
Subdivision Design Guide

Table of Contents

INTRODUCTION

- *Application*
- *Intentions*
- *Interpretation*

1 Activity location

- *Distribution, intensity and mix of activity*
- *Design for diversity*
- *Locating parks and other open spaces*
- *Orientation of lots*

2 Access and interconnection

- *Connection to neighbouring areas and facilities*
- *Internal connectivity*

3 Sense of place

- *Distinctiveness and memorability*
- *Authenticity*
- *Orientation and wayfinding*

4 Landform and natural features

- *Relation to landform*
- *Streams, watercourses and storm water runoff*
- *Mature trees and established vegetation*

5 Public space design

- *Street trees and landscaping*
- *Walkability*
- *Safety*
- *Providing for recreation*
- *Storm water treatment*

6 Individual lot design

- *Shaping the lot*
- *Useable outdoor space*
- *Access to the lot*
- *Landscaping*
- *Privacy, sun and outlook for neighbours*

INTRODUCTION

Application

This Guide provides design assessment criteria for subdivision consent applications. It provides guidance to give effect to the Council's *Urban Development Strategy*, *Environmental Strategy*, and the *Northern Growth Management Framework*.

This design guidance should be read with any structure plan prepared for the area. The structure plan will provide strategic guidance on a number of the issues identified in this design guide including activity location, access and interconnection and landform and natural features.

Technical and engineering criteria relating to the implementation of development are contained in the separate Code of Practice for Land Development.

This Guide applies to new 'greenfield' subdivision, [as well as]^{PC56} subdivisions within the existing urban footprint, on either 'infill' sites (undeveloped land within the existing urban footprint) or 'brownfield' sites (previously developed land).

Specific objectives [and guidelines]^{PC56} may be less relevant to smaller subdivisions (e.g. less than 20 lots) than to larger subdivisions. Examples include provision for parks and open spaces, neighbourhood centres, and street connections, which may not be required in smaller subdivisions. Again, flexibility and judgment by Council is permitted on where the Guide's objectives and policies are relevant. [The guidelines for Individual Lot Design will apply equally to individual lots within larger subdivisions through to small scale subdivision applications creating just one lot.]^{PC56}

Besides this Guide, other design guides like the Multi-Unit Design Guide and Central City Design Guide may also be applicable to subdivisions. Relevant District Plan rules for the underlying zoning will also apply.

The (proposed) Development Contributions Policy defines "Greenfield development" as "a proposal that creates new residential or rural residential areas, and...includes residential or rural residential development on land that was zoned Rural, or Open Space." It also includes land that was zoned Residential within the land areas referred to in appendices 12 to 14 and 16 to 22 to chapter five of the operative District Plan as at 1 July 2005. That definition can be considered applicable to this Guide as well, with the added inclusion of non-residential development.

Intention

To facilitate neighbourhoods that are liveable, sustainable (both socially and environmentally), well connected, safe, that have a strong sense of place and which respect existing landscape and natural features

This Design Guide promotes high quality living environments including the public settings and facilities which allow a sense of community to develop. It will promote implementation of low-impact, environmentally sustainable design, maintaining valued landscapes and natural features. It also aims to provide for walking and cycling and convenient access to local facilities.

Detailed design objectives are set out in each section.

Interpretation

Relevance

Good design is a response to the specifics of the site and development brief for the project, and not all of the design guidelines in this design guide will necessarily apply to every site. However in all cases the relevant guidelines must be considered and the design objectives must be satisfied.

Design flexibility and responsiveness to site

There may also be instances where a design objective can be best achieved by a means not anticipated by a relevant guideline. In this situation, departure from a relevant guideline is justifiable if it can be demonstrated that the proposed design solution better satisfies the associated design objective.

Prioritisation

Priority should be given to those guidelines that are critical to satisfying the intention of this guide in an optimal way in each unique location.

Coherence and integration

Each subdivision design must respond to the range of relevant guidelines in a coherent and integrated way, and should have its own inherent design integrity and coherence.

Explanation

Italicised explanatory text is to assist decisions about the proper interpretation and application of the

guidelines.

Information requirements

Refer to Chapter 3 of the District Plan for a list of information required with each application. This includes a design statement that will describe how the proposal satisfies relevant design guidelines and objectives.

1 Activity location

The general location of different types of activity will be established by the structure plan for the area should such a plan have been prepared. In other areas opportunity may be taken to vary the density of activity in response to local site conditions. Close proximity to existing or new local neighbourhood facilities and parks and reserves can justify higher densities, and opportunities should be taken to connect to these. Lower density in peripheral areas may allow important natural features and open spaces to be retained.

Objectives

- O1.1 To provide convenient access to local neighbourhood services and facilities.
- O1.2 To provide a range of lot types and sizes, public spaces and local facilities to meet the needs of the community.
- O1.3 To create lots which lead to conditions of safety in both the public and private environments.
- O1.4 To create lots which have potential to use renewable energy sources.

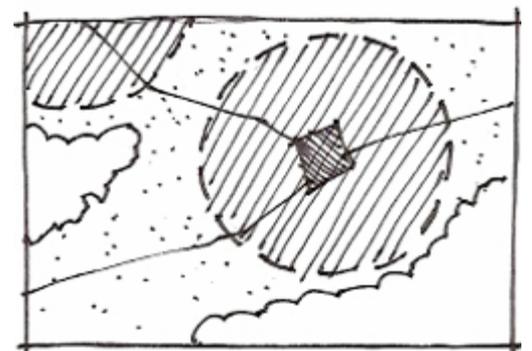
Guidelines

Distribution, intensity and mix of activity

- G1.1 Provide for service, retail, and community facilities at neighbourhood centres, as set out in the Urban Development Strategy and any applicable structure plans.

- G1.2 Concentrate the highest intensity of residential development within close walking distance of local neighbourhood and larger suburban centres, transportation nodes and public transport routes.

Variations in intensity and clustering of residential development both supports and draws support from neighbourhood centres and community infrastructure, and may also allow important natural features to be retained in other parts of the development. Concentrating smaller lots around important public spaces and at centres generates vitality and reinforces these as the focal point of the development.



Concentrate higher density development at or close to the centre

Design for diversity

- G1.3 Provide a range of lot sizes within a development, where appropriate.

Variation in lot size and density will provide a choice of living opportunities. It increases the likely range of building types and tenures, responding to the diverse needs of the wider community.

Opportunities for a range of lot sizes are more readily available in larger subdivisions but may also occur in some smaller subdivisions.

Locating parks and other public open spaces

- G1.4 Provide parks and other public open spaces close to and well connected with concentrations of activity such as neighbourhood centres, in locations that serve a substantial population within close walking distance, and in keeping with any applicable structure plans.

The broad location of park spaces will be identified in any structure plan applying to the area.

Community parks should be located within each suburb, within 10-15 minutes walking distance (800-1200m) of a significant majority of dwellings in the suburb. Smaller local parks and playgrounds should be provided within 5-10 minutes walking distance (400-800m) of a significant majority of dwellings. See G5.7 for size and design guidelines for community and local parks.

Parks should receive reasonable year-round sunshine and will be in full view and directly accessible from the main streets in the neighbourhood.

Except for areas of bush, streams and wetlands preserved for ecological reasons, public parks should not comprise residual land which is inaccessible, predominantly steep or south-facing, or otherwise unsuitable for recreation.

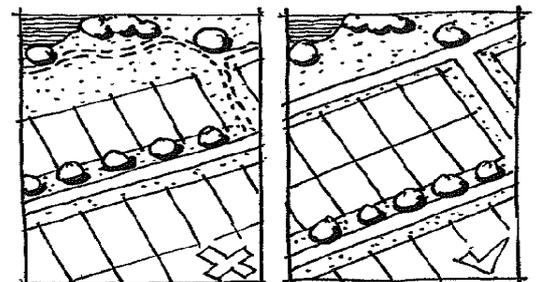
The need for public parks and other public open spaces can exist in subdivisions of any size. While a smaller subdivision may not always require public open space, it is often necessary to provide such space if private open space is minimal, and the site is not conveniently close to off-site parks and reserves.

Orientation of lots

- G1.5 Orientate lot frontages onto streets and other public spaces, wherever possible locating the fronts of lots opposite other fronts, and connecting backs to backs.

To enhance safety and security, ensure that all streets and other public spaces are bounded by lot frontages or overlooked from adjoining activity. Minimise rear lots.

- G1.6 Provide good natural surveillance of public parks or reserve areas through the orientation of adjacent lots and the provision of adequate adjacent road frontage.



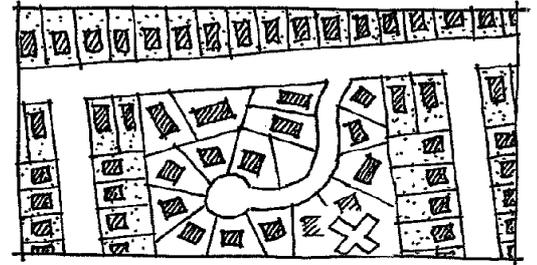
Poor lot orientation shown at left with backs of lots connecting to the park. Preferred orientation with

When lots back onto a park or reserve with high open space values, the lots should be orientated towards these areas. Enough adjacent road frontage should be provided to create a welcoming, practical, safe and accessible entrance to the park or reserve.

fronts of lots and street edge to the park indicated at right

- G1.7 Relate the orientation and alignment of lots in infill subdivision to established and defined neighbourhood patterns.

This applies to infill subdivision within those existing neighbourhoods that have a notably consistent character, and where contrast would undermine that character. Alignment of lot boundaries will influence that of the buildings that will be constructed, and the size of lots will impact on the 'grain' of development. Both characteristics are important determinants of character.



Avoid radical contrast with defining lot patterns

- G1.8 Plan and orientate lots to maximise the potential for solar gain into habitable rooms and private open space.

This suggests concentrating development on north-facing slopes where possible, especially for smaller lots where shading from neighbouring buildings is more likely to be a factor.

- G1.9 Where appropriate, take into account opportunities for joint energy schemes e.g. small scale wind turbines, solar generation and/or solar heating.

Options for producing renewable energy within a subdivision for the benefit of multiple lots should be considered, with allowance made for the space and orientation requirements of any such joint energy scheme.

- G1.10 In cases where land subject to subdivision and development proposals are located near, or traversed by, high voltage electricity transmission lines, take into account Transpower's Development Guide for development near high voltage transmission lines (September 2006).

2 Access and interconnection

Connections to neighbouring areas provide convenient access to existing facilities, better utilising and strengthening these facilities. Within a development, high levels of connectivity provide increased travel choice and convenience for users, and contribute to social interaction and energy saving by providing enhanced conditions for public transport walking and cycling. Easily understood networks with interconnected streets provide alternative routes for pedestrians and assist orientation and wayfinding.

Opportunities for street connections are usually available in larger subdivisions but may exist in some smaller subdivisions as well, depending on their location.

Objective

- O2.1 To provide good accessibility to, from and within an area, permitting a choice of modes of access and routes.

Guidelines

Connection to neighbouring areas and facilities

- G2.1 Provide street connections to adjoining neighbourhood centres, residential areas, recreational reserves, regional walkways, other public facilities, and future development areas and more direct links to existing or proposed public transport services.

Key roading connections will be identified in any applicable structure plan.

Where walkways are provided rather than street connections, apply the principles of Crime Prevention Through Environmental Design (CPTED) to their design.

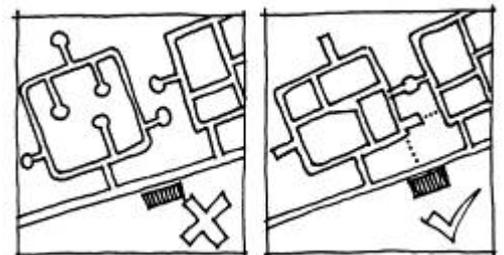
Internal connectivity

- G2.2 Provide streets in a highly interconnected network structure that is simple and legible, and provides good access to public transport services, neighbourhood centres and public facilities.

This will be characterised by relatively small blocks (particularly at and close to any neighbourhood centre) and will provide a choice of routes. Long cul-de-sacs should as far as possible be avoided. Where these are necessary because of topography, their heads should be interconnected wherever possible to provide access for pedestrians and cyclists. Where practicable, new residential development should either be located within 500 metres of a public transport route or provide for a viable public transport route.

Public facilities to which access should be provided include schools, parks, reserves and public walking tracks.

- G2.3 Accommodate vehicles, cyclists and pedestrians together, in preference to pedestrian-only routes.



Connection within and between areas

Neighbourhood streets that provide for a range of uses are safer than pedestrian-only routes. Pedestrian-only routes are generally acceptable only where part of a public recreational space, or where gradients or existing land tenure preclude full street access.

3 Sense of place

How people feel about where they live and whether they find it attractive is related to its sense of place. A distinctive and memorable sense of place may be developed with a combination of physical characteristics such as relation to underlying landscape and the configuration of public spaces and landscaping. It is also influenced by the activity and events in the neighbourhood.

Objectives

- O3.1 To develop a distinctive and valued character within new neighbourhoods.
- O3.2 To create systems of streets and other public spaces that people readily understand and find easy to navigate.

Guidelines

Distinctiveness and memorability

- G3.1 Retain existing notable landscape elements and create new features to give a distinctive and memorable sense of place.
Features that differentiate one place from another will contribute to memorability and a distinctive sense of place. Existing notable landscape features will be identified in any applicable structure plan. Such features will typically include underlying landform and landscape characteristics, spectacular views and distinctive vegetation, including mature trees. Minimising change to the existing landform will help to accentuate local character. Designed elements such as avenues of street trees, parks and high quality landscaping as well as landmark buildings and neighbourhood centres can also contribute to this effect. When developing local character, it is important to also maintain coherence and a positive relationship with the valued characteristics of the surrounding landscape and neighbourhood.
- G3.2 Identify significant views or landmarks, and align streets and design significant public spaces to focus on these.
New places and buildings that will serve an important public function should be emphasised as landmarks.

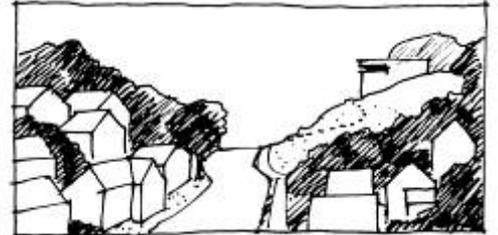


View aligned on a local landmark

Authenticity

- G3.3 Reinforce an authentic local sense of place by referencing past local events, the history of development and use of the site, the site's cultural significance, and the underlying landscape patterns.

An authentic sense of place can be developed by identifying, retaining and enhancing the defining features of the site. Methods include highlighting traces of past occupation where these exist; artistic interpretation in form, space or detail; naming of areas, streets and spaces to reflect the history of the place; and designing development to reflect strong underlying landscape or past development patterns. Historically significant existing structures, sites and buildings may be used as features in public open space.



Use of existing landscape features to give character and a sense of place

Orientation and wayfinding

- G3.4 Design new streets, accessways and other public spaces so that they fit within a coherent neighbourhood-wide system.

Clear visual links between existing parts of the city and new neighbourhoods will be achieved when routes are visible, and destinations are obvious.

Ensuring that there is visual continuity and coherence in the street network and its landscape treatment will assist users in finding their way to, from and within the area. For example, when an existing street is extended into or through a new subdivision, its streetscape (road width, footpaths, street trees, etc.) should generally also be continued. However, opportunities may exist to provide local enhancement, particularly when the existing street design or landscaping is unattractive or undistinguished.

Streets and accessways within infill subdivision should complement and complete existing street patterns. This relates to street type and alignment, as well as physical connection.

- G3.5 Where appropriate, give main routes within and through the subdivision a distinctive form and character that differentiates them from other streets in the neighbourhood.

Expressing the street hierarchy through streetscape and other design features will assist users in identifying main routes.

4 Landform and natural features

Landform and natural features contribute significantly to the sense of place and attractiveness of a neighbourhood. Retention of landform, streams and habitats is important to improving sustainability and reducing the adverse effects of sedimentation.

The objectives and policies in this section are generally applicable to all subdivision regardless of size. Whether they apply to infill and brownfield subdivision as well as greenfield subdivision depends on whether the infill and brownfield sites have existing landforms and natural features that have survived previous development.

Objectives

- O4.1 To maintain the distinctive natural character of the landscape including general contours and prominent landforms, areas of native bush, wetlands, streams and their margins.
- O4.2 To provide for the long-term sustainability of identified valued ecosystems and habitats.

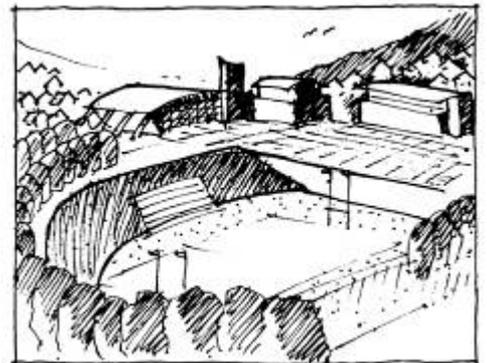
Guidelines

Relation to landform

- G4.1 Avoid intensive development on coastal escarpments, open ridgelines and skylines, and generally on sites steeper than 30 degrees.

This is to maintain valued landscape qualities of highly visible sites. Prominent landforms of particular value in Wellington include the coastal escarpment and terraces, and all main hilltops, ridges and spurs, and watercourses. Concentrating development on relatively flat areas and avoiding development of steep sites (particularly back sites over cliffs) will also give significant improvements in runoff, sediment control and stormwater quality.

Any applicable structure plan will identify the appropriate intensity of development for particular parts of the area.



Contour modification may be considered for publicly significant facilities

- G4.2 Minimise disturbance to natural landform.

Avoiding subdivision that relies on extensive earthworks will minimise the impact on the landscape, disturbance to natural systems and vegetation, and impact on stormwater quality. It will also maintain the local sense of place that is derived from building with rather than removing local landforms.

Some contour modification on hillsides is often required to provide access and to facilitate building works. In these cases, the slopes, edge alignments and

contour transitions created should relate to large-scale landform patterns.

Where landform modifications are made, cut faces should be concealed behind development, or finished to present as natural an appearance as practicable.

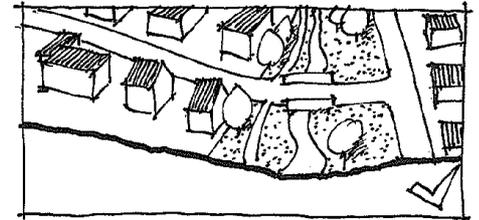
Streams, watercourses and storm water runoff

- G4.3 Maintain streams, watercourses and wetlands, and protect aquatic habitats and any associated native vegetation.

Where a structure plan has been prepared, this will identify the streams and watercourses to be protected by incorporating them into the open space network, and the presumption is that other sites will be developed. Other watercourses need not be preserved in place, but their watersheds and flow patterns should inform a subdivision's natural landscaping and stormwater plan.

Avoid piping streams and wetlands where other practicable options are available. While not all ephemeral streams need to be retained in place, alternative design solutions for stormwater management should be provided where practical. Combinations of new and existing watercourses, swales and wetland vegetation will contribute to visual and ecological connectedness and coherence.

Associated vegetation, including any new planting, may also enhance existing water features and habitats, add to the visual amenity of the neighbourhood, and assist with stormwater treatment and siltation management.



Watercourse retained as a feature within a development

- G4.4 Minimise additional stormwater runoff resulting from development.

Additional stormwater runoff can lead to erosion and degradation of water quality in the receiving environment. Consideration should be given to incorporating existing watercourses and wetlands into a stormwater plan that uses natural drainage to reduce runoff beyond the site. Rain tanks, rain gardens, permeable paving, dispersal trenches, soak pits and other techniques suitable for the site and its geotechnical conditions might also assist in reducing stormwater runoff.

See G5.8 for stormwater guidelines related to public spaces.

Mature trees and established vegetation

- G4.5 Protect remnant areas of native bush where possible.

This includes all native bush recognised as having ecological, visual, or historical significance. Such areas of bush on large private lots should be retained and protected wherever possible to help ensure ecological viability, and to form corridors of vegetation. In addition to their ecological benefits, such corridors help create a visual framework that

integrates development into the landscape.

- G4.6 Retain and integrate mature trees and native vegetation where these can make a positive contribution to the visual character, amenity and ecological values of an area.

Established trees and native vegetation are important components of ecosystems, help with stormwater management, integrate development into the landscape, and provide character, shelter and privacy.



Established trees contribute character

5 Public space design

Public spaces including streets, parks, squares and reserves provide the context for the homes of residents, and the setting for community interaction. When well-designed they will be attractive, safe and comfortable, and support a range of activities.

Objectives

- O5.1 To provide an attractive, safe and pleasant public environment for all users and all modes of use.
- O5.2 To achieve environmentally sustainable stormwater design wherever site conditions allow.

Guidelines

Street trees and landscaping

- G5.1 Use street trees to give local character and amenity, ensuring these are spaced in a way that defines the street space and achieve visual continuity. Generally use a single species of street trees within any one street.
- G5.2 Express the street hierarchy with differentiation of street trees and landscaping as well as street width.

The key elements of the street network will be identified in any structure plan applying to the area. Streets have an important function as public spaces, not just vehicle-ways. They should be designed to reflect their multiple uses and to retain a coherent visual pattern.

Trees on any street might be either distinctly different in appearance from the trees used on other streets to give a unique sense of place, or of the same species to visually emphasise physical connection.

Refer to the Code of Practice for Land Development for required street widths.

Walkability

- G5.3 Provide safe, convenient pedestrian access, generally along both edges of all streets.

Appropriate accommodation for pedestrians may vary in relation to the activities along the street edge. For example, a footpath may not be required along both sides of a street that has private lots on one side only. At the end of the roading hierarchy (ie on streets or accessways that serve a small number of dwellings and that do not provide through routes), shared surfaces for pedestrians and vehicles may be considered.

Safety

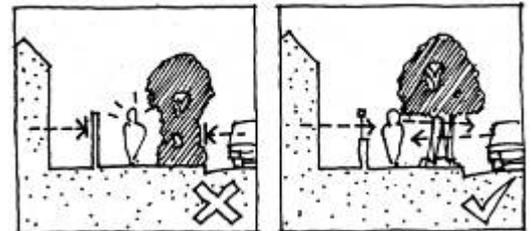
- G5.4 Ensure streets, accessways and other public open spaces are wherever possible bounded by active building frontages, with low or visually permeable fences at these boundaries, to allow the natural surveillance that promotes safety.

Urban places bounded by activity and overlooked from buildings are generally safer.

Lots should be configured so that building fronts and entrances connect to and windows will overlook public spaces. This, and avoiding high blank walls, provides the natural surveillance that contributes to safety in public space and security within the private realm.

- G5.5 Ensure vegetation within the street space does not obstruct car drivers' vision of pedestrians, cyclists or other vehicles and minimises the opportunity for concealment.

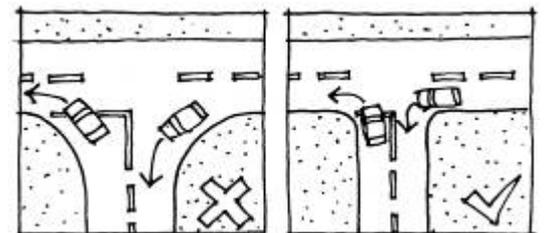
Low vegetation close to walkways or the street edge should be below the level of a driver's eye-line. High vegetation should generally be, when a tree matures, at least two metres above ground level to maintain sightlines for pedestrians.



Planting should allow views from and of the street, and minimise opportunity for concealment

- G5.6 Use traffic calming devices, suitable for the type of street and traffic conditions, to moderate driver behaviour and reduce traffic speeds.

The intention is to ensure drivers travel relatively slowly and cautiously within the local neighbourhood environment, particularly in areas shared with pedestrians. Methods may include planting, on-street parking, narrow carriageways, roundabouts, spatial constriction and tight corner radii. At the end of the roading hierarchy, or in neighbourhood centres, intensive traffic calming may be used to restrict vehicles to very low vehicle speeds. Refer to the Code of Practice for Land Development for specific engineering criteria.



Tight corner radii for traffic calming and pedestrian convenience

Providing for recreation

- G5.7 Provide attractive and accessible park spaces, including some that are suitable for active as well as passive recreation, which are dimensioned for the expected type and intensity of use.

Public parks should be treated as features of the development and should not be simply residual exposed, steep or flood prone areas that are suitable for no other use. Refer to G1.4 for more detail on the desired location and orientation of parks.

Community parks should provide a sunny flat area suitable for active recreation such as running and informal ball games as well as space for play equipment, seating and other passive activities.

Community parks can vary in size but are generally around 4000m². Local parks and playgrounds can be smaller.

Parks and other public open spaces within a neighbourhood centre may be relatively small, as large reserve areas or sports fields at centres tend to fragment them and disperse activities that ideally should be concentrated. Instead, large parks are best placed in locations readily accessible from but slightly away from the centre.

Regardless of size, all parks should contribute to a sense of community and safety by being relatively accessible and at least partly overlooked by adjoining activity.

Storm water treatment

- G5.8 Apply environmentally sensitive methods of storm water disposal within public spaces wherever practicable.

Swales and retention areas are a desirable means of dealing with storm water, assuming that the geological substrate is suitable for retention. These areas can be designed to contribute to visual amenity, irrigation and habitat development. Methods include retention on reserve or park areas, within tree pits, and extending existing wetlands.

[6 Individual Lot Design

This section requires the potential development achievable on each lot to be planned so that the lot and its subsequent building development will offer a high level of amenity and not unduly compromise the amenity of neighbours or character of the wider neighbourhood. These guidelines apply to both Greenfield development and infill subdivision, but are particularly applicable to small-scale infill within established neighbourhoods.

Objectives

- O6.1 To create acceptable qualities of amenity on each new lot.
- O6.2 To maintain the amenity of neighbouring properties.

Guidelines

Shaping the lot

- G6.1 Shape lots to be generally compact and regular in shape, allowing for outdoor areas to be accessible from proposed dwelling sites.

Random and arbitrary lot shapes, particularly those extensions or shapes that contribute nothing to the usability and amenity of the lot are not acceptable.

This is because the random alignment of dwellings and boundary fences that results, will often create odd, unusable or inaccessible spaces on the lot, and have a detrimental effect on neighbourhood character, particularly in neighbourhoods with a relatively regular lot layout.

Long linear extensions of lots are acceptable only when they are part of a shared accessway, or there can be seen to be a compelling character, open space amenity or landscape reason for that shape.

Deviations from this guideline may be justifiable only where this is to preserve a significant landscape or building feature.

Lots should be shaped to avoid unnecessary earthworks, and major and sudden changes in the contours of a site should be avoided. Where necessary, such changes should be used to separate lots, rather than occur within a lot.

Useable outdoor space

- G6.2 Plan for building footprints that allow for at least one primary outdoor space of reasonable size with northerly exposure on each lot.

This space is to provide for short-range outlook from the dwellings, and private recreation and service space.

Open spaces on lots should be close to and readily accessible from the dwelling. They should be located

to the north, east or west of and connected to the anticipated main living floor of indicative future dwellings on the lots.

- G6.3 Where possible, co-locate the primary open spaces associated with new lots to give outlook both for new dwellings and neighbours, and allow the integration of large trees.

Where it is achievable, an open space that connects with others on neighbouring lots can provide a pleasing sense of openness within an intensively developed area. It also allows the large trees that are often not possible within smaller enclosed spaces.

Access to the lot

- G6.4 Provide for vehicle access and future garaging in a location and configuration that minimises earthworks and does not dominate either the streetscape or the interior of the development.

Street edges and other open spaces will be poor if dominated by garage doors, or hard paving, retaining walls and fences. Careful placement of accessways and garaging so they are not visually dominant should be considered first, followed by landscaping to mitigate adverse effects.

- G6.5 Offset or otherwise articulate long vehicle accessways to reduce vehicle speeds, and to landscape them to make them visually attractive.

Avoid long narrow lanes or expanses of asphalt that are unrelieved by landscape elements. Enhance the visual appearance of these spaces for users and neighbours with landscaping or other design elements. This will also help to minimise the impact on neighbouring lots of passing cars.

- G6.6 Where possible, combine accessways to rear lots to minimise the visual impact of these and associated kerb crossings on the neighbourhood.

Use of shared accessways minimises the amount of land required for access and by reducing the number and width of accessways at the street edge also reduces conflict with pedestrians.

Where opportunities exist, consideration might be given to providing access to the rear of sites with shared rear or side accessways, thereby maximising potential for buildings to front the primary street.

Landscaping

- G6.7 Retain significant large trees and vegetation on new lots.

Retaining mature vegetation gives a sense of the development being well-established, allows new dwellings to assimilate into the neighbourhood, thereby helping to maintain the character of the neighbourhood.

- G6.8 Provide planting within new development that is suitable for situation, wind and sun exposure and soil type, placing this to enhance amenity.

Well placed trees and planting provide benefits of visual interest, privacy, shelter and shade for both dwellings and associated outdoor areas. Planting with a scale and growing habit appropriate to site and situation is required to provide any necessary screening within any subdivision and for neighbours while allowing reasonable sun and daylight to dwellings and open spaces. In order to achieve visual integration, consideration should be given to species that extend the planting and landscape patterns of the wider setting.

- G6.9 Design any necessary retaining walls to be both integrated into the development and not visually intrusive.

The most effective approach is to minimise earthworks and need for retaining walls by planning the lot so that it is in harmony with the landform.

Retaining structures are often utilitarian and unsightly, and can be prominent in views across a neighbourhood, particularly where these replace areas of dense planting. These also impact on the outlook from the dwelling they serve. Their quality of construction and appearance is important.

Where retaining walls will not be entirely screened by future buildings, their appearance should be mitigated with measures that might include screening planting, subdivision into modules of dimensions that can be perceived from distant views, and fine texture that is perceived in close range views.

- G6.10 Incorporate on-site water quality treatment measures where practicable.

This may involve retention swales, soak pits and permeable surfacing for driveways and areas of on-site carparking. The nature and stability of sub-terrain conditions should be assessed to determine if such measures are practicable.

Privacy, sun and outlook for neighbours

- G6.11 Provide for placement of buildings where they may avoid unreasonable compromises to privacy, sun and outlook for neighbours as well as, where these are significant, reflecting established neighbourhood patterns.

If the potential to place buildings and the relation of these to neighbouring dwellings is considered at the lot layout stage, there is often potential to mitigate the amenity effects of infill. In many cases only subtle shifts in building location or orientation can address cross-boundary issues.

It is likely that subdivision to create infill at the rear of

lots will lead to situations where people in new buildings will be able to look down into existing rear yards. To address this, the location of buildings, open spaces and planting on the new lot to contribute to privacy should be considered. In such situations it is not expected that existing levels of privacy will be maintained, however consideration should be given to providing privacy to parts of neighbouring existing lots that are connected to the dwelling.

If neighbouring properties enjoy a significant outlook, consideration should be given to placing building footprints where at least part of that view is retained.]^{PC56}