Public Realm
Urban Design Guidelines
The Public Realm Urban Design Guidelines offer a set of principles and aspirations to help guide and support the appropriate development of current and future public land in growth areas.

This Guide is aimed at people involved in the creation of public realm, e.g. proponents, developers, project managers, designers or community groups. It is for people and companies engaged in the use, design, implementation and ongoing management and maintenance of public spaces. The Guide seeks to set consistent methods for Councils and developers to work together to collaboratively design public spaces that meet the collective needs of a diverse community.

This document seeks to bring about a clear understanding of the design principles and outcomes that should generally apply in “growth areas” of Local Government. The intent of this Guide is to draw on existing work to bring together a complete set of principles that underpin quality, safe and accessible environments. The principles set out in this document are not just applicable to high profile areas (e.g. a town centre), they also apply to areas such as neighbourhood precincts, small community spaces or a residential street.


Given that Development Plans contain assessment policies as an expression of the 30-Year Plan for Greater Adelaide and Regional Plans the LGA Urban Design Guidelines should assist in facilitating development outcomes that align with the strategic outcomes sought for South Australia.

It is anticipated the Guide will be a useful resource for a broad range of stakeholders across the community.

To that end, this document has been designed to include two distinct parts.

Part 1 specifically targets the end owner such as Councils or developers; and designers (e.g. project management consultants/advisors or Government departments and agencies).

Part 2 is aimed at the broader community as a resource in understanding how public realm outcomes will be delivered.

“A Council’s Guide to Managing Growth (LGA) – Modified Table

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Acknowledgements

The LGA would like to acknowledge the contributions of Heynen Planning Consultants, City of Onkaparinga, the Urban Development Institute of Australia, the South Australian Active Living Coalition and the owners of projects and content referenced within this document.

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Version Control

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2. Key Objectives  
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Introduction
Purpose and Key Objectives

1.1 Purpose and Reason for this Guide

The Guide provides an outline of procedures to follow and makes reference to design principles and standards that are relevant and applicable to the subdivision and development of land within the Council area. It is not intended to be totally definitive or applied rigidly, but it offers guidance for a wide range of development activities which at times require site specific considerations. In this regard proponents and developers should be aware that each development should be treated individually and that in addition to compliance with engineering type standards proposals should seek to align with broader design principles.

This Guide outlines a framework of principles (and qualities) that should be considered when undertaking development that affects the public realm. They provide “waymarkers” to good design and management methods that are applicable to projects of all scales and type (eg. cities, towns, neighbourhoods or local streets, and urban, per-urban or rural).

Councils are also encouraged to use the Guide as a helpful resource when reviewing or applying Development Plan policy or undertaking precinct planning activities.

Given the consistency of the aspirations of the guide with numerous Council Wide policies in the Development Plan, the successful design and management of the public realm should achieve the general goals of good planning.

The LGA acknowledges that there are a number of existing resources available which provide assistance for public realm design. Many of these resources have been developed to address a particular theme such as a child and aged friendly cities, health, movement and access or environmental and climatic factors. This Guide is intended to complement these resources by bringing together a complete set of design principles within one document. Users of the Guide are encouraged to have regard to the resource listed in the ‘Further Reading’ section on Page 48.

Scope of the Guidelines

The focus of the Guide is on growth areas and developments of various scales that incorporate significant public spaces. Discussions between the Council and the developer about public realm design and management should commence prior to the design concept stage. This will avoid costly design changes at the assessment and approval stage.

The Guide should not be treated as a set of prescriptive design standards, but it should be worked through systematically to ensure that public realm design achieves a high standard.

1.2 Key Objectives

The key objectives in the design and delivery of public realm outcomes in new and existing communities are:

- To provide a basis for Council to review and bring up to date Development Plans and previous urban design standards.
- To demonstrate a commitment to best practice in planning and design.
- To provide a framework upon which more detailed design and delivery processes can be built.
- To engender shared values as to what defines best practice in public realm design and delivery.
- To establish an accountable and transparent process for public realm design, delivery, management, maintenance and handover to all stakeholders in the process.
- To ensure a consistent approach to planning and design for individual developments over time and across the Council area.
How to use This Document

1.3 Document Structure and How it Should be Used

While it is not intended that this Guide be used as a day-to-day operational manual, it is expected to direct key aspects of the design process for development activities within the Council area. Importantly the Guide provides direct features in the latter sections where simple checklists enable stakeholders (and Council) to determine in what way individual projects have addressed the Design Principles at the heart of this document and what areas of design and delivery need to be agreed between the parties. The primary elements of this Guide are outlined below.

PART 1

Section 1: Matrix of Principles
The Matrix of Principles provides a shorthand summary of Design Principles that are more likely to be relevant to certain types of development.

Section 2: Design Principles
This section contains the “core” of the Guide and outlines the key Design Principles upon which development should be designed, delivered and managed.

Section 3: Design and Delivery
This section defines the objectives for a successful delivery program from design and documentation to “final handover” to Council.

Section 4: Ownership and Maintenance Handover
This section describes the objectives and some of the processes that will assist a smooth handover of ownership to Council and arrangements for long term maintenance.

PART 2

Section 5: Protection of Public Infrastructure
This section provides a summary of key standards and measures associated with activities affecting Council land and assets.

Section 6: The Guidelines Toolbox
The Guidelines Toolbox includes a Public Realm Design Checklist and outlines commonly asked questions and answers.

Section 7: Glossary, References and Further Reading

1.4 Target Audience for this Guide

The Guide provides an outline of the procedures, standards and/or requirements that are relevant and applicable to the development of growth areas which affects the public realm within the Council area. It provides a collective of key issues to be addressed for the more frequent urban design elements. However, due to the wide range and nature of development and activities, a more flexible site specific approach to urban design will achieve the best outcomes. In this regard applicants should be aware that each development is required to be treated individually, and that Council support is dependent on the overall impact of the development and not solely on compliance with quantitative standards.

The Guide provides a framework of qualities and principles to be considered when developing projects that affect and create the public realm.
1.5 The Planning and Policy Context

The key objectives associated with development in growth areas that affects or creates the public realm expressed in the Guide are applicable to all Local Government areas. The degree to which the Guide will be used across Local Government will depend on a variety of circumstances (e.g., township or urban growth boundaries, land supply, demand for residential land, population growth, environmental constraints, employment potential). Nonetheless, consistent application of the Guide will assist in bringing about:

- Best practice in public realm planning and design.
- Shared agreement on public realm design, delivery and maintenance.
- An accountable and transparent process for public realm design and decision making for partners and stakeholders.
- A framework upon which more detailed design and delivery processes can be built.
1.6 Public Realm Defined

Public realm belongs to everyone. It comprises the streets, squares, parks, green spaces and other outdoor places that require no key to access them and are available, without charge for everyone to use.

Public realm should not be seen in isolation but in the context of its adjacent buildings, their uses and its location in a wider network of public and private space.

The three key elements that influence the public realm are:

- The buildings that enclose and define the space;
- The space itself; and
- The people that inhabit the public realm and the way they use the space.

Why is it important?

High quality public places are vital for creating harmonious, socially inclusive communities. It is increasingly recognised that investing in quality public space generates tangible, fiscal benefits; stimulating growth in the visitor economy, raising property values and increasing income and profit for local businesses. Public realm investment has been shown to boost confidence in an area, reverse the cycle of decline and stimulate inward investment.
PART 1

Section 1

Matrix of Principles

This section summarises key Design Principles that are likely to apply to a range of growth area projects.
# Matrix of Principles

The Matrix of Principles provides a shorthand summary of Design Principles that are more likely to be relevant to certain types of development. It enables stakeholders to quickly determine key design elements and criteria. As with all Guidelines seeking to foster innovation, it is recognised that unique design solutions may also apply in individual circumstances.

**Legend:**
- ✓ Consideration of these design principles would be anticipated.
- ♦ These design principles may be of less relevance.

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### Design Principles

#### Connectivity
- Inclusive Design
- Cultural Considerations

#### Environmental Sustainability
- Biodiversity
- Use Sustainable Materials

#### Financial Sustainability
- Design Cost Considerations
- Long Term Financial Sustainability

#### Movement
- Legibility
- Access for All

#### Image
- Local Identity
- Design Excellence
- The ‘Wow’ Factor

#### Streetscapes
- Connectivity
- Intersections
- Topography
- Functionality
- Ease of Use
- Safety and Vehicle Speed

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**Streetscapes (Cont./)**

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**Water Sensitive Urban Design**

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<th>Neighbourhood Subdivision (&lt; 300 ha)</th>
<th>Large Scale Subdivision (&gt; 20 ha)</th>
<th>Small-medium Scale Subdivision (&lt; 20 ha)</th>
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**Open Space**

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<th>Large Scale Subdivision (&gt; 20 ha)</th>
<th>Small-medium Scale Subdivision (&lt; 20 ha)</th>
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Design Principles

This section details the Design Principles upon which public realm should be designed, delivered and managed.
Place and Community

Why this is important

Successful public realm and spaces are those that remain relevant to people’s day-to-day lives. Such success is not only a function of the available spaces and facilities but more importantly for people, the connections that those places make with their community, their environment and their history.

Guidelines

2.1.1 Historical Context

- Integrate physical geographic features of the place into new designs where these are central to the environmental values of the site (e.g., topographic features, trees, water bodies etc).
- Conserve and integrate historical and heritage features of both Aboriginal and European origin in a manner that enhances their values (i.e., protection that provides an appropriate landscape setting to buildings, memorials and places to appreciate their former context and uses etc).
- Use landform, landscape, public art, and interpretive signage and other media to tell the story of the place.

2.1.2 Local Context

- Stimulate imaginative personal interaction through the design of spaces that respond to the geography and history of the place (e.g., sculptural play, use of water, tactile devices etc).
- Optimise the sensory experience of the public realm through design.
- Employ materials and designs that are sourced locally (wherever practical) to reinforce the desired character of the place.
- Design spaces that enable/accommodate community based events, celebrations, memorials, markets, etc.
- Ensure a site responsive approach to urban development that supports and enhances the context in which it is located, strengthens local character and identity, integrates with its context and promotes a sense of community.
Why this is important

A vibrant public realm is not just a result of quality design, but the way in which a place encourages, enhances and creates opportunities for activity. The edges of spaces, the buildings and routes that surround the place, must work together to encourage interaction and mutually beneficial associations.

Guidelines

2.2.1 Diversity

- Public spaces are places for everyone. Design needs to accommodate a range of users of different ages, abilities and cultures and a variety of uses from the personal to the communal.
- Anticipated uses should be accommodated by the allocation of appropriate spaces having regard to location, geographic characteristics, context, accessibility and scale.

2.2.2 Flexibility

- Simple, uncluttered designs allow the public realm to accommodate activities that are temporary, seasonal or time specific.
- Design the street network so as to be able to adapt to changes in building design, form and density so as to maintain street level amenity.
- Consider elements that have a dual purpose eg. light columns that host lights and rigging for events on main streets.
- Different people interpret the public realm in different ways. Spaces should be designed to allow for choice and function in how they are used and experienced.
- The layout of streets and activity nodes (private and communal) should be logical and effective.

2.2.3 Adaptability

- Simple design using high quality materials and a reinforcement of concepts within the public realm will maintain the character of spaces when activity is absent.
- Robust, unrestrictive designs are key to creating a durable public realm that can adapt and respond to the rhythms and patterns of use by time of day, day of week and season.
Multi Functional and Adaptable

Why this is important

Communities and their needs and choices change over time. Multi-functional and flexible public realm must be able to adapt to these changes by allowing for a range of users and uses to access spaces, facilities and infrastructure at different times and over time. Adaptable infrastructure that can be augmented to meet changing demands are critical to the community that is served.

Guidelines

2.3.1 Identify design Opportunities

- Identify physical and cultural features (e.g., topography, heritage etc) that might determine potential opportunities for multi-functionality and co-location of facilities (e.g existing buildings and private and public facilities).
- Explore design opportunities to locate recreation facilities close to other compatible facilities (e.g., community facilities such as indoor sports venues, schools, community halls etc) to maximise joint use and minimise duplication of facilities and infrastructure.
- Identify design opportunities to create flexible spaces for community events (e.g playing fields for community fairs, hard stand areas for community markets) and provide permanent infrastructure for spaces intended for special events (e.g, water, three phase power, sewer connections for temporary toilets, telecommunications etc).
- Design sports facilities for the optimum practical range of multi-users (e.g. multi-court line markings, artificial surfaces, removable sporting infrastructure) and co-locate active sports and passive recreation facilities to maximise use during and outside training and competition periods (e.g. children’s playground, picnic facilities etc).
- With recreation facilities offer opportunities for those with sensory or physical disabilities to use smell, sound and touch to enhance user experience

2.3.2 Adaptable Design

- Implement sustainable multi-functionality through the use of robust materials, design and infrastructure (e.g. using recycled water for irrigation of recreation based spaces, soil profile specification for siting of building uses, effective drainage and recharge etc).
- In early stages maintain a simple and adaptable public realm design that will allow for future enhancement as trends and infrastructure design technology become clearer and available.
Why this is important

Whether it be individuals meeting while walking their dogs in the park, people walking to a public transport terminal, or adults meeting at nodes for entertainment and shopping, well planned public realm promotes opportunities to interact socially. Healthy public realm creates healthy communities (socially and economically).

Guidelines

2.4.1 Design for the Community

- Design paths, crossing spaces and seat locations to encourage incidental social interaction.
- Provide opportunities in the design for spaces that are adaptable to local cultural activities throughout the year (eg. level spaces for temporary market stalls, marquees, etc).
- Ensure that the public park design structure will allow for future enhancement of the space as the community’s appreciation of the space evolves with time and use.
- Plan and design the public realm to minimise user conflict issues such as pedestrian, cycle and vehicle movements; noise generating activities and dormitory activities; and land uses and areas of environmental sensitivity.

2.4.2 Involve the Community

- Involve the community (existing and new), in the design, maintenance and progressive enhancement of the public realm through consultation and participation.
- Identify opportunities to integrate open space into existing community and social plans and programs.
- Provide information to new residents on special events, key activity nodes and future stages of development.

Incidental Spaces for People
Health and Wellbeing

Why this is important

A strong relationship between quality of life and access to public open space and the natural environment is playing an increasingly critical role in the community’s health and wellbeing. The way cities, towns and neighbourhoods are planned and designed impacts on people’s opportunity to walk, cycle and use public transport; to access healthy food; to recreate; and to participate in community life.

Guidelines

2.5.1 Pedestrian/cycle connections

- Provide on and/or off-road pedestrian and cycle connections to open space to encourage walking and cycling access and incidental physical activity, to promote environmentally friendly transport options and to cater for independent mobility.
- Integrate direct routes to activity nodes wherever possible to promote walking, jogging and cycling throughout the public realm.

2.5.2 Comfort and Relaxation

- Provide space for rest and relaxation where interaction with the natural environment can best be experienced (contact with natural flora and fauna).
- Street design and layout to maximise seasonal opportunities for solar efficiency and prevailing breezes, and protection from winter storms.

- Orientate and design the public realm and street layout to maximise the impact of local and distant views so as to achieve a sense of space and connection to landscape.
- Maximise visual permeability throughout the development by orienting development to parks and open spaces and key landscape features and maintaining natural sight lines and vistas.

2.5.3 Safety

- Enhance the sense of safety and personal security through the application of ‘Crime Prevention Through Environmental Design (CPTED) principles.
- Ensure that places are well defined, that routes and spaces maintain clear sightlines and that entrances to nodes and spaces are clearly identifiable.
- Seek to facilitate a sense of ownership of public space and territorial responsibility and passive surveillance by the siting of public spaces, the alignment of roads and pedestrian thoroughfares and future orientation of buildings.

Refer to ‘Further Reading’ section on page 48 of this Guide for further references on designing healthy communities.
Why this is important

Direct correlations exist between access to public open spaces and interaction with the natural environment for young people and their mental health and socialisation. A well utilised and designed public realm is invariably one that is easily accessible to and functional for all members of the community.

Guidelines

2.6.1 Inclusive Design

- Ensure that layout and design maximises connections between public open spaces, activity nodes, transport centres and natural corridors.
- Use natural corridors as part of the open space network to enhance accessibility to day-to-day destinations such as schools, shops, public facilities, places of work and to increase appreciation of biodiversity.

2.6.2 Cultural Considerations

- Provide facilities and spaces within the public realm that are responsive to the cultural needs of all users.
- Design access to sensitive landscapes to manage impacts and enhance wider appreciation of the values and sensitivity of these locations (eg. boardwalks).

- Design signage to improve accessibility, orientation and connectivity of spaces and functions. Provide direct path routes or controls that preclude worn tracks across areas of environmental sensitivity.
- Provide a movement network which has a highly interconnected street network that clearly distinguishes between arterial routes and local streets, establishes good internal and external access for residents, maximises safety, encourages walking and cycling, supports public transport and minimises the impact of through traffic.
Environmental Sustainability

Why this is important

As well as contributing to the overall sustainability of a site, biodiverse landscapes improve physical and psychological wellbeing, and offer opportunities to ameliorate climatic conditions and may provide cost effective solutions for the provision of open space and branding.

Guidelines

2.7.1 Biodiversity

- Retain and extend the existing natural values of the space wherever practical, including enhancement of biodiversity, flora and fauna habitat value, energy conservation, and microclimate.
- Locate, orientate and design the street layout and public open space network to maximise wildlife connectivity and reduce habitat fragmentation.
- Protect conservation areas and manage as buffers to such environments, providing controlled access where this will not compromise environmental values.
- Provide opportunities for the environmental values and spaces to be interpreted to assist with the branding of sites and the culture of the public realm.

2.7.2 Use Sustainable Materials

- Design and plan roads, space and public open space and facilities for energy and water conservation, optimised lifecycle and selection of materials with low embodied energy. Such initiatives might include:
  - Managing stormwater to improve water quality and integrate with Water Sensitive Urban Design.
  - Harvesting of water for reuse in irrigation and toilets.
  - Rehabilitating waterways.
  - Low water and low maintenance demand planting and use of mulch to retain soil moisture.
  - Use of recycled materials in construction including materials salvaged from site and reused.
  - Use of energy efficient lighting such as solar lighting and low voltage electrical facilities (eg. public barbeques etc).
- Produce lot layouts that accommodate the landform, views, prevailing breezes, and take account of site constraints, but wherever possible optimise orientation to suit energy efficient housing.
Why this is important

An understanding of the long term financial sustainability of the public realm is essential if community aspirations are to be realistic and the quality of these spaces is to endure. Careful design and planning is critical to ensuring sustainable ongoing maintenance costs and achieve anticipated life cycles.

Guidelines

2.8.1 Design Cost Considerations

- Establish realistic estimates at the outset of the project budgeting.
- Design and maintain the public realm to reflect the likely usage of and within a space.
- Consider the life cycle costs of materials in constructing and managing the public realm including, operating, maintaining, replacing, and de-commissioning infrastructure, facilities and public open spaces.
- Use robust and enduring materials and products that are affordable to replace and where practical focus one-off items and features that are not readily replaceable to landmark locations and features.
- Incorporate revenue raising opportunities where appropriate (e.g., cafes, kiosks, events, bike hire etc) where these meet the criteria of:
  - The community values being sought.
  - The leisure and recreation orientation to be created.
  - Compatibility and integration with adjoining land uses.
- Apply solar effective measures to reduce the cost of maintaining public open spaces or facilities (e.g., lighting, filtration systems etc).

2.8.2 Long Term Financial Sustainability

- Consider long term financial sustainability in the design processes, particularly with relation to Council’s maintenance after handover. Matters to consider include:
  - Maintenance requirements.
  - Conventional levels of expertise of maintain assets and infrastructure.
  - Service levels and community expectations.
  - Replacement budgets.
  - Preference for the use of certain materials, finishes, furniture and fixtures.
  - Vandal resistance.
  - Adaptability and future augmentation works.

Consider using the LGA’s ‘Economic Impacts Scenario Assessment Model’ to measure the short and long-term financial impacts of new or upgraded infrastructure in a development scenario. This model can be found on the LGA website.
**Why this is important**

Public realm is made up of squares, parks, and spaces, and the streets, footpaths and alleyways that link them. Designing for movement, providing connected, legible and ‘people friendly’ streets that encourage walking and cycling and meet the access needs of the whole community, is key to creating successful public realm.

**Guidelines**

2.9.1 Legibility

- Use signage, gateways and landmarks to help people navigate their way through streets and spaces.
- Accessibility and permeability should be encouraged by linking to existing routes and the wider network of movement.
- Road networks should be designed to reinforce preferred routes and enhance these routes by providing features to complement and highlight them.
- Movement through our public realm should be easy, pleasurable and intuitive. Street furniture and signage should use innovative and integrated solutions.
- Streets should be designed as attractive spaces with coordinated and distinctive identities.

- Apply well-detailed, high quality, and robust materials that reduce maintenance costs in the long term and achieve better value for money.

2.9.2 Access For All

- Streets and spaces should be designed to be inclusive and create a public realm where everyone has the best opportunity to participate in all areas.
- Provide a safe, convenient and legible bike network to meet the needs of experienced and less experienced cyclists for persons, including on-road and off-road routes.
- Streets and spaces should specifically recognise disability access, including contextual references, to ensure equitable participation by all members of the community.
- Provide a safe, convenient and legible movement network for people using wheelchairs, strollers, gophers etc.
- Use ‘comfort spaces’ to avoid potential risks associated with shared spaces eg. consider street furniture placement, tactile paving, landscaping design and the siting of crossing points.

The Disability (Access to Premises) Standards ensure that dignified, equitable, cost-effective and reasonably achievable access to buildings, and facilities and services within buildings, is provided for people with disability. Guidelines on the application of the Premises Standards can be found on the Australian Human Rights Commission website.

Refer to ‘Further Reading’ section on page 48 of this Guide for further references on designing ‘Age Friendly’ communities.
Why this is important

The public realm plays a vital role in defining the ‘image’ of our towns, neighbourhoods and local streets. The public realm affects the perception of an area and influences desires to live, work and visit these places. Urban design should influence the image of places and shape perceptions and interactions.

Guidelines

2.10.1 Local Identity

- Ensure that the image of a space enables the community to easily form a mental map of the urban environment (e.g., consider the role of paths, the form of edges that bound a space, the common elements of a district, the strategic nodes and the placement of landmark points of reference).

- Brand the public realm so as to create a desired image or strengthen an existing identity (e.g., a traditional materials palette can reinforce and enhance a heritage setting).

- Rebrand and overhaul the public realm to encourage repopulation of the area and rejuvenate activity nodes (e.g., employment, entertainment, community facilities).

2.10.2 Design Excellence and Innovation

- Invest in quality, design and materials to create a positive image (e.g., craftsmanship and detailing gives spaces perceived value and prestige).

- Incorporate design competitions and community interaction that involves multi-disciplinary teams to stimulate creativity and innovation.

2.10.3 The ‘Wow’ Factor

- Create a ‘wow’ factor and impact through coordinated and integral lighting, public art, interactive media, street furniture, lighting, surfacing, planting etc.

Image

Unique, Recognisable and Branded Spaces
Why this is important

Streetscape improvements which utilise sustainable design strategies and practices are a key component to enhancing an area’s economic viability, attractiveness, environmental health and social well being. Tangible benefits to the community might include increasing the property value of homes and businesses, reducing traffic congestion by providing access to alternative modes of transportation, and providing recreational spaces that encourage healthier, active lifestyles.

Guidelines

2.11.1 Connectivity

- Arrange lots to front streets, major streets and public open space such development enhances public safety, traffic safety, property safety, personal security and contributes to streetscape quality.
- Connect new streets with existing street systems and pedestrian and cycle networks.
- Design an interconnected street network in new neighbourhoods that offers choices for users.
- Improve cycle and pedestrian connections through and between open spaces.
- Determine a hierarchy of streets according to the function of each street in the network.

2.11.2 Intersections

- Intersections should be designed to reflect the street hierarchy.
- Control vehicle speeds on minor streets:
  - Use appropriate signage and street markings.
  - Reduce sight lines with closely spaced trees.
  - Extend verges to narrow the carriageway at the intersection.
  - Use short block lengths to control vehicle speed.
- The use of roundabouts should be balanced to suit the role and function of the road and if necessary should:
  - Ensure the design indicates the presence of the intersection on all approaches.
  - Use signage and street markings to increase legibility.

Typical Corner Cut Off Design

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<td>Major Collector Road</td>
<td>Access Street</td>
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</tr>
<tr>
<td>Arterial Road</td>
<td>Major Collector Road</td>
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<tr>
<td>Arterial Road</td>
<td>Arterial Road</td>
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</tr>
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</table>

Intersection Design Spacing

<table>
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<tr>
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<th>Spacing Distance when the intersection is on the opposite side of the Through Street</th>
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</thead>
<tbody>
<tr>
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<td>40 m</td>
</tr>
<tr>
<td>80 km/h</td>
<td>60 m</td>
<td>60 m</td>
</tr>
</tbody>
</table>
2.11.3 Topography
- The topographical features of the site should play a key determinant in the design of the street network.
- Avoid where possible street layouts that result in lots being substantially higher or lower than street level.
- Design so as to mitigate large retaining walls and rear of allotment drainage.
- Terminate streets with views that make the most of special features or enhance character.
- Ensure the street alignment is straight or gently curved where possible to enable edges such as street trees and building frontages to frame vistas.

2.11.4 Functionality
Roads should be designed to achieve the following:
- **Safety** (A road network safe for people and property):
  - Prevent vehicle crashes.
  - Provide emergency vehicle access.
  - Crime Prevention through Environmental Design (CPTED).
- **Amenity** (A road network contributing to the character of neighbourhoods):
  - Traffic noise.
  - Visual amenity.
  - Street tree planting.
- **Convenience** (A road network easy to use offering transport choices):
  - Community access.
  - Choice of transport options.
  - Minimum travel distances.
- **Environment** (A road network improving people’s lives):
  - Reduce greenhouse gas emissions.
  - Vibrant spaces and better quality of life.
  - Improve health and fitness.
- **Economy** (A road network that is value for money):
  - Reduce transport costs.
  - Minimise cost of development.
  - Control maintenance and asset replacement costs.
  - Avoid roads servicing allotments on one side only, with the exception of roads that front public or communal spaces.
- Ensure the provision of appropriate street crossings and direct, continuous and well lit pedestrian and bicycle routes.
- Streets that front public open spaces should provide on-street parking adjacent to these spaces to encourage public use.
- Ensure sufficient lane width and corner splays on streets that are used as bus routes.
- Integrate street lighting and landscaping to avoid conflicts (e.g., canopy habit to avoid blocking street lights).
- Ensure on street car parking is staggered and designed to retain flexible options for driveways and maintaining the road clearway.

2.11.5 Ease of Use
- Design local streets to reduce traffic speeds so that pedestrians, cyclists and vehicles can use them safely and avoid conflict.
- Incorporate traffic calming techniques when roads are designed for integrated use by pedestrians, bicycles and vehicles.
Streetscapes

Principle 2.11

2.11.6 Safety and Vehicle Speed

- Design for pedestrians and cyclists first, cars second.
- Design for passive surveillance of the street and visually contain the carriageway to promote steady, predictable traffic speeds:
  - Use appropriate landscaping.
  - Provide verge width that reinforce the pedestrian zone.
  - Plant street trees at regular spacing within the carriageway and / or verge.
  - Provide on-street parking
  - Encourage front fences or hedging to contain the street reserve.

2.11.7 Visual continuity

- Design suburban streets and streetscapes to achieve a sense of enclosure and scale appropriate to the street hierarchy.
- Design streets so that major structural elements such (ie. trees, fences, gateway buildings) are symmetrical to create balance.

2.11.8 Verge Design

- Verge design should provide a continuous linear element of the street.

- Limit the height of fences, hedges and other landscaping and gateway buildings to 1.0 metre to enable passive surveillance of the street and contribute to street amenity for streets that do not carry high traffic volumes and/or experience high acoustic levels.
- Use material complementary to the context to achieve visual consistency and brand image.
- Use upright kerbs rather than rolled kerbs to create better definition between the carriageway and the verge and to encourage better parking behaviour, where relevant to the function of the road.
- Pay particular attention to main street streetscape elements to reinforce and set the tone of the public realm and the theme to be adopted throughout the development.

2.11.9 Quality

- Arterial roads should be of a high quality.
- Major collector roads should be of a high quality.
- Minor collector roads should be of a good quality.
- Access streets should be of a safe and appealing quality.
- Trees to be planted and maintained to the relevant Australian Standard.
Example Streetscape Elements

- Trees entire length of street
- Parking
- Street
- Parking
- Tree wells & planting
- Street lights with pedestrian lighting
- Shop frontage
- Sidewalk seating
- Shade covers in various locations
- Large format paving
- Shop awnings
- Shop frontage
- Parallel car parking
- Sidewalk seating
- Street lights with pedestrian lighting

Streetscape Ideas

Principle 2.11
### Example Street Design Elements

<table>
<thead>
<tr>
<th></th>
<th>Access Street</th>
<th>Minor Collector Road</th>
<th>Major Collector Road</th>
<th>Arterial Road</th>
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<td>Both sides – pedestrian or shared use path</td>
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</table>

**Reference:** Sourced from the City of Charles Sturt “Engineering & Open Space Development Guidelines - Road and Path Design Guidelines Revision 3 – Issued July 2009”. Provided as an example only as site specific considerations may require an individual approach.
Why this is important

Quality landscape design can shape the character and image of the public realm, creating continuity and containment and increasing the visual amenity of new and existing areas. Landscaping also has a positive impact on health, wellbeing, climatic conditions and biodiversity.

Guidelines

2.12.1 Landscape Elements

- Maximise landscaping in all streets by planting new trees and retaining existing trees wherever possible.
- Tailor landscape design and selection to the local context.
- Where possible, plant deciduous trees on both sides of east-west streets to shade north-facing allotments in summer and allow sunshine in winter.
- Integrate landscape design with water sensitive urban design systems wherever possible.
- Space trees so that the canopies touch when mature.
- Include outdoor furniture within the public realm to reinforce “human scale”.
- Paving for footpaths, verges, driveway crossovers, lanes, road thresholds and reserve paths should help to integrate existing and new areas.
Why this is important

Appropriate water management is essential to the environmental sustainability of urban landscapes. Streets are the source of increased stormwater flows, water borne pollutants (sediments, metals and hydrocarbons) that adversely affect the health of receiving waters. WSUD elements should be integrated into open space and streetscapes to collect and treat runoff prior to discharge.

Guidelines

2.13.1 WSUD Considerations

- Manage stormwater, wastewater and potable water with a particular emphasis on reducing potable water demand.
- Minimise wastewater generation.
- Treat stormwater to meet water quality objectives for reuse and/or discharge to surface areas.
- Integrate stormwater management into open space areas to assist in addressing anticipated frequency of inundation, minimum duration of discharge time, and “normal” and “high” flows.
- Use stormwater in the urban landscape to maximise the visual and recreational amenity of developments.

- Maximise the visual and recreational amenity of developments by using stormwater treatment elements in urban landscapes.
- Apply WSUD on slopes of 1–4% for maximum gain.
- Use WSUD elements such as bioretention swales on the high-side verge reserve, if relevant.
- Where the street runs perpendicular to contours use either verge for bioretention systems.
- Incorporate WSUD elements in the centre median of dual travel-way streets.
- Ensure street or driveway crossovers of bioretention swales are either at grade or incorporate a culvert crossing.
Open Space

Why this is important

The design of open spaces in a manner that is attractive, functional, accessible and sustainable while responding to the recreational needs of the community is essential to the liveability of areas.

Guidelines

2.14.1 Regional Open Space

- Regional open space should form a focal point for people across and beyond the area by providing a multi-functional place that meets the needs of a broad scope of users.
- Provide natural and built shelter throughout the open space.
- Park furniture should support long visitations by large groups e.g., rubbish bins, water fountains, BBQ and public catering facilities.
- Seating should provide access to all (including people with a disability), and provide back support and ease and safety of use.
- Provide all access toilets (including people with a disability).
- Include walking tracks and cycle paths.
- Provide demographic specific infrastructure for youth, families and the elderly to reinforce intergenerational use.
- Ensure signage is interpretive, educational, and directional.
- Provide pet-friendly features including dog exercise areas, drinking areas, and tidy stations.
- Ensure that public art is a component of public open space furniture and design.

2.14.2 Neighbourhood Open Space

- Neighbourhood open space should contain facilities and places for passive recreation and unstructured physical activity.
- Designed to include irrigation and drainage and be supportable by basic maintenance levels.
- Consider possible inclusion of seating, tracks, pathways, youth activity areas, and drinking fountains.
- Incorporate public art, signage and security lighting.

2.14.3 Minor Open Space

- Minor open space should be provided as small reserves that showcase sustainable landscapes and convenience.
- Minor open space should contribute to the character and amenity of walkable neighbourhoods.
- Designed as a component of the streetscape and should avoid the creation of walkways between allotments.
- Should include park furniture, playgrounds, and small scale public art.

2.14.4 Linear Open Space

- Linear open space should act as a corridor of public space or a series of linked open spaces that provide for off-road movement by pedestrians and cyclists.
- Provide low impact recreation opportunities, enhanced by connection to other recreation spaces or community locations thereby contributing to the liveability of an area.
- Incorporate all-weather path networks.
- Reinforce landscape character and provide trees to provide shade and create a vista, while maintaining surveillance.
- Provide furniture at designated rest spots/places of interest.
- Include signage that is interpretive, educational, promotional and directional.
Open Space

Principle 2.14

2.14.5 Operational Open Space

- Operational open space may include walkways and lanes, road reserves, screening reserves, easements, buffers and wind breaks, overland flood mitigation or landscaped entry statements.
- Maximise potential to increase off road transport networks, provide biodiversity corridors and enhance the character of an area.
- Include signage as necessary.
- Incorporate vegetation planting to enhance the public realm and provide habitat corridors.

2.14.6 Sportsfields

- Sportsfields designed and managed to host various levels of competition run by a range of sporting clubs and facilities.
- Provide high profile landscaping and prominent entry statements to promote the service delivered by licensed and private users.
- Provide irrigated and non-irrigated areas.
- Provide all weather surfaces for regional, national or international sports.
- Landscape using significant trees to create a vista, shade and surveillance.
- Include sheltered spectator provisions.
- Incorporate flood lighting that allows full use of reserve areas for training and/or night competition.
- Provide toilet facilities, clubrooms and consider kiosk facilities.
- Provide barbeques and other park furniture to support secondary recreational activities.
- Define fencing around main playing fields.
- Ensure on site car parking (including parking for people with a disability) is provided.

2.14.7 Maintenance

Open space should be designed to balance function, the investment in space and the maintenance profiles (including Council of resources to manage the benefit to the community).

**Category 1 – Feature Park (High Profile)**

High profile maintenance regimes designated to key locations of civic, cultural, or recreation importance such as feature reserves, memorials, regional parks, civic spaces and high use passive irrigated areas.

**Category 2 – Passive Irrigated (Medium Profile)**

Passive irrigated neighbourhood parks are managed to meet the recreation expectations of young and mature families.

**Category 3 – Active Profile (Sportsfields)**

Turf playing surfaces are maintained to sport specific standards and largely incorporate weekly mowing and annual turf regeneration. Passive irrigated surrounds are managed as a medium profile regime, dry land surrounds are maintained according to a low profile maintenance regime.

**Category 4 – Urban Garden (Medium Profile)**

Urban Gardens are spaces within urban areas that are low maintenance but high in amenity value. The intention of this space is to generate sustainable landscapes that contribute to the character of a locality.

**Category 5 – Dry Land (Low Profile)**

Operational open space, dry land reserves, and minor parks are durable reserves relying largely on the amenity, shade and appeal of over storey plantings and ground cover vegetation.

Open Space Maintenance Profile

<table>
<thead>
<tr>
<th>Category</th>
<th>Category 1</th>
<th>Category 2</th>
<th>Category 3</th>
<th>Category 4</th>
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<tr>
<td>Regional</td>
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<td>Sportsfield</td>
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<td>Neighbourhood</td>
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<tr>
<td>Minor Open Space</td>
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<td>✓</td>
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</tr>
<tr>
<td>Linear Park</td>
<td></td>
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<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Operational</td>
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<td>✓</td>
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</tr>
</tbody>
</table>
Section 3

Design and Delivery

This section provides guidance on the objectives, opportunities and constraints that inform successful Design and Delivery processes and Final Handover to the long term custodian.
3.1 Objectives
From Design Development to Final Handover there are three key elements that guide and direct the project delivery process. These are:

1) Retain continuity of design intent.
The Objectives and Principles established at the beginning of the project and during concept development should be maintained in all facets of the project outcomes, maintaining continuity in:
- Stakeholder consultation outcomes.
- The vision for the project.
- The ‘in-principle’ preliminary concept.
- The approved construction documentation package.

2) Achieve a timely sign-off by Council and other agencies.
While most projects will require Council sign-off, more complex projects may be subject to concurrent approvals from one or more State Government agencies. Achieving these sign-offs by maintaining regular contact with Council and relevant agencies throughout the project will be critical to achieving delivery targets.

Critical to achieving Council sign-off is the provision of design plans and technical drawings (plans, sections and longitudinal sections) as per the Council specification. Initial consultation with Council should identify relevant standards, formats and details that will be required at the practical completion stages.

3) Maintain open and continuing communications with Council and Stakeholders
The context and circumstances surrounding a project may vary greatly as the program evolves. Maintaining open and ongoing communications with Council, relevant agencies and stakeholders ensures that any necessary changes can be effected in a timely manner during the project without loss of design intent and while also maintaining time lines.

3.2 Issues, Constraints and Opportunities

3.2.1 Establishing and Coordinating Project Teams
At the heart of delivering successful design outcomes on projects of any scale is the level of integration achieved across the consultant disciplines involved (eg. planning, landscape design, ecological sciences, civil services, hydraulic engineering etc), Council and other stakeholders. A Project Manager should serve as a design leader and ensuring that technical outputs are integrated to achieve the project’s overall objectives.

The design leader should actively communicate with Council as the project develops and evolves. Council can assist in providing information on legislation, time lines and local circumstances/policies/technical design standards. The design leader should incorporate this information into the design process.

3.2.2 Consultation
When consulting with Council on the project, it is beneficial to involve the design team at the initial stages to assist in defining and discussing the design rationale, as well as the finer design detail that will follow.

Where a number of agencies may have a direct involvement in statutory approvals for a project, it may be advisable to consider a workshop format for consultation at key stages in the project to ensure integrated outcomes and to assist in achieving timely sign-offs.

3.2.3 Environmental and Development Policies
Environmental and development legislation has seen many changes in recent years and is likely to advance further in the future due to factors such as climate change, improved technologies and materials and evolving environmental management techniques.

In some cases legislative change will occur during the life of a project with potential consequences for design and management outcomes. Some of the project delivery issues that are generated by the more commonly encountered environmental policy and legislative requirements include:
- Water Sensitive Urban Design (WSUD).
- Conservation Area Management.
- Bushfire Protection.
- Native Vegetation Management.
- Flood Plain Management.
- Disability Discrimination Act.

Council will require an Environmental Site Management Plan prior to commencement of works.
3.2.4 Council Design and Maintenance Policies

While there will often be common ground between Councils on urban design objectives, the approach to design outcomes may vary across boundaries.

An understanding of those parameters at the outset and their priority is essential to achieving a smooth approvals process. Design policies and agreements will address matters such as:

- Recurrent maintenance funding and maintenance staff skill levels.
- Operational Health and Safety and public liability responsibilities.
- Responses to vandalism and graffiti.
- ESD and other environmental policies.
- Outcomes from community consultation.

Areas where these considerations can commonly raise design constraints can include:

- “Hardworks” materials selection (e.g., limitations on paving types based on ease of repair and replacement).
- Plant selection and design (e.g., preference for native species).
- Fixtures and fittings selection (e.g., preferred suppliers, infrastructure, street furniture, lighting etc).
- Limits on non-proprietary items (e.g., opposition to custom designed play equipment due to potential liability, cost or ease of replacement).
- Selection and timing of implementation of public art to avoid vandalism.

3.2.5 Safety, Security and Risk Management

The principles that underpin Crime Prevention Through Environmental Design (CPTED) are accepted across most Local Government areas. For Councils CPTED is generally incorporated in Council policies and Development Plans as established by the Development Act.

Of particular design importance is how projects specifically address the three CPTED principles of (1) Natural Surveillance, (2) Natural Access Control and (3) Territorial Reinforcement. Means by which design outcomes can be delivered on the ground include:

- Lighting design and codes.
- Planting heights and species selection.
- Visual permeability, including wall and fence locations and heights.

Risk management must be based on acceptable levels of risk for the developer, user and Council. Typical factors will include:

- Open space design (e.g., fall heights and controls such as walls and fences, play equipment design and selection).
- Susceptibility of the design for given features to vandalism and graffiti or difficulty of repair.
- Water bodies and water feature design (e.g., depths, water quality and public health and safety).

3.2.6 Integrating Market Strategies

The integration of marketing strategies into the design process at the beginning of the project will ensure that design-based marketing opportunities are identified early.

This should also ensure that a consistent vision for the development is maintained between the marketing team and design team throughout the project and will be delivered on the ground.

While marketability is not specifically a Council issue, it is important that the design concept is marketable to ensure the economic viability of the project. In this respect the marketing approach must also promote and support the urban design, social and environmental sustainability objectives established at the beginning of the design process.
3.2.7 Program Staging

In many projects staging of development is required. If staging is necessary, there needs to be a clear understanding between all parties involved in the project as to what is involved at each stage and the anticipated time frames or milestones.

Factors to be considered from a design and management perspective include:

- Determining the appropriate population threshold at which functions and features will be well used.
- Targeting the development of infrastructure and facilities (e.g., open space) to match the proposed population of the development at each stage.
- Creating an early sense of the brand and image through public realm implementation, landscaping and other symbols.
- Establishing susceptibility to vandalism in early stages where natural surveillance may be more limited by virtue of low resident population.
- Determining the degree to which the developing population can influence the ongoing development of items (e.g., open space) as the community’s uses and needs evolve.
- Timing of handover of maintenance and management to the final custodian.
- Implementing key design features and icons to assist with marketing.
This section sets out the objectives for a smooth handover and also identifies the common issues, opportunities and constraints that arise from ownership and maintenance transfer.
Ownership and Management

4.1 Objectives

There are two basic objectives that will enhance a successful transfer of ownership and maintenance include:

1) To maintain continuity of design intent through maintenance and handover.

It is often as a project matures (e.g. landscape, public art projects, linear parks) that the original design intent is fully achieved. This may eventuate long after handover.

Careful upfront definition and agreement with Council on the nature of that design intent in the initial phases of design will ensure continuity of the full life-cycle of the project.

2) To attain a smooth transition of maintenance during transfer.

Even where earlier agreements with Council cover the design intent there can often be a marked change in the nature and extent of maintenance after the project is handed over. The objective should be to achieve a situation where there is no observable change for the community in the periods before and after ownership handover.

4.2 Issues, Conditions and Requirements

4.2.1 Ownership Models

In the main, agreed land, facilities and functions will be vested in the ownership of Council as either public land and/or land held a “community land”.

4.2.2 Common Handover Conditions and Requirements

Under any model of ownership the long term owner/manager will commonly be seeking the following outcomes in accepting ownership:

- An outcome that reflects existing or anticipated community needs and aspirations.
- A long design life cycle (e.g. selection of robust and enduring materials and finishes).
- Materials and design that can be readily repaired and replaced.
- Agreed maintenance service levels and anticipated annual costs.
- Maintenance and management commitments that match the recurrent funding pool and available expertise.
- Revenue raising opportunities where these are directly related to the project (e.g. recreation spaces which can be fed back into ongoing maintenance).

Some of the common handover and ownership issues for Councils that require addressing include:

- Service Levels
- Staging of works
- Vandalism
- Pre-Handover Program and Joint Inspections
- Maintenance (type and time frame) and Operations Manuals
- Certificate of Final Completion
- Indemnity

Key Project and Handover Process

<table>
<thead>
<tr>
<th>Project Stage</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Agreement</td>
<td>Negotiate, consult and workshop to agree preliminary project design and staging</td>
</tr>
<tr>
<td>Project Master Plan</td>
<td>Prepare, develop and define the concept and proposal plans. Reaffirm agreements with Council</td>
</tr>
<tr>
<td>Development Application</td>
<td>Prepare/lodge DA, receive and review feedback, resolve issues, gain consent and review conditions</td>
</tr>
<tr>
<td>Project Design and Documentation</td>
<td>Re-evaluate and refine staging of works, agree to handover process, confirm the documentation of construction details</td>
</tr>
<tr>
<td>Construction Phase</td>
<td>Prepare maintenance manuals, transfer funds, certify establishment periods, training programs</td>
</tr>
<tr>
<td>Practical Completion</td>
<td>Maintenance inspections and final defects inspection</td>
</tr>
<tr>
<td>Defects Liability</td>
<td>Final handover, Certificate and ongoing project evaluation (post project review)</td>
</tr>
<tr>
<td>Handover</td>
<td></td>
</tr>
</tbody>
</table>
Ownership and Management

4.2.3 Road Certificates
During construction of roads, the following certificates are generally required by Council:

- Compaction Certificates (for all stages of the road pavement construction, lot filling and lot classification which have been prepared by an approved laboratory).
- Material Compliance Certificates (for all the road pavement materials used for all stages of the construction).
- Engineer's Certificates (for work that requires engineer's certification).
- Easement Certificates and Surveyor's Certificate (where applicable to certify that all pipes and drainage infrastructure are located within the proposed drainage easements).

4.2.4 Security Bonds
Bonds are sometimes required to be lodged as security to cover development works. This security is often lodged with Council prior to the release of the Certificate of Titles for work that relates to a development approval.

When this is required, an itemised schedule of all relevant works (typically the prescribed essential works) associated with the development is submitted to Council. The security amount will be determined by Council based on this information. It is common that the total bond amount would be split into two separate bank guarantees to cover necessary works in the early stages of a project construction stage and for later stages of the project.

EXAMPLE 1 - Small Subdivision:
Total bond amount required as determined by Council = say $300,000
Bank Guarantee 1
95% component released at Practical Completion = $285,000
Bank Guarantee 2 - 5% component for Maintenance Period released at Final Completion = $15,000

EXAMPLE 2 - Neighbourhood Level Subdivision:
The approach applied in Example 1 remains, except that it is applied to each stage of multi-staged development works.

Each 95% security will normally be released at a time of issuing the certificate of Practical Completion for the stage to which it relates.

It is typical that once a prior stage has been completed and 95% of security bond is returned no construction traffic shall use the new roads as access to the next stage.

The 5% security held for the duration of the maintenance period is released upon acceptance by Council of the Certificate of Final Completion.

4.2.5 Third Party Approvals and “Signoff”
In some cases handover may require sign off by agencies other than Council (eg. works to be completed, conditions of approval to be met, documentation to be supplied). Frequently this requires significant forward notice to those agencies.

Keeping these agencies informed and engaged during the project can accelerate sign-offs. Examples of such special agreements might relate to:

- Land to be protected for conservation purposes.
- Riparian corridors (creeks and river vegetation corridors).
- Heritage items and sites.
- Arterial roads.

4.2.6 Maintenance and Management
Additional considerations worthy of mention include:

Open Space Management Plans: As required under the Local Government Act Councils have developed generic or geographic Plans of Management for their reserves that may well apply to new open space acquisitions. In many cases these Plans may contain specific clauses and conditions that might constrain use and design features. These constraints should be addressed by all parties prior to project commencement.

Replacement / Non Replacement: Where a particular design element requires replacement due to damage or having reached the end of its life cycle it will be essential that there is a defined replacement (or at minimum a comparable substitute) so as to maintain the design intent and original quality of the project.
This section discusses the ways in which Councils seek to protect existing infrastructure and minimise environmental harm during the construction of buildings within new land division areas.
5.1 Environment Protection

All projects should meet the intent of the Stormwater Pollution Prevention Code of Practice for the Building and Construction Industry (EPA SA as amended) and the Handbook for Pollution Avoidance on Commercial and Residential Building Sites (EPA SA as amended 2004).

This includes ensuring that adequate measures are in place for the duration of the development to manage dust emissions.

Development should also ensure that adequate measures are in place for the duration of the development to ensure compliance with the Environment Protection (Noise) Policy 2007 in relation to noise from construction activity.

5.2 Damage to Council Infrastructure

In order to mitigate the environmental harm and damage to Council infrastructure, developer will normally be required:

• Monitor the works of builders and their employees and sub-contractors to identify and report damage to Council infrastructure.

• In the first instance, remedy any environmental harm and/or repair any damage to Council infrastructure in a reasonable period.

• On receipt of advice take such action as is reasonable to rectify the harm or damage in a practical period.

5.2.1 Permits for Working on Council Land

Any works that are required to be carried out on Council’s land need separate approval before they commence. Council manages such approvals, to ensure that it is carried out in a safe manner and to an expected level of workmanship. The permits also allow Council to manage private activities on Council land to ensure any associated hazards are minimised. Approvals given in the form of permits include:

• Driveway Crossover Permits (repair/reinstate or widen an existing driveway crossover or install a new crossover).

• Private Stormwater Outlet Permits (repair an existing or install a new stormwater outlet).

• Underground Service Permits (to install underground electrical service to private land).

• Temporary Occupation of Council Land Permits (allows a public footpath - partial or full footpath width to be occupied and if required a portion of the road pavement to install underground electrical services etc).

• Working on Council Land Permits.

• Temporary Fencing on Council Land Permits.

• Scaffolding on Council Land Permits.

• Half or Full Road Closure Permits.
The Guidelines Toolbox provides commonly asked questions and answers in relation to the Design Principles set out in Section 2. It also includes a “checklist” outlining design issues that may occur at various stages of a project.
Public Realm Design Checklist

6.1 Public Realm Design Checklist

The possible range of design issues that may need to be discussed and negotiated with Council will vary greatly from one project to the next and from Council to Council. Once reaching consensus on issues it may be appropriate to formalise an agreement.

The following checklist outlines typical design issues that may require consultation, negotiation and resolution during the life of a project.

Project Feasibility and Preliminary Stage
(Tick as Required)

☐ Stakeholder Consultation and Communication Strategy.
☐ Project Agreement with Council (if required).
☐ Local planning (Development Plan, regional plans or precinct policies).
☐ Council’s ESD and Social Sustainability strategies.
☐ Concurrent approval from Government agencies (linked or otherwise with Council process).
☐ Ownership and transfer arrangements.
☐ Land classification and categorisation after handover and any limitations that may incur.
☐ Council maintenance service levels and maintenance staff capacity and expertise.
☐ Council’s annual maintenance budget allowances.
☐ Council’s leasing and licensing policy.
☐ Council’s risk management policies and strategies.
☐ Additional strategies or policies such as WSUD, CPTED, Play, Public Art, irrigation etc.
☐ Council’s policies for open space and signage requirements (litter, cycling, etc).

☐ Project staging and handover timetable (including thresholds for early handovers).
☐ Defects and inspection regime.
☐ Bonds (if required).

Concept and Master Plan

☐ Design standards (as per the Guide)
☐ Council specific codes/specifications on materials, finishes and quality.
☐ Integration of WSUD strategies.
☐ Streetscape design and Council’s specific Street Tree policies.
☐ Vandalism and graffiti policies.
☐ Other approval authority design requirements (e.g., Conservation, Native Vegetation, Bushfire, Heritage)
☐ Council’s landscaping, lighting and drainage standards.
☐ Design parameters for special design features (e.g., water features, public art).
☐ Maintenance budget (preliminary).
☐ Design implications and marketing strategy.
☐ Extent of Maintenance and Operations Manuals required.

Construction to Handover

☐ Finalise Handover details and timing.
☐ Handover manuals to Council in advance of ownership transfer.
☐ Handover inspections timing.
☐ Funds transfer or bonds (as required)
What is Greenfield land?

For the purposes of the Guide “Greenfield” is taken to refer to any development context in which dwellings are being created for the first time and/or where the adjacent urban context is being newly created.
This contrasts with situations where dwellings are being created on land that has previously accommodated residential development and/or where dwellings are being constructed within existing built-up streetscapes.

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

For projects the street layout should generally extend to an existing or proposed 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.

Should I provide roundabouts or 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 better pedestrian environment than roundabouts. They allow pedestrians to cross safely and directly without diverting from their route.

Do the benefits of additional footpaths outweigh 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, improving pedestrian amenity and safety. Footpaths should 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.

Why do corner allotments need to be slightly larger or wider than other allotments that address the street?

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.

Providing wider and larger allotments on corner sites creates the flexibility to allow these outcomes to occur.

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

Preferably try to avoid designing a street like this. If it is unavoidably, 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.
Questions and Answers

How do I create more presence when street trees are first planted?

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.

Do 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 and these benefits should balance the reduction in developable land.

What do I do if I am concerned that street trees in the carriageway create maintenance, liability and limb-drop issues?

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.

Should I place street trees within or separating parking bays and will this disrupt street cleaning programs?

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.

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 modelling to develop the WSUD strategy for the site, and integrated with the overall design.

How should WSUD elements be integrated with roadways 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 rain gardens.

Do WSUD elements require much maintenance?

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

The following list summarises a selection of the main references used in the development of this Guide.

Publications

City of Charles Sturt (July 2009)
Engineering and Open Space Development Guidelines

City of Playford (August 2008)
Peachey Belt Landscape Precinct Plan Playford North Renewal

Government of SA (2012)
Streets for People Compendium

Landcom (May 2008)
Open Space Design Guidelines

Landcom (undated)
Street Design Guidelines

Local Government Association (SA)
A Council Guide to Managing Growth

The Southern Region Crime Prevention Committee (2007)
Crime Prevention Through Environmental Design

Western Australia Planning Commission (January 2009)
Liveable Neighbourhoods

Images

http://publicaffairs.ucla.edu/urban-planning
http://home.vicnet.net.au/~mbcl/linksus.htm
http://www.watsons.net.au/PORTFOLIO/Portfolio/Awards.asp

Further Reading

The LGA recommends that users of this Guide also have regard to the following publications, most of which have been have been developed for South Australia.

Australian Human Rights Commission (2013)
Disability (Access to Premises-Buildings) Standards 2010

City of Charles Sturt (2012)
Best Practice Open Space in Higher Density Developments

Government of SA (2012)
Age Friendly South Australia- Guidelines for State Government

Government of SA (2012)
Streets for People Compendium

Vision and Guiding Principles- Principles for an Innovative, Inclusive and Innovative Adelaide

Government of SA (2010)

Heart Foundation, SA Active Living Coalition (2012)
Healthy by Design SA