street design guidelines

LANDCOM

For Landcom Projects

LANDCOM

quality streets

"We go back to some streets more often than to others…
maybe a street unlocks memories or offers expectation of
something pleasant to be seen… streets are places of social
and commercial encounter and exchange… a place to be
comforted by the presence of others."

contents

introduction

"Streets moderate the form and structure and comfort of communities. Their size and arrangements afford or deny light and shade. They may have the effect of focusing attention and activities on one or many centres, at the edges, along a line. The street is a place to be seen."

From Great Streets by Allan B Jacobs

1.1 Purpose and reason for this document

This document contains guidelines for the design of streets in urban and suburban Landcom developments. It has been prepared because we are conscious that streets in new subdivisions sometimes lack the qualities that are valued in streets of established neighbourhoods, and we want to address this.

Streets perform certain basic functions in the built environment such as providing routes for vehicles and public transport, and accommodating utility services and drainage systems. The design of a street affects how successful it is in performing these functions, and it can also vitally affect the urban character of a neighbourhood and influence how people use the street and interact with each other on it.

The quality of a street and its connections can affect whether people choose to walk, cycle or take the car. It can affect whether people feel safe.

Its character can influence whether people choose to stroll or hurry through, and whether they leave their front curtains open during the day or not. The design and layout of streets also affects how we experience the natural environment and the special qualities and quirks of individual places.

Landcom is committed to best practice urban design. These guidelines have been prepared to help us design streets that people like: streets that make the most of the natural environment and help to create a sense of place, while also meeting their functional requirements.

A suburban street with mature trees planted in the verge and on-street parking.

Streets can have different characters and should respond to their local context.

1.2 Document structure

Section Two of this document contains design principles that should be applied commonly to all street types.

The section is organised by design elements but there is necessarily some overlap in the design principles for each element.

Section Three contains design models of the most common street types in Landcom developments.

1.3 Who this document is for and how it should be used

This document has been written for Landcom development staff, our consultants involved in master planning and urban design, and our project partners and their consultants. It is intended to provide a starting point for the design of new streets. It provides guidelines for good practice but it is not a code. Designers will of course have to take into account the particular constraints and opportunities of individual sites when applying the principles in this document. Individual councils and the Roads and Traffic Authority also have specific requirements to be taken into account. These guidelines may assist development staff and designers to justify departures from standards where we feel this is appropriate.

There are some specific aspects that have not been included in this document but may be the subject of future work. These include guidelines on the design of bus stops, car courts and street furniture, and further detail on intersection and parking bay design.

This was originally released in 2006 as a working tool. Since then they have been under revision and changes have been made to ensure these guidelines remain relevant to the target audience. To ensure it remains useful and relevant we require feedback from its users on how achievable the design objectives are in practice, and the practicality of the street type models. Please give feedback to Landcom's Sustainability and Policy group.

1.4 Definition of street elements

In this document the primary street elements are defined as follows:

Carriageway (or street pavement)

The area of street reserve that is provided for the movement or parking of vehicles measured from kerb to opposite kerb.

Street reserve

The land set aside for a street carriageway and verge incorporating the full width from property line to opposite property line.

Travel-way

The part of the carriageway that is used for vehicle travel and does not include the area normally used for parking.

Verge

The part of the street reserve between the carriageway and the boundary of adjacent lots (or other limit to street reserve).

It may accommodate public utilities, footpaths, storm water flows, street lighting poles and landscaping.

Typical illustration from the document showing the application of the definitions. The model streets are provided in Section 3.
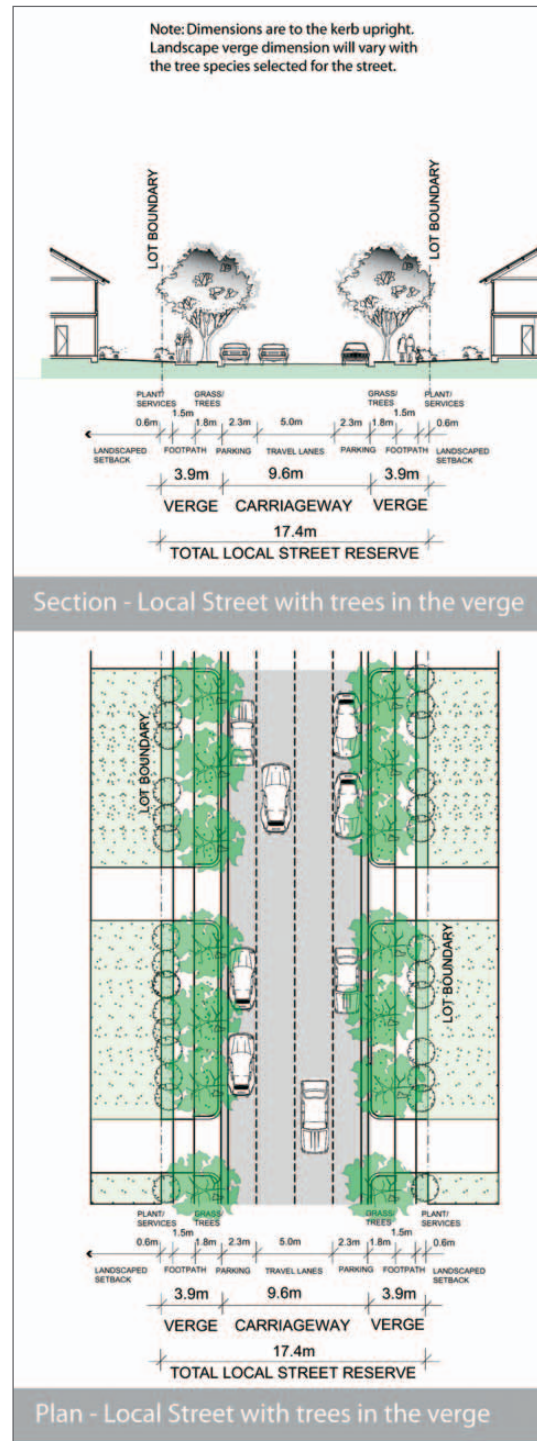
part 2

common design principles

FOR ALL STREET TYPES

2.1 Connectivity and legibility

New sites should be connected to the existing street network wherever possible to create seamless neighbourhoods.

Connected neighbourhoods continue existing desire lines and provide access for existing and new residents through the neighbourhood.
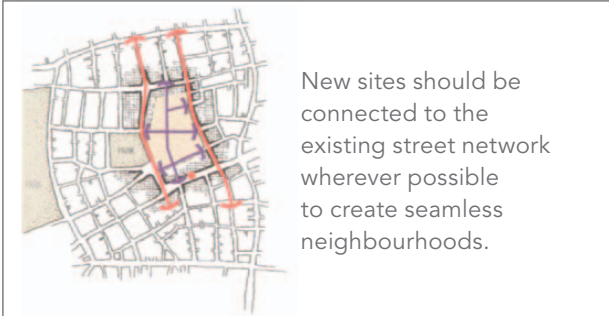
Why this is important

Connected street networks, those with minimal dead-ends and culs-de-sac and regular interconnections, minimise travel distances, provide a choice of routes, maximise access to available facilities and services, may help to spread traffic loads, and may assist people to find their way because networks are permeable.

New developments integrate better with existing neighbourhoods when the street systems connect. Connected grid networks may also improve safety when dwellings are sited to address block edges, to enable passive surveillance.

These streets provide pedestrian connections that could be opened for vehicles in the future if appropriate.

Design principles

- Determine a hierarchy of streets for new developments according to the function of each street in the network.

- In new neighbourhoods design an inter connected street network that offers choice for users.

- Connect new streets with existing street systems.

- Provide additional cycle and pedestrian connections where appropriate.

- Avoid culs-de-sac wherever possible.

If they are used:

- *avoid them at activity and transit centres such as near shops and where they would limit direct access to transport.*

- *limit their length so the end point is visible from the access point to prevent drivers inadvertently turning into a dead-end.*

- *provide access to 10 houses at the most.*

- Turning heads should be capable of accommodating a three point turn by a Medium Rigid Vehicle (garbage and fire trucks).

Response to common issue

The local council or residents oppose the connection of new streets into the established street network.

Where street connections cannot be negotiated, design the new street layout to enable future connections. A flexible design will allow streets to be connected if and when required, as needs and perceptions change. Where vehicular connections are not provided, maintain pedestrian and cycle-way connections wherever possible (see example photos on page 6).

This street terminates at the local street by letting the footpath of the perpendicular street carry through with bollards to clearly show the street terminates for vehicles but not for pedestrians or cyclists.
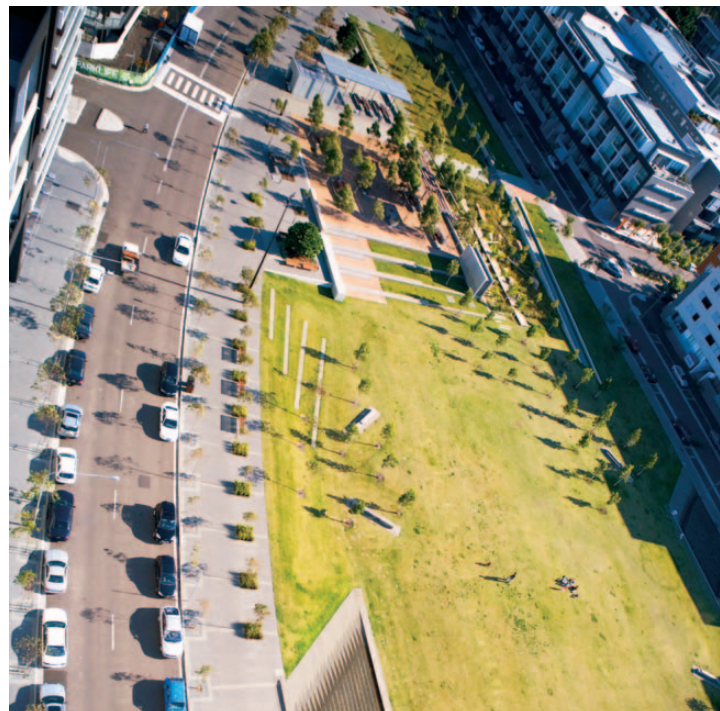
At Landcom's Victoria Park the new streets are well connected into those already existing in the area making the place very permeable to pedestrian, cycle and vehicular traffic. The functionality of the street is clear with well defined footpaths, parking bays and a two-way carriageway.

2.2 Intersections

Why this is important

Intersections are the points at which all users of the street converge. They must be designed for the safe and convenient passage of all users. Intersections that prioritise pedestrians generally cause drivers to slow down. Four-way intersections (rather than staggered three-way T-junctions) enable a continuous path of travel and provide visual continuity of the streetscape.

Roundabouts in suburban streets are not recommended because they:

– *prioritise vehicles*

– *result in poor pedestrian amenity, as pedestrians have to change their route to get through*

– *are not safe for cyclists*

– *take the gaps out of the traffic flow downstream*

– *require additional signage which creates visual clutter*

– *often require splitter islands because drivers do not know how to use them*

– *often require street corners to have large splays to enable trucks to pass through, which erodes pedestrian amenity and safety.*

Similarly, splitter islands are not recommended because when they are used, larger splays (kerb radii) are required to enable trucks, buses and other large vehicles to turn, which compromises pedestrian amenity and safety.

Design principles

• Design intersections to reflect the street hierarchy.

• On local streets use four-way intersections where possible. Control vehicle speeds on the minor streets by:

– *extending verges to narrow the carriageway at the intersection (creating 'pinch-points')*

– *reducing sight lines with closely spaced trees*

– *using appropriate street markings and signage*

– *using differently textured materials on the carriageway across the throat (but not differently coloured materials).*

• Avoid roundabouts wherever possible by:

– *ensuring the design indicates the presence of the intersection on all approaches*

– *using short block lengths (less than 70 metres) to control vehicle speed on minor streets*

– *using traffic signals, street markings and signs where required.*

• Use tight kerb radii at intersections to shorten pedestrian crossing distances and reduce vehicle speeds.

• Avoid splitter islands wherever possible.

Intersection diagram

Labels on diagram: PARKING, PARKING, SMALL UNIT PAVER, HIGHER PRIORITY STREET, LOT S, NARROW THROAT TO STREET, LOWER PRIORITY STREET
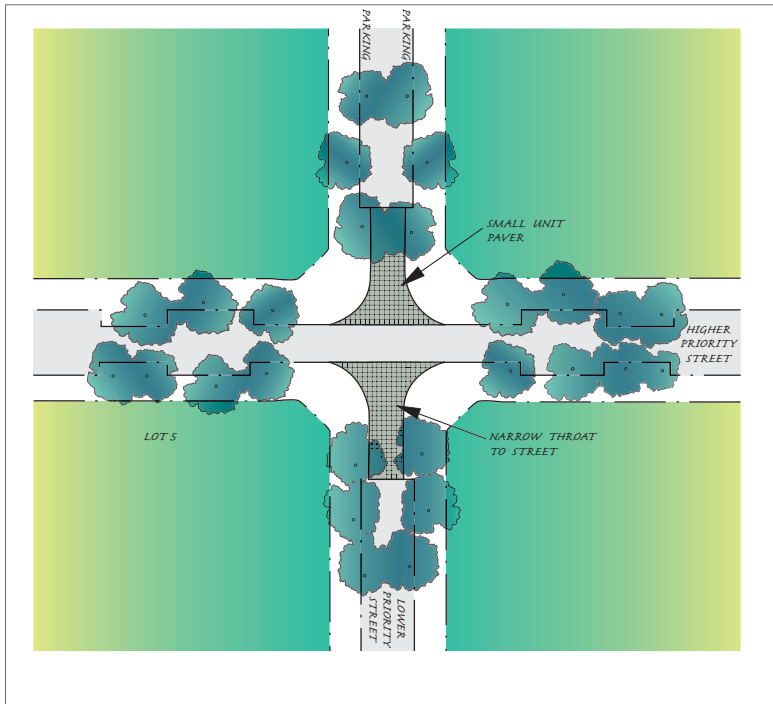
Four-way intersection where the design marks the priority of the collector street clearly.

Response to common issue

The local council requires roundabouts and will not support four-way intersections.

Neighbourhood streets are for pedestrians and cyclists as well as for vehicles. If our aim is to create walkable neighbourhoods and active communities, streets must be pedestrian-friendly. On local streets, well-designed intersections provide a much better pedestrian environment than roundabouts. They allow pedestrians to cross safely and directly without diverting from their route.

Different treatments can be used to indicate the priority of the connecting streets. As indicated in the right image and on page opposite, small unit paving has been used with bollards on the corners to indicate that this street is the lower order street. The image on left has used a different approach by widening the verges and using planter beds close to the street edge to visually and physically narrow the street throat - again indicating that it is the lower order street.

2.3 Topography and view termination

Why this is important

The topography of an area is often an important place-making element. Streets designed in response to topography and natural features can reveal desirable views and help to enhance an area's unique character.

The view to the end of a street may also help people to find their way through a neighbourhood, and can help to create a sense of place.
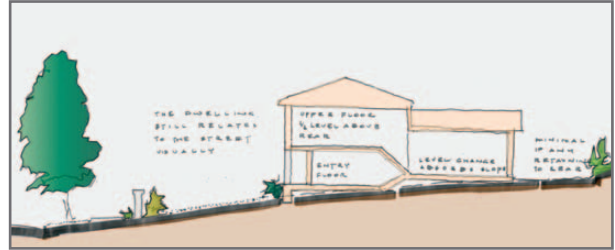
Step the dwelling to achieve a good relationship between the house and both the private open space and the street.

Design principles

- Design the street network in response to topographical features of the site.

- Where land slopes at a grade of 6% or more the predominant street alignment should be perpendicular to contours. (Where the slope is less the street alignment is not constrained by topography.)

- Where a lot slopes from one side to the other, design for the slope with a split-level house to avoid retaining walls on side boundaries, with consequent drainage and structural issues.

- Avoid street layouts that result in lots being considerably higher or lower than the street level.

- Where a lot slopes from the rear to the front, design for the slope with a split-level house to ensure the front of the house relates well to the street, and to avoid retaining walls on the rear boundary, with consequent drainage and structural issues (see diagram above).

- Terminate streets with views that make the most of the special features of a site or enhance its character (such as a park, a stand of mature trees, distant hills, water or significant building).

- Where streets terminate with a view of a house (or other building), ensure that the house (but not the garage) is on axis with the street, and require high quality design for terminating buildings.

- Ensure the street alignment is straight or gently curved where possible to enable edges (such as street trees and building frontages) to frame vistas.

This street runs down the contours to provide a view straight to the water. This approach also enables houses that run across the contours and avoids high side and low side lots.

Response to common issues

How to handle housing on steep land when constraints require streets to run parallel with the contours.

If the street providing the address to the house does have to run along the contour and this results in a high-side and a low-side of the street, the houses on the low-side should be designed so that their entrances are level with the street (e.g. split-level). If the entrances are sunk significantly below street level, the sense of address of these houses is reduced. It may also reduce the visual containment of the street and its passive surveillance, and result in drainage problems.

How should streets be terminated in small in-fill projects where there is no open space available to terminate the view?

For in-fill projects the street layout should generally extend the existing network. Special view terminations may not be required as the streets will continue through the established neighbourhood. If it is not possible to connect new streets with old, then look at the existing context for houses or other landscape elements that can act as view terminators.

The dwellings in this street have absorbed the slope by being designed with the dwellings to have the garage on the low side of the block and the house wrapping over the garage.

This street has a straight alignment that focuses attention on the hills behind. The view is also terminated by the house at the end of the street which is also positioned centrally on the street axis. Together they create a dramatic view and strong sense of place for the street.

2.4 Ease of use

Why this is important

Streets should be easy to use for all users. Landcom aims to create neighbourhoods where people have opportunities for walking and cycling, and this requires us to consciously design for pedestrians and cyclists as well as for cars. Streets designed for people are also often the most attractive.

Design principles

- Design local streets to reduce traffic speeds so that pedestrians, cyclists and vehicles can mix safely. Provide clear routes for pedestrians and bicycles as well as for vehicles.

- If separate cycle paths are provided indicate them with street markings or by clearly displayed and well-designed signage.

- Ensure pedestrian and bicycle routes are direct, continuous and well lit, and that appropriate street crossings are provided.

- Provide footpaths on both sides of the street (unless the street is a share-way for vehicles, pedestrians and cyclists, or if the vehicular traffic levels are very low) to provide equal amenity.

- Ensure footpaths are generally 1.5 metres wide to allow pedestrians (including those with prams and ambulant disabled people) to walk two abreast or comfortably pass each other, unless the street has only a small number of houses where 1.2 metres may be sufficient.

- Where paths are designed for shared use by pedestrians and cyclists, ensure they are at least 2.5 metres wide to enable safe and comfortable passing.

This street has sufficient width to suit its functional needs, provides a clear indication of where drivers should park and has footpaths to both sides for pedestrians. It also demonstrates the successful use of street trees planted in the carriageway.

Design principles continued

- Ensure each dwelling has a front gate and pathway (separate to the driveway) that connects to the public footpath to create a clear pedestrian address.

- Ensure appropriate visitor parking space is provided.

- On streets that front public open spaces, provide on-street parking adjacent to the open space to encourage public use.

Response to common issue

The local council does not support additional footpaths due to their maintenance cost.

Continuous footpaths are essential for walkable neighbourhoods. Grass is often uncomfortable or unsafe to walk on and cannot be negotiated by people with prams and less able people. Where footpaths are provided on both sides of the street people are less inclined to walk on the carriageway and they need to cross less often, thereby improving pedestrian amenity and safety. Footpaths should always be provided on both sides of the street unless it is specifically designed as a shared-zone with adequate clearances for vehicles, cyclists and pedestrians, or if the vehicular traffic levels are very low.

This street terminates at the local street by letting the footpath of the perpendicular street carry through with a small local park to clearly show the street terminates for vehicles but not for pedestrians or cyclists.

Where driveways coordinate with the footpath the public domain of the street achieves a more visually pleasing and uniform appearance as the landscape dominates rather than the driveways.

2.5 Functionality and clarity

Why this is important

Streets should be designed to suit their purpose. They must be sufficiently wide to accommodate their functions and the design must make clear the intended behaviour of the various users. This includes where and at what speeds drivers should travel, where vehicles should be parked, where cyclists should ride, and where pedestrians should walk and cross. If the design is ambiguous it may compromise safety and amenity.

Design principles

- Provide a sufficiently wide carriageway to allow vehicles to pass safely.

- Where parking bays are inset in the verge ensure that the verge length between insets is insufficient to allow a vehicle to park. *(see diagram "Parking Layout" page 15).*

- Set garages at least 5.5 metres back from the front property boundary to enable a vehicle to be parked in front of the garage without blocking the verge.

- If a two-way street is designed with a single lane travel-way and parking lanes on both sides, ensure that driveways are staggered to minimise the number of cars parked directly opposite one another. *(see diagram "Staggered Driveways on Minor Local Streets" page 15).*

- Ensure sufficient lane width and corner splays on streets that are to be used for bus routes.

- Ensure the design of street lighting and landscaping is integrated to avoid conflicts, such as tree canopies that block light spill to the street.

Response to common issue

Wider street reserves diminish yield and drive up development costs.

Streets that are too narrow to function effectively reduce neighbourhood amenity and marketability. Particularly where lots are smaller, generous street reserves are required to enable landscaping that may otherwise have occurred in front gardens.

The car spaces, footpath and carriageway are clearly defined and avoid any conflict or safety issues.

Parking Layout
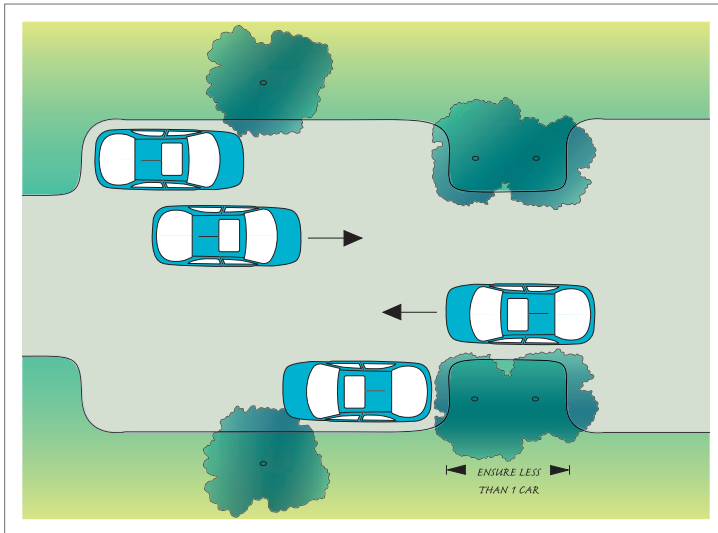
Keep the length of verge widenings to less than the length of a car so that drivers do not assume that it is acceptable to park next to the wider portion of the verge rather than in the parking bays.

Staggered Driveways on Minor Local Streets
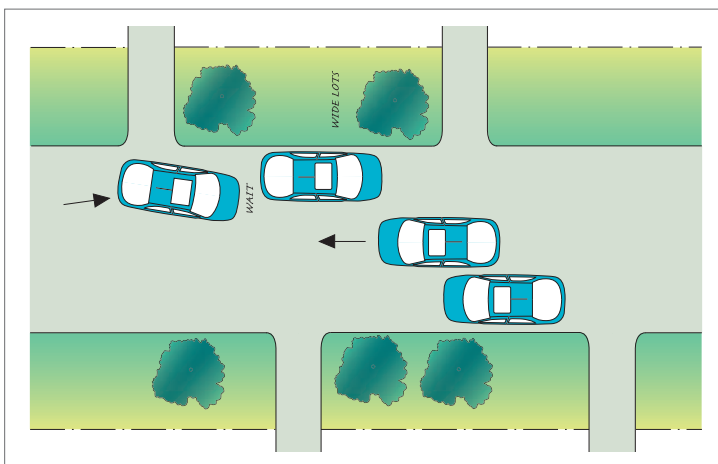
Where a minor local street is used which has a single travel lane and on street parking to both sides, ensure that the driveways are staggered to stop cars parking directly opposite each other which stops cars being able to weave between the parked cars.

This street defines very clearly where each activity is to occur: from walking for pedestrians, to where parking is encouraged and where the vehicle carriageway occurs. This is an urban solution but the principles are appropriate for any street.

2.6 Safety and vehicle speed

Why this is important

Streets need to be safe for all users. The level of passive surveillance of a street, traffic speed and parking behaviour affects the actual and perceived safety of pedestrians. Streets that feel safe are more likely to foster social encounters and activity. Narrow streets may reduce traffic speeds but they do not always achieve other design objectives. Wider streets that provide a more generous public domain can be designed so that they do not become speedways.

Design principles

- Design first for the needs of the least mobile – pedestrians and cyclists before cars.
- Design for passive surveillance of the street – all houses on the street should have a habitable room with windows facing onto the street.
- Visually contain the carriageway to promote steady, predictable traffic speeds by:

  - *encouraging hedging or front fences to contain the street reserve*
  - *using upright kerbs to clearly define the boundary between the pedestrian and vehicle zones*
  - *providing on-street parking*
  - *providing wide verges to reinforce the pedestrian zone*
  - *planting street trees at regular spacing within the carriageway and / or verge*
  - *using appropriate landscaping.*

- Only use narrow streets (i.e. Minor Local Streets as defined in Section 3) to reduce traffic speed when traffic volumes are low, when lot frontages are wide (at least 15 metres) so driveway cuts are infrequent, and when street parking is likely to be intermittent.

Response to common issues

Why do trees in the carriageway slow traffic?

When trees or other substantial landscaping is planted in the carriageway the travel-way appears narrower which encourages drivers to slow down. Trees and landscaping in the carriageway also effectively reduce the perceived width of streets, and hence speeds, when there are no parked cars that would otherwise do the same job.

Why do houses on corners have to address both street frontages?

Houses on corner lots can play a very important function in local streetscapes. They are the visual as well as the literal turning points. If they are designed to address both street frontages, this improves the passive surveillance of both streets as well as the intersection. Houses on corners should be designed with habitable rooms (such as living rooms or bedrooms) with windows facing both streets. Wrap-around verandas or terraces also encourage residents to use their front gardens, particularly when they face north and when fencing or landscaping is used to delineate private space from the public domain.

Trees within the carriageway visually narrow the width of the road whether there are parked cars or not.

2.7 Visual containment and continuity

Why this is important

Streets that are designed to a human scale with a good sense of visual continuity and enclosure (other than those fronting open space) tend to be the most attractive streets and those where people feel most comfortable. They generally have a better sense of place. Asymmetry, irregular alignment and haphazard use of materials, including different coloured materials, tend to erode visual containment and continuity of the street.

Design principles

- Design suburban streets and streetscapes to achieve a sense of enclosure for the street itself. Street trees over time provide a good sense of enclosure for the street, as can the predominant building line.

- Achieve visually contained streetscapes by:

    – *spacing street trees so that their canopies will meet when mature where possible*

    – *spacing street trees so that they read as a continuous linear element of the street*

The tree guards in this street provide vertical elements that help to contain the street, until the trees are mature.

Landscaping creates beautiful streets. It creates desirable and memorable places.

This street has an excellent sense of containment despite the houses being set well back.

In this photo the sense of containment is created by the fences to the laneway as well as the street trees planted on the edge of the verge.

Design principles continued

- *using a continuous line of hedging or fencing (with consistent height) at front property boundaries*

- *using two-storey houses on the low side where one side of the street is lower than the other.*

- Use robust tree guards to protect immature street trees. The guards themselves may contribute to the visual containment of the street if well-designed.

- Design streets so that the major structural elements (such as verge design, fence heights, street trees and predominant massing) are roughly symmetrical to create containment and balance for the street.

- Maintain generally consistent setbacks of houses where possible.

- Ensure the treatment of street trees, heights of front fences, and verges are consistent to maintain visual continuity.

- Avoid wiggly carriageways and irregular parking areas.

Response to common issues

How do you treat a street that has rear-access houses on one side and front-access houses on the other?

Preferably don't design a street like this. If it is unavoidable, ensure the verges and front fences are treated consistently on both sides of the street. Ensure the driveways match the colour and materials of the footpaths on the verge so that they don't dominate. Plant street trees as symmetrically as possible and use the same species on both sides of the street.

When street trees are first planted they don't have much presence on the street.

It is difficult to achieve visual containment in new streets when trees are immature. Using well-designed and stout tree guards, about 1 – 1.2 metres high, can assist in providing containment before the trees are established. Consider planting more mature trees in some streets to improve their early presentation.

The verge in this image has the footpath along the street edge with tree planting near the fence line. The paling fence provides strong definition in combination with the street trees.

2.8 Verge design

Why this is important

The street verge needs to do much more than accommodate utility services. Its design can vitally contribute to the sense of place of a new neighbourhood. The design of paths affects how people use them, and landscaping and other elements contribute to the visual containment of the street. Verge design is particularly important in neighbourhoods with smaller lots – where every square metre of external space needs to contribute to the amenity of private residences and the public domain.

The verge, including the fence is the interface between the private and public domains and its design can affect how people interact across this edge. Clearly defined boundaries remove ambiguity between private and public space, and may help residents and pedestrians feel more comfortable. Front fences and hedges have an important role in defining the private-public boundary and in enhancing streetscape character. Fences and hedges with a consistent height may help to visually contain the street and tie elements together.

Fences and hedges may also:

- provide separation between public space and private front yards – landscaping in the verge in front of fences increases the separation
- encourage people to use front verandas and gardens because they feel more secure when boundaries are defined

- encourage people to leave curtains open during the day (because the public-private boundary is separated from the house) which in turn enables passive surveillance of the street
- screen public utility service boxes
- be designed with integrated letterboxes
- provide the 'walls' of outdoor rooms which become more usable spaces, as an extension of the indoor living spaces, when well designed.

Design principles

- Design the verge to read as a continuous linear element of the street. Ensure continuity across intersections.
- Ensure the verge is wide enough to accomm-odate trees in their mature form.
- Ensure driveway cross-overs of the verge are the same material and colour as the footpath to achieve visual continuity.
- Ideally avoid any separation between the footpath and the front property boundary. Where councils or utility providers require it plant the gap with a grass strip, hedge or other landscaping.
- Provide footpaths on both sides of the street (unless the street is a share-way for vehicles, pedestrians and cyclists, or where vehicular traffic levels are very low).

The verge in this street is well defined with a strong alignment created by the fence, the simple footpath, grass verge and rain garden with street trees. It creates a pleasant ambiance for pedestrians. Generally the parking bay would not be a different colour to the roadway as in this image and the cycleway would be combined with one of the street footpaths for safety.

Design principles continued

- Use upright kerbs. They are preferable to rolled kerbs because they create better definition between the carriageway and the verge, and they encourage better parking behaviour (i.e. people park closer to the kerb when it is upright, and they are prevented from driving up onto the verge where they should not). Upright kerbs also enable easier access to and from vehicles for disabled and elderly people.

- Clearly define private property boundaries with a fence or hedge. Consider using a small level change (step up) to the house to reinforce change from semi-private to private space.

- Limit the height of front fences and hedges to 1.2 metres to enable passive surveillance of the street and to contribute to the street's amenity.

- Use fencing materials (or hedge species) that are consistent with or complementary to the context to achieve visual consistency and maintain a consistent fence and / or hedge height.

- Do not use sheet metal fencing where it can be seen from the public domain as it can detract from visual amenity.

- Ensure fences on corner lots are designed as front fences addressing both streets (rather than a front and a side fence).

- Ensure front fences between dwellings are the same height as front fences/hedges to a point at least 2.0 metres behind the dwelling frontage. Ideally side fences separating front yards should be the same material as the front fence (unless it is a hedge).

Response to common issues

Wide verges use up too much developable land.

The appearance of the street is an important factor in a buyer's purchase decision. It can vitally contribute to the sense of place of a new neighbourhood and improve its marketability. Wide verges create the impression of generous streets. They compensate in some part for reduced building setbacks and smaller lots.

Wide, well-designed verges with footpaths create walkable neighbourhoods, which is a Landcom objective.

Narrow streets with mean, poorly designed verges tend to bring down the appearance of the whole neighbourhood. They are not consistent with Landcom's best practice objectives.

The design and materials of the front fence returns up to the side of the house as part of the design of the house frontage and garden.

This house continues its front fence around the corner of the block with the higher rear fence set back along the building frontage.

2.9 Landscape design

Why this is important

Quality landscape design is imperative for good streetscapes. Landscaping can create continuity and containment even when buildings are poorly designed or inconsistent. Street trees, when mature, tend to be the most prominent landscape elements. They can contain vistas and help to define boundaries, reduce traffic speeds by narrowing the perceived travel-way, provide shade and habitat for fauna, and be integrated with stormwater management systems. Green streets help to create a sense of place and are generally the most attractive.

Design principles

- Maximise landscaping in all streets. Plant trees in all streets and retain existing trees wherever possible.

- Tailor the landscape design (including species selection, tree spacing and bay design) to the local context and street orientation. Be conscious of the limb-drop, sap and fruiting of some tree species.

- Where possible, plant deciduous trees on both sides of east-west streets, to shade north-facing lots in summer and allow sunshine in winter.

- Ideally, space trees so that the canopies touch when mature. Generally allow a minimum 1.5 x 1.5 metre planting area for a substantial tree.

- Ensure there are no potential conflicts with other street elements, such as streetlights being blocked by the tree canopy, or car doors being opened onto tree trunks.

- Where appropriate integrate landscape design with water sensitive urban design systems.

- Where trees are in the carriageway (i.e. vehicles drive over root zones) plant trees in structural soils to maximise air and water supply, and the horizontal root zones.

Response to common issues

The local council does not support street trees in the carriageway due to concerns about maintenance, liability and limb-drop.

If tree pits are designed for mature trees and species are appropriate for their context, there should be no long-term maintenance liabilities. WSUD elements may also be integrated with the pit design to provide water and nutrients for the tree. There are many tree species, both native and introduced, that do not drop limbs. Select a species appropriate for the location and streetscape design.

The local council does not support street trees within, or separating, parking bays because they disrupt street cleaning devices.

The impact of the trees on street cleaning is no different to that of parked cars. The benefits of trees in the carriageway balance the concerns: they improve the appearance of the street and they narrow the travel-way to calm traffic, which in turn improves safety and amenity.

Landscaping creates beautiful streets. It creates desirable and memorable places.

2.10 Water sensitive urban design

Why this is important

All Landcom developments are required to have a WSUD (water sensitive urban design) strategy that ensures the development complies with our targets for potable water reduction, stormwater pollution control and flow attenuation.

Streets account for a significant percentage of the impervious area of a development, causing increased stormwater flows. They are also the source of a number of water borne pollutants such as sediments, metals and hydrocarbons that adversely affect the health of receiving waters. WSUD elements can be integrated into open space and streetscapes to collect and treat runoff prior to discharge.

Design principles

- Use stormwater treatment elements in the urban landscape to maximise the visual and recreational amenity of developments.

- Size WSUD elements relative to the contributing impervious area (approximately 2-3% of its catchment depending on the geographical location).

- Generally, WSUD is most effective on slopes of 1-4%.

- Where slopes exceed 4% either bio retention street planters or additional flow control features (such as check dams with swales and bio retention systems) can be used.

- Use WSUD elements such as bio retention swales on the high-side verge reserve if there is one.

Swales can also be simple grass depressions on the street edge or within an open space area.

A rain garden within a verge bubble can be a useful element within any WSUD strategy depending on the design, character and topography of the street.

A rain garden designed as an integral part of the public domain adds character as well as being functional.

Design principles continued

- Where the street runs perpendicular to contours use either verge or bio retention systems.

- Where practical, incorporate WSUD elements in the centre median of dual travel-way streets.

- Ensure street or driveway crossovers of bio retention swales are either at grade or incorporate a culvert crossing. If this is not possible, use discrete WSUD elements separated by driveway crossovers.

- Refer to Landcom's WSUD policy for details about WSUD streetscape elements (including street tree planter bio retention systems, raingarden bio retention systems, bio retention swale systems, and vegetated swales).

Response to common issues

Do WSUD elements in streets have to be a component of a broader WSUD strategy for a development?

The WSUD strategy allows for the integration of all WSUD elements within the development to ensure that the site complies with established sustainability objectives. Street-scale WSUD elements are a key component of a WSUD Strategy.

Should all streets have WSUD elements?

It is not necessary to provide WSUD elements on all streets. Stormwater can be directed to a series of development-wide systems. The number and location of WSUD elements should be determined by modeling to develop the WSUD strategy for the site, and integrated with the overall design.

How should WSUD elements be integrated with travel-ways and parking areas?

Parking areas can be located adjacent to WSUD elements but should be designed to prevent vehicles damaging these systems. Bollards or kerbs with regular breaks are required to allow distributed flow to the WSUD element. Parking areas may be interspersed between WSUD elements, such as parking bays between raingardens.

Do WSUD elements require much maintenance?

In the first two years it is important to remove weeds. Only limited maintenance is required after this.

This street has a swale within its central median as part of the WSUD strategy. The unique kerb treatment and timber walkway also create an interesting streetscape.

2.11 Design for on-street parking

Why this is important

On-street parking supplements private parking areas and creates activity on the street. Activity means people and improved passive surveillance. On-street parking may also help to calm traffic speeds as it reduces the width of the carriageway available for travel, and drivers are required to slow down or stop to let others park.

Design principles

- Provide an appropriate level of on-street parking, relative to demand.

- Ensure significant landscaping of the verge (or carriageway if street trees) is achieved.

- Ensure parking is level with the travel-way.

- Use upright kerbs.

- Use trees, tree guards and landscape boxes to define parking bays where appropriate.

- If parking bays are inset in the verge, ensure end bays are sufficiently long to enable easy maneuvering of vehicles. Vehicles should be able to park easily without mounting the verge.

- Design the parking bay layout to allow continuous mature tree canopies, by providing trees adjacent to the parking in the verge as well as between them if necessary.

- Avoid single parking bays as they tend to be inefficient and more difficult to park in.

The parking bay is inset into the verge and separately defined from the carriageway.

On-street parking should be provided on all streets – the design needs to respond to the type of street, number of lots accessed off the street and the character of the area. In this street the on-street parking is defined by the upright kerb as part of the carriageway with cars able to park on either side of the street.

Response to common issues

Why are raised parking pads on the verge not acceptable? They have been used in quite a few recent developments.

Raised parking pads create ambiguity between the space allocated for parking and the pedestrian zone, which compromises safety. Drivers also feel uncomfortable mounting the verge and find it difficult to judge distances because of the flat plane of the pad.

Some local councils prefer rolled kerbs. Rolled kerbs also enable driveways to go anywhere.

Upright kerbs are preferable because they define the street edge better, they provide a stronger edge to park against and encourage drivers to park closer to the kerb, they discourage verge parking and they enable easier car access for passengers.

BASIX orientation requirements and smaller lot frontages have reduced the options for driveway locations so the perceived benefit of the rolled kerb in providing flexibility has diminished. Achieving northerly orientation for living areas tends to result in more limited configurations for the lot depending on the topography and orientation of the street. This, coupled with the narrow lot frontages which again reduce the opportunities for the driveway location, means that driveway positions are much more predictable. Therefore the advantages of roll kerbs from a construction view point are diminished and less significant, relative to the issues that they are creating.

This street has the on street parking defined by both upright kerbs and street trees within the carriageway.

Here the upright kerb is part of a street tree bioretention system for trees in verges which can be a useful element within the WSUD strategy depending on the design, character and topography of the street.

2.12   Details and services

Why this is important

The appearance of otherwise well-designed streets can be brought down by poorly positioned utility services and ill-considered detailing. For example, the visual impact of electrical pillar-boxes may be reduced if they are positioned within landscaping or against front property fences. The visual integrity of a street will generally be improved if verge materials are consistent – not having multi-coloured, multi-patterned driveway cross-overs for example. Simple techniques, such as continuous footpath edging, can be used to lift and unify the appearance of streets.

Design principles

- Locate service utilities to be as visually unobtrusive as possible.

- Ensure civil engineers and services contractors are aware of the street design objectives and the need to integrate services with other design elements.

- Share services trenching wherever possible.

- If services are run between front property fencing and the footpath, screen service access points and electrical pillar-boxes with landscaping.

- Limit the colour and materials palette for public domain elements.

- Ensure driveway cross-overs of the verge are the same material and colour as the footpath to achieve visual continuity.

- Use design details, such as footpath edging, to unify street elements where appropriate.

Response to common issue

Homeowners want to express their individuality in the materials and colours they use for their driveway.

Everyone shares the public domain and unified streetscapes are generally the more attractive. Residents can still express their individual taste on their own properties by using different materials from the front property boundary to the garage, but the treatment of the street itself should be consistent to reinforce its sense of containment.

The simple use of inset pavers within the footpath can add interest and help to tie in grey driveways through the estate as part of a coordinated approach.

The use of fencing and hedging within the front garden even in smaller lots can assist in screening the services.

model
street types

Model street types for Landcom projects

This section contains design models of the street types that will most commonly be used in urban and suburban Landcom developments. They have been developed with advice from the Urban Design Advisory Service; with input from urban design, engineering, transport planning, WSUD and landscape consultants; and tested by selected Landcom development teams in various local government areas.

Models are provided for:

- major roads (with slip roads)
- collector streets
- local streets
  - *with trees in the verge*
  - *with trees in the carriageway and verge*
  - *with parking bays (and optional raingardens)*
  - *with trees in the carriageway, and swales*
- minor local streets
- lanes and access-ways.

Each street type includes a description of the street and its function, and the issues to be considered in its use. Plans and sections for each street type are also provided. These models are a starting point for the design of street systems in new developments. The street dimensions and design elements are not intended to be applied uniformly in all circumstances. The WSUD measures, for instance, are indicative and each development will require a fully designed site-specific strategy.

Both these streets are local streets. They provide quite a different character that reflects their context.

The left image is a more urban solution with strong definition provided to a narrower verge and car parking inset. The hedging responds well to the vertical emphasis created by the two storey terrace houses and provides definition whilst the trees mature. Each house has a very small setback with a common fence treatment which assists in tying the street together visually.

The right image is a suburban setting with on-street parking within the carriageway and extensive tree planting which has matured to provide a green canopy over the street. The verges are generous with the public-private interface created by front fences of varying types.

Model street types table and street hierachy diagram

STREET TYPE	INDICATIVE TRAFFIC VOLUME RANGE (VPD)	TARGET DESIGN SPEED (KM/HR)	STREET RESERVE WIDTH (M)	CARRIAGEWAY WIDTH (M)	APPROPRIATE USE
Major Road (with slip road)	6000	60	Slip road – 10.1m Main carriageway varies depending on the swale width.	Slip road – 5.6m Main carriageway – 8.2m in each direction.	Major roads are generally used to link and pass through major town or suburban regional/sub regional centres. They will normally have a major bus route along them but are subordinate to the primary distributor roads.
Collector Street	3000-6000	60	20.4m	11.6m	Collector Streets link neighbourhoods together. They usually carry bus routes within as well as between neighbourhoods. Neighbourhood and local centres are usually located along these routes at intersections.
Local Streets - : with trees in the verge : with trees in the carriageway + verge : with parking bays : with trees in the carriageway and swales	Up to 3000	50	17.4m unless the verge contains a swale in which case the reserve width will increase depending on the required swale width.	9.6m 9.6m 10.4m 9.6m	Local streets are the predominant street type within a neighbourhood. They provide access to the dwellings, parks and neighbourhood edges. The type of local street used should relate to the local context, lot widths and WSUD strategy.
Minor Local Street	1000	40	14.8m	7.6m	Minor local streets have a limited use. Use only where: : traffic volumes are low, : there is low parking demand and : where the lot width is 15m or more.
Lanes and access ways/mews	300	15	8.0m	6.0m	Lanes or access ways are used to provide rear vehicle access to dwellings. They should be designed as shared zones with good passive surveillance. They should be a maximum of 100m and have a straight alignment.

Street hierachy diagram

KEY

- 🟥 Major Road
- 🟧 Collector Street
- 🟩 Local Streets
- 🟦 Minor Local Street
- 🟪 Lanes
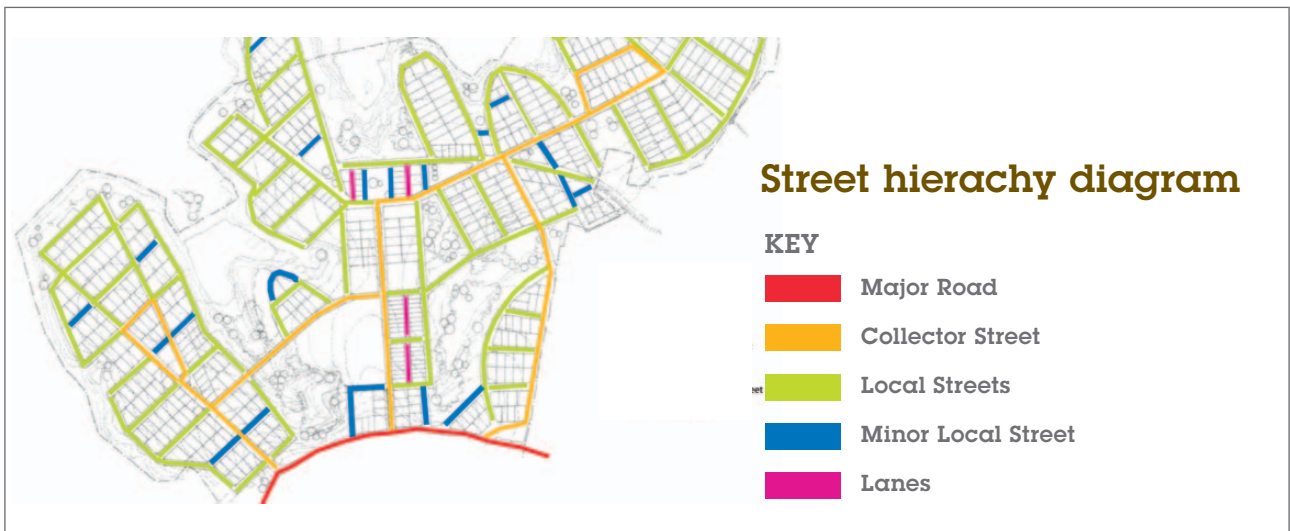
Although immature at present the trees between the car bays will provide a pleasant environment for this collector street. Here the cycle path has been combined with the footpath to provide a strong pedestrian link to the local centre.

3.1 Major Roads

Description

These are significant roads that are designed for considerable traffic loads (approximately 6,000 vehicles per day). They should be designed for a vehicle speed of up to 60 km/h. They are subordinate to primary distributor roads and have frequent connections to local streets. They will generally be used for major bus routes. Shops, schools and community facilities will often be located on major roads.

Issues to be considered

- Dwellings situated on major roads may require some separation from the carriageway to protect their amenity. Ideally we should strive to have buildings, rather than rear fences, facing all types of roads to increase their visual appeal. Separation may be provided by a slip road that provides access to dwellings, such as that shown in the model shown on page 31. Advantages of providing slip roads on major roads include:

  – *Houses and other buildings and facilities are separated (visually and acoustically) from traffic.*

  – *It is better to have houses and other buildings facing the road, as this achieves passive*

surveillance and a better visual outcome, than to have the road lined with rear fences. When the buildings are separated from the main carriageway by a slip road they are more likely to be designed to face the road.

  – *Slip roads provide a safer environment for pedestrians and enable cars to be parked on the road more safely than if they were parking on the main road carriageway.*

  – *Slip roads provide safer access to private driveways.*

  – *There is more opportunity for landscaping including WSUD bioswales where appropriate.*

  – *Cyclists may use slip roads as an alternative to the more heavily trafficked main road.*

- Extensive landscaping of these roads will soften their appearance and create a more attractive environment for users.

- Landscaping of major roads with slip roads should include major trees within a central median, in a landscaped strip between the main carriageway and slip road carriageway, and in the verge.

The dividing median for this slip road provides visual separation from the main carriageway - over time the main carriageway will be almost invisible from the housing greatly improving its amenity.

Both these roads above have the dividing median between the carriageways heavily landscaped. One shows native species in character with the local area whereas the other makes a bold planting statement to create a differentiated character. Both improve the visual appearance of the road and reduce its apparent width.

3.1 Major Road

Note: Dimensions are to the kerb upright.
Landscape verge dimension will vary with
the tree species selected for the street.

LOT BOUNDARY

PLANT/
SERVICES
0.6m

GRASS/
TREES
1.5m 2.4m

FALL TO SWALE

5.6m

1.5m 3.5m 3.2m

3.2m 3.5m 1.5m

GRASS/
TREES
5.6m

2.4m 1.5m

PLANT/
SERVICES
0.6m

LANDSCAPED
SETBACK

FOOTPATH

PARKING AND
TRAVEL LANE

GRASS AND
SWALE

BIKE
LANE

TRAVEL LANES

CENTRAL MEDIAN
(AND SWALE IF ROAD
FALLS TO CENTRE OF
TOTAL ROAD RESERVE)

TRAVEL LANES

BIKE
LANE

GRASS AND
SWALE

PARKING AND
TRAVEL LANE

FOOTPATH

LANDSCAPED
SETBACK

10.1m

SLIP ROAD RESERVE

CARRIAGEWAY

10.1m

SLIP ROAD RESERVE
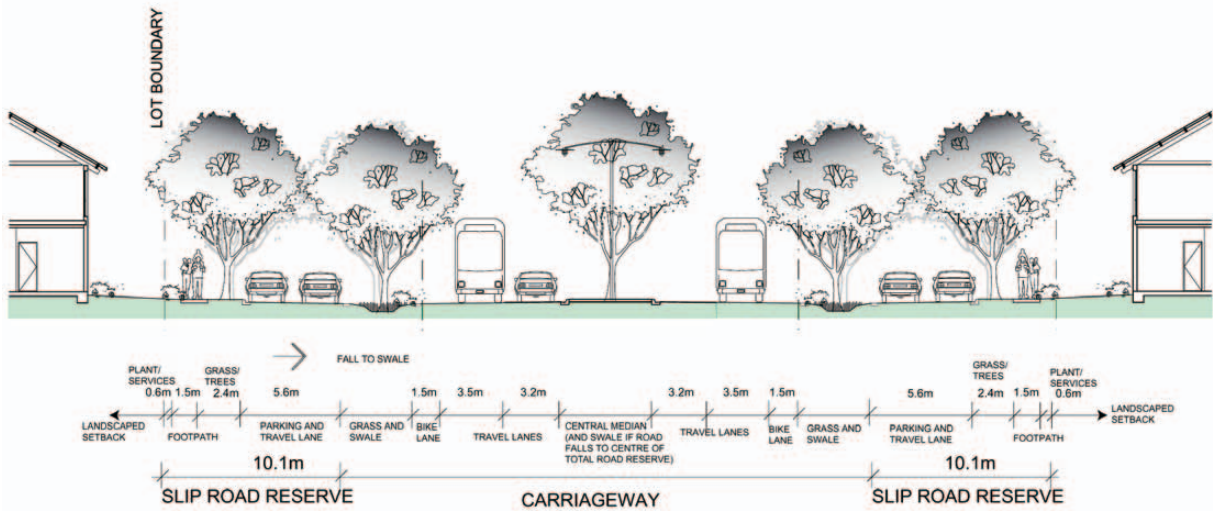
Section - Major Road (with Slip Rd)
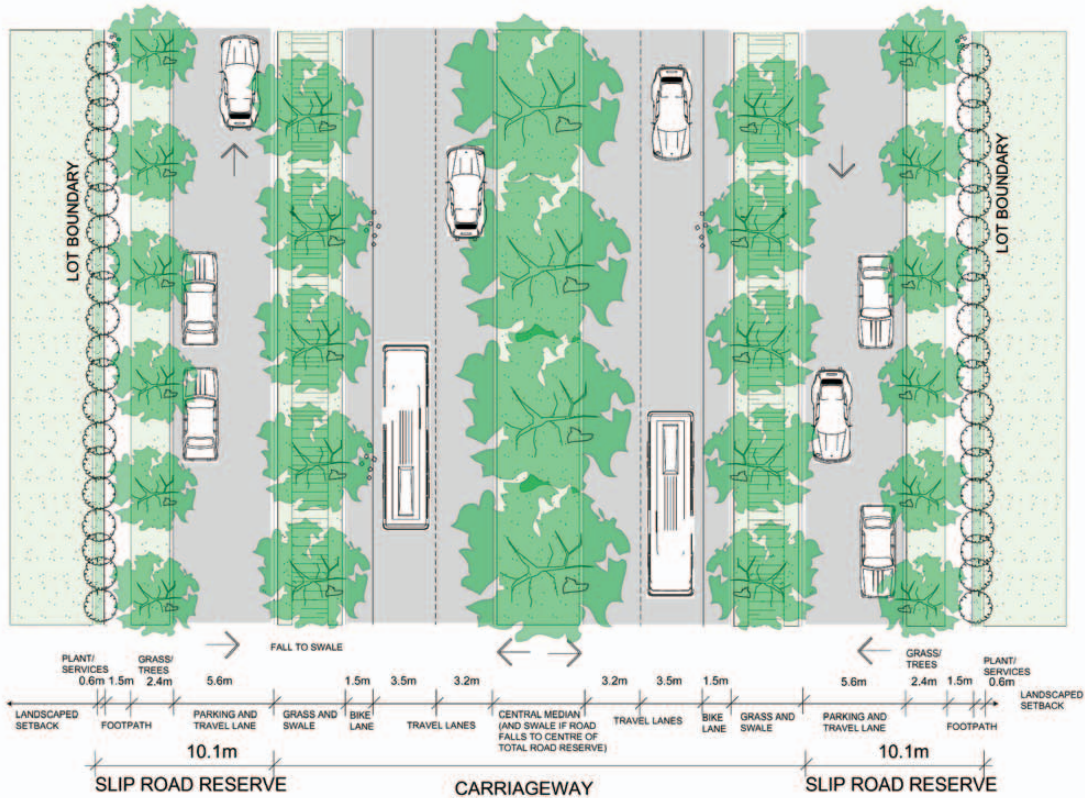
Plan - Major Rd (with Slip Rd)

3.2 Collector Streets

Description

These are streets that typically link neighbourhoods, and link local streets to major roads. They are the neighbourhood 'arrival' streets so their character has an important impact on sense of place. They carry approximately 3,000 – 6,000 vehicles a day and they should be designed for a vehicle speed of up to 60 km/h. (Note that AMCORD refers to minor and major collectors. This traffic volume and travel speed relates to major collectors as described in AMCORD.) These streets are normally edged by residential uses but neighbourhood or small local centres may be located along them.

Issues to be considered

- These streets need to be designed to enable easy way-finding. They are generally more direct than subordinate streets, and their character needs to reflect their function.

- These streets need to be carefully designed to control vehicle speed and provide an environment that is pleasant for pedestrians. They should not be designed to attract significant long-distance through-traffic.

- Collector streets must be designed to enable use by buses.

- Extensive landscaping may improve the amenity of collector streets and help to create a sense of place for the neighbourhood.

- Entry statements (such as signage marking the 'gateway' to an estate) should be avoided or temporary (e.g. for the sales period only) as it effectively isolates the development, creating an enclave, which goes against the principles of social sustainability. As an alternative to entry statements, public art or unique landscaping can be used to signal a point of arrival.

- For the safety of cyclists it is better to provide a combined footpath and cycleway, rather than having cyclists use the travel-way in order to avoid incidents between cyclists and parking cars. Combined footpaths and cycleways should be clearly sign posted and/or marked.

- Bus stops should be located where there is likely to be passive surveillance at most times of the day and night (e.g. outside dwellings rather than in open space).

- Houses should face the street rather than present a rear fence.

- If bioswales are to be used then one verge should be increased in width to accommodate it or a central median should be used.

This street works well as a collector street. The parking visually narrows the street and combined with the mature street trees, it achieves a good proportion and sense of containment.

This collector uses a central planted median. The landscaping improves the appearance of the street and reduces its apparent width even when there are no parked cars in the parking lane. Verge widenings in places narrow the carriageway at key points to further control vehicle speed.
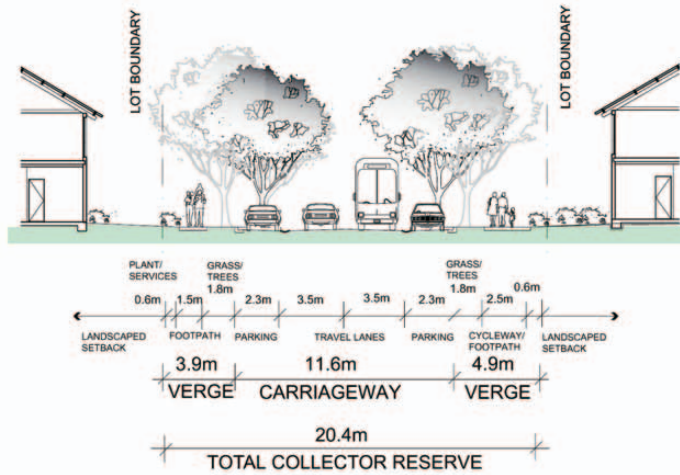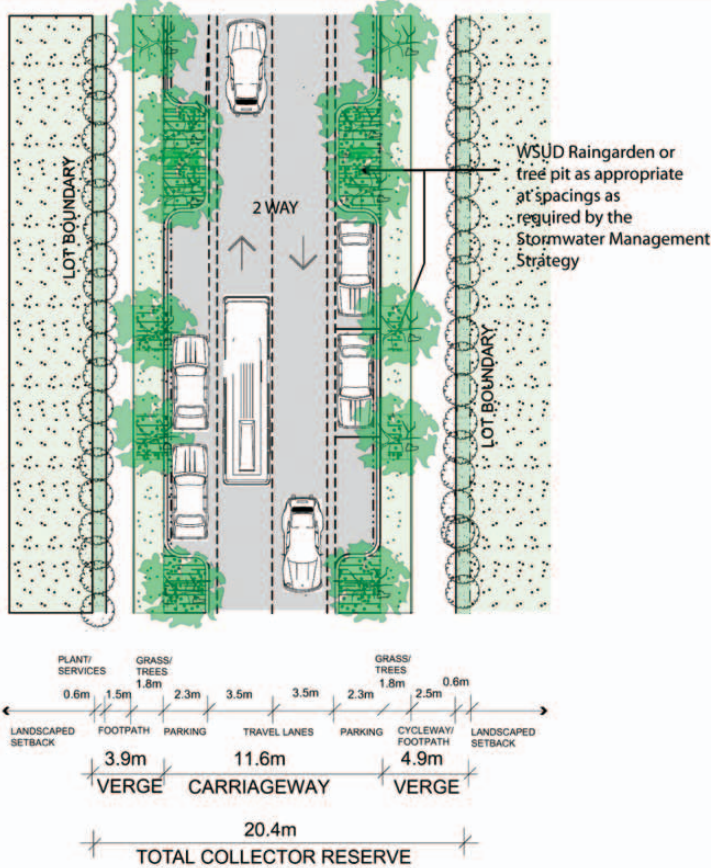
This street uses native landscaping to define the parking bays on the collector road. The distinctive landscape treatment also provides a strong sense of place.

3.2 Collector Street

Note: Dimensions are to the kerb upright. If the street is not to be used as a bus route then the width of the carriageway travel lanes can be reduced to 3.2m each i.e. 11m carriageway. Landscape verge dimension will vary with the tree species selected for the street.

| LOT BOUNDARY | | | | | | | | | LOT BOUNDARY |

PLANT/ SERVICES	GRASS/ TREES 1.8m					GRASS/ TREES 1.8m			
0.6m	1.5m	2.3m	3.5m	3.5m	2.3m		2.5m	0.6m	
LANDSCAPED SETBACK	FOOTPATH	PARKING	TRAVEL LANES		PARKING		CYCLEWAY/ FOOTPATH	LANDSCAPED SETBACK	

3.9m — VERGE   11.6m — CARRIAGEWAY   4.9m — VERGE

20.4m — TOTAL COLLECTOR RESERVE

Section - Collector Street

2 WAY

WSUD Raingarden or tree pit as appropriate at spacings as required by the Stormwater Management Strategy

| LOT BOUNDARY | | | | | | | | | LOT BOUNDARY |

PLANT/ SERVICES	GRASS/ TREES 1.8m					GRASS/ TREES 1.8m			
0.6m	1.5m	2.3m	3.5m	3.5m	2.3m		2.5m	0.6m	
LANDSCAPED SETBACK	FOOTPATH	PARKING	TRAVEL LANES		PARKING		CYCLEWAY/ FOOTPATH	LANDSCAPED SETBACK	

3.9m — VERGE   11.6m — CARRIAGEWAY   4.9m — VERGE

20.4m — TOTAL COLLECTOR RESERVE

Plan - Collector Street

3.3 Local Streets

Description

These are the most common streets within Landcom neighbourhoods. They carry up to approximately 3,000 vehicles a day and they should be designed for a vehicle speed of up to 40-50 km/h. Four local street models have been illustrated in this document, for application in different contexts and local government areas.

Issues to be considered

- Local streets should prioritise pedestrians and cyclists – they should provide a pleasant environment that encourages walking and social interaction.

- Even where local streets run along a park edge or open space, parking should be provided on both sides of the street. Footpaths on the edge of the open space are also important to provide easy access and continuous pedestrian routes.

- Particularly where there are smaller lots, local streets can become an extension of the residents usable open space and the street design should enhance the amenity of these lots.

- The models in this section are mainly for suburban locations – in urban settings it is likely that the verge would be paved or bitumen, with tree bays or possibly hedging and raingardens. Where the verge is hard surfaced it may be possible to reduce the verge width.

- Local streets should be landscaped with trees to provide shade. They should also provide habitat for local fauna.

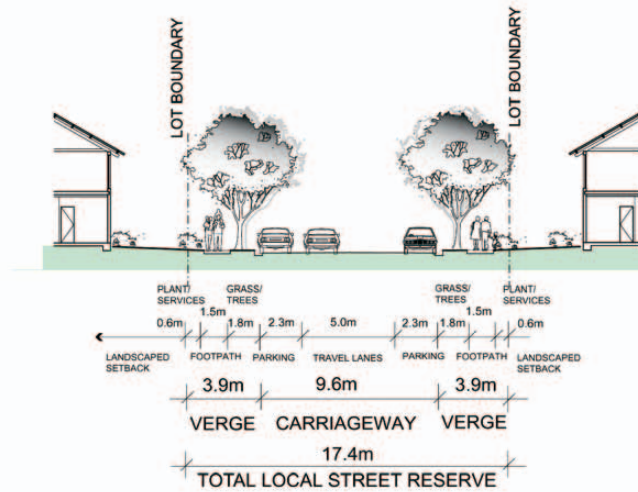- Houses on local streets corners should address both street frontages.

This local street has parking in bays created by trees planted within the carriageway. This street is suitable for both urban and suburban situations with its arching tree canopy.
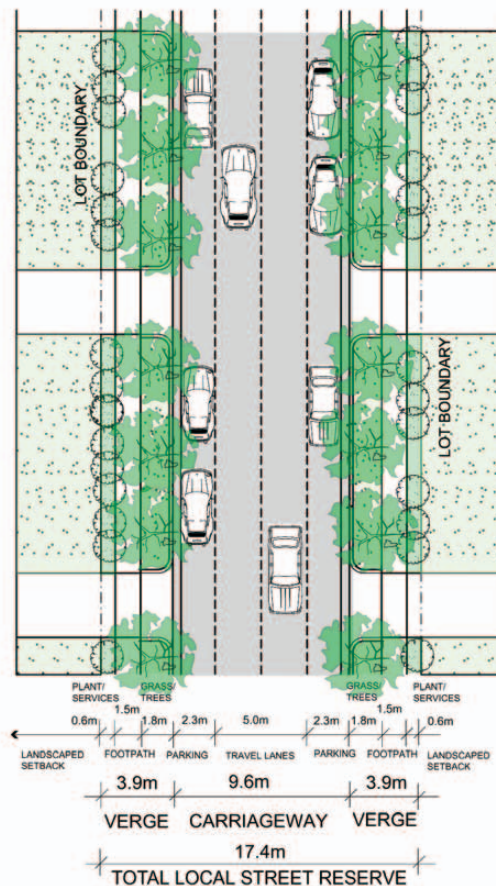

This street has a more rural character with unmade edges, very wide verges and more random tree planting. Again the boundry is defined by fencing or hedging.

3.3.1 Local Street with trees in the verge

Note: Dimensions are to the kerb upright.
Landscape verge dimension will vary with
the tree species selected for the street.

LOT BOUNDARY

LOT BOUNDARY

PLANT/ SERVICES	GRASS/ TREES				GRASS/ TREES	PLANT/ SERVICES
0.6m	1.5m	1.8m	2.3m	5.0m	2.3m	1.8m	1.5m	0.6m
LANDSCAPED SETBACK	FOOTPATH	PARKING	TRAVEL LANES	PARKING	FOOTPATH	LANDSCAPED SETBACK

3.9m — 9.6m — 3.9m

VERGE CARRIAGEWAY VERGE

17.4m

TOTAL LOCAL STREET RESERVE

Section - Local Street with trees in the verge

LOT BOUNDARY

LOT BOUNDARY

PLANT/ SERVICES	GRASS/ TREES				GRASS/ TREES	PLANT/ SERVICES
0.6m	1.5m	1.8m	2.3m	5.0m	2.3m	1.8m	1.5m	0.6m
LANDSCAPED SETBACK	FOOTPATH	PARKING	TRAVEL LANES	PARKING	FOOTPATH	LANDSCAPED SETBACK

3.9m — 9.6m — 3.9m

VERGE CARRIAGEWAY VERGE

17.4m

TOTAL LOCAL STREET RESERVE

Plan - Local Street with trees in the verge

3.3.2 Local Street with trees in the carriageway and verge

Note: Dimensions are to the kerb upright.
Landscape verge dimension will vary with
the tree species selected for the street.

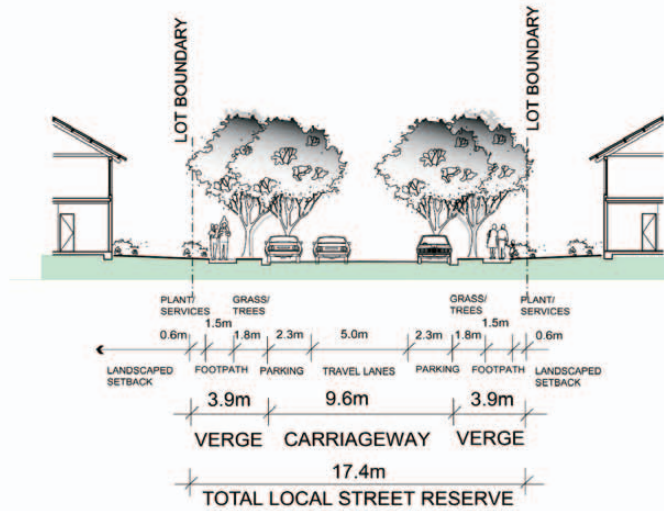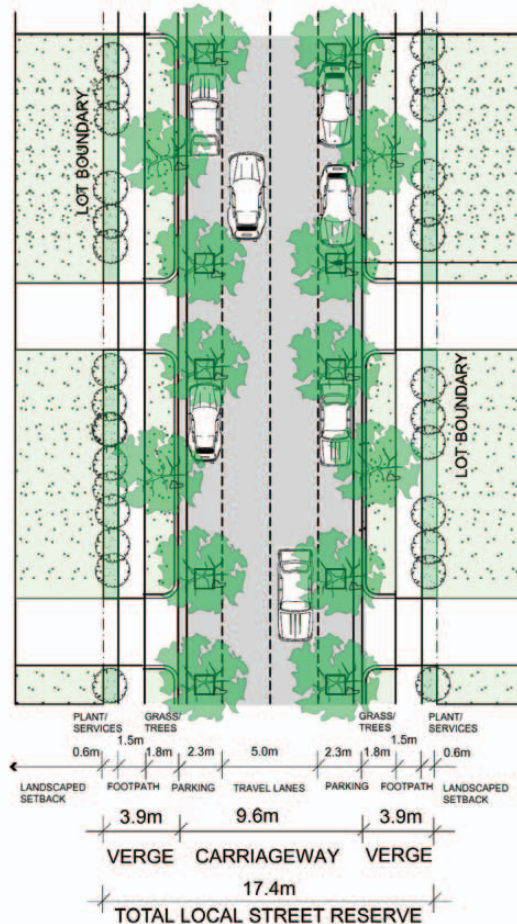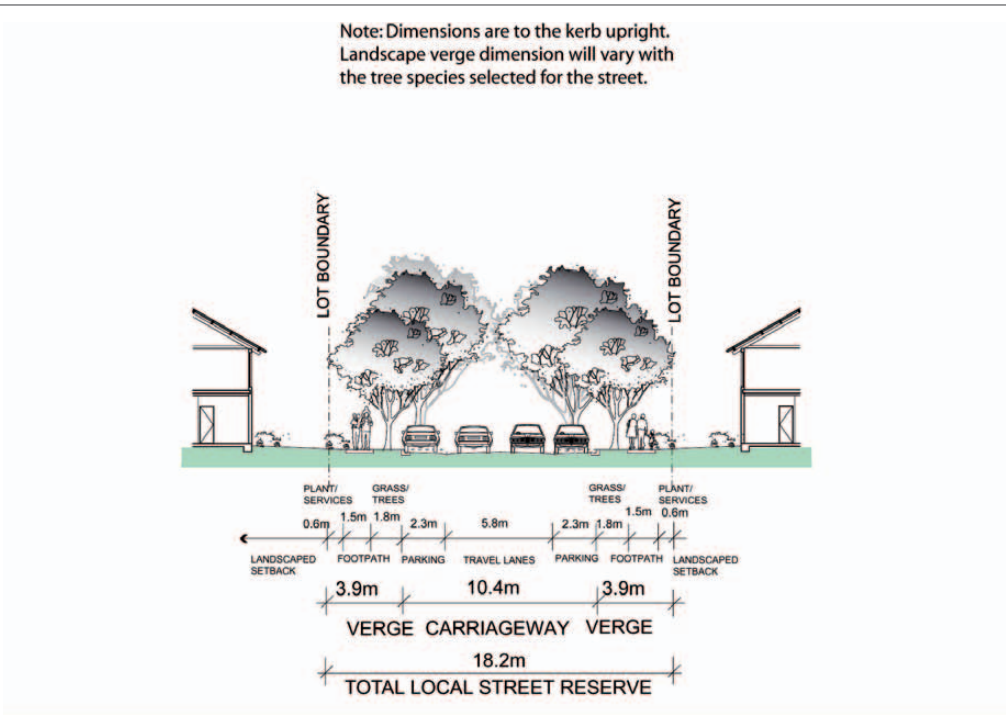Section - Local Street with trees in the carriageway

Optional raingarden or
tree pit as part
of an WSUD strategy -
size to suit localised
conditions.

Plan - Local Street with trees in the carriageway

3.3.3 Local Street with inset parking bays (and optional raingardens)

Note: Dimensions are to the kerb upright.
Landscape verge dimension will vary with
the tree species selected for the street.

Section - Local Street with inset parking bays (optional raingardens)

Optional raingarden or tree pit as part of an WSUD Strategy & to discourage parking in carriageway

In local streets without driveways 3 car bays should be provided between verge widenings.

No. of car parking spaces will vary depending on lot width but should not exceed 3 spaces.

Plan - Local Street with inset parking bays (optional raingardens)

3.3.4 Local Street with trees in carriageway and swale

Note: Dimensions are to the kerb upright.
Landscape verge dimension will vary with
the tree species selected for the street.

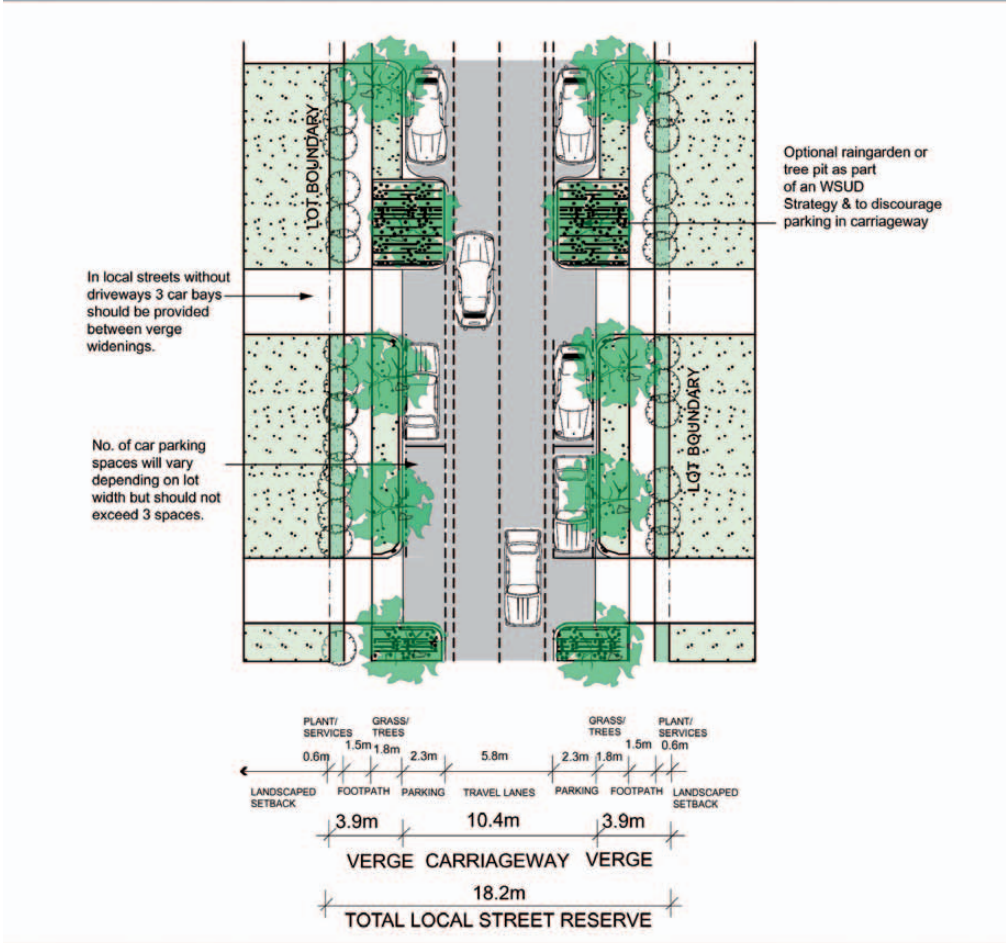Section - Local Street with trees in the carriageway & swale

Swale location and width/dep
will vary depending on
topography, area draining to
the swale and likely flow rates
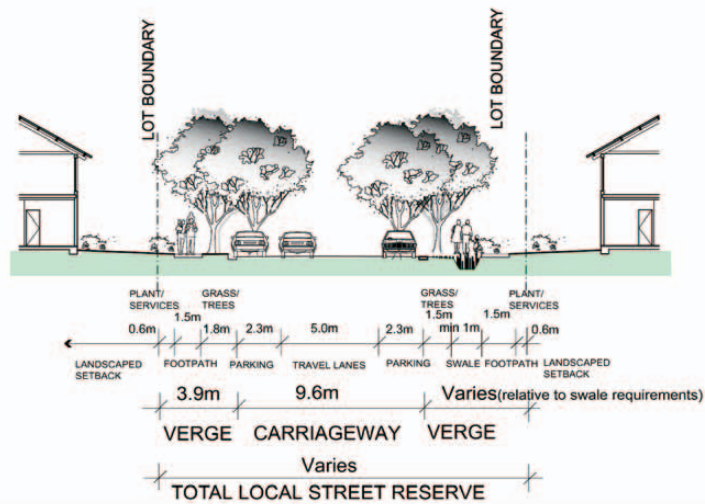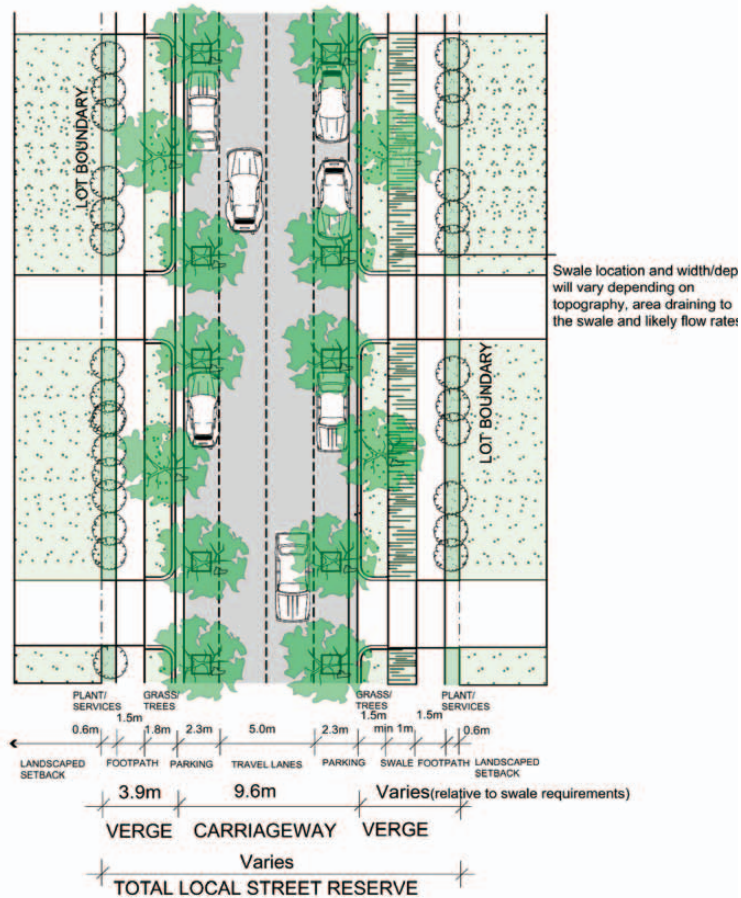
Plan - Local Street with trees in the carriageway & swale

Examples of well designed local streets with differing parking configurations.

3.4 Minor Local Streets

Description

Minor local streets are relatively narrow and are therefore suited to only the quietest routes within a subdivision - i.e. those with limited pedestrian and vehicular through traffic. Their use is limited in this way because when there are too many cars parked in a minor local street (as seen in photo bottom right) it is difficult for traffic to 'weave' effectively as intended.

Issues to be considered

- Minor local streets should only be used where lots are wider than 15m in order to keep the number of driveways limited and the vehicular and pedestrian traffic from residents at a low level.

- Driveways on a minor local street should be staggered *(see diagram page 15)*.

- Minor local streets should have footpaths on at least one side of the street.

- Given the lesser number of pedestrians using a minor local street, footpaths here can be reduced to 1.2m if necessary.

- If used as a no-through street or cul-de-sac then ensure that the length of the street is limited so that it serves 10 houses at most.

- The termination of the street should be capable of accommodating a three point turn as illustrated in Section 2.1 Connectivity and legibility.

- Upright kerbs should always be used in these street types as drivers may be tempted to park up on the verge otherwise due to the narrow carriageway.
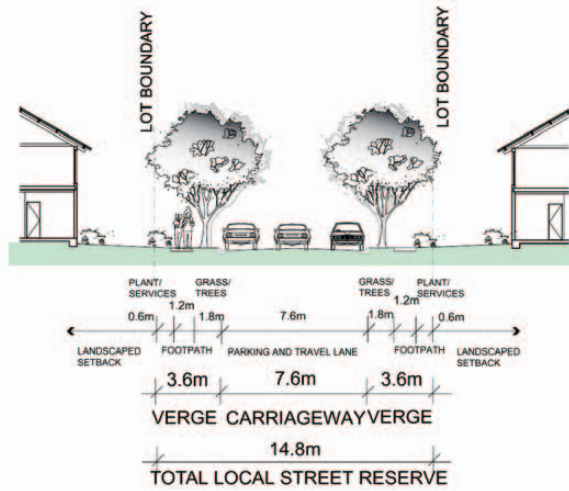

These two images are minor local streets where parking can occur in the carriageway on either side of the street.
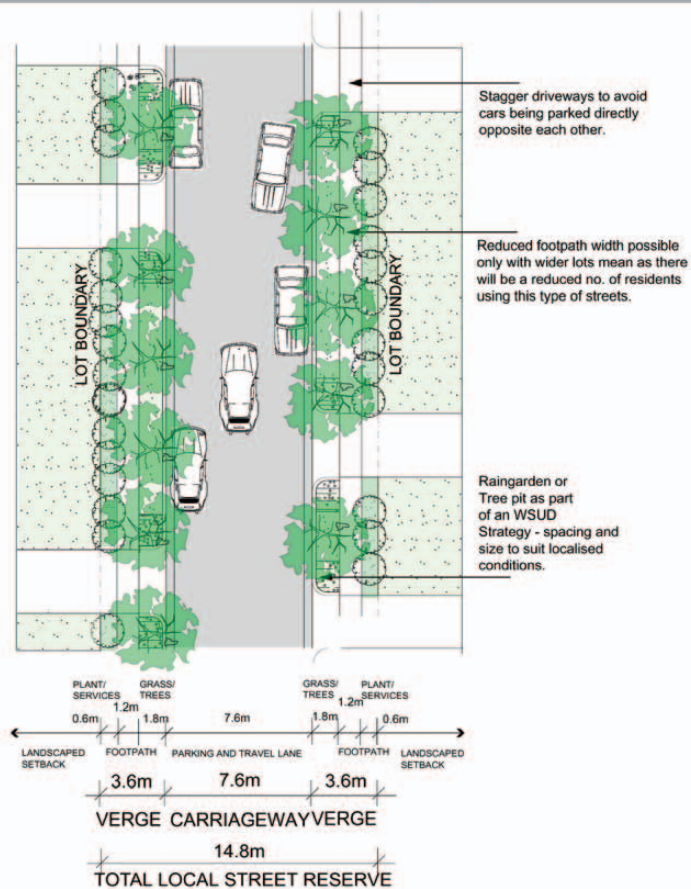
The street provides one lane for travel if cars are parked opposite each other but can provide good speed control where cars are parked diagonally opposite. This creates a 'weaving' effect.

3.4 Minor Local Street

Note: Dimensions are to the kerb upright.
Landscape verge dimension will vary with
the tree species selected for the street.

LOT BOUNDARY

LOT BOUNDARY

PLANT/ SERVICES	GRASS/ TREES			GRASS/ TREES	PLANT/ SERVICES
0.6m	1.2m	1.8m	7.6m	1.8m	1.2m	0.6m
LANDSCAPED SETBACK		FOOTPATH	PARKING AND TRAVEL LANE	FOOTPATH		LANDSCAPED SETBACK

| 3.6m | 7.6m | 3.6m |
| VERGE | CARRIAGEWAY | VERGE |

14.8m

TOTAL LOCAL STREET RESERVE

Section - Minor Local Street

Stagger driveways to avoid
cars being parked directly
opposite each other.

Reduced footpath width possible
only with wider lots mean as there
will be a reduced no. of residents
using this type of streets.

LOT BOUNDARY

LOT BOUNDARY

Raingarden or
Tree pit as part
of an WSUD
Strategy - spacing and
size to suit localised
conditions.

PLANT/ SERVICES	GRASS/ TREES			GRASS/ TREES	PLANT/ SERVICES
0.6m	1.2m	1.8m	7.6m	1.8m	1.2m	0.6m
LANDSCAPED SETBACK		FOOTPATH	PARKING AND TRAVEL LANE	FOOTPATH		LANDSCAPED SETBACK

| 3.6m | 7.6m | 3.6m |
| VERGE | CARRIAGEWAY | VERGE |

14.8m

TOTAL LOCAL STREET RESERVE

Plan - Minor Local Street

3.5 Lanes and access-ways

Description

Lanes, access-ways and mews are generally used for small-lot housing to provide rear access for car parking. They may also be used for lots fronting parks or major streets to avoid frequent driveway cuts, which reduce the number of on-street parking spaces.

Issues to be considered

- Lanes should not be treated as purely utilitarian – they should be designed as pleasant and safe elements of the street network, with sufficient 'address' to create activity and provide passive surveillance.

- The safety of lanes and access-ways is critical – they should be designed according to CPTED (crime prevention through environmental design) principles and to minimise conflicts between vehicles and other users.

- Lanes should be short (less than 100 metres) and should always link other streets (no dead ends). They should generally be straight, providing visual connection from one end to the other.

- Lanes should provide a minor address for some dwellings to enable passive surveillance. This may be achieved with small apartments or studios accessed off the lane (e.g. above garages). Ideally these dwellings should have an actual 'front door' or clearly defined entry onto the lane rather than just a rear gate. They should also have windows or a balcony looking into the lane. These secondary dwellings should be located at each end of the lane, with at least some in the middle portion, when solar orientation allows.

- Lanes should be wide enough to allow some tree planting to improve visual amenity. Landscaping should be planted in a semi-mature state to minimise risk of damage. When mature, landscaping in lanes should have a raised canopy so that it does not block access and sight lines.

- Rear fences along lanes should be partly semi-transparent to enable passive surveillance – as a guide at least 25% of the fence should be transparent. Narrow inset areas of fencing should be avoided as they offer opportunities for concealment. However some variation in fence alignment can provide interest and allow for landscaping.

- Lanes should be designed as shared zones – materials and signage should make the intended behaviour of all users clear. However, the colour of the lane should not vary substantially from the local street to which is connects – it should read as a part of the overall street network.

- A minimum lane width of 6 metres is required adjacent to a garage door, to allow for a vehicle to enter and exit.

- Lighting of laneways is important to achieve safety at night – lighting should be positioned to minimise areas of darkness, and light spill to surrounding residences should be avoided.

- Ideally, screened bin storage should be provided in lanes for residences.
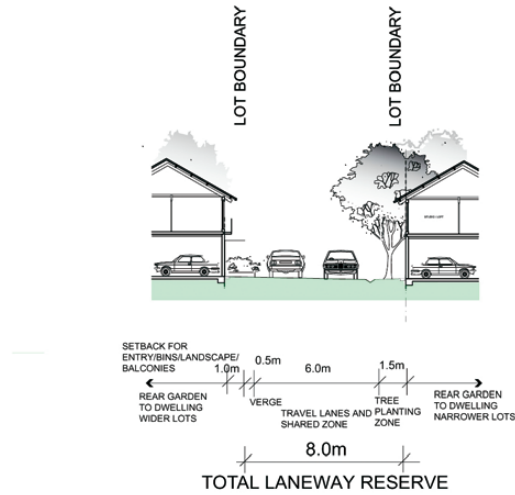

This image shows how a quality rear fence, a gate and small amount of landscaping can improve the amenity of the lane considerably.
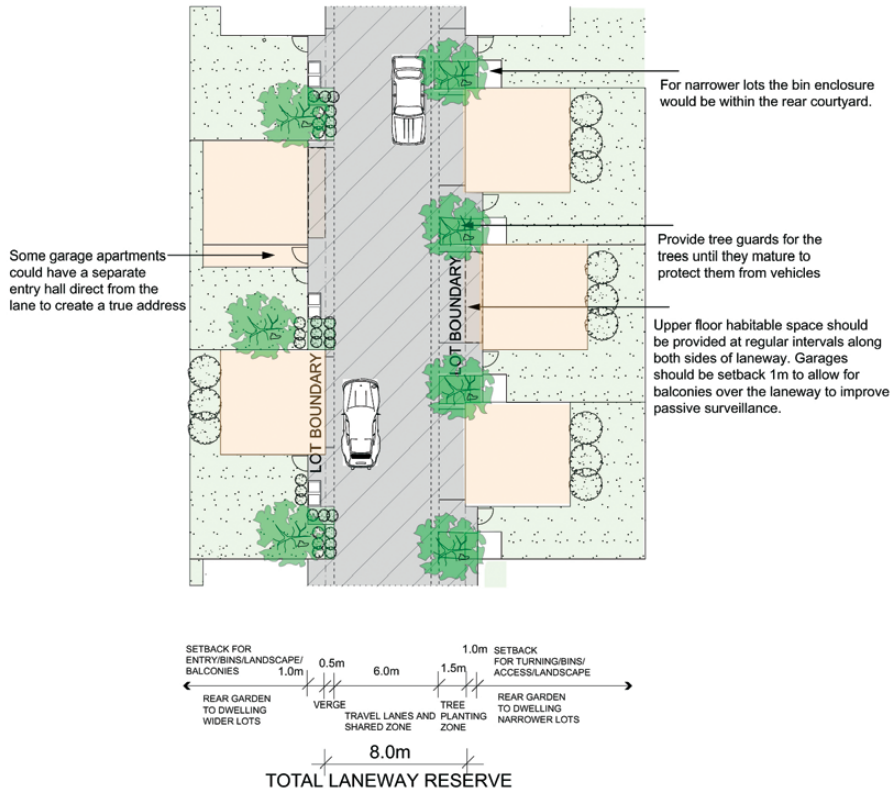

This lane is not typical but shows how the inclusion of a footpath, landscaping and parking, as well as studio apartments, can all contribute to a quality rear lane solution.

3.5 Lane

Note: dimensions are to the kerb upright

LOT BOUNDARY

LOT BOUNDARY

SETBACK FOR
ENTRY/BINS/LANDSCAPE/
BALCONIES   1.0m   0.5m   6.0m   1.5m

REAR GARDEN
TO DWELLING
WIDER LOTS

VERGE

TRAVEL LANES AND
SHARED ZONE

TREE
PLANTING
ZONE

REAR GARDEN
TO DWELLING
NARROWER LOTS

8.0m
TOTAL LANEWAY RESERVE

Section - Laneway or Access Street/ Mews

For narrower lots the bin enclosure
would be within the rear courtyard.

Some garage apartments
could have a separate
entry hall direct from the
lane to create a true address

LOT BOUNDARY

LOT BOUNDARY

Provide tree guards for the
trees until they mature to
protect them from vehicles

Upper floor habitable space should
be provided at regular intervals along
both sides of laneway. Garages
should be setback 1m to allow for
balconies over the laneway to improve
passive surveillance.

SETBACK FOR
ENTRY/BINS/LANDSCAPE/
BALCONIES   1.0m   0.5m   6.0m   1.5m   1.0m   SETBACK
FOR TURNING/BINS/
ACCESS/LANDSCAPE

REAR GARDEN
TO DWELLING
WIDER LOTS

VERGE

TRAVEL LANES AND
SHARED ZONE

TREE
PLANTING
ZONE

REAR GARDEN
TO DWELLING
NARROWER LOTS

8.0m
TOTAL LANEWAY RESERVE

Plan - Laneway or Access Street/Mews

references

A number of references have been sourced for the preparation of this document. These may assist designers and project managers to gain a greater understanding of the issues and principles of these guidelines.

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