan, including policy on the subdivision of land. The review has been informed by:

1. The Department of Territory and Municipal Services (TAMS) standards codification project.

Generally, new estate developments that include public infrastructure are referred to TAMS for approval or endorsement. Efficiencies are expected if at least some of the TAMS standards can be incorporated into the Territory Plan.

2. A review of solar access provisions

The current Territory Plan requires that 75 per cent blocks in the subdivision achieve an energy rating of at least three stars while all blocks achieve at least one star. In 2009, a major review of these provisions recommended that standards for new subdivisions should be significantly tightened to ensure that the size, slope and aspect of blocks in new estates allow subsequent dwellings to achieve high levels of solar access and significantly limit overshadowing of adjoining residential blocks.

Comments from ACT Government agencies have been considered in preparing this draft variation.

2.2 Current Territory Plan provisions

The current Residential Subdivision Development Code applies to developments involving both the subdivision of land and creation of new public infrastructure. These applications are described as estate development plans under the *Planning and Development Act.*

The code has two parts:

Part A – Residential Estate Planning and Design Process

Part B – Subdivision Development Code

Part B(1) – estate development plans supported by a precinct code

Part B(2) – additional requirements that apply when an estate development plan is not supported by a precinct code

2.3 Summary of key changes

Proposed changes to Section 16 of the Territory Plan

A. The existing Residential Subdivision Development Code is proposed to be replaced by the Estate Development Code (***Attachment 1***).

The proposed Estate Development Code has four parts:

Part A – general estate controls (controls relating to residential, commercial and industrial estates)

Part B – controls applying specifically to residential estates and estates in mixed use commercial CZ5

Part C – controls applying specifically to commercial estates

Part D – controls applying specifically to industrial estates

B. Significant structural and policy changes in the proposed Estate Development Code are itemised below.

1 The current Residential Subdivision Development Code has been restructured to reduce duplication and to improve clarity. Parts B(1) and B(2) have many similarities in the elements, and are now proposed to be combined for usability and clarity.

2 New provisions dealing with subdivision in commercial and industrial zoned areas have been inserted. The new Estate Development Code includes Part C for commercial estates for areas other than CZ5 – Commercial Mixed Use Zones and Part D for Industrial estates. Since CZ5 Commercial Mixed Use Zone can include residential development, CZ5 is subject to residential estate controls in Part B.

3 Incorporating some of the TAMS standards that are relevant to subdivisions, into the new Estate Development Code .

4 Assessment tool for solar performance provisions for residential blocks in new estates.

C. Consequential changes to General Code

Insert ‘subdivision’ into Table 1 of the Crime Prevention through Environmental Design General Code (CPTED) as another development that needs to meet the requirements of CPTED.

Details of the changes (with reasons for the changes) are summarised in the following section.

2.4 Reasons for the proposed draft variation

The draft variation proposes replacing the Residential Subdivision Development Code at Section 16.1 of the current Territory Plan with the new Estate Development Code (***Attachment 1***). The key elements of the proposed code and the reasons for implementation are outlined below.

1. The proposed code is structured to reduce duplication and improve clarity

   Reason

   Increased clarity and reduced duplication will assist in the design and assessment of estate development plans. Most provisions are found in parts A and B. Other parts contain a limited number of provisions relating to commercial or industrial estates.

2. New provisions dealing with EDPs in commercial and industrial zoned areas have been inserted.

   Reason

   The Territory Plan does not currently contain provisions that specifically apply to EDPs for commercial or industrial estates.

3. Codifying relevant TAMS standards

   Reason

   TAMS infrastructure standards are used in assessing development applications (DA) for EDPs. Currently proponents are required to seek advice and approval from various parts of TAMS before lodging an EDP. The ACT Economic Stimulus Taskforce engaged a consultant to explore the possibility of incorporating relevant standards into the Estate Development Code (e.g. laneways, street geometry etc.) to facilitate a streamlined approach to the DA assessment process. The proposed Estate Development Code seeks to follow this approach where possible.

4. Incorporate solar access provisions for residential blocks in new estates

Reason

ACTPLA engaged a consultant to undertake a major review of solar access provisions in the Territory Plan in 2009. The recommendations from the review of solar access provisions are generally incorporated in the proposed Estate Development Code. The key provision is that 95 per cent of the single dwelling blocks in an estate comply with the new single dwelling block compliance tables at appendix A to the code. These tables identify blocks with the potential for acceptable solar access based on block area, width, depth, slope and orientation. Multi unit housing blocks must demonstrate that they comply with the solar access provisions of the Multi Unit Housing Development Code (which is proposed to include updated solar access provisions, and is the subject of a separate draft variation to the Territory Plan).

The new solar access provisions are in line with the Government's response to climate change and will ensure good solar orientation in new subdivisions.

5. Insert 'Subdivision' as an assessable development into Table 1 of the Crime Prevention through Environmental Design General Code (CPTED)

Reason

Subdivision as a merit assessable development has been inadvertently left omitted from Table 1 of the CPTED. This draft variation provides an opportunity to rectify this matter.

2.5 Planning context

2.5.1 National Capital Plan

The *Australian Capital Territory (Planning and Land Management) Act 1988* established the National Capital Authority (NCA) with two of its functions being to prepare and administer a National Capital Plan (NCP); to keep the NCP under constant review and propose amendments when necessary.

The NCP, which was published in the Commonwealth Gazette on 21 January 1990 is required to ensure that Canberra and the Territory are planned and developed in accordance with their national significance. The *Planning and Land Management Act 1988* also required that the Territory Plan is not inconsistent with the NCP. In preparing this draft variation, ACTPLA has considered the proposed changes are consistent with the NCP.

2.5.2 Territory Plan

The proposal is consistent with the Territory Plan's Statement of Strategic Directions in terms of environmental; economic and social sustainability and spatial planning and urban design principles such as:

- integrated transport and land use planning, by maximising the accessibility to public transport, public open space and to social infrastructure
- reduce energy consumption by solar efficient subdivisions, and water sensitive urban design
- support preferred pattern of development and efficient use of land take.

2.5.3 Spatial Plan

The Spatial Plan outlines the strategic direction for growth to achieve social, environmental and economic sustainability for Canberra. Some of the objectives identified in the Spatial Plan are achieved through the Estate Development Code in providing for housing diversity in the new residential areas, protecting the natural environment and creating a healthy community by facilitating good travel connections and ease of movement and access to recreational open space areas.

2.5.4 Sustainable Transport Plan

The proposed Estate Development Code meets the broad objectives of the Sustainable Transport Plan in terms of integrated transport and land use planning by designing new residential estates with good access to public transport, cycleways and footpaths. The code also emphasises the provision of connectivity with community activity nodes, retail areas and public realm.

2.6 Interim effect

This draft variation does not have interim effect.

2.7 Consultation with government agencies

ACTPLA is required under the *Planning and Development Act* to consult with each of the following agencies:

i) the National Capital Authority

ii) the Conservator of Flora and Fauna

iii) the Environment Protection Authority

iv) the Heritage Council

v) if the draft variation would, if made, be likely to affect unleased land or leased public land – each custodian for the land likely to be affected

i) National Capital Authority

The NCA provided the following comments on 8 April 2010.
"The National Capital Authority (NCA) has no objection to DV 301 proceeding to the next stage of consultation. The key intent of the Draft Variation in improving efficiencies across ACT Government agencies, and strengthening controls to ensure increased levels of solar access to residential development is supported."

Response

Noted.

ii) Conservator of Flora and Fauna

The Conservator made the following comments on 28 April 2010.

In accordance with Section 61 (b) of the *Planning and Development Act 2007*, I advise that I have examined Draft Variation to the Territory Plan No. 301 – Estate Development Code. I understand that this will replace the existing Residential Subdivision Development Code.

I have no comments to provide other than to note my support, particularly for the recognition of public realm spaces and their importance in the protection of biodiversity and ecological connectivity.

Response

Noted.

iii) Environment Protection Authority

The Environment Protection Authority provided the following comments on 29 April 2010

a) **"**3.3. Earthworks and Sediment and Erosion Control

Please change R51 to the following:
For estates greater than 3000m^2 a sediment and erosion control concept plan is prepared in accordance with the *ACT Environment Protection Guidelines for Construction and Land Development in the ACT 2007* and endorsed by the Environment Protection Authority."

Response

Agreed. R51 (now R54) has been amended accordingly.

b) Part B – Residential Estate & Mixed Use CZ5 Area controls and Part D – Industrial Estate Controls

The EPA would welcome the addition of the following lines for inclusion:
"C#
The proposal incorporates an assessment of the following in relation to the estate design:
i) Visual impacts on adjoining non-industrial/non-commercial areas;
ii) Noise on adjacent non-industrial/non-commercial areas
iii) Odour on adjacent non-industrial/non-commercial areas"

Response

Not agreed. At the time of considering the Estate Development Plans (EDPs) ACTPLA does not know precisely how the proposed blocks in the estate will be developed. EDPs approve the subdivision layout and associated infrastructure. The subdivision causes no visual, noise, air or odour impacts. These impacts can only be considered as part of the future development proposals for the blocks at detailed design stage of a development application, supported by relevant legislation including the *Environment Protection Act 1997*.

c) The EPA's comments on C98 (from an initial draft version circulated to agencies in January 2010).

C98
The proposal incorporates ameliorative measures to reduce:
i) visual impacts on adjoining non-industrial areas; and
ii) noise on adjacent non-industrial areas.

"The EPA suggests that former C98 be re-inserted into the code as an element requiring the submission of visual, noise and impacts assessments. This would provide more substance for the EPA and ACTPLA in assessing the proposed amelioration measures required by C98. The EPA would argue that amelioration of impacts is an important issue in the design of industrial estates, and one that should be addressed through this Code."

Response

Not agreed. The version circulated as an initial draft was a preliminary, 'work in progress' document. The provision was subsequently deleted as it could not be assessed as part of an EDP proposal. This issue can only be considered as part of future development proposals for the blocks.

iv) Heritage Council

The Heritage Council provided the following comments on 26 March 2010.

"It is understood that the purpose of the variation is to replace Residential Subdivision Development Code with a new Estate Development Code following an extensive review. The details of and reasons for the proposed variation are noted on page 6 and 7 of the submitted draft report. It is also noted that the requirements of the *Heritage Act 2004* for cultural places are included as a mandatory rule under Rule 3.2 of the draft variation.

The Heritage Council has considered the proposed variation to the Territory Plan number 301, and advises that variation 301 contains the required provisions for the protection of cultural heritage sites under the *Heritage Act 2004.* The Council therefore advises that the proposal will not result in adverse heritage impacts."

Response
Noted

Additional comments received on 23 April 2010

Page iii Structure Plan; Heritage should form a part of the initial structure plan and investigations.

Page iv Concept Plans; Additionally ANY "off-site" works such as water mains, sewerage, electricity etc. should be identified for an estate.

R48: Add the word 'recorded' in the first sentence after" -----has been---"

Response
The comments made are relevant to structure planning and concept planning processes under the *Planning and Development Act 2007* which are considered at earlier planning stages, well before an EDP is prepared and assessed. Agreed to the change at R48 and the draft code is amended accordingly.

v) Land Custodian

Not applicable to this draft variation.

3. DRAFT VARIATION

3.1 Variation to the Territory Plan

a)	Residential Subdivision Development Code

Substitute Residential Subdivision Development Code at Section 16 with the Estate Development Code at Attachment 1.

b)	Crime Prevention Through Environmental Design General Code

Insert 'Subdivision' after 'Store' in Table 1 of the Crime Prevention through Environmental Design General Code.

Interpretation service

ENGLISH	If you need interpreting help, telephone:
ARABIC	إذا احتجت لمساعدة في الترجمة الشفوية ، إتصل برقم الهاتف :
CHINESE	如果你需要传译员的帮助，请打电话：
CROATIAN	Ako trebate pomoć tumača telefonirajte:
GREEK	Αν χρειάζεστε διερμηνέα τηλεφωνήσετε στο
ITALIAN	Se avete bisogno di un interprete, telefonate al numero:
MALTESE	Jekk għandek bżonn l-għajnuna t'interpretu, ċempel:
PERSIAN	اگر به ترجمه شفاهی احتیاج دارید به این شماره تلفن کنید:
PORTUGUESE	Se você precisar da ajuda de um intérprete, telefone:
SERBIAN	Ако вам је потребна помоћ преводиоца телефонирајте:
SPANISH	Si necesita la asistencia de un intérprete, llame al:
TURKISH	Tercümana ihtiyacınız varsa lütfen telefon ediniz:
VIETNAMESE	Nếu bạn cần một người thông-ngôn hãy gọi điện-thoại:

TRANSLATING AND INTERPRETING SERVICE

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Canberra and District - 24 hours a day, seven days a week

Attachment 1

ACT Planning & Land Authority

Estate Development Code

Draft June 2010

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INTRODUCTION

Name

The name of this code is **Estate Development Code**.

Application

This code applies to all developments in the ACT involving both subdivision and the creation of new public infrastructure, whether the subdivision is for residential, commercial or industrial purposes. The code does not apply to proposals to subdivide individual leases unless those proposals also involve the creation of significant public infrastructure to be handed back to the Territory.

National Capital Plan

Where a development is subject to special requirements under the National Capital Plan, or any relevant development control plan prepared under the National Capital Plan, the development must not be inconsistent with the special requirements or development control plan. Where any provision of this code is inconsistent with special requirements under the National Capital Plan, or any relevant development control plan prepared under the National Capital Plan, that provision has no effect.

Purpose

This code provides additional planning, design and environmental controls to support the objectives of the relevant zone.

It will be used by the ACT Planning and Land Authority (ACTPLA) to assess estate development plans (development applications). It also offers guidance to applicants preparing estate development plans.

Structure

This code has four parts:

Part A – General estate controls

Part B – Residential estate and mixed-use CZ5 area controls

Part C – Commercial estate controls

Part D – Industrial estate controls

Each part is divided into one or more elements. Each element has rules and associated criteria (unless a rule is mandatory). Rules provide quantitative, or definitive, controls, while criteria are chiefly qualitative in nature.

In some instances rules are mandatory and are accompanied by the words “This is a mandatory requirement. There is no applicable criterion”. Non-compliance with a mandatory rule will result in the refusal of the development application. Conversely, the words “There is no applicable rule” is found where a criterion only applies.

Assessment tracks

Assessment track for a particular developments are specified in the relevant zone development table.

Proposals in the **code track** must comply with all rules relevant to the development.

Proposals in the **merit track** and **impact track** must comply with a rule or its associated criterion, unless the rule is mandatory (i.e. it has no related criterion). When a rule is fully met, no reference to the related criterion needs to be made. Where there is a departure from a rule, or where a criterion only applies, the onus is on the applicant to demonstrate, through supporting drawings and/or

documentation, that the relevant criterion is satisfied. In addition, the applicant for proposals in the impact track must justify any non-compliance by reference to the Statement of Strategic Directions.

Code hierarchy

When more than one type of code applies to a development, the order of precedence when there is inconsistency of provisions between codes is precinct code, development code, and general code, as defined by the *Planning and Development Act 2007.*

In addition to this code, general codes may be relevant. The following general codes, in particular may be relevant to development in land identified in the Estate Development Plans as residential zones.

Crime Prevention through Environmental Design General Code

Planning for Bushfire Risk Mitigation General Code

Waterways: Water Sensitive Urban Design General Code

Estate development plans

Estate development plans (EDPs) set out the proposed subdivision pattern and infrastructure works for the neighbourhood. EDPs must be submitted as development applications for approval by ACTPLA. Development approval of the EDP is required before starting the works and granting leases for the subdivided blocks. The EDP is assessed against the relevant parts of this code and any applicable structure plan and/or precinct code.

In the absence of a structure plan and or a precinct code, an EDP will be assessed against this code.

Definitions

Defined terms used in this code are italicised.

Most are defined in section 13 of the Territory Plan. Additional definitions used in this code are in the appendix B.

Part A – General estate controls

This part applies to all estates. This should be read in conjunction with any applicable specific zone provisions from parts B, C or D

Element 1: Street network

Rules	Criteria
1.1 Street function	
R1 The design speeds, forecast traffic volumes and function for streets in the *estate* comply with the relevant street type in the following: a) Table 1A for residential *estates* and mixed use CZ5 areas b) Table 1B for commercial *estates* (excluding mixed use CZ5 areas) c) Table 1C for industrial *estates*.	C1 Lower traffic volumes for the street types identified in Table 1A, 1B or 1C may be considered where endorsed by the Department of Territory and Municipal Services (TAMS). In making its assessment TAMS will consider whether the street performs the function of the specified street type.
1.2 Street layout	
There is no applicable rule.	C2 The street layout achieves all of the following: a) distributes traffic flows in accordance with function and type of the streets proposed b) promotes legibility, convenience and safety of the road layout c) avoids through traffic from external areas (other than for pedestrians, cyclists and public transport) and 'rat runs' d) provides opportunities for permeable and direct bus routes that minimise bus travel time by not being circuitous and avoiding back tracking e) is endorsed by TAMS. In making its assessment TAMS will consider the *TAMS Design Standards for Urban Infrastructure (DS-02)* or its successor.

Rules	Criteria
R3 Streets connect with other streets that are no more than two levels higher or lower in the hierarchy as defined in the following: a) Table 1A for residential *estates* and mixed use CZ5 areas b) Table 1B for commercial *estates* (excluding mixed use CZ5 areas) c) Table 1C for industrial *estates*. **Note 1**: Each different street type listed in Tables 1A, 1B and 1C constitute a different level in the street hierarchy (e.g. Access Street A and Access Street B are two different levels). **Note 2**: All *arterial roads* are taken to be the level higher than a major collector street.	C3 *Access streets* may connect with other streets of more than two levels higher or lower in the hierarchy where they are endorsed by TAMS. In making its assessment TAMS with consider the safety and legibility of the proposed street connections.
There is no applicable rule.	C4 Vehicle entry and egress points are provided to the subdivision to achieve all of the following: a) distribute traffic flows b) facilitate permeability c) allow for appropriate vehicle movements during an emergency and are endorsed by the Emergency Services Authority (ESA).
There is no applicable rule.	C5 Left-in and left-out intersections may supplement crossroads or staggered junctions where endorsed by TAMS.
There is no applicable rule.	C6 Four-way intersections that are not controlled by traffic signals or a roundabout are only permitted where they are endorsed by TAMS. In making its assessments TAMS will consider whether the intersection design and forecast traffic volumes meet the recommended limits as specified in the AUSTROADS Guidelines.

1.3 Street geometry	
R7 Street carriageway widths comply with the following: a) Table 2A for residential *estates* and mixed use CZ5 areas b) Table 2B for commercial *estates* (excluding mixed use CZ5 areas) c) Table 2C for industrial *estates*. **Note1**: Streets proposed as bus routes have additional requirements in Table 3. **Note 2**: Refer to the notes supporting Tables 2A, 2B and 2C for how to measure the carriageway width.	C7 Street carriageway widths are endorsed by TAMS. In making its assessment TAMS will consider whether proposed carriageway widths achieves all of the following: a) comply with *TAMS Design Standards for Urban Infrastructure* (DS-02) or its successor b) provide for safe and efficient movement of all road users.
R8 Street verge widths comply with the following: a) Table 2A for residential *estates* and mixed use CZ5 areas b) Table 2B commercial *estates* (excluding mixed use CZ5 areas) c) Table 2C for industrial *estates*.	C8 Street verge widths provide opportunities to provide a level of amenity appropriate for the adjoining land use and future users of the *estate* and are endorsed by TAMS and all relevant utility providers. In making its assessment TAMS and all relevant utility providers will consider whether street verge widths achieve all of the following: a) comply with *TAMS Design Standards for Urban Infrastructure* (DS-02) or its successor b) are capable of accommodating the required utility services, street tree planting, shared paths, and street lighting c) will not cause any undesirable maintenance issues d) will encourage traffic speeds consistent with the street design speed and function.
R9 Street pavement cross-fall is 3%.	C9 Street pavement cross-falls are endorsed by TAMS. In making its assessment TAMS will consider all of the following: a) whether proposed pavement cross-falls reflect the physical land characteristics and major drainage functions b) safety criteria for vehicle movement c) overland flow paths.

R10 Maximum street longitudinal gradients comply with the following: a) Table 2A for residential *estates* and mixed use CZ5 areas b) Table 2B for commercial *estates* (excluding mixed use CZ5 areas) c) Table 2C for industrial *estates*. **Note**: Streets proposed as bus routes have additional requirements in Table 3.	C10 Street longitudinal gradients are endorsed by TAMS. In making its assessment TAMS will consider whether the proposed gradients achieve all of the following: a) provide suitable access for pedestrian, cyclists and waste collection vehicles b) will cause any stormwater system issues c) safety issues for future users.
There is no applicable rule.	C11 Geometric design for intersections, roundabouts and slow points are endorsed by TAMS. In making its assessment TAMS will consider AUSTROADS Guidelines and the Australian Road Rules for the relevant vehicle speed and maximum design vehicle envelope for each street.
There is no applicable rule.	C12 Intersection designs are endorsed by TAMS. In making its assessment TAMS will consider vehicle turning movements using *AUSTROADS Design Vehicles and Turning Templates* to enable turns in a single forward movement to achieve the following: a) for turns between a major collector and a minor collector or *access street*, the 'design articulated vehicle' provides a turning path radius of at least 15m in accordance with the Australian Road Rules b) for turns between a minor collector street and *access streets*, the 'design heavy rigid vehicle' provides a turning path radius of at least 12.5m, using any part of the pavement, in accordance with the Australian Road Rules c) for turns between *access streets*, the B99 'design car' provides a turning path radius of at least 8m using the correct side of the pavement only.

R13 Kerb types comply with the following: a) Table 2A for residential *estates* and mixed use CZ5 areas b) Table 2B commercial *estates* (excluding mixed use CZ5 areas) c) Table 2C for industrial *estates*. All bus routes must have upright kerbs.	C13 Kerb types are endorsed by TAMS. In making its assessment TAMS will consider whether the proposed kerb types achieve all of the following: a) will not create any safety issues for users of the street b) will not cause any undesirable maintenance issues c) will provide for additional water sensitive urban design outcomes.
R14 Kerb return radii for each street type: a) is a minimum of 8m for residential *estates* and mixed use CZ5 areas b) is a minimum of 10m for commercial (excluding CZ5 areas) and industrial *estates*.	C14 Kerb radii are endorsed by TAMS. In making its assessment, TAMS will consider all of the following: a) *AUSTROADS Guidelines* b) TAMS *Design Standards for Urban Infrastructure*.
1.4 Shared Zones	
There is no applicable rule.	C15 *Shared use zone*s are provided in areas of competing demand for pedestrians, cyclists and vehicles and endorsed by TAMS. In making its assessment TAMS will consider all of the following: a) pedestrian priority b) *AUSTROADS Guidelines*, and c) TAMS *Design Standards for Urban Infrastructure*.

1.5 Rear Lanes	
R16 *Rear lanes* only serve one or more of the following purposes: a) provide rear vehicular access to single dwelling blocks that front roads with forecast traffic volumes in excess of 3000 vehicles per day b) provide rear vehicular access to blocks with a road frontage of less than 8m (rear access can also be provided to the other blocks in the same section even if the road frontage of those blocks exceeds 8m) c) provide rear vehicular access to commercial blocks for the purposes of accessing on-site car parking or service areas.	This is a mandatory requirement. There is no applicable criterion.
R17 The maximum length of *rear lanes* where street lights are provided only at the entry and exit points of the *rear lane* is 60m.	C17 The length of *rear lanes* is endorsed by TAMS. In making its assessment TAMS will consider all of the following: a) the adequacy of proposed street lighting b) TAMS *Design Standard for Urban Infrastructure (DS-12),* or its successor.
R18 Where street lights are provided along the *rear lane* in addition to the entry and exit points, the street lights are located to comply with all of the following: a) minimum clearance to back of kerb – 1.7m b) minimum clearance to any boundary or indented boundary of block that is leased (or intended to be leased) – 0.5m c) provide upright kerb along the side where street lighting is provided.	C18 *Rear lanes* are endorsed by TAMS. In making its assessment TAMS will consider all of the following: a) the design and location of proposed street lighting b) on-going access to proposed street lighting c) TAMS *Design Standard for Urban Infrastructure (DS-12),* or its successor.

R19	C19
Rear lanes comply with all of the following: a) the relevant provisions of Tables 1A, 1B, 2A and 2B b) number of dwellings in any *rear lane* arrangement in one location do not exceed 40 dwellings c) maximum *leg length* in any leg in a *rear lane* is 120m (Figure 1) d) maximum peak hour traffic volume at any intersection with connecting street is 160vpd e) do not directly align with *rear lanes* across higher order streets f) provide sight lines in accordance with Australian Standards for blocks at bends and corners of intersections g) include threshold or other treatments to differentiate the *rear lane* from other streets h) street lights comply with TAMS Design Standard for Urban Infrastructure (DS-12), or its successor i) if waste collection is provided from *rear lanes*, turning circles at the intersection of *rear lanes* and higher order streets and/or intersections between different legs of *rear lane*, accommodate 12.5m single unit truck (refuse vehicles) and comply with TAMS Design Standard for Urban Infrastructure (DS-12), or its successor j) do not serve as the primary access route for emergency vehicles.	R*ear lanes* achieve all of the following: a) safe and effective accommodation of anticipated traffic loads b) do not contribute to a pattern of long, continuous straight lengths of *rear lanes* c) effective threshold treatment to differentiate the *rear lane* from other streets d) where *rear lanes* connect to higher order streets, adequate turning circles for refuse vehicles are provided.

There is no applicable rule.	C20 The configuration of *rear lanes* achieves all of the following: a) does not contribute to a more desirable alternative to the adjoining street network (i.e. does not contribute to 'rat running') b) endorsement by TAMS. In making its assessment TAMS will consider all of the following: i) TAMS *Design Standard for Urban Infrastructure* ii) the adequacy of stormwater management iii) horizontal and vertical curvature, particularly relating to sight lines and the gradient that would diminish sight lines and adversely affect the gradient of access driveways iv) whether the *rear lane* can adequately accommodate refuse vehicles, if required.
R21 Utility service connections to blocks (excluding local stormwater drainage) are not provided from *rear lane*s. Local stormwater drainage, where provided within a rear lane, is to be located along the centreline of the *rear lane* and include grated sumps designed for zero capacity.	C21 Utility service connections to blocks may be provided from *rear lane*s where endorsed by the relevant utility service provider and TAMS.
1.6 Culs-de-sac	
R22 No more than 15 per cent of blocks in the proposed *estate* are served by culs-de-sac.	C22 Culs-de-sac achieve all of the following: a) do not diminish the legibility and connectivity of the neighbourhood b) provide access to blocks where alternate access is not feasible.
R23 Culs-de-sac are no longer than 100m.	C23 Culs-de-sac greater than 100m are endorsed by TAMS and the Emergency Services Agency (ESA). In making their assessment TAMS and the ESA will consider the availability of alternative emergency access.

R24 The diameter of the head of the cul-de-sac is not less than 17m.	C24 The geometry of the head of a *cul-de-sac* is endorsed by TAMS. In making its assessment TAMS will consider whether the head of the culs-de-sac will accommodate a three point turn by a 'design refuse vehicle'.
R25 *Culs-de-sac*, other than *rear lane*s, that are greater than 50m in length are provided with an access way with a shared path of at least 1.2m width at the turning head. The shared path is to connect with the greater shared path network.	C25 *Culs-de-sac* are provided with convenient and legible pedestrian and cyclist access with connections to the greater shared path network.
1.7 On-street car parking	
R26 The dimensions of designated on-street car spaces comply with AS 2890.	This is a mandatory requirement. There is no applicable criterion.
1.8 Design of streets in bushfire prone areas	
R27 Edge streets within or adjacent to a *bushfire prone area* on the long-term urban edge or conservation area comply with all of the following: a) 7.5m wide carriageway with fire hydrants in accordance with the requirements of the ESA b) Street trees and vegetation within the verge complying with the asset protection zone requirements as outlined in the Planning for Bushfire Risk Mitigation General Code.	C27 The design of edge streets within or adjacent to a *bushfire prone area* on the long-term urban edge or conservation area are endorsed by ESA and TAMS. Fire trails may be provided in place of edge streets where endorsed by ESA and TAMS.
1.9 Public transport	
1.9.1. Bus routes	
There is no applicable rule.	C28 Bus routes are endorsed by ACTION and TAMS. In making their assessment ACTION and TAMS will consider Strategic Public Transport Network, including the Frequent Network structure and service characteristics.

R29 Bus routes are only provided on streets nominated as being appropriate for bus routes in the following: a) Table 2A for residential *estates* and mixed use CZ5 areas b) Table 2B for commercial *estates* (excluding mixed use CZ5 areas) c) Table 2C for industrial *estates*.	C29 Bus routes may be provided on streets other than those nominated, where they are endorsed by ACTION and TAMS. In making their assessment ACTION and TAMS will consider the Strategic Public Transport Network, including the Frequent Network structure and service characteristics.
There is no applicable rule.	C30 The geometry of streets proposed as bus routes are endorsed by ACTION and TAMS. In making their assessment ACTION and TAMS will consider whether the geometry of the street achieves all of the following: a) allows for the movement of buses unimpeded by parked cars b) safely accommodates on-road cycling, if required c) avoids the need for cars to overtake parked buses d) ensures that buses maintain priority en route and from departing bus stops.
R31 Bus routes that are proposed to link areas across roads that carry or are forecast to carry in excess of 6000 vehicles per day (an *arterial road*) provide one of the following: a) a left turn onto the *arterial road* and right turn from the *arterial road* into the adjoining area b) a signalised intersection.	C31 Bus route connections across *arterial roads* are endorsed by ACTION and TAMS. In making its assessment ACTION and TAMS will consider the need to allow buses to safely gain access to adjoining neighbourhoods without the need for complicated turning manoeuvres.

1.9.2. Bus stops	
R32 Blocks proposed for commercial zoning or community facility zoning, or for sporting facilities such as playing fields are located within 400m of an existing or proposed bus stop.	C32 Blocks proposed for commercial zoning or community facility zoning, or for sporting facilities are located within proximity to existing or proposed bus stops to promote safe and convenient access for pedestrians and cyclists.
There is no applicable rule.	C33 Bus stops are provided in locations that achieve all of the following: a) appropriate passive surveillance from adjoining areas b) minimal potential for adverse impacts on adjoining land uses c) the siting is related and linked to path net work d) endorsement by ACTION and TAMS. In making their assessment ACTION and TAMS will consider *TAMS Design Standards for Urban Infrastructure*.
1.10 Pedestrian and cyclist facilities	
1.10.1. On-road cycling	
R34 Major collector streets are provided with 1.5m wide designated on-road cycling lanes.	C34 The design for on-road cycling is endorsed by TAMS. In making its assessment TAMS will consider all of the following: a) AUSTROADS Guidelines b) TAMS *Design Standards for Urban Infrastructure (DS-13)* or its successor.
There is no applicable rule.	C35 Designated on-road cycle lanes are to connect with the existing and proposed shared path network.

1.10.3. Shared path design – crossings and standards	
R36 Shared paths comply with the following: a) Table 2A for residential *estates* and mixed use CZ5 areas b) Table 2B for commercial *estates* (excluding mixed use CZ5 areas) c) Table 2C for industrial *estates*. d) Table 5 e) TAMS *Design Standards for Urban Infrastructure (DS-13)* or its successor f) are a minimum of 2.5m wide for the entire frontage where shared paths adjoin activity centres, schools, shops, community facilities and bus stops g) are provided for the entire length of the frontage of multi-unit development blocks with a proposed yield of 10 dwellings or more comply with all of the following: i) are a minimum 1.2m wide ii) are connected to the greater path network h) are provided on both sides of streets proposed as bus routes.	C36 Shared paths achieve all of the following: a) encourage walking and cycling b) accommodate likely users (e.g. school children, parents with prams, the aged, people with disabilities, commuter and recreational cyclists) c) respond to topography d) provide for cyclist and pedestrian safety e) design and layout of the network are endorsed by TAMS. In making its assessment TAMS will consider the TAMS *Design Standards for Urban Infrastructure (DS-13)* or its successor.
There is no applicable rule.	C37 Shared path crossings on streets where the actual or forecast traffic volumes exceed 3000 vehicles per day, excluding those at signalised intersections, are provided with the use of pedestrian refuges, slow points, raised thresholds or other treatments endorsed by TAMS. Where a crossing is provided for a Main Route, as defined in TAMS *Design Standards for Urban Infrastructure (DS-13)* or its successor, priority is given to pedestrians and cyclists.

1.10.2. Shared path network	
R38 The shared path network connects with all of the following: a) any existing or proposed shared path networks, including any nearby Main Routes as defined in TAMS Design Standards for Urban Infrastructure (DS-13) or its successor b) open space networks c) community facilities such as educational establishments and local activity centres d) public transport routes and bus stops.	C38 Shared paths design and layout are endorsed by TAMS. In making its assessment TAMS will consider the TAMS *Design Standards for Urban Infrastructure (DS-13)* or its successor.
R39 Pram crossings are provided for all shared paths at street intersections. Note: Driveways cannot be substituted for pram crossing.	This is a mandatory requirement. There is no applicable criterion.
R40 Lighting is provided to shared paths in accordance with Australian Standards *AS115.3.1- Lighting for roads and public spaces*.	This is a mandatory requirement. There is no applicable criterion.
There is no applicable rule.	C41 Sight distances at pedestrian and cyclist crossings and at junctions or intersections are endorsed by TAMS. In making its assessment TAMS will consider *AUSTROADS Guidelines* and Australian Standards *AS1742.10 – Pedestrian control and protection*.
1.10.4. Surveillance	
There is no applicable rule.	C42 Shared path networks are provided in areas afforded with passive surveillance from adjoining areas such as public streets, existing or future leased land, and local activity centres, such as community facilities and commercial areas.

Table 1A: Street hierarchy for residential estates & mixed use CZ5 areas		
Street type and function	**Design speed (km/h)**	**Traffic volume (vehicles per day) [1]**
REAR LANE A	20	0-160[2]
Rear lanes are narrow and short local public street which has the primary function of providing rear vehicular access to blocks.		
ACCESS STREETS		
Access Street A	50	0–300
Access Street B	50	301–1000
Access streets are generally streets where the residential environment is dominant, traffic is subservient, speed and volume are low, and pedestrian and cycle movements are facilitated. Access streets are categorised as Access Street A or B according to traffic volumes and width requirements for the road reservation as per Table 3A. Access Street A provides access to sites without any traffic generated by sites in other streets, excluding rear lanes.		
COLLECTOR STREETS		
Minor collector	50	1001–3000
The minor collector street collects traffic from access streets and carries higher volumes of traffic. A reasonable level of residential amenity and safety is maintained by restricting traffic volumes and vehicle speeds. Vehicle speeds are controlled by street alignment, intersection design and, in some cases, by speed-control measures.		
Major collector	60	3001–6000
The major collector street is generally short and connects the minor collector street with the corridor network.		

Notes supporting Table 1A

1	To calculate the traffic volume apply a traffic generation rate of 8 vehicle movements per day per dwelling for single dwellings and a rate of 6 vehicles per day per dwelling for multi unit developments.
2	160 vpd maximum at legs of rear lanes intersecting with other streets.

Table 1B: Street hierarchy for commercial estates (excluding mixed use CZ5 areas)		
Street type and function	**Design speed (km/h)[1]**	**Traffic volume (vehicles per day)**
REAR LANE	20	0-100
Rear lanes are narrow and short local public street which has the primary function of providing rear vehicular access to blocks.		
ACCESS STREET	50	0–1000
An access street is generally a street where the speed and traffic volumes are low, and pedestrian and cycle movements are facilitated.		
COLLECTOR STREETS		
Minor collector	50	1001–3000
The minor collector street collects traffic from access streets and carries higher volumes of traffic. A reasonable level of amenity and safety is maintained by restricting traffic volumes and vehicle speeds. Vehicle speeds are controlled by street alignment, intersection design and, in some cases, by speed-control measures.		
Major collector	60	3001–6000
The major collector street is generally short and connects the minor collector street with the corridor network.		

Table 1C: Street Hierarchy for Industrial Estates		
Street type and function	**Design speed t (km/h)[1]**	**Traffic volume (vehicles per day)**
ACCESS STREET	50	0–1000
An access street is generally a street where the speed and traffic volumes are low, and pedestrian and cycle movements are facilitated.		
COLLECTOR STREETS		
Minor collector	50	1001–3000
The minor collector street collects traffic from access streets and carries higher volumes of traffic. A reasonable level of amenity and safety is maintained by restricting traffic volumes and vehicle speeds. Vehicle speeds are controlled by street alignment, intersection design and, in some cases, by speed-control measures.		
Major collector	60	3001–6000
The major collector street is generally short and connects the minor collector street with the corridor network.		

Table 2A: Residential estates & mixed use CZ5 areas – street network requirements			
Facility Type	**Rear lane[2]**	**Shared use access street 'Woonerf' style**	**Access street A**
Traffic volume range (vpd) [1]	0-160[3]	0–40	0–300
Design speed (km/h)	20	20	50
Carriageway width (m) [2]	5.5 (5.0 where the lane is less than 60m in length)	3.5–3.7 (single lane)	5.5
Verge width (m)	minimum 1.5m	5.0	5.5
Minimum horizontal radius (to accommodate)	12.5m single unit truck		
On-street car parking	Prohibited	Permitted only as indented spaces	Permitted
Kerb type	Flush or layback upright kerb adjacent to street lighting	Flush or layback	Layback or upright
Maximum street longitudinal gradient	12.5%	12.5%	12.5%
Minimum shared path requirement	No shared path required	No shared path required	1.2m wide shared path on one side only
Bus route requirement	Not to be used as bus route	Not to be used as bus route	Not to be used as bus route
Street tree requirement	No trees required	Street trees to be provided	Street trees to be provided
Intermittent street lighting	Must be provided when length exceeds 60m		

Notes supporting Table 2A

1	To calculate the traffic volume for streets apply a traffic generation rate of 8 vehicle movements per day per dwelling for single dwellings and a rate of 6 vehicles per day per dwelling for multi unit developments. For a rear lane traffic generation is measured at its junction with a higher order street.
2	The carriageway width is measured from kerb invert to kerb invert. The carriageway width measurement does not include any designated on-road car parking spaces, on-road cycle lanes, indented car parking bays or medians.
3	160vpd maximum at legs of rear lanes intersecting with other streets.

Table 2A: Residential estates & mixed use CZ5 areas – street network requirements			
Facility type	**Access street B**	**Minor collector street**	**Major collector street**
Traffic volume range (vpd) [1]	301–1000	1001–3000	3001–6000
Design speed (km/h)	50	50	60
Carriageway width (m)[2]	6.0 – 7.0	7.0–8.0	7.0–10.0
Verge width each side (m)	6.25	6.25	6.25
Minimum horizontal radius			
On-street car parking provision	Permitted	Permitted	Permitted
Kerb type	Layback or upright	Layback or upright	Upright
Maximum street longitudinal gradient	12.5%	12.5%	12.5%
Minimum shared path requirement	1.2 m wide shared path on one side only	1.5m wide shared path on both sides and aligned at least 1.5m from the kerb	1.5m wide shared path on both sides and aligned at least 1.5m from the kerb
Bus route requirement	Not to be used as bus route	Can be used as a bus route where in accordance with Table 3	Can be used as a bus route where in accordance with Table 3
Street tree requirement	Street trees to be provided	Street trees to be provided	Street trees to be provided

Notes supporting Table 2A

1	To calculate the traffic volume apply a traffic generation rate of 8 vehicle movements per day per dwelling for single dwellings and a rate of 6 vehicles per day per dwelling for multi unit developments.
2	The carriageway width is measured from kerb invert to kerb invert. The carriageway width measurement does not include any designated on-road car parking spaces, on-road cycle lanes, indented car parking bays or medians.

Table 2B: Commercial estate (excluding mixed use CZ5 areas) – street network requirements

Facility type	Rear lane	Access street	Minor collector street	Major collector street
Traffic volume range (vpd)	0-100	0–1000	1001–3000	3001–6000
Design speed (km/h)	20	50	50	60
Carriageway width (m) [1]	5.5 (5.0 where the lane is less than 60m in length)	7	10	10
Verge width each side (m)	minimum 1.5	6.25	6.25	6.25
On-street car parking	Prohibited	Permitted	Permitted	Permitted
Kerb type	Flush or layback upright kerb adjacent to street lights	Layback or upright	Upright	Upright
Maximum street longitudinal gradient	12%	12%	12%	12%
Minimum shared path requirement	No shared path required	2.0m wide shared path on both sides	2.0m wide shared path on both sides and aligned at least 1.5m away from the kerb	2.0m wide shared path on both sides and aligned at least 1.5m away from the kerb
Bus route requirement	Not to be used as bus route	Not to be used as bus route	Can be used as a bus route where in accordance with Table 3	Can be used as a bus route where in accordance with Table 3
Street tree requirement	No trees required	Street trees to be provided	Street trees to be provided	Street trees to be provided

Notes supporting Table 2B

1	The carriageway width is measured from kerb invert to kerb invert. The carriageway width measurement does not include any designated on-road car parking spaces, on-road cycle lanes, indented car parking bays or medians.

Table 2C: Industrial estate – street network requirements

Facility type	Access street	Minor collector street	Major collector street
Traffic volume range (vpd)	0–1000	1001–3000	3001–6000
Design speed (km/h)	50	50	60
Carriageway width (m) [1]	10	10	10
Verge width each side (m)	6.25	6.25	6.25
On-street car parking	Permitted	Permitted	Permitted
Kerb type	Layback or upright	Upright	Upright
Maximum street longitudinal gradient	12%	12%	12%
Minimum shared path requirement	1.5m wide shared path on both sides	1.5m wide shared path on both sides and aligned at least 1.5m away from the kerb	1.5m wide shared path on both sides and aligned at least 1.5m away from the kerb
Bus route requirement	Can be used as a bus route where in accordance with Table 3	Can be used as a bus route where in accordance with Table 3	Can be used as a bus route where in accordance with Table 3
Street tree requirement	Street trees to be provided	Street trees to be provided	Street trees to be provided

Note supporting Table 2C

1	The carriageway width is measured from kerb invert to kerb invert. The carriageway width measurement does not include any designated on-road car parking spaces, on-road cycle lanes, indented car parking bays or medians.

Table 3: Bus route requirements
Street carriageway widths[1] One-way: 4 m Two-way: 8.0 m
Minimum geometric layout R 12.5 m for single bus unit Note: some routes may require geometry to suit articulated buses. **Roundabouts** Maximum desirable pavement crossfall: to comply with AUSTROADS Guidelines Absolute maximum gradient: to comply with AUSTROADS Guidelines

Note supporting Table 3

1	The carriageway width is measured from kerb invert to kerb invert. The carriageway width measurement does not include any designated on-road car parking spaces, on-road cycle lanes, indented car parking bays or medians.

Element 2: Public realm

The public realm consists of different types of unleased open spaces such as:

- street verges and planted medians
- parks of all sizes
- walkways and linear spaces
- open hill or bushland reserves and conservation areas
- unenclosed sports or playing fields.

Rules	Criteria
2.1 Networks	
There is no applicable rule.	C43 Public realm spaces achieve all of the following: a) link adjoining or existing areas of open space b) functions in accordance with Table 4 c) provide opportunities for recreational facilities for pedestrians and cyclists d) provide opportunities for wildlife corridors between natural areas.
2.2 Street trees	
There is no applicable rule.	C44 Street trees achieve all of the following: a) are provided on the streets identified in the following: i) Table 2A for residential *estates* and mixed use CZ5 areas ii) Table 2B for commercial *estates* (excluding mixed use CZ5 areas) iii) Table 2C for industrial *estates* b) species comply with TAMS *Design Standards for Urban Infrastructure* (DS-23) or its successor c) planting intervals in accordance with TAMS *Design Standards for Urban Infrastructure* (DS-23) or its successor.

There is no applicable rule.	C45 Street tree plantings are provided at regular intervals to provide all of the following for the adjoining land use and the future users of the area: a) a minimum of 30 per cent of summer shade to the estate movement routes surfaces (vehicular, pedestrian and cycle) is to be provided by trees (measured by estimated canopy size when minimum 20 years old) b) biodiversity c) aesthetics d) microclimate.
2.3 Bushfire mitigation	
There is no applicable rule.	C46 Public realm spaces within bushfire prone areas are endorsed by ESA and TAMS. In making its assessment ESA and TAMS will consider all of the following: a) vegetation types and management b) access for emergency vehicles.
2.4 Safety	
There is no applicable rule.	C47 Public realm spaces that adjoin watercourses, drainage swales and stormwater detention basins achieve all of the following: a) public safety b) shared paths, formalised meeting places such as picnic and barbeque areas, and playgrounds and playspaces are inundated only in storm events greater than the two year average recurrence interval (ARI).

R48 A minimum of 75 per cent of the perimeter of public realm spaces, excluding street verges and medians, access ways and pedestrian lanes, as defined in Table 4, are bordered by one or more of the following: a) edge roads with kerbside parking b) public car parking areas c) trunk shared paths d) blocks with a commercial or community facility zoning.	C48 The location, layout and design of public realm spaces, excluding street verges and medians, access ways and pedestrian lanes, as defined in Table 4, provides for surveillance and visual access from adjoining public realm spaces and the private realm and reduce potential for vandalism in accordance with *Crime Prevention Through Environmental Design General Code.*
R49 Pedestrian parkland and access ways, as defined in Table 4, have a minimum dimension of 6m.	C49 Pedestrian parkland and access ways, as defined in Table 4, are of an appropriate width to reduce opportunities for crime through all of the following: a) enhancing legibility and reducing the length of narrow sections b) the provision of appropriate sightlines c) avoiding the creation of potential entrapment spots or hiding places.

Element 3: Environment protection

Rules	Criteria
3.1 Protection of trees, existing vegetation and natural features	
R50 On unleased land, all exceptional, high and medium value trees are protected in accordance with a tree management plan.	C50 Exceptional, high or medium value trees may be considered for removal where justification is provided to demonstrate all of the following: a) any realistic alternatives to the proposed development, or relevant aspect of the development, have been considered b) all reasonable development options and design solutions have been considered c) it is in accordance with the objectives of the Territory Plan.
There is no applicable rule.	C51 Significant trees and vegetation, rock outcrops, water features and other important natural or cultural features are protected in public open space and enhanced to provide visual relief and establish a unique character for a neighbourhood. Significant trees, vegetation and other natural features may be retained within leased blocks where all of the following are demonstrated: a) that the leased block is of a sufficient size to enable their protection without unnecessarily limiting the development potential of the block b) if relevant, the plan is endorsed by the Conservator of Flora and Fauna.

3.2 Protecting existing cultural heritage	
R52 In relation to heritage one of the following is provided: a) written confirmation from the ACT Heritage Council that there are no sites within the development area that are either listed or nominated to the Heritage Register b) where a heritage site that has been listed or nominated to the Heritage Register is within a development area, a statement of compliance from the Heritage Council to the effect that the proposal meets the requirements of the *Heritage Act 2004*.	This is a mandatory requirement. There is no applicable criterion.
3.3 Earthworks and sediment and erosion control	
There is no applicable rule.	C53 Street and block layouts have regard to topography and achieve all of the following: a) minimal erosion b) minimal sediment movement c) minimal impact from dust d) a cut and fill balance across the site.
R54 For *estates* greater than 3000m^2, a sediment and erosion control concept plan is prepared in accordance with the *ACT EPA Environmental Protection Guidelines for Construction and Land Development in the AC 2007* and endorsed by the Environment Protection Authority.	This is a mandatory requirement. There is no applicable criterion.
3.4 Contamination	
R55 In relation to contamination one of the following is provided: a) written confirmation from the EPA that there are no contaminated sites within the development area b) an environmental site assessment report and independent audit endorsed by EPA where potentially contaminated site(s) are identified within or adjacent to the site.	This is a mandatory requirement. There is no applicable criterion.

3.5 Water sensitive urban design	
R56 For *estates* 5000m^2 or larger, the average annual stormwater pollutant export is reduced for all of the following: a) suspended solids by at least 60 per cent b) total phosphorous by at least 45 per cent c) total nitrogen by at least 40 per cent compared with an urban catchment with no water quality management controls. A report by a suitably qualified person, using the MUSIC model or another nationally recognised model, demonstrates compliance with this rule.	This is a mandatory requirement. There is no applicable criterion.
R57 For *estates* 2000m^2 or larger, stormwater management complies with one of the following: a) the capacity of the existing pipe (minor) stormwater connection is not exceeded in 1-in-10 year storm event and the capacity of the existing major overland stormwater system is not exceeded in 1-in-100 year storm event b) the 1-in-5 year and 1-in-100 year stormwater peak run off does not exceed pre-development levels. A report by a suitably qualified person demonstrates compliance with this rule.	This is a mandatory requirement. There is no applicable criterion.
R58 For *estates* 2,000m^2 or larger, provision is made for the storage of stormwater equivalent to at least 1.4kl per 100m^2 of impervious area, and its release over a period of 1 to 3 days A report by a suitably qualified person demonstrates compliance with this rule.	C58 For *estates* 2,000m^2 or larger evidence is provided to demonstrate a reduction in runoff peak flow for the 3 month ARI storm to no more than the pre-development levels and release of captured flow over a period of 1 to 3 days.
There is no applicable rule.	C59 The estate includes measures to reduce underground piping of natural stormwater overland flow paths.

Table 4: Types and purposes of public realm spaces			
PUBLIC REALM TYPE	**PRIMARY FUNCTIONS**	**MANAGEMENT INTENTIONS**	**STAGE IDENTIFIED**
Town park	***Located in a town centre*** A meeting place park, formal in character. With irrigated grass, paving, art, and street furniture. May have shrub or flower beds, pavilions and water features. May be associated with play facilities, lakes or ponds.	Managed to a high standard for intensive use with capacity to host special events.	Structure Plans/Concept Plans
District parks	***Recreational facilities*** Extensive, informal park or series of spaces, 4 -10 Ha Serving population catchment area of 25 - 50,000 minimum people. With grass and trees and a diversity of recreation facilities to cater for informal recreation for all age groups such as picnics, barbecues, adventure playgrounds and skateboard parks. May have natural or cultural heritage conservation or habitat creation purposes. May be associated with waterways, wetlands, lakes and ponds.	Managed to a high standard for intensive use with capacity to hold large gatherings.	Structure Plans/Concept Plans
District sportsgrounds	***Sportsground complex*** Training and competition venue for organised nominated sports at all levels, 8 ha minimum. Serving population catchment area of 25 - 50,000 minimum people. May be associated with high schools. With irrigated grass, public parking, training lights and a pavilion that includes change rooms, toilets and kiosk.	Managed to a high standard for intensive sports training and events. May be enclosed and leased.	Structure Plans/Concept Plans
***Neighbourhood ovals**	***Recreational or sporting activities*** (Not applicable to commercial and industrial *estates*) Ovals used for sporting purposes and recreational space for local residents. Generally located adjacent to primary schools and/or local shopping centres with shared or separate parking. Neighbourhood ovals are an integral part of surrounding parkland when not in use for sporting purposes. The area is irrigated and will require sufficient space for related amenities (small pavilion/toilet block and training lights).	Moderate intensity management with seasonal variability.	Estate Development Plans

Neighbourhood parks	***Recreational or sporting activities*** Neighbourhood parks are classified as Local neighbourhood parks (0.5ha-1ha) or Central neighbourhood parks (1ha-2ha). Focal point park of all neighbourhood open spaces and off road movement networks to be an outdoor meeting place. To accommodate opportunities for informal free and innovative play as well as a range of unstructured recreation activities for a range of ages. The play space may include standardised playground equipment. Parks are linked or adjacent to other public realm spaces and may be located adjacent to a neighbourhood sportsground. Neighbourhood parks can also accommodate remnant native vegetation and other natural features. Provided with shade and shelter and drinking water.	Moderate intensity management with seasonal variability.	Estate Development Plans
Heritage parks	***Special purpose park*** Open space area created to conserve heritage character and elements. May have heritage conservation and monitoring activities.	Moderate intensity management with seasonal variability. Can be enclosed.	Estate Development Plans
Lakes and ponds	***For control of stormwater quality and quantity including flood mitigation from the urban catchments*** Designed waterscape for aesthetics and water storage for irrigation and other second class water needs. Water uses may include conservation and or active recreation (e.g. fishing, swimming, boating) and passive recreation around lakes and ponds.	Low intensity management with seasonal variability with a range of human uses that are nominated/ controlled for each site.	Structure Plans/Concept Plans/Estate Development Plans
Broad scale open space	***The bushland setting for Canberra*** Areas of remnant and planted native vegetation, hills and ridges, waterway corridors and buffer areas between suburbs. To provide visual and landscape amenity, informal recreation and wildlife habitat. May contain sites for biological diversity or connectivity, cultural heritage conservation and or for community activities (e.g. Landcare, Parkcare, Community Garden groups).	Low intensity management with seasonal variability plus a range of human uses that are nominated/ controlled for each site. May be agisted with grazing sock.	Structure Plans/Concept Plans/Estate Development Plans

Habitat sites	***The bushland setting for Canberra*** Remnant grassland or woodland sites important for nature conservation purposes. May form part of a regional ecosystem, provide the food source for migratory species or contain endangered plant or animal species or be used for connectivity and be subject to conservation activities and monitoring in accord with Action Plans for their conservation prepared under provisions of the *Nature Conservation Act 1980*.	Low intensity management with seasonal variability.	Structure Plans/Concept Plans/Estate Development Plans
Pedestrian parkland	***Movement network*** Corridors providing for pedestrian and cyclist routes within and between suburbs and linkages with parks, schools and workplaces. May include playgrounds and fitness stations in suitable locations. Often co-located with waterways for urban stormwater management and treatment and may contain small ponds and wetlands. Often includes remnant vegetation and other natural features, may provide wildlife habitat conservation and/or connectivity. Generally, the dominant surface treatment is dryland grass as dominant ground surface unless otherwise specified for the conservation of habitat, with planted vegetation to enhance shade, shelter, character, seasonal diversity or wildlife movement.	Moderate intensity management with seasonal variability.	Concept Plans/estate Development Plans
Access ways	***Movement network*** Linear spaces for pedestrians and cyclists between residential properties providing direct access between streets and other public realm spaces.	Low intensity management with seasonal variability.	Estate Development Plans
Pedestrian lanes	***Movement network*** Routes for pedestrians between buildings and /or properties providing direct access between shops and or streets.	Low intensity management with seasonal variability.	Estate Development Plans

Street verges and medians	***Movement network*** An interconnected network of spaces, not necessarily symmetrical, for off road movement networks, and to incorporate trees, shrubs and ground cover plantings. To provide for aesthetic purposes and microclimate control as well as driving experience, character of place and environmental services. May contain underground services and street /traffic furniture. Surface treatments designed to maximise capture of rainfall for ground water recharge and vegetation health.	Low intensity management with seasonal variability.	Estate Development Plans

*****Sport and Rec Services are currently proposing a new Sportsground Provision Model, replacing the Neighbourhood Oval concept with School Ovals and Community Recreation Irrigated Parks (CRIPs). If and when this model is adopted by the ACT Government, the reference to Neighbourhood Oval will be changed.

Table 5: Shared path requirements

Path type	Function	Minimum width (m)	Maximum longitudinal gradient
Minor Path	Local access path with low traffic volumes; Pedestrian and low speed cyclist use.	1.2	In accordance with AUSTROADS Guide to Traffic Engineering Practice Part 13
Intermediate Path	Commuting and local access path with low traffic volumes; Pedestrian and cyclist use where cyclists passing in opposite directions is rare.	2.0	In accordance with AUSTROADS Guide to Traffic Engineering Practice Part 14
Trunk Path	Commuting and local access path required to accommodate cyclist speeds of up to 20km/h; Pedestrian and cyclist use where two way cyclist movements are common.	2.5	In accordance with AUSTROADS Guide to Traffic Engineering Practice Part 14
Trunk Path (high use)	Commuting path required to accommodate cyclist speeds of up to 30km/h; High levels of pedestrian and cyclist use in both directions.	3.0	In accordance with AUSTROADS Guide to Traffic Engineering Practice Part 14

Element 4: Services and infrastructure

Rules	Criteria
4.1 Utility services	
There is no applicable rule.	C60 All required utility services, including water, sewer, stormwater, electricity, gas and telecommunications, are provided to each of the future leased blocks in the estate in accordance with the requirements of the relevant utility service providers. In making its assessment each utility service provider shall consider the future use of land.
R61 Subject to endorsement from the current or future land custodian and the relevant utility provider, water, sewer, stormwater, electricity, gas and telecommunication services are to be located within road verges or other Territory Land that is to remain unleased.	C61 Utility services may be located within leased blocks where all of the following are achieved: a) located within service easements and accessed by means of emergency or maintenance access routes in accordance with the requirements of utility service providers b) endorsed by the relevant utility service provider c) located on blocks that are of sufficient size to accommodate the required service easements and access routes whilst providing comparable building footprint area to that of unencumbered blocks.
There is no applicable rule.	C62 Compatible minor utility service reticulation may be located in the shared trenching in the street verge where endorsed by the relevant utility service providers.

4.2 Waste management	
R63 Waste collection facilities comply with one of the following: a) on-street collection points for single dwelling blocks and multi-unit blocks of up to 10 dwellings b) internal collection points for multi-unit blocks greater than 10 dwellings, commercial blocks and industrial blocks.	C63 Waste management facilities are endorsed by TAMS. In making its assessments TAMS will consider the Development Control Code for Best Practice Waste Management in the ACT or its successor.
There is no applicable rule.	C64 Waste management plans are endorsed by TAMS. In making its assessments TAMS will consider the Development Control Code for Best Practice Waste Management in the ACT or its successor.
4.3 Buffer zones for utility services	
There is no applicable rule.	C65 Buffer zones are provided between blocks proposed with residential, commercial or community facility zoning and utility service equipment, such as sewer vents and sewer and water pump stations, to reduce the impacts of noise and odour in accordance with the requirements of the relevant utility service provider. Utility service equipment must also be adequately screened from public view.

Part B – Residential estate and mixed use CZ5 area controls

This part applies to residential estates and mixed use CZ5 areas.

Element 5: Street network

Rules	Criteria
5.1 Street network	
R66 Junctions between streets are spaced in accordance with Table 6.	C66 Street junction spacing is endorsed by TAMS. In making its assessment TAMS will consider whether the proposed spacing of junctions will allow for safe and convenient vehicle movements.
R67 The driving distance between any dwelling to certain roads complies with all of the following: a) Minor or major collector street or higher order road – no greater than 700m b) *arterial road* – no greater than 1200m.	C67 The street layout optimises connectivity for the convenient movement of vehicles between dwellings and collector streets and *arterial roads.*
R68 No more than three turning movements at intersections or junctions are required in order to travel from any dwelling to the nearest collector street or *arterial road*.	C68 The street layout optimises connectivity for the convenient movement of vehicles between dwellings and collector streets and *arterial roads*.
5.2 Street verge	
R69 No more than 50 per cent of the street verge will have impervious surface.	C69 The finished surface treatment of street verges achieves all of the following: a) adequate and appropriate opportunities for stormwater infiltration and landscaping b) allows for maintenance access to utility services in accordance with the standards of the relevant utility provider c) is suitable for uses generating high levels of pedestrian traffic such as retail centres, schools and community facilities d) enables street trees to mature fully without suffering undue compaction of the root system.

5.3 Rear lanes	
There is no applicable rule.	C70 Where adequate passive surveillance is not provided, *residential blocks* with frontage to *rear lane*s are to incorporate habitable rooms above garages at strategic locations along the *rear lane* to provide adequate passive surveillance. **Note**: Blocks incorporating habitable rooms above garages must be nominated on planning control plans submitted with the estate development plan and, if approved, will be nominated in the relevant precinct code.
5.4 Traffic Control and Management	
R71 *Street leg lengths* do not exceed 160m for streets other than major collector streets. Where slow points are created through the introduction of bends, the bends comply with Table 7.	C71 *Street leg lengths* are endorsed by TAMS. In making its assessment TAMS will consider whether the traffic speed reduction measures provided as part of the design for the total street will achieve all of the following: a) reduce traffic speeds to within the design speeds of the street b) avoid unacceptable noise c) maintain convenience and safety levels for cyclists and public transport.
5.5 On-street car parking	
R72 For single dwelling blocks with a frontage to the street of less than 12.5m, evidence is provided to demonstrate that on-street visitor car parking is available, in addition to the car parking spaces required on-site, at a rate of one car parking space for every two blocks. The on-street visitor car parking spaces are provided within 60m from the frontage of the blocks being served. **Note**: R70 provides controls in relation to undesignated on-street car parking spaces.	C72 On-street car parking is provided according to projected needs, which are determined by reference to all of the following: a) the number of dwellings proposed in the street b) the expected car parking requirements of the area c) availability and proximity to public transport d) proximity to schools, commercial and local centres e) the need for overflow parking.

R73 Undesignated on-street car parking complies with the following: a) where the carriageway width is less than 5.5m, on-street car parking is not permitted b) where the carriageway width is 5.5m or greater and less than 6m, on-street car parking can only be permitted on one side of the street c) where the carriageway width is greater than 6m and 7.5m or less, on-street car parking is allowed on both sides of the street where car parking spaces are staggered down the street d) where the carriageway width is greater than 7.5m, on-street car parking spaces can be provided on both sides of the street. **Note**: Refer to Note 2 for Table 2A for the calculation of carriageway widths.	This is a mandatory requirement. There is no applicable criterion.
There is no applicable rule.	C74 Where on-street car parking is provided as indented car parking spaces, it is demonstrated that the verge width is appropriate to provide for car parking spaces with reference to all of the following: a) any required utility services and infrastructure b) the required street tree plantings are provided c) adequate pervious space for natural stormwater infiltration for healthy tree growth d) the required shared paths e) where it provides a level of amenity appropriate for the adjoining land use.

5.6 Public Transport	
Bus routes	
R75 At least 90 per cent of dwellings comply with one or more of the following a) are within 500m of a bus stop on an existing or proposed *coverage route* b) are within 800m of a bus stop on an existing or proposed *frequent network*.	C75 Provision of bus routes and bus stops take account of all of the following: a) projected travel demand b) distribution of likely demand c) scale and time of demand d) characteristics of travellers e) travel time f) operating characteristics g) cost of providing the service.
5.7 Pedestrian and Cyclist Facilities	
Pedestrian and cycling network	
R76 Shared path crossings of an *arterial road* adjacent to residential and CZ5 mixed use commercial areas are provided to comply with all of the following: a) at intervals of not more than 500 m b) connected to the greater shared path network.	C76 Safe and convenient shared path crossings are provided for pedestrians and cyclists across *arterial roads* and are endorsed by TAMS.

Element 6: Public Realm

Rules	Criteria
6.1 Size and location	
R77 Local neighbourhood parks have an area of at least 0.5 – 1.0 hectares. Central neighbourhood parks are of an area of between 1-2 hectares.	This is a mandatory requirement. There is no applicable criterion.
R78 Neighbourhood ovals comply with all of the following a) have an area of not less than 3.8 hectares b) are endorsed by TAMS, Sport and Recreation Services as being designed in accordance with TAMS *Design Standards for Urban Infrastructure* (DS-24 Sportsgrounds Design) or its successor.	C78 The area of the neighbourhood oval is endorsed by TAMS, Sport and Recreation Services. In making its assessment TAMS, Sport and Recreation Services will consider the specific needs of the area and the provision of site access, car parking, amenities and required engineering treatments.
R79 Blocks for *residential use* comply with at least one of the following: a) not more than 300m from at least one of the following: i) a local neighbourhood park ii) town park or a pedestrian parkland containing recreational facilities such as picnic and barbeque areas and playgrounds b) not more than 500m from at least one of the following: i) a central neighbourhood park ii) neighbourhood oval iii) district park iv) district sportsground.	C79 Public realm spaces containing recreational facilities or space are provided at accessible walking distances from all blocks for *residential use*.

R80 *Residential blocks* that have a common boundary with public open space only where they comply with all of the following: a) adjacent to a shared path that is connected to the greater shared path network b) the opposite side of the public open space is bordered by a street.	C80 Blocks abutting public open space are to provide opportunities for dwellings to contribute to the public domain by achieving all of the following: a) good amenity for residents b) facilitate personal and property security c) deter crime and vandalism in the public open space.

Element 7: Block Layout and Orientation

Rules	Criteria
7.1 Block size, slope and orientation	
R81 Not less than 95 per cent of *single dwelling blocks* in an *estate* comply with the Single Dwelling Block Compliance Tables in Appendix A. Blocks meet this rule if a block of the same type that complies with the Single Dwelling Block Compliance Tables fits entirely within its boundaries. **Note**: Block types include large blocks, mid-sized blocks and compact blocks.	This is a mandatory requirement. There is no applicable criterion.
There is no applicable rule.	C82 For multi-unit blocks dwellings are capable of complying with the rules of the solar access provisions of the *Residential Zones – Multi Unit Housing Development Code*.
7.2 Sections	
R83 Sections comply with all of the following: a) the maximum depth of a section between roads is 80m b) the maximum length of a section between road intersections is 300m c) where the length of a section between roads greater than 200m, a mid-section pedestrian access way as defined in Table 4 is provided.	C83 Section dimensions provide permeability for pedestrians and cyclists to connect with open space networks, commercial centres and community facilities, including bus stops, local activity centres and schools.

7.3 Block access	
R84 Except for battle-axe blocks, all *residential blocks* in RZ1 have a minimum frontage of 8m to a public street.	This is a mandatory requirement. There is no applicable criterion.
R85 All blocks are to have frontage to a street other than a *rear lane*.	This is a mandatory requirement. There is no applicable criterion.
R86 Compact blocks with a frontage to a road of less than 8m are to have vehicular access from a *rear lane* or a rear shared driveway.	This is a mandatory requirement. There is no applicable criterion.
R87 Driveway verge crossings to blocks comply with all of the following a) the minimum dimensions required by the relevant Residential Zones Development Code or Commercial Development Code b) 6m horizontally clear of the tangent point of the radius of the curve on a corner block, where not adjacent to a roundabout or signalised intersection c) *AS2890.1 – The Australian Standard for Off Street Parking* as amended from time to time, in relation to sightlines and cross fall of the site d) Clear of any existing or proposed indented on-street car parking bays, valves, fire hydrants and electricity equipments e) TAMS design Standard for Urban Infrastructure (DS5).	C87 Proposed driveway verge crossings to blocks are endorsed by TAMS.
7.4 Block diversity and distribution	
R88 In any *estate* the block layout in RZ1 complies with all of the following a) a maximum of 20 per cent of all blocks in the *estate* are less than 250m^2 b) a maximum of 50 per cent of all blocks in the *estate* are less than 500m^2.	C88 In any *estate* for RZ1, block types and sizes are distributed to promote housing diversity and choice to meet the projected requirements of people with different housing needs.

7.5 Compact blocks – slope	
R89 The *slope* across frontage or length of a compact block is no greater than 10 per cent. For this rule **Slope** means the slope of land, expressed as a percentage, calculated using the difference in the natural surface levels from the highest to lowest points on the proposed block boundary.	This is a mandatory requirement. There is no applicable criterion.
7.6 Battle-axe blocks	
R90 Single dwelling battle-axe blocks have an area of at least 500m^2, exclusive of the driveway access corridor.	This is a mandatory requirement. There is no applicable criterion.
R91 Battle-axe blocks access handles have a minimum width of 5m.	This is a mandatory requirement. There is no applicable criterion.
R92 Battle-axe blocks adjoin public open space.	This is a mandatory requirement. There is no applicable criterion.
7.7 Multi-unit blocks	
R93 Multi-unit blocks enable all dwellings to front a public road or public open space.	C93 The size and shape of multi-unit blocks will enable those dwellings that cannot front a public road or public open space to front an internal road.
R94 No more than 50 per cent of the total boundary length of a multi-unit block is adjacent to single dwelling blocks.	C94 Multi-unit blocks are to be designed to minimise their impact on the amenity of adjacent single dwelling blocks.
R95 Battle-axe blocks cannot be designated for multi-unit housing development.	This is a mandatory requirement. There is no applicable criterion.

Element 8: Blocks with special characteristics

Rules	Criteria
8.1 Blocks possibly affected by external noise	
R96 In all residential zones, blocks possibly affected by external noise (including, but not restricted to traffic noise) are nominated in an *estate development plan*.	This is a mandatory requirement. There is no applicable criterion.
R97 For blocks identified for CZ5 commercial mixed use zoning, a noise management plan is prepared. The noise management plan is prepared by a suitably qualified acoustics consultant that is a member of the Australian Acoustic Society and has experience in assessing noise effects demonstrates compliance with this rule.	This is a mandatory requirement. There is no applicable criterion.
8.2 Universal Housing Blocks	
R98 *Single residential blocks* that are identified to provide universal housing are nominated in the *estate development plan*.	This is a mandatory requirement. There is no applicable criterion.
8.3 Alternative setbacks	
R99 Blocks to which alternative setbacks under the Single Dwelling Housing Development Code apply, are nominated on a planning control plan as part of an *estate development plan*.	This is a mandatory requirement. There is no applicable criterion.
8.4 Bushfire prone blocks	
R100 Blocks assessed as requiring buildings to be constructed to a specified bushfire construction level in accordance with Australian Standards *AS3959- Construction of buildings in bushfire prone areas* are to be nominated on a planning control plan as part of the *estate development plan.*	This is a mandatory requirement. There is no applicable criterion.

Table 6: Spacing of junctions along traffic routes in residential estates or mixed use CZ5 areas

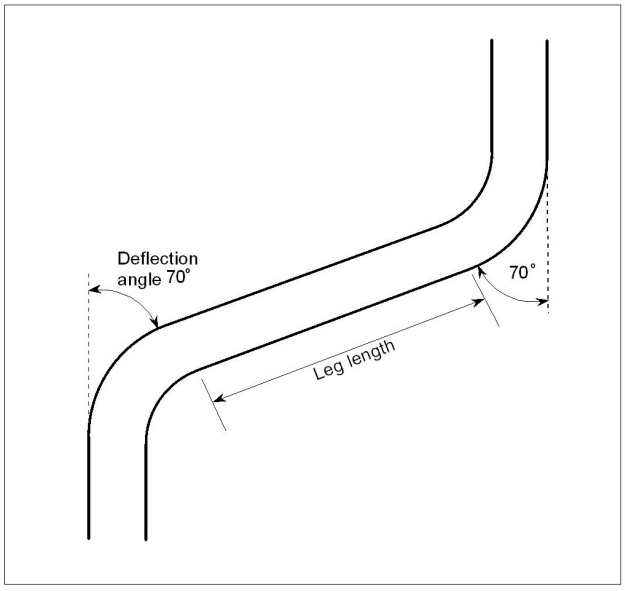
Road type		Minimum spacing of staggered junctions	
		Left – right stagger	Right – left stagger
Local access street		40	20
Collector (minor)		40	20
Collector (major)		40	20
2-lane sub-arterial		60	30
3-lane sub-arterial		100	30
Divided sub-arterial		150	50
Divided arterial		150	50
Divided major arterial		150	50

* Each crossroad counts as one junction. A right–left stagger on a three-lane sub-arterial of higher road also counts as one junction. Other junctions may form T-junctions or allow only restricted vehicle movements.

Table 7 – Minimum deflection angles for speed control to 20km/h (refer Figure 1)

Bend Type	Street Carriageway width (m) *		
	3.5-<5.5m	5.5.-,7.0m	7.0-7.5m
Single bend	60º	70º	90º
Chicane (two reverse single bends)	30º-30º	45º-45º	60º-60º

Figure 1: Measuring deflection angles for speed control to 20km/h (refer Table 7)



Part C – Commercial estate controls
(excluding mixed use CZ5 areas)

Element 9: Street network

Rules	Criteria
9.1 Street network	
There is no applicable rule.	C101 Street junction spacing is endorsed by TAMS. In making its assessment TAMS will consider whether the proposed spacing of junctions will allow for safe and convenient vehicle movements taking into account the types of vehicles accessing the estate.
9.2 Traffic control and management	
There is no applicable rule.	C102 Street leg lengths are endorsed by TAMS. In making its assessment TAMS will consider whether the traffic speed reduction measures provided as part of the design for the total street will achieve all of the following: a) reduce traffic speeds to within the design speeds of the street b) avoid unacceptable noise c) maintain convenience and safety levels for cyclists and public transport.

Part D – Industrial Estate Controls

Element 10: Street Network

Rules	Criteria
10.1 Street network	
There is no applicable rule.	C103 Street junction spacing is endorsed by TAMS. In making its assessment TAMS will consider whether the proposed spacing of junctions will allow for safe and convenient vehicle movements taking into account the types of vehicles accessing the estate.
10.2 Traffic control and management	
There is no applicable rule.	C104 Street leg lengths are endorsed by TAMS. In making its assessment TAMS will consider whether the traffic speed reduction measures provided as part of the design for the total street will achieve all of the following a) reduce traffic speeds to within the design speeds of the street b) avoid unacceptable noise c) maintain convenience and safety levels for cyclists and public transport.

Element 11: Block Layout

Rules	Criteria
11.1 Block size	
R105 Minimum block size resulting from a subdivision of an industrial lease is 5000m^2 in IZ1.	This is a mandatory requirement. There is no applicable criterion.
11.2 Block frontage and slope	
There is no applicable rule.	C106 Each industrial block achieves all of the following: a) has an appropriate frontage width to provide adequate access for heavy vehicles b) has appropriate dimension to allow heavy vehicles to access and egress the block in a forward direction c) access arrangements do no negatively impact on the operation of the street network.
R107 The slope across the frontage or length of the block is not to exceed 10 per cent. **Note**: Slope is to be calculated from the proposed finished ground levels.	C107 Slopes of up to 20 per cent may be considered where the proposal is supported by a geotechnical assessment that demonstrates that the land is suitable for industrial development.
11.3 Block access	
There is no applicable rule.	C108 Direct vehicular access to a block from a street with actual or forecast traffic volumes in excess of 3000 vehicles per day is permitted only where the design of the block enables the forward egress of vehicles into the street.
There is no applicable rule.	C109 Access to the industrial area through existing or future residential areas is not permitted.

11.4 Battle-axe blocks	
There is no applicable rule.	C110 Battle-axe blocks are only permitted where all of the following are achieved: a) using AUSTROADS Design Vehicles and Turning Templates, internal turning radii allows for vehicles to access and egress the block in a forward direction and the width and length of the access handle permits the passing of vehicles b) the block provides an appropriate area to allow for the development of buildings for a permissible use within the zone.

Appendix A – Single residential block compliance tables

Using the single residential block compliance tables

The single residential block compliance tables schedule a range of block widths and depths and confirms the permitted spatial location of specified blocks in any residential estate to ensure adequate solar access.

When considering options for development, the subdivision designer is urged to:

1. refer to the appropriate table, based on block area and width under consideration
2. note the minimum block length prescribed
3. refer to the appropriate column, based on the slope of site under consideration
4. read down the column, and for each row marked ✓, read across the row to determine the acceptable orientation range.

Calculating variables:

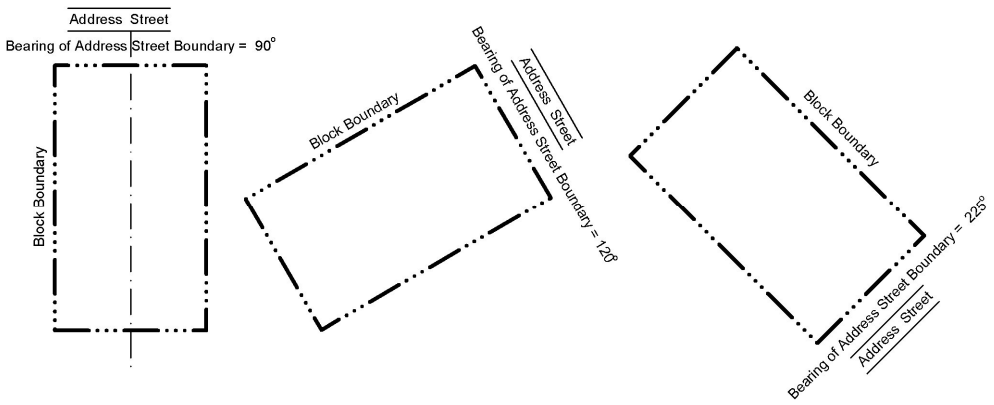
^ Block width
Defined as the average of the width of the front and rear boundaries.

^^ Block depth
Defined as the average of the length of the two side boundaries.

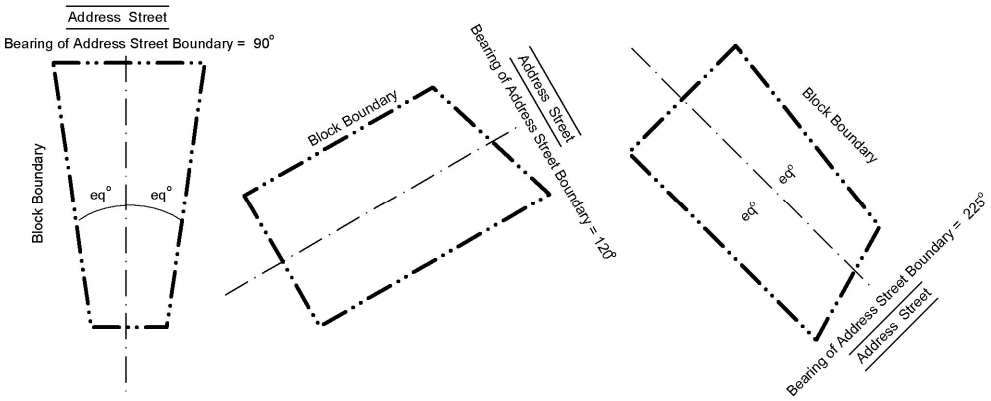
^^^ Bearing of address street boundary

Used to indicate the predominant orientation of the Block.

In the case of regular rectangular blocks, this is as stated: the 360° bearing of the address street boundary, starting at 0° for a West loading block (ie boundary running NS) and increasing clockwise, as shown in the examples below:



In the case of irregularly shaped blocks, the 'bearing of address street boundary' shall be taken to be the bearing of a line perpendicular to the primary axis of the proposed block, as shown in the examples below:



(s) Slope

Slope (s) is an average of two slope measurements: one extending 30m due north from the northern most point of the subject block, and one extending 30m due south from the southern most point of the subject block (see **Figure C1**). North-facing slopes (slopes falling to the north) have a positive value, south-facing slopes (slopes falling to the south) have a negative value. Slope is represented as a decimal number as in per cent slope.

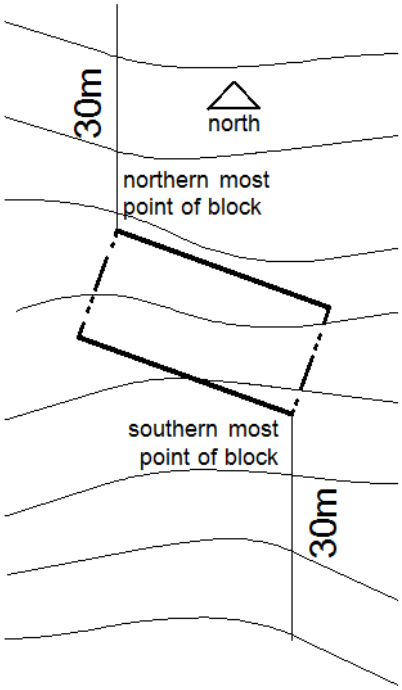


Figure C1

Single Residential Block Compliance Table A1.1 Single Dwelling Housing (>500m^2) Detached Dwelling Block Width ^: **14m - <16m** Minimum Block depth ^^: **31m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	×	×	×	✓	✓	✓	✓
	Street to East	160° - <180°	✓	✓	✓	✓	✓	✓	✓
		180° - <210°	✓	✓	✓	✓	✓	✓	✓
		210° - <250°	×	×	×	✓	✓	✓	✓
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	×	×	×	✓	✓	✓	✓
	Street to West	340° - <360°	✓	✓	✓	✓	✓	✓	✓
		0° - <30°	✓	✓	✓	✓	✓	✓	✓
		30° - <70°	×	×	×	✓	✓	✓	✓

Single Residential Block Compliance Table A1.2 Single Dwelling Housing (>500m^2) Detached Dwelling Block Width ^: **16m - < 18m** Minimum Block depth ^^: **30m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	×	×	✓	✓	✓	✓	✓
	Street to East	160° - <180°	✓	✓	✓	✓	✓	✓	✓
		180° - <210°	✓	✓	✓	✓	✓	✓	✓
		210° - <250°	×	×	✓	✓	✓	✓	✓
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	×	×	✓	✓	✓	✓	✓
	Street to West	340° - <360°	✓	✓	✓	✓	✓	✓	✓
		0° - <30°	✓	✓	✓	✓	✓	✓	✓
		30° - <70°	×	×	✓	✓	✓	✓	✓

Single Residential Block Compliance Table A1.3 Single Dwelling Housing (>500m²) Detached Dwelling Block Width ^: **≥18m** Minimum Block depth ^^: **30m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	✗	✓	✓	✓	✓	✓	✓
	Street to East	160° - <180°	✓	✓	✓	✓	✓	✓	✓
		180° - <210°	✓	✓	✓	✓	✓	✓	✓
		210° - <250°	✗	✓	✓	✓	✓	✓	✓
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	✗	✓	✓	✓	✓	✓	✓
	Street to West	340° - <360°	✓	✓	✓	✓	✓	✓	✓
		0° - <30°	✓	✓	✓	✓	✓	✓	✓
		30° - <70°	✗	✓	✓	✓	✓	✓	✓

Single Residential Block Compliance Table A2.1 Midsized Blocks (>250 - 500m²) in New Estates Detached Dwelling Block Width ^: **10m - < 12m** Minimum Block depth ^^: **26m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	✗	✗	✗	✗	✗	✗	✗
	Street to East	160° - <180°	✗	✗	✗	✗	✗	✗	✗
		180° - <210°	✗	✗	✗	✗	✗	✗	✗
		210° - <250°	✗	✗	✗	✗	✗	✗	✗
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	✗	✗	✗	✗	✗	✗	✗
	Street to West	340° - <360°	✗	✗	✗	✗	✗	✗	✗
		0° - <30°	✗	✗	✗	✗	✗	✗	✗
		30° - <70°	✗	✗	✗	✗	✗	✗	✗

Single Residential Block Compliance Table A2.2 Midsized Blocks (>250 - 500m^2) in New Estates Detached Dwelling Block Width ^: **12m - < 14m** Minimum Block depth ^^: **26m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	✗	✗	✗	✗	✗	✗	✓
	Street to East	160° - <180°	✗	✗	✗	✗	✓	✓	✓
		180° - <210°	✗	✗	✗	✗	✓	✓	✓
		210° - <250°	✗	✗	✗	✗	✗	✗	✗
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	✗	✗	✗	✗	✗	✗	✓
	Street to West	340° - <360°	✗	✗	✗	✗	✓	✓	✓
		0° - <30°	✗	✗	✗	✗	✓	✓	✓
		30° - <70°	✗	✗	✗	✗	✗	✗	✓

Single Residential Block Compliance Table A2.3 Midsized Blocks (>250 - 500m^2) in New Estates Detached Dwelling Block Width ^: **14m - < 16m** Minimum Block depth ^^: **25m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	✗	✗	✗	✗	✗	✓	✓
	Street to East	160° - <180°	✗	✗	✓	✓	✓	✓	✓
		180° - <210°	✗	✗	✓	✓	✓	✓	✓
		210° - <250°	✗	✗	✗	✗	✗	✗	✓
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	✗	✗	✗	✗	✗	✓	✓
	Street to West	340° - <360°	✗	✗	✓	✓	✓	✓	✓
		0° - <30°	✗	✗	✓	✓	✓	✓	✓
		30° - <70°	✗	✗	✗	✗	✗	✓	✓

Single Residential Block Compliance Table A2.4 Midsized Blocks (>250 - 500m^2) in New Estates Detached Dwelling Block Width ^: **≥16m** Minimum Block depth ^^: **25m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	✗	✗	✗	✗	✓	✓	✓
	Street to East	160° - <180°	✗	✓	✓	✓	✓	✓	✓
		180° - <210°	✗	✓	✓	✓	✓	✓	✓
		210° - <250°	✗	✗	✗	✗	✗	✓	✓
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	✗	✗	✗	✗	✓	✓	✓
	Street to West	340° - <360°	✗	✓	✓	✓	✓	✓	✓
		0° - <30°	✗	✓	✓	✓	✓	✓	✓
		30° - <70°	✗	✗	✗	✗	✓	✓	✓

Single Residential Block Compliance Table A3.1 Compact Blocks in New Estates Detached Dwelling Block Width ^: **10m - < 12m** Minimum Block depth ^^: **20m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	✗	✗	✗	✗	✗	✗	✗
	Street to East	160° - <180°	✗	✗	✗	✗	✗	✗	✗
		180° - <210°	✗	✗	✗	✗	✗	✗	✗
		210° - <250°	✗	✗	✗	✗	✗	✗	✗
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	✗	✗	✗	✗	✗	✗	✗
	Street to West	340° - <360°	✗	✗	✗	✗	✗	✗	✗
		0° - <30°	✗	✗	✗	✗	✗	✗	✗
		30° - <70°	✗	✗	✗	✗	✗	✗	✗

Single Residential Block Compliance Table A3.2 Compact Blocks in New Estates Detached Dwelling Block Width ^: **12m - < 14m** Minimum Block depth ^^: **17m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	✗	✗	✗	✗	✗	✗	✗
	Street to East	160° - <180°	✗	✗	✗	✗	✗	✓	✓
		180° - <210°	✗	✗	✗	✗	✗	✓	✓
		210° - <250°	✗	✗	✗	✗	✗	✗	✗
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	✗	✗	✗	✗	✗	✗	✗
	Street to West	340° - <360°	✗	✗	✗	✗	✗	✓	✓
		0° - <30°	✗	✗	✗	✗	✗	✓	✓
		30° - <70°	✗	✗	✗	✗	✗	✗	✗

Single Residential Block Compliance Table A4.1 Compact Blocks in New Estates Attached Dwellings Block Width ^: **6m - < 9.5m** Minimum Block depth ^^: **26m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	✗	✗	✗	✗	✗	✗	✗
	Street to East	160° - <180°	✗	✗	✗	✗	✗	✗	✗
		180° - <210°	✗	✗	✗	✗	✗	✗	✗
		210° - <250°	✗	✗	✗	✗	✗	✗	✗
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	✗	✗	✗	✗	✗	✗	✗
	Street to West	340° - <360°	✗	✗	✗	✗	✗	✗	✗
		0° - <30°	✗	✗	✗	✗	✗	✗	✗
		30° - <70°	✗	✗	✗	✗	✗	✗	✗

Single Residential Block Compliance Table A4.2 Compact Blocks in New Estates Attached Dwellings Block Width ^: **= 9.5m** Minimum Block depth ^^: **26m**			**Slope (S)**						
			Fall to South			Flat	Fall to North		
			> -15%	-15% to < -10%	-10% to < -5%	-5% to < +5%	+5% to < +10%	+10% to < 15%	> +15%
Bearing of Address Street Boundary ^^^	Street to North	70° - <90°	✓	✓	✓	✓	✓	✓	✓
		90° - <120°	✓	✓	✓	✓	✓	✓	✓
		120° - <160°	✗	✗	✗	✗	✗	✗	✗
	Street to East	160° - <180°	✗	✗	✓	✓	✓	✓	✓
		180° - <210°	✗	✗	✓	✓	✓	✓	✓
		210° - <250°	✗	✗	✗	✗	✗	✗	✗
	Street to South	250° - <270°	✓	✓	✓	✓	✓	✓	✓
		270° - <300°	✓	✓	✓	✓	✓	✓	✓
		300° - <340°	✗	✗	✗	✗	✗	✗	✗
	Street to West	340° - <360°	✗	✗	✓	✓	✓	✓	✓
		0° - <30°	✗	✗	✓	✓	✓	✓	✓
		30° - <70°	✗	✗	✗	✗	✗	✗	✗

Appendix B - Definitions

Access street means a street where the speed and traffic volumes are low, and pedestrian and cycle movements are facilitated.

Arterial road means a road that predominantly carries through traffic from one region to another, forming principal avenues of travel for traffic movements.

Bushfire prone area means land with *standing vegetation* one hectare or larger in extent, or land within 100m of an area of *standing vegetation* on one hectare or larger.

Collector road means a non-*arterial road* that collects and distributes traffic in an area as well as serving abutting property.

Coverage route is typically found in a lower density suburban part of the public transport network where local bus services respond to mobility needs and provide feeder services. Coverage route services run all day at relatively low frequency: usually every 30 minutes during commute peaks and every 60 minutes midday and evening (to be confirmed when Strategic Transport Action Plan is adopted).

Cul-de-sac means a dead end street.

Estate means land which is the subject of an estate development plan.

Frequent network is the backbone of the public transport network that has services run every 15 minutes or better all day. The Frequent Network forms part of the public transport response to transit-oriented developments in the context of integrated land use and transport. (to be confirmed when Strategic Transport Action Plan is adopted)

Large block means a block with an area of 500m^2 or greater.

Rear lane means a narrow, short and local public street which is to provide rear vehicular access to properties which front major roads, or where vehicle access is otherwise not desirable or capable of being provided.

Residential block means a *block* that has at least one of the following characteristics:
(a) zoned residential
(b) affected by a *lease* which authorises *residential use.*

Shared use zone means a length of carriageway in which vehicles are required by regulation to give way to pedestrians, defined by a 'Shared Use Zone' sign at its beginning and at its end, by an 'End Share Zone' sign: Refer to No R4-4 in AS 1742.1.

Single dwelling block means a *block* with one of the following characteristics:
(a) originally leased or used for the purpose of *single dwelling housing*
(b) created by a consolidation of *blocks,* at least one of which was originally leased or used for the purpose of *single dwelling housing*.

Slope (in relation to compact blocks only) means the slope of land, expressed as a percentage, calculated using the difference in the *natural ground levels* from the highest to lowest points on the proposed block boundary.

Solar access means the availability of (or access to) unobstructed direct sunlight

Standing vegetation means all forms of vegetation as well as regrowth after clearing, as well as plantations and any other continuous vegetation in the form of trees and scrub that grows to a height of 2m or greater.

Street leg length means the distance between intersections or junctions, or points and locations where vehicles are forced to slow to a maximum of 20km/h.

Sub-arterial road means a road connecting *arterial roads* to areas of development, and carrying traffic directly from one part of a region to another.