

APPENDIX 16B	SUBDIVISION DESIGN ASSESSMENT CRITERIA (RESIDENTIAL 8 ZONE)
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PURPOSE OF APPENDIX 16B (RESIDENTIAL 8 ZONE)

In the Residential 8 Zone applications for restricted discretionary activity subdivision resource consent will be assessed in terms of a series of matters, to which the Council will restrict the exercise of its discretion.

One of the matters which the Council will have regard to is:

“Design and Layout

The extent to which the subdivision is in accordance with the Subdivision Design Assessment Criteria in Appendix 16B”.

The criteria will be considered for vacant lot subdivision and for subdivision in relation to a preceding or concurrent land use consent involving household units. In addition, the criteria will also be used as appropriate in the consideration of discretionary activity applications for subdivision, or retail, service station, commercial or community activities consistent with the Addison Neighbourhood Centre as defined in Section One Part 10 and described in Appendix 16D.

Structure of Appendix 16B (Residential 8 zone)

The Appendix sets out the assessment criteria under four “Design Elements”, which are the design and layout matters to which the Council’s discretion is restricted for restricted discretionary applications, namely:

- Road, Reserve and Access Networks
- Block Size and Lot Type
- Design of Roads and Access Routes
- Design of Reserves

The criteria listed under each Design Element are intended to give flexibility, enabling site responsive subdivision designs, while ensuring that the subdivision contributes to the efficient development and amenity of the Takanini Structure Plan Area.

The criteria are intended to guide development rather than prescribe exact design and layout. Most criteria are illustrated. The illustrations are intended to support the text and are representative of good design solutions, but are not necessarily intended to represent the only design solution.

Each Design Element includes an explanation which summarises the rationale for the particular Design Element, and expands on the individual criteria. The explanation may be used as further guidance in interpreting the intention of the criteria and assessing the extent to which the proposal accords with them.

Information Requirements

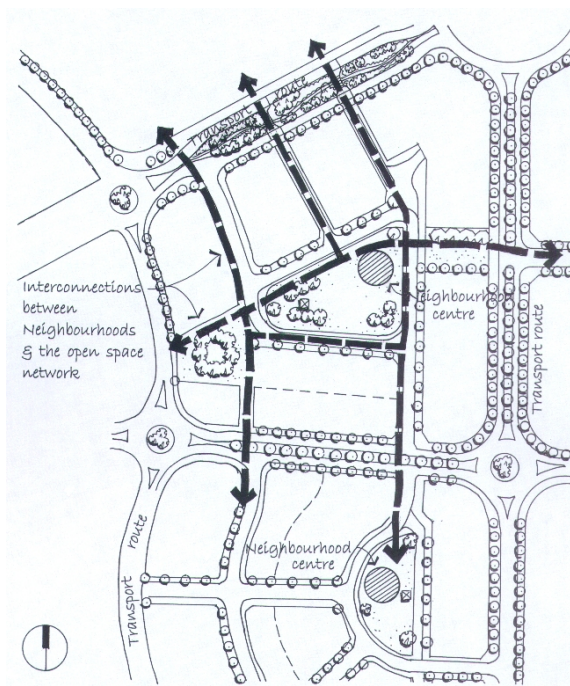
The applicant shall provide a written assessment describing how the criteria for each Design Element are addressed. Applicants will have to demonstrate that the provisions of the criteria have been acknowledged.

It is recognised that certain proposals will not achieve absolute accordance with all criteria. Where necessary, in regard to a criterion demonstrably not met, the applicant shall explain with reference to the explanation for the particular Design Element:

- whether site constraints inhibit the ability to address the criterion, and/or;
- how the intention of the criterion is met by the proposal, and/or ;
- whether the proposal represents a better design solution than that suggested by the criterion.

Design Element 1: Road, Reserve and Access Networks

1. Subdivision design should achieve connectivity within and between neighbourhoods.
2. Street patterns should maximise convenient and direct access to passenger transport stops, reserves, community facilities and mixed use nodal areas.
3. Street patterns should be logical and contribute to the legibility of the area.
4. Street patterns should include roads which front the edge of Bruce Pulman Park, particularly along the northern park boundary.
5. Roads and other public spaces which front Bruce Pulman Park or extend up to its boundary should be designed to recognise, incorporate and extend walking, running and cycling routes into and out of the park.
6. Street alignments should maximise opportunity for lots with good solar access.
7. Safe pedestrian and cycle routes should be generally integrated with road and reserve design.
8. Subdivision design should help achieve an interconnected open space network.
9. Layouts should retain any existing mature trees, preferably in road or reserve, where these contribute to existing site amenity.



Explanation:

Design Element 1 pertains to the general layout of the networks of roads, reserves and other access linkages that make up the public space of a subdivision. These public routes should be considered in an integrated fashion together with the development blocks they create.

Connectivity - i.e. multiple linkages between points - should be one of the key aims of any subdivision designed to achieve intensification, as it promotes convenience, energy efficiency, safety and social interaction. In general this will mean that most roads will be through routes. Provided that pedestrian and visual connectivity is generally maintained, culs-de-sac may also be included, as they can minimise traffic movement and provide greater safety for children. If culs-de-sac are provided they should be straight and limited in length to 100 metres.

In considering the appropriate degree and nature of connections, regard should be had to probable destination. For the Residential 8 Zone connections to the Addison Neighbourhood Centre and to the railway station at Takanini are a particular priority. Connections to Bruce Pulman Park are also important, hence requiring that the design and layout of future subdivision is sensitive and responsive to this proximity. Aligning some roads along the park's boundary will improve potential connections, as well as enhance park security. When such roads are designed it is also important to ensure that walking and cycling routes are provided which enable integration with those in the park thereby facilitating the expansion of the functional capacity of the park. The design of the entrance to the park from Porchester Road, if required, should also be carefully considered so as to ensure safe and convenient vehicular access / egress to the park road connections will also be required into adjoining undeveloped blocks of land for future linkages.

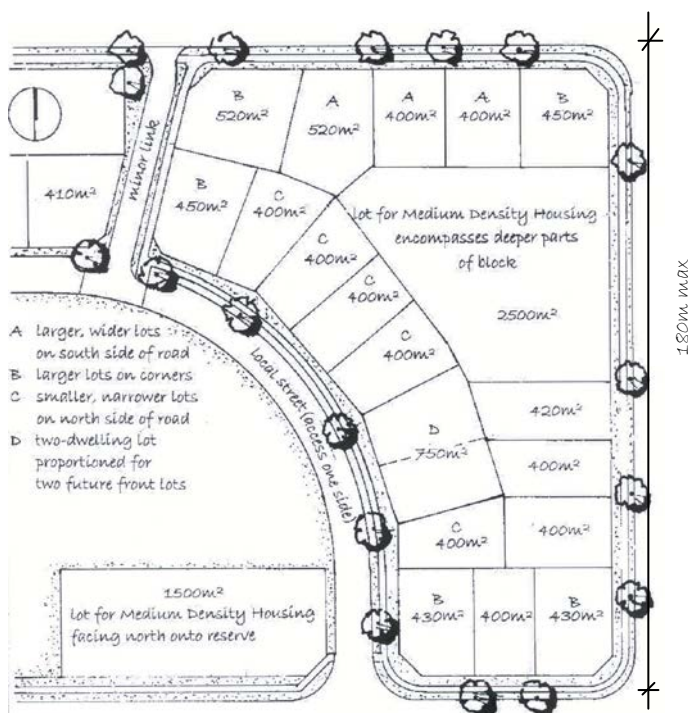
On flat land, a road pattern that is logical and legible is likely to be best achieved by basing layouts upon simple alignments and geometries such as avenues, rectilinear and offset grids, crescents, ovals etc. A legible road pattern is one that is easily understandable for the people that use it. Consistent road designs and landscape themes can further emphasise the position of each street in the road hierarchy and in the wider area. Road patterns that are logical and easy to comprehend and navigate make a neighbourhood feel more comfortable and help provide a sense of identity for it. "Dead worm" or "spaghetti" road layouts and re-entrant layouts (i.e. roads turning back on themselves) will be generally discouraged unless it can be demonstrated that the layout still promotes connectivity or legibility, or is required for servicing or drainage purposes.

Design for good sunlight and daylight access will often have been predetermined by land use resource consents. However, where vacant lots are proposed, good sunlight and daylight access can usually be enabled by road alignments as close as possible to east-west and north-south, and by lot proportion (refer to Design Element 2).

Routes should incorporate pedestrian and cycle facilities. Where these are provided separate from vehicular traffic routes they should be short, wide and direct (refer to Design Element 3). Layouts that are actively planned to incorporate existing mature trees can also ensure an "instant amenity" for the subdivision and so are encouraged.

Design Element 2: Block Size and Lot Type

1. Blocks should be of a scale and shape to achieve a permeable street layout.
2. Blocks and lots should be designed to enable dwellings with good solar access.
3. As many lots as possible should front onto and be accessed directly from a legal road. Rear lots should generally be avoided.
4. Through lots (lots with dual road frontage) should be avoided and corner lots should be designed to maximise opportunities to create private outdoor space on site without the need for high front fences.
5. A variety of lot sizes should be provided, although vacant residential lots with areas of between 525m² and 700m² should be avoided.



Explanation:

Design Element 2 describes principles for consideration in the layout of blocks and lots within a subdivision, and is mostly relevant to vacant lot subdivision. Where residential subdivision applications are accompanied or preceded by a land use consent application the house designs and layout will determine lot size and shape.

In general, blocks should be not more than two lots deep (i.e. lots fronting roads only) and not more than 180 metres long to achieve permeability. Elongating blocks in a north-south direction minimises the number of “south-facing” lots and so is encouraged where house design is not known. Vacant lots intended for single dwellings accessed from the south or east should generally be narrow and deep to enable sunny and private space to the rear. Vacant lots accessed from the north or west should be wider and shallower.

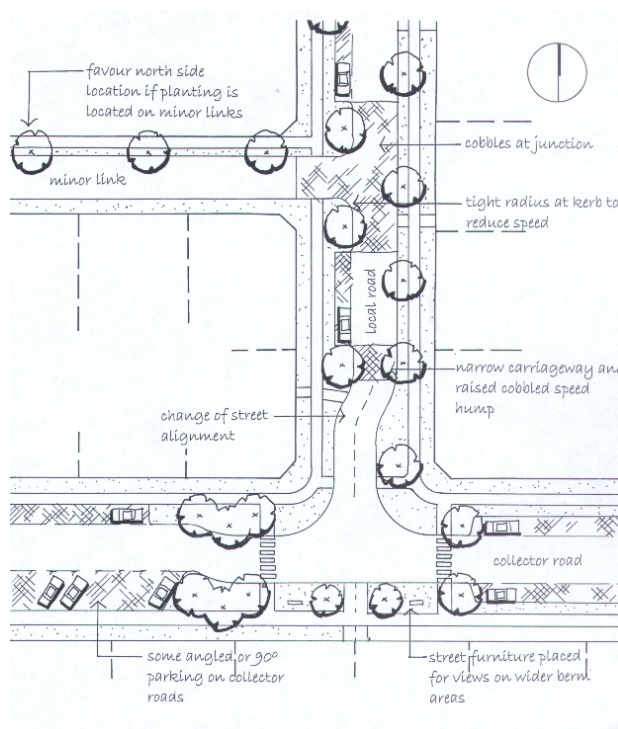
Maximising the potential number of dwellings that can front the road and minimising the use of rear lots adds to safety, orientation and streetscape amenity, so as a guide subdivisions should be designed such that not less than 80% of potential complying dwellings in a subdivision will be located on existing or future front lots. In this regard it should also be noted that for restricted discretionary activity subdivisions, performance standard 16.1.3.5.2 requires that any rear lots proposed must gain access to the road by a jointly owned access lot or combined rights of way, with a legal width of 8m and 4.5 metres carriageway. In general, discretionary activity resource consent to infringe performance standard 16.1.3.5.2 is unlikely to be granted particularly for vacant lot subdivisions.

Lots with dual road frontage should be avoided because of interface issues where a rear area intended for private use abuts a second road. The size and proportion of corner lots should be carefully considered in the light of road frontage interface controls potentially affecting the ability to achieve houses with private open space on site.

For vacant lot proposals a variety of lot sizes and shapes, including larger lots of over 700m² for future more intensive development and subdivision, and development blocks of over 1400m² (enabling “Medium Density Housing Developments”) should be provided to avoid monotony and ensure efficient land use. However, in practice, because of household density thresholds established by land use rules, vacant lot subdivision proposals could only proceed as restricted discretionary activities if single dwelling lots were between 400m² and 525m² in net site area, and lots for two or more dwellings were greater than 700m². Where a lot proposed is between 525m² and 700m² in net site area the Council will generally require the applicant to seek concurrent restricted discretionary activity land use consent for two or more dwellings. Where vacant lots of between 700m² and 1400m² are proposed the Council will generally require the applicant to demonstrate the way in which the lot will accommodate future permitted development and restricted discretionary activity subdivision.

Design Element 3: Design of Roads and Access Routes

1. Road cross-sections should be appropriate to the nature of the service they provide.
2. Parking should be provided on both sides of residential collector streets, and at least one side of local residential roads.
3. A footpath with provision for cycling should be provided on both sides of residential collector roads, and at least one side of local roads and minor links.
4. Local traffic management measures should be applied to limit the speed of vehicles in local residential roads and minor links, and to enhance safety, movement and amenity for pedestrians and cyclists.
5. Generous avenue planting should be provided on principal or arterial roads, and some planting should be provided on all roads except minor links.



Explanation:

Design Element 3 pertains to principles for the design of roads and other access routes within subdivisions. Road and road design should be appropriate to function and provide practical widths for vehicles, planting, and services. The Plan does not specify minimum widths as performance standards for the Residential 8 Zone. Drawings on subsequent pages identify suggested cross section treatments, and will be used only as a guide in assessment of proposals. Useful dimensions to have regard to in assembling a suitable road cross section are:

• two lanes of traffic on a residential collector road (to cater for buses or trucks)	6.0 metres
• two lanes of traffic on a local street	5.5 metres
• cycle path or cycle lane	1.5 metres
• parallel parking lane	2.5 metres
• service strip	2.0 metres
• footpath	1.5 metres
• kerbside verge	1.0 metres
• planting strip	1.5 metres

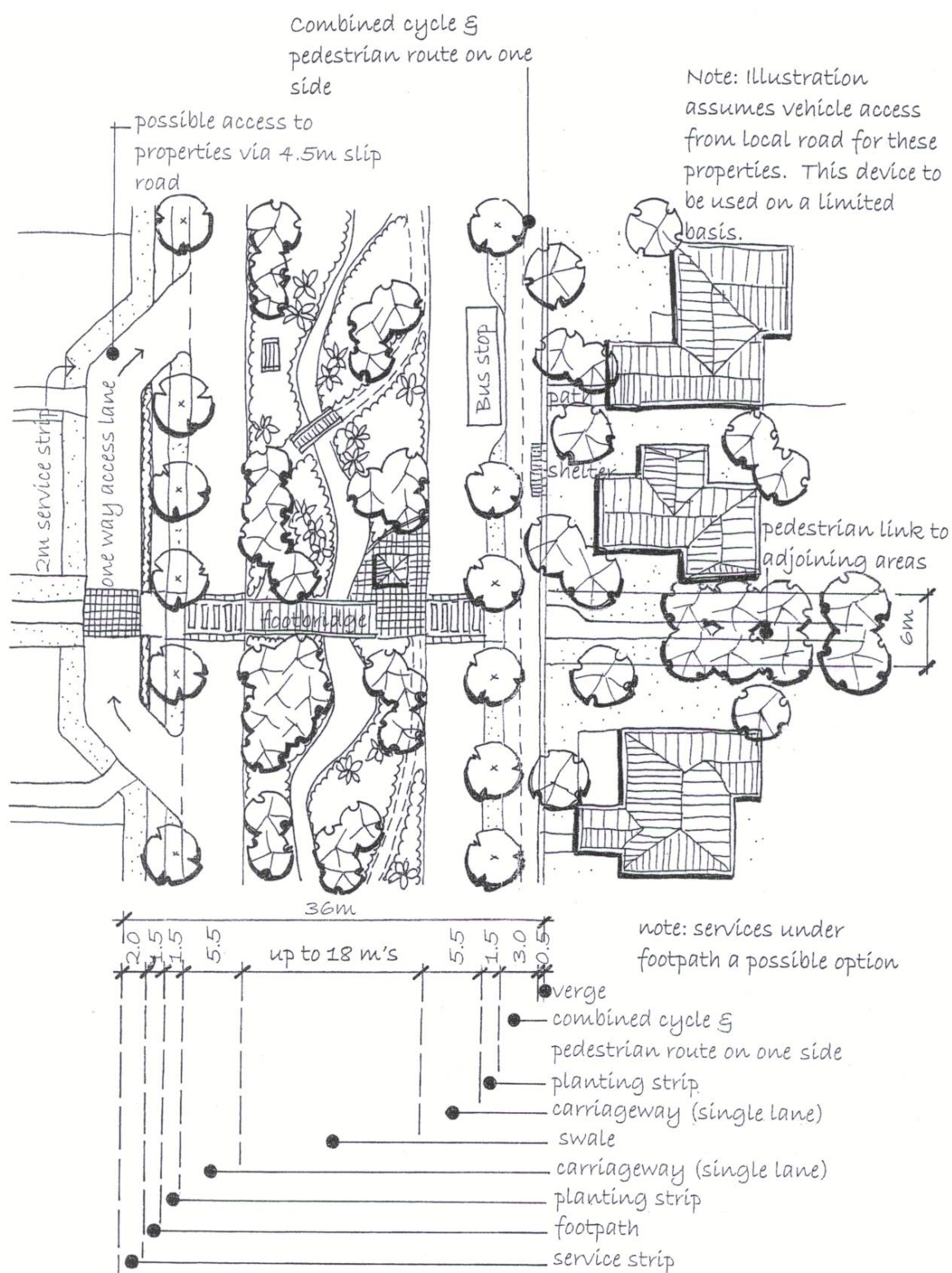
Indicative locations for principal roads and residential collector roads are shown on the Glenora Structure Plan. Most remaining roads should be regarded as local streets and minor links (i.e. short lanes, often with properties accessing only one side or neither side).

The use of parallel kerbside parking is efficient in using the road as circulation area and reducing the need for on-site visitor parking. Kerbside parking lanes may be defined and delineated with planting bays if desired.

Pedestrian and cycle paths should generally be integrated with road and reserve design. Paths which are separate from vehicle routes should be designed to ensure personal security for users. Where paths are not part of an open reserve they should generally be short (not more than 50 metres in length), and wide (not less than 6 metres legal width) and there should be clear visibility from one end to the other, and street lighting at both ends.

Tree planting in the road reserve should be regarded as a requirement, as it provides character and, particularly in more intensive subdivisions, may be the only place for trees to grow to maturity. Grassed service strips (separate from planting strips) are generally required along any road boundaries where properties are accessed, (though other solutions for services location may be considered, for example a single service strip with connections under the carriageway on minor links and lanes).

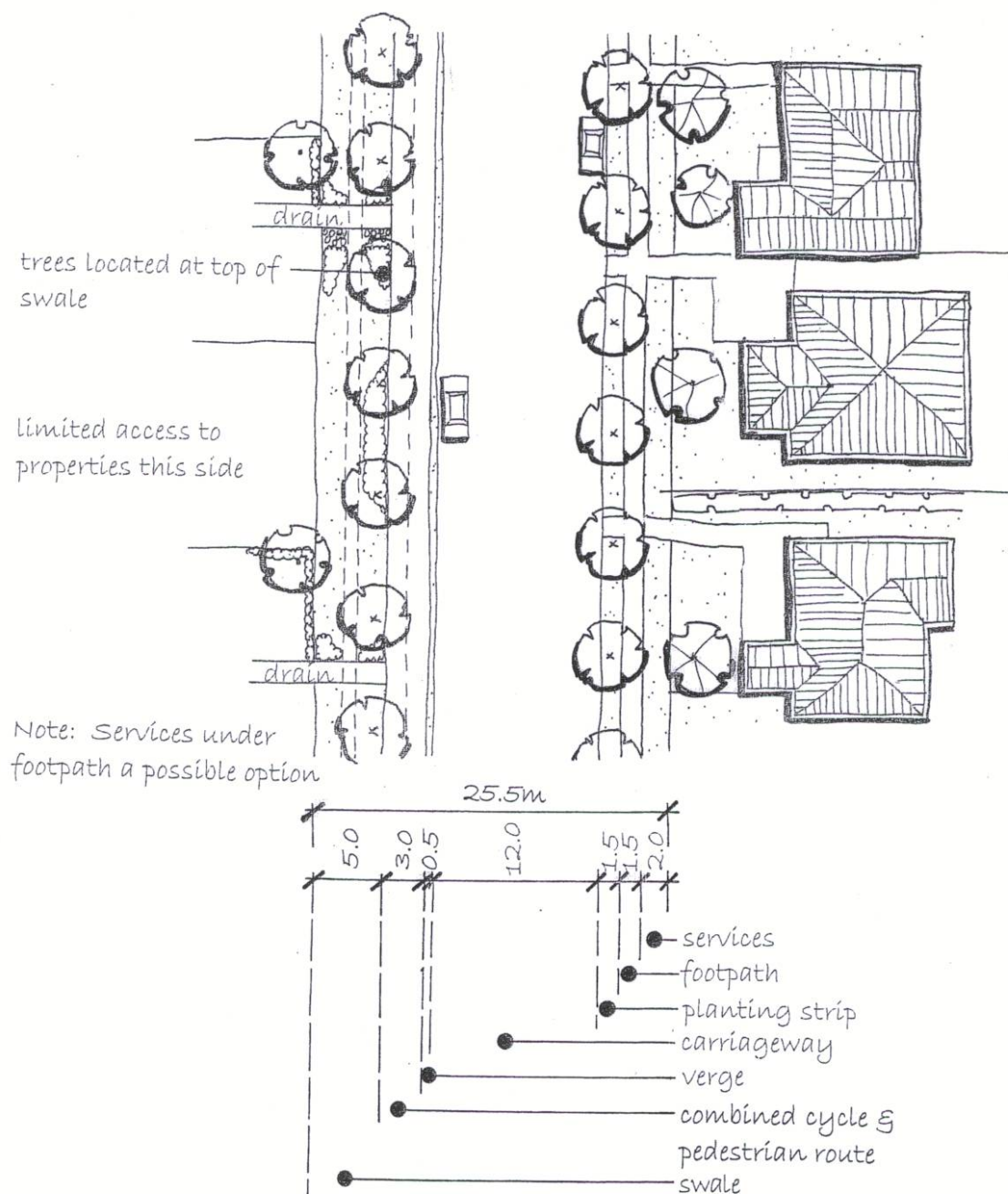
**Section Three, Appendix 16B – Subdivision Design Assessment Criteria
(Residential 8 zone)**



Principal Road With Central Swale

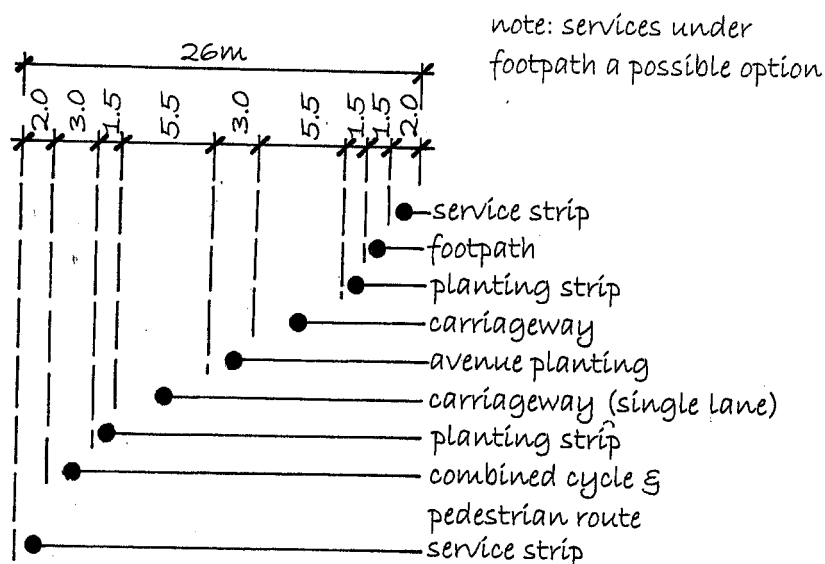
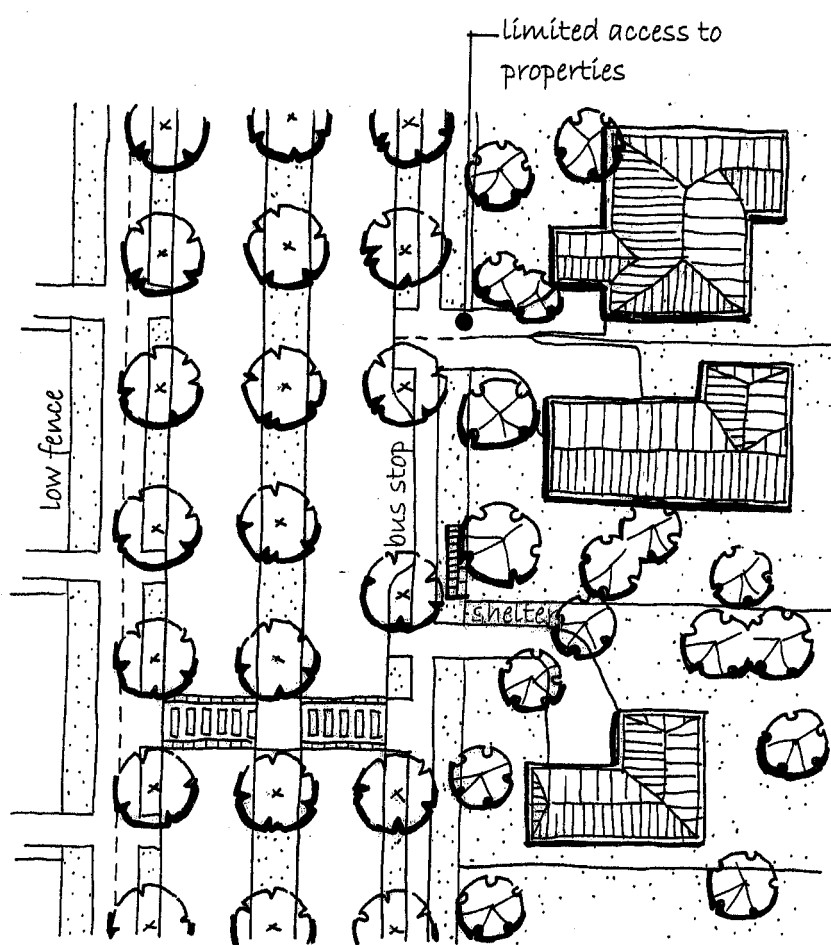
**Suggested Road Cross Sections for the Residential 8 Zone
Scale 1: 500**

*Section Three, Appendix 16B – Subdivision Design Assessment Criteria
(Residential 8 zone)*



Principal Road With Swale One Side

Suggested Road Cross Sections for the Residential 8 Zone
Scale 1: 500



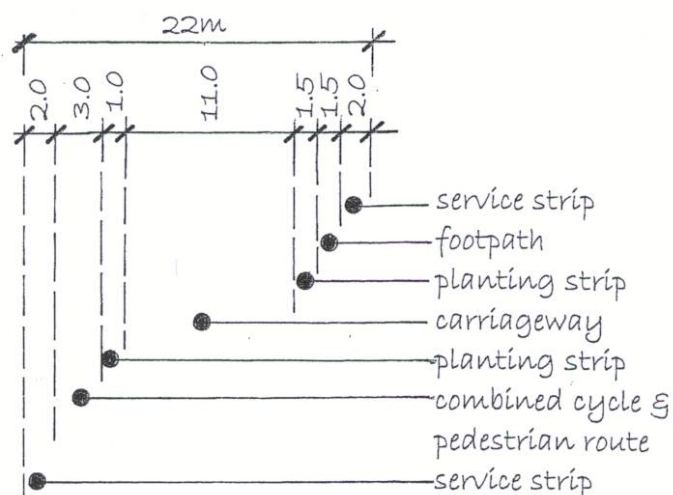
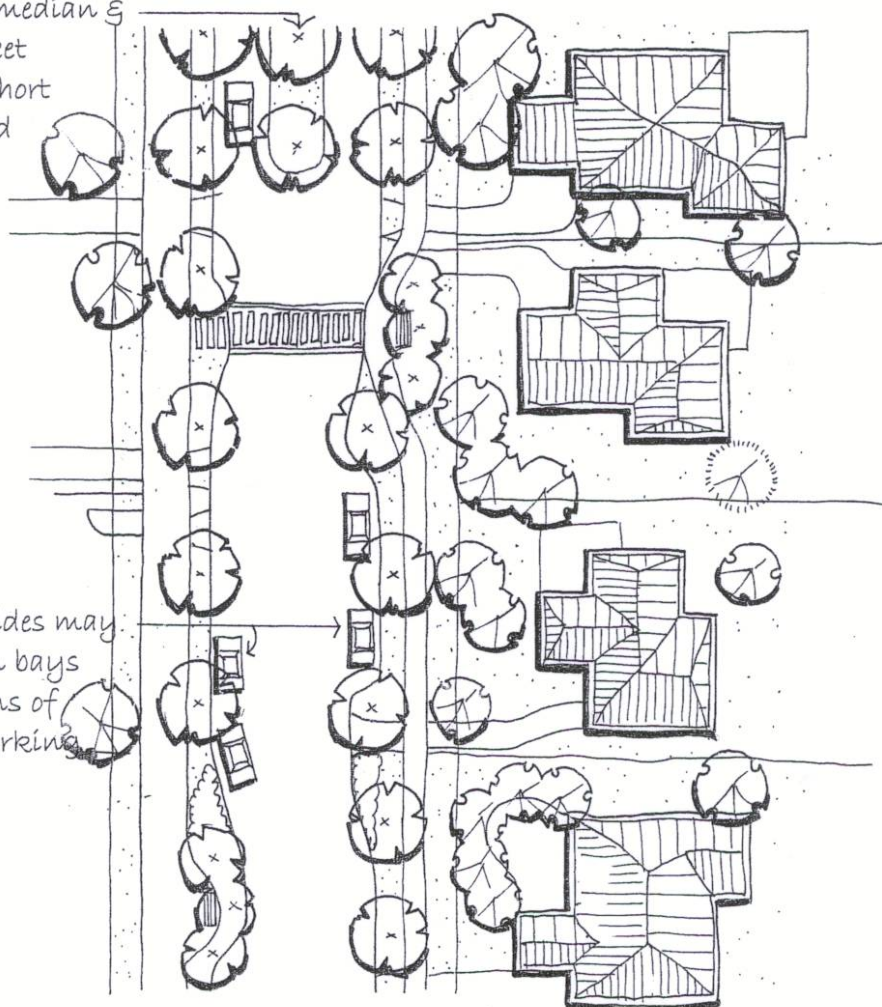
Principal or Collector Road with Central Swale or Central Median

Suggested Road Cross Sections for the Residential 8 Zone
Scale 1: 500

*Section Three, Appendix 16B – Subdivision Design Assessment Criteria
(Residential 8 zone)*

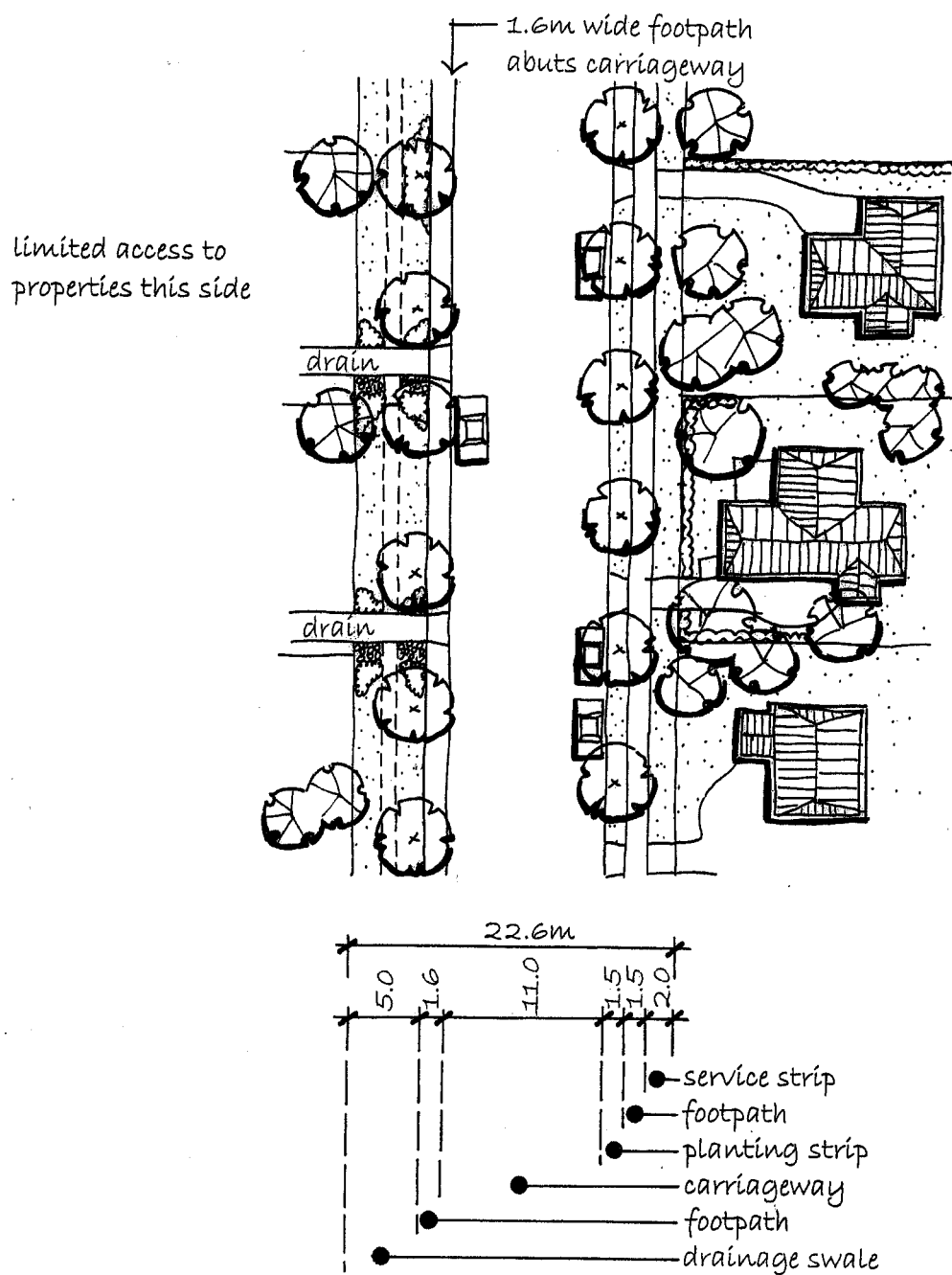
use of central median &
limited on-street
parking over short
sections of road

parking both sides may
be delineated in bays
(limited sections of
angle or 90° parking
may be used)



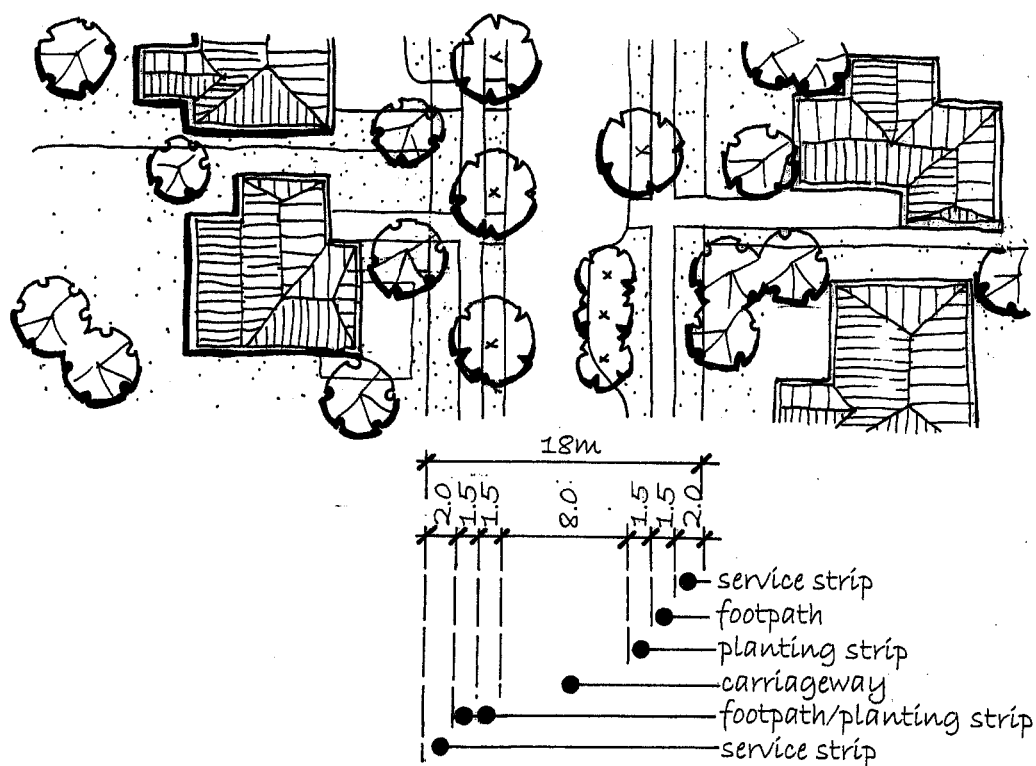
Residential Collector Road Without Swale – No Median

Suggested Road Cross Sections for the Residential 8 Zone
Scale 1: 500

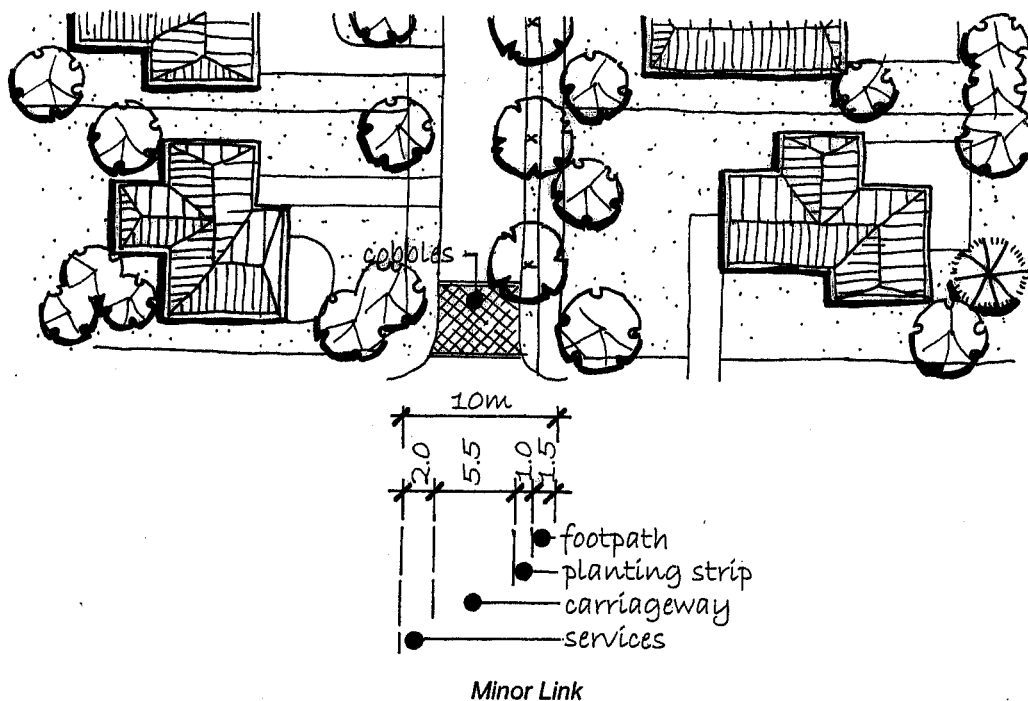


Residential Collector Road With Swale One Side

Suggested Road Cross Sections for the Residential 8 Zone
Scale 1: 500

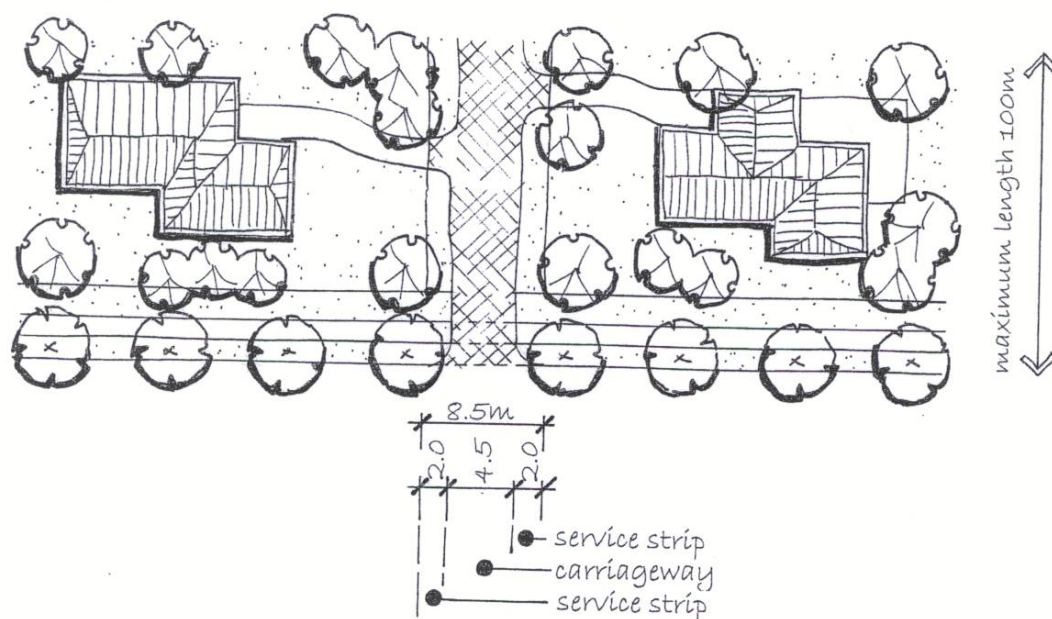


Local Road

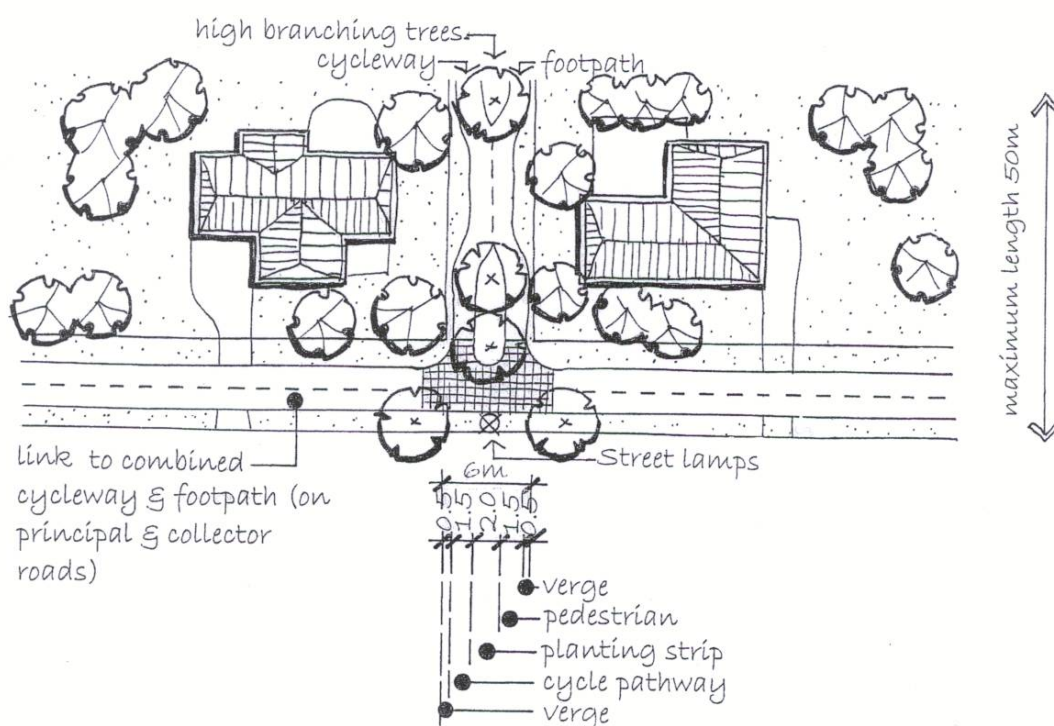


Suggested Road Cross Sections for the Residential 8 Zone
Scale 1: 500

*Section Three, Appendix 16B – Subdivision Design Assessment Criteria
(Residential 8 zone)*



Access Lot or Combined Rights of Way

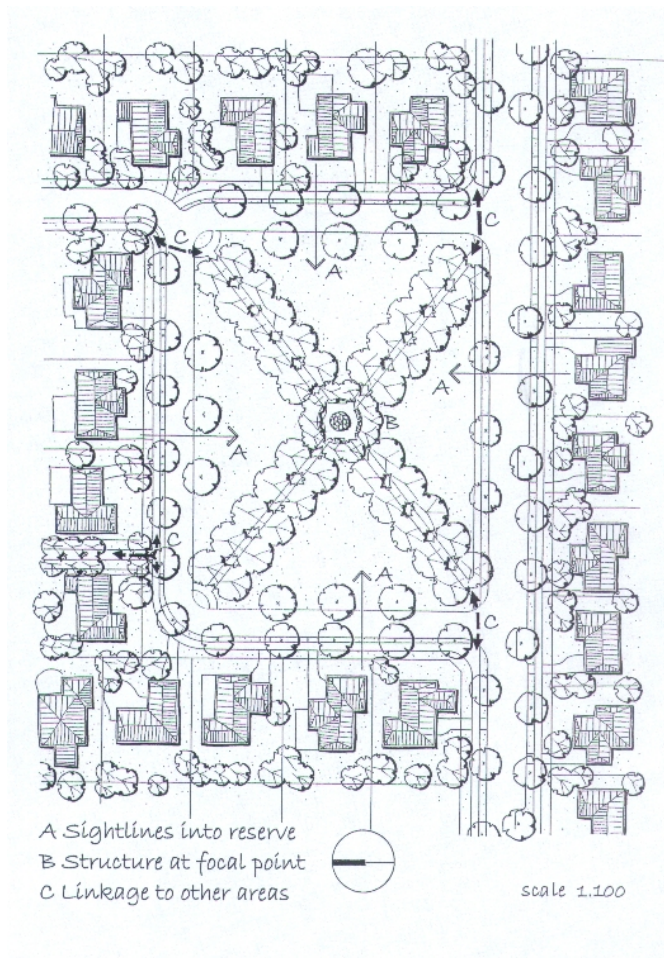


Pedestrian / Cycle Link

Suggested Road Cross Sections for the Residential 8 Zone
Scale 1: 500

Design Element 4: Design of Reserves

1. Reserves should be located adjacent to public roads. Clear sight lines into all areas of reserves should be available from public roads and nearby dwellings and along cycle and pedestrian routes.
2. Reserves should be distributed throughout the Residential 8 Zone to provide a variety of recreation opportunities.
3. Reserves should be designed for a particular purpose and to provide a focal point for the neighbourhood, and be located such that as many lots as possible have a direct physical or visual connection with the reserve.
4. Trees and any structures should be positioned for winter shelter and summer shade, to maximise the focal qualities of any reserve, and to reinforce any linkages from the reserve to other areas.



Explanation:

Design Element 4 pertains to matters for consideration for locating, sizing and designing reserves within subdivisions.

Reserves that are largely bounded by public roads often tend to be more secure, because of informal surveillance from the road and from the houses nearby, and are thus likely to discourage crimes against the person, vandalism, burglary, dumping, and littering. The necessary surveillance required to deter crime is attracted through other means, principally through high public usage of these open spaces (as well as clear sight lines from public roads.) In such locations, and clearly visible to as many properties as possible, they are likely to attract the maximum number of users and be more valued by the community. Ideally reserves should not directly adjoin residential lots, but as a guide, not less than half the total length of legal boundary of any reserve should adjoin legal road. Innovative design for roads to incorporate or define open space is also encouraged – for example a large cul-de-sac “head” in which the carriageway actually encircles a usable open space reserve is a good design solution and preferable to a conventional cul-de-sac head located in road reserve, where their function and role in the context of the area as a whole may require a different layout to comply with Appendix 16A, Takanini Structure Plan.

No specific targets for size and numbers of reserves in the Residential 8 Zone have been established, but in most subdivisions of blocks of more than a hectare in area some provision of physical reserve should be allowed for.

Such reserves should be designed as “neighbourhood greens”, with some capacity for local informal recreation (larger scale active recreation opportunities will be catered for at Bruce Pulman Park). A small, well proportioned flat reserve designed as focal point for a neighbourhood through the use of planting, shelters, pergolas etc will be more appropriate than a large area of “leftover” rolling rear land.

Design Element 5: Design of Subdivision Located near Electricity Transmission Lines.

- 1 All buildings, structures, mobile plant and earthworks must maintain adequate separation distances from transmission line conductors and support structures and must comply with the requirements of the NZECP 34:2001. Additionally, access around transmission line support structures must be maintained to ensure that Transpower can carry out maintenance and emergency works unfettered.
- 2 Dwellings and landscape planting should be located and orientated to ensure that the adverse effects of any high voltage transmission lines present are minimised.
- 3 In accordance with the Electricity (Hazards from Trees) Regulations 2003, planting should be kept away from transmission line support structures and conductors, but can be planted near dwellings to ensure that the transmission lines are screened and out of view from the dwellings and/or outdoor living areas. Any planting necessary underneath a line needs to give consideration to the mature height of plant species and their ability to maintain the specified safe separation distances.

Explanation:

Design Element 5 incorporates the main principles appropriately locating and orientating development near high voltage electricity transmission lines, which traverse the Takanini Structure Plan area. Separation distances are required to be maintained between transmission lines and buildings, structures and landscaping, to ensure public safety and the protection of the National Grid.

Transpower's Development Guide (for development near high voltage transmission lines) should be consulted for more detailed information. Additionally, Transpower New Zealand Ltd. should be consulted to provide details on the separation distance requirements in each particular situation.

Guidelines for subdivision located near electricity transmission lines.

Source: Transpower Development Guide.

