

Policy 11: Land Development Guidelines

Section 6

6.0 Open Space Requirements

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6.1 Introduction

The Guidelines have been prepared for the guidance of Developers and their Consultants to ensure Council's concept of a balanced mix of open space, landscape works, and recreational facilities requirements is achieved.

By the application of the **Section 2.0 – General Planning Guidelines** it is anticipated that open space and recreational planning will be further integrated to optimise the goals as set out in **Section 2.2.1**.

6.2 Design Requirements – Open Space

6.2.1 General Requirements

The Guidelines are intended to be a general guide. It is anticipated that there will often be circumstances where alternative open space layout proposals may be considered by Council on their merits.

Land to be transferred to Council in fee simple to be held in trust for community infrastructure purposes at no cost.

In relation to Dedicated Open Space, Council has adopted elements of the goals and objectives of the following:

- i) Refer to Council's Planning Scheme Policies:
 - **Policy 12 – Landscape Strategy Part 1 – Landscape Character: Guiding the Image of the City;**
 - **Policy 13 – Landscape Strategy Part 2;**
 - **Policy 16 – Policy for Infrastructure Recreation Facilities Network Developer Contributions.**
- ii) Main Roads and **QUDM** provide the basis for the Preliminary Concept Layout. This layout shall take into consideration Council's mix of functional uses of open space areas for various recreational and environmental values. The appropriate drainage standard shall be incorporated to meet Council's open space requirements as established in **Section 3.5.6** of the Guidelines.

Parks should be planned and designed to achieve the following specific objectives:

- i) Community Needs and Cultural Values:
 - provide recreational opportunities and facilities that respond to the expected local community profile (demographics) but ensure sufficient flexibility to cater for changing community needs;
 - provide a diverse range of recreation opportunities in the local area and avoid duplicating facilities available in nearby parks (forward planning documents, such as Local Area Plans and Infrastructure Charges Plans, may guide park developments);
 - maximise opportunities for co-locating compatible park and open space facilities;
 - to develop the park where appropriate as a focal point for the local community;
 - conserve and enhance European and Indigenous cultural heritage values.
- ii) Access and Circulation:
 - access to and within the park should be safe and convenient for all visitors;
 - provide a hierarchy of pedestrian and bicycle paths within the park and, where appropriate, links to other components of the public open space system;
 - ensure vehicular access does not conflict with non-vehicular circulation or impact on the open space values;
 - provide entry nodes that highlight safe access points and provide path connections to major activity spaces and facilities;
 - provide features, including signs, to help orientate park visitors and promote easy access to facilities and other components of the public open space system.

- iii) Character and Visual Amenity:
 - enhance the area's local identity by developing a park that contributes to local landscape character, visual amenity and a sense of place;
 - protect and enhance significant views and vistas;
 - screen areas of poor visual quality;
 - capitalise on significant landmarks such as old figs, rocky outcrops and escarpments;
 - ensure park embellishments, future and facilities contribute to high visual quality and have consistent character.
- iv) Safety and User Comfort:
 - maximise visitor safety and minimise vandalism and unintended use. This includes incorporating **Crime Prevention Through Environmental Design (CPTED)** principles, such as the facilitation of casual community surveillance through layout and design;
 - identify features that may provide potential hazards and remove or manage through landscape treatments;
 - separate active (eg. ball games) and passive (eg. picnic node) recreation areas;
 - maximise natural shade, particularly in high use areas and along paths.
- v) Natural Values:
 - protect and enhance the site's natural (biodiversity) values and features;
 - protect and enhance potential ecological corridors, eg. along waterways;
 - retain and enhance significant areas of local native vegetation;
 - consider fire management needs in conjunction with the maintenance of natural values.
- vi) Other Design Considerations:
 - minimise the impact of stormwater on the use and maintenance of park facilities and activity spaces;
 - the level of maintenance required and type of facilities should reflect the Park Type.

6.2.2 Design Standards for Parks and Playing Fields

Following the Background Research and Discussion with Council and the application of the **Section 2.0 – General Planning Guidelines** and **Section 6.2.1 – Specific Park Objectives** Council will consider the adoption of relevant development conditions.

These conditions shall include Council's requirements for topsoiling irrigation, grassing and planting of open space areas to be utilised as parks or playing fields. In general the following category classification may be referred to in the Development Conditions:

- local recreation parks;
- district recreation parks;
- sporting parks;
- environmental parks (these are not primarily ecological or conservation areas); and
- park linkages.

Generally design standards will apply as follows:

- i) Recreation Parks: Topsoiled, stones and rocks removed, mowable 'A' or 'B' grade weed-free turf cover where requires, non-scourable slopes, easy to maintain with sporting areas of District Recreation Parks in accordance with Sporting Parks.
- ii) Recreation Facilities: Recreation facilities comprised Local and District Recreation Parks, and community facilities such as swimming pools, clubhouses, libraries and changing rooms.

Sporting Parklands

Dimensions for multi-use sporting:

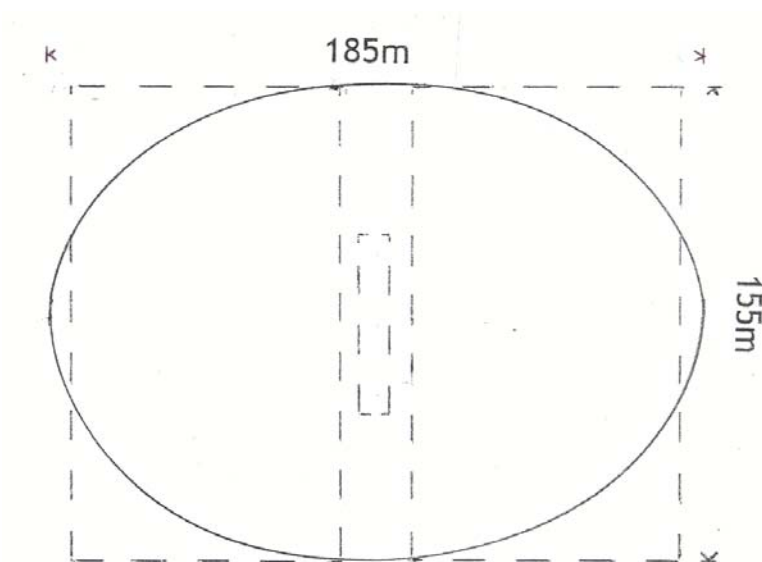
Pitches shall have north/ south orientation. Maximum size fields to allow for review and accommodation of changing demography and sporting club requirements.

Council's standard dimensions for components of multi-purpose fields as determined as follows (exclusive of spectator areas):

Sport	Pitch Dimensions	Hard Surface Clearance/ Runoff	Total Dimensions ¹	Rotational Area ²
AFL	185m x 155m	Min 5m from pitch perimeter	195m x 165m	5m x 5m
Cricket ³	138m x 119m	Min 5m from pitch perimeter	148m x 129m	6m x 2m ⁴
Soccer	110m x 75m	Min 2 X 5m	130 x 85m	5m x 5m
RU	144m x 69m	Min 2 X 5m	154m x 79m	5m x 5m
RL	122m x 69m	Min 2 X 5m	132m x 79m	5m x 5m
Touch	76m ⁵ x 50m	Min 2 X 5m	86m x 60m	5m x 5m

Notes:

1. **Spectator areas to be added to total area dimensions.**
2. **Rotational areas to added to total area dimensions.**
3. **Longitudinal centre of crease to parallel pitches shall be 6.83m.**
4. **6m for crease width rotation.**
5. **Includes 2 x 3m for in goal area.**



Finished playing surface of multi-purpose playing field shall have a 0.5% to 1% camber from the centre of the AFL field outwards to drainage pits around the perimeter of all the fields combined. To remove any doubt, no drainage pit shall be located along the perimeter of a specific sporting field where it overlaps with another sporting field (the drainage pits are to be appropriately spaced to the satisfaction of the Chief Executive Officer).

- iii) Environmental Parks: Habitat retention, cultural features retained and protects, natural finishes, top soiled, and grassed to the satisfaction of Council.
- iv) Park Linkages: Shade trees to paths, turfed to minimise maintenance requirements.
- v) All water provided from Council's reticulated water supply system shall be metered and all irrigation systems shall comply with the back-flow prevention requirements of **AS3500**. Refer **Section 6.2.5** of the Guidelines.
- vi) Consideration shall be given to the provision of low maintenance water usage concepts in the overall design of all parks and playing fields.
- vii) Roofwater runoff and overland flow should be addressed so as not to adversely impact on the parkland.

6.2.3 Design Standards for Playground Equipment

Development conditions may include Council's specified playground equipment requirements.

Table 6.2-A identifies general playground equipment and associated facilities required for park types. Playground equipment should not be installed within 400m of another set of playground equipment:

Table 6.2-A Playground Equipment

Park Type/ Setting	Standard
Local Recreation	
Urban	Min of 2 seats; Temporary shade and permanent 'living' shade; 3 individual play items/ modules with a range of activities; Undersurfaced play equipment; Vehicular barriers; and 1 single covered picnic unit.
In industrial areas or adjacent to community facilities	1 – 2 covered picnic units.
Along pathway linkage to a district park or adjacent to a high usage playground	Bubbler.
District Recreation	
Urban	Min 2 seats per activity space; Temporary shade and permanent 'living' shade; (1 – 2 X) 3 individual play items; Undersurfaced play equipment; Vehicular barriers; Min 1 bubbler; Min 1 picnic shelter and 2 picnic units to be undercover within the shelter; and 1 refuse bin where appropriate.
Within or adjacent to an industrial area, parks with a barbecue, and parks near a shop, school or community facility likely to generate a large volume of litter in the park	Min 1 refuse bin.
District Informal Use Park, District Sporting Parks	
Along pedestrian pathways and bikeways	Min 1 seat per 500m of pedestrian pathway or bikeway, and max 1 seat per 60m in areas of high use by people with ambulatory disabilities.
Park Linkages	
Along district and major pedestrian pathways and bikeway network where reticulated water is available	At max 1 km spacing: 1 bubbler or 1 drinking fountain in parks with a formal design theme or 1 drinking fountain to a higher standard where required to match existing park furniture.

All play equipment and undersurface shall comply with **AS1924.1**, **AS1924.2**, **AS/NZS4486.1** and **AS/NZS4422** (current versions), with facilities being located to minimise potential annoyance and disturbance to adjoining residents.

Council may consider recreational features for teenagers such as multi-use hard courts with/without rebound walls, rollerblade/ skate/ skateboard features, or other features. Council may also require community facilities such as community halls, club houses, libraries, amenity and toilet blocks, boat ramps and/or pontoons (with sufficient trailer spaces), or other community facilities to be installed in open space areas.

6.3 Landscape Works

Generally landscape works associated with open space should be best suited for the use, function, environment and location to beautify and improve the amenity of the area, but at the same time ensuring the safety and security of park users and residents. The principles of crime prevention should be considered in all park/ open space design. Refer to **Planning Scheme Policy 13 – Landscape Strategy Part 2**.

6.3.1 Retaining Structures

Retaining structures generally should not be located in or immediately adjacent to open space areas, particularly at entrance nodes and along boundaries to the park. They may only be constructed in accordance with the Conditions of the Development Permit and/or the approved Landscape Plan in the following circumstances:

- to avoid the creation of extensive, unusable slopes and embankments when stabilising the landform of a park site;
- where pathways with low gradients are required, for example, to provide an accessible path of travel;
- where a structure is necessary to retain the natural ground level and protect tree roots around the drip line of existing vegetation;
- where space is limited and planted embankments are not a reasonable alternative.

Where a retaining structure cannot be avoided along the boundary of parkland, a low or stepped retaining structure is acceptable. The structure is to be located wholly within the adjacent lot(s), and include associated landscaping. A barrier or balustrade may be required at the top of retaining structures adjacent to park activity areas (refer Council's **Standard Drawing N^{os} 03-05-001, 03-05-002, 03-05-003, 03-05-004**). **AS2156.2 – Walking Tracks – Infrastructure Design** provides a suitable guide for the placement of barriers, based on risk assessment.

6.3.2 Boulder Walls

Boulders walls may only be constructed where rock formations are a feature of the park site and/or the surrounding landscape, and the proposed retaining structure is no more than 0.6m high.

Boulder retaining walls should be constructed in accordance with the following general requirements:

- ensure boulders are of sufficient size and weight to prevent inadvertent or deliberate displacement by park visitors, or alternatively, ensure boulders are mortared in place;
- minimise creation of large voids that may attract vermin or weeds or cause erosion;
- install edging and a landscaped strip of no less than 0.6m wide, along both the base and the top of a wall, to promote integration with the surrounding landscape.
- lay geotextile fabric behind the wall to prevent the escape of retained material from voids between boulders.

6.3.3 Masonry and Stone Walls

Masonry and stone walls are preferred as retaining structures where the park is located in a formal landscape setting, and masonry/ stone forms part of the approved features of a park, such as a stone Park entry statement.

Reinforced masonry and stone retaining walls should be certified, by a Consulting Engineer and constructed in accordance with the following general requirements:

- use design elements such as landscaped recesses to provide visual relief in walls that are in excess of 10.0m in length;
- install edging and a landscaped strip of no less than 0.6m wide (1.2m preferred) around the base of the wall, to reduce the risk of graffiti;
- ensure walls are finished to a high visual quality, eg. split face finish of sandstone or other approved stone or replica material;
- integrate signage and/or artwork in a wall where appropriate.

6.3.4 Timber Sleeper Walls

Treated hardwood timber sleeper walls may only be constructed where the park is located in a natural bushland setting and treated timber forms part of the approved features (eg. furniture) of a park. Timber walls are not acceptable to retain land along the boundary of parkland.

6.4 Vegetation

6.4.1 Revegetation

Revegetation is required to achieve vegetation cover on steep, bare areas of the park site, to enhance habitat values and to make the park safe for public use. This work should be undertaken in accordance with the Conditions of the Development Permit and/or the approved Landscape Plan.

6.4.2 Existing Vegetation

Existing vegetation (other than environmental weeds) should generally be retained and protected on the park site. Vegetation may only be removed in the following situations:

- where agreed in the Conditions of the Development Permit and/or the approved Landscape Plan/ Vegetation Management Plan;
- the vegetation is not identified as significant in Council's **Nature Conservation Strategy**;
- the site is not listed on the **Queensland Heritage Register**;
- where open activity areas are required;
- where vegetation within or close to activity spaces, active recreation nodes, or pathways presents a public safety risk.

In assessing risk, take into account the health and potential life of the vegetation, and preferred alternative treatments such as the removal of lower limbs to improve visibility and dead-wooding of hazardous trees, in accordance with **AS4373 – Pruning of Amenity Trees**.

Where the visibility of the park from surrounding streets needs to be improved.

The removal of vegetation to construct a firebreak to protect neighbouring properties is only acceptable in a park where no reasonable alternative is available. The construction of firebreaks and building set backs on the private lot adjoining the park is preferred, particularly on:

- steep slopes;
- where continuous natural vegetation is to be retained across the boundary between the park and the private property;
- where access to the park will be restricted for maintenance of the proposed firebreak and for fire suppression operations.

6.4.3 Rehabilitation

Erosion prone and degraded areas in the park site (eg. areas with a steep gradient or unstable slopes, habitat areas invaded by environmental weeds) should be stabilised and enhanced through rehabilitation works. Rehabilitation works are to comply with the provisions of an approved Landscape Plan or Vegetation Management/ Rehabilitation Plan. Where a road fronts the parkland to be rehabilitated, the Plan will include details of rehabilitation works on the adjacent road verge.

6.5 Vandalism

6.5.1 Graffiti Mitigation

Unless otherwise specified, infrastructure colours should match the existing precinct or district selection, based on Council's standard paint colours for graffiti reduction. Infrastructure materials should be vandalism and graffiti resistant.

The use of innovative technologies and methodologies in the provision of park infrastructure, that contribute to environmental sustainability and the achievement of Council's **Desired Environmental Outcomes**, is encouraged.

6.6 Park Access

6.6.1 Maintenance Vehicle Access Driveway

One or more controlled maintenance (service) vehicle access driveways is to be provided at strategic locations along the road frontages or internal roads and car parks of a park, to enable entry/ exit vehicular movements for park maintenance purposes. The driveway is to be designed for occasional access by an industrial refuse collection vehicle and a medium rigid vehicle with trailer. A controlled access facility, such as a removable bollard or lock rail should be installed at each maintenance driveway.

If the maintenance access driveway is located on a major road or any road with a speed environment of > 50 km/h, a setback or queuing area should be provided between the road and the controlled access facility. The setback is to be sufficient to allow an industrial refuse collection vehicle or a medium rigid vehicle with trailer to park next to the controlled access facility without obstructing traffic flow. Alternatively, locate the access facility on a minor road with a 50 km/h or less speed environment.

Where a footpath is present or proposed along the road frontage, a reinforced concrete crossing (slab) should be provided between the road and the park, for the length of the park. Where there is no footpath, the driveway should provide all weather access to an acceptable standard.

6.6.2 Internal Park Maintenance and Emergency Vehicle Access

Access must be available within a park for park maintenance and emergency vehicles. Maintenance access should be designed and located in accordance with the following principles:

- provide access for emergency vehicles in high use active areas, including those that are in remote areas;
- provide for vehicular access to park facilities and areas requiring regular cleaning and ongoing maintenance (toilets, playgrounds, refuse bins, barbecues, mown areas, firebreaks, etc). wherever possible all weather access should be provided to these facilities and areas;
- provide maintenance access to service and other infrastructure, such as manholes and stormwater quality improvement devices;
- where considered safe and compatible, shared pedestrian/ cycle and maintenance/ emergency vehicle access should be installed;
- ensure bridges or culverts are designed for maintenance and emergency vehicles unless a pedestrian/ cycle use is specifically required by Council.

6.6.3 Primary Public Access Point

One or more primary public access points should be provided at strategic locations along the road frontages of a park, to enable pedestrian and, in some instances, vehicular access to the park. Primary public access points should be designed and located generally in accordance with the following principles:

- separate pedestrian and vehicular access points;
- separate from residences where possible;
- pedestrian access is to be designed to **AS1428 – Design for Access and Mobility** (eg. continuous accessible path of travel). The **Human Rights Commission Advisory Notes on Access to Premises (including Parks)** should be used as a guide;
- integrate park access to adjacent developments such as transport nodes, schools, shops and community facilities, path and road networks, and anticipated desire lines;
- incorporate other elements to emphasise entry points such as signage;
- where a public access road or car park may be closed at night (eg. to reduce park vandalism and nuisance to neighbours), a metal lock gate should be installed.

6.6.4 Pathways/ Pavement Areas

Pathways and pavement areas should be provided in a park, to provide all-weather pedestrian access to park activity areas and other key park features, as well as non-motorised commuter access through a park. Pathways and pavement areas should be designed and located in accordance with the following principles:

- reflect anticipated pedestrian desire lines where appropriate;
- provide convenient links to pedestrian infrastructure in the surrounding area (eg. footpath network, public transport node, shopping centres);
- provide access for all where feasible. The minimum path width is 1200mm (desirable 1500 to 1800mm) (refer Council's **Standard Drawing N^{os} 03-02-201, 03-02-202, 03-02-203, 03-02-204**). Class 2 and 3 trails (as defined in **AS2156 – Walking Tracks** series) are generally of a lower standard where the topography is unsuitable or because of other constraints;
- take advantage of park attributes (eg. internal and external views, special features);
- minimise impacts on existing landform and vegetation;
- incorporate other park infrastructure along pathways and within pavement areas where appropriate (eg. signage, lighting, park furniture, shade trees);
- incorporate appropriate drainage and land stabilisation infrastructure as required;
- where possible provide a level 600mm shoulder (maximum cross fall of 1:50) along both sides of a pathway;
- pedestrian paths in parks with an informal design theme, and trails in natural areas, should incorporate long sweeping bends and meanders, with crests and gentle rises and falls, to create interest and assist drainage. Long straight flat sections, unvarying grades, short zigzags and unnatural repetitive snake-like bends should be avoided.

Where appropriate incorporate existing tracks and clearings into the trail network in natural areas, to reduce the requirement for clearing of existing vegetation.

The type of pathway and pavement area in a park should be consistent with the park type and its significance, established during the park design and development assessment process and any unique park characteristics, such as heritage values. The standards for provision of pathways and pavement areas in parks are listed in **Table 6.6-A**. Where unavoidable, concrete, cut stone and/or timber stairs may be installed in conjunction with pathways, using tread and/or riser materials to match the pathway.

Table 6.6-A Pathways and Pavement Areas

Park Type/ Setting	Standard
Local or District: Recreation Parks, Sporting Parks, Open Space Linkages	
Low to moderate use pathways through bushland (including Class 2 walking track as defined in AS2156)	Decomposed granite with timber edge restraint.
Low to moderate use pathways alongside vegetated waterways	Decomposed granite is only acceptable where there is a well developed canopy of natural vegetation, high velocity overland flow is unlikely to cause path erosion, and the trail will not be subject to regular inundation (ie. a trail located above the 5 year ARI flood level).
Moderate to high use pathways and pavement areas (including Class 1 walking track through bushland and along waterways, as defined in AS2156)	Coloured aggregate spray seal with timber or other acceptable edge restraint (refer Council's Standard Drawing N^o 03-02-201).
	Asphalt with timber or other acceptable edge restraint.
	Broom finish concrete (Council's Standard Drawing N^o 03-02-201).
Moderate to high use pathways and pavement areas in parks with formal design themes	Exposed aggregate concrete (refer Council's Standard Drawing N^o 03-02-201).
	Other pathways/ pavement areas of a higher standard may be acceptable, if designed to complement any unique park or precinct characteristics.
Urban Civic Spaces	
All settings	Subject to Council approval, other footpath specifications may be acceptable where intended to match any special type used in the adjacent suburban centre.
City Parks: Informal Use Parks, Sporting Parks	
All	In accordance with Council approved park specific standards and specifications.
Formalised Trails	
All	In accordance with Council's Trails Design guidelines.

6.6.5 Boardwalks and Pedestrian Bridges

Boardwalks and bridges may be provided in a park, to provide pedestrian and cyclist access to park activity areas and other key park features, as well as non-motorised commuter access through a park. All boardwalks and pedestrian bridges, including quality of workmanship should comply with **AS2156.2 – Walking Tracks Infrastructure Design**.

6.6.6 Fencing and Barriers

Fencing and/or barriers are to be provided along road frontages of a park, to prevent illegal vehicle access and provide protection from potential hazards. Fencing may also be required in association with infrastructure such as some playgrounds. The type of fence or barrier to be provided in a park should be consistent with the park type and its significance. The standards for provision of fencing or barriers in parks are listed in **Table 6.6-B**.

All fences and barriers should be square and true to line. Fence rails and the tops of bollards should generally follow the slope of the land, without frequent dips and bumps. Bollards are preferred where tight corners are to be fenced along road frontage boundaries. Hydraulic constraints must be considered in the design and possible placement of a fence located below the flood regulation line or across an overland flow path. The opportunity to install 'living' bollards (appropriate tree species) should be maximised where appropriate.

Table 6.6-B Fencing and Barriers

Fence Type/ Setting	Standard
Road Frontage	
Local Informal Use, Sport and Open Space Linkages	Timber log barrier fence and/or timber or dome bollards (refer Council's Standard Drawing N° 03-05-005, 03-05-101); Steel lock rail.
District Informal Use and Sport Parks	Hardwood timber post and rail barrier fencing and/or hardwood bollard barriers (refer Council's Standard Drawing N° 03-05-005, 03-05-101); Timber lock rail; Other fences/ barriers of a higher standard, if designed to complement any particular park or precinct character.
Urban Civic Spaces	Cast aluminium bollard barriers.
Natural Areas	Hardwood bollard barriers and/or hardwood timber post and rail barrier fencing; Timber lock rail; All other boundary fencing to be of an approved design to allow the safe movement of fauna.
Entrances to Bikeways or Pedestrian Pathways/ Paved Areas	
	Where on-going maintenance vehicle access is required, removable bollards with posts to match park fencing/ barrier type or other approved lockable barrier; Cycle path deflection rails may be required (refer Council's Standard Drawing N° 03-02-402).
Unfenced Park Boundary	
	Boundary markers where the park boundary is not clearly defined and the park could be perceived as private property.
Safety Fencing	
	Galvanised tubular handrail with chain wire where there is a danger of children gaining access to high risk areas (eg. around stormwater drain head walls, outlets and Pollution Control Devices); Fence off hazards in district and City parks with an approved fence to AS1926 .
Ecological/ Conservation Reserves or Environmental Parks	
	Fauna friendly fencing required.

6.7 Signage

6.7.1 General

Signage is to be provided in a park to facilitate park identification, and to promote safe and appropriate use. Where appropriate, signs are to be co-located on the same set of posts. Signage should be mounted below eye level except where parked vehicles could obstruct viewing, with consideration given to ease of reading from a wheelchair (Council's **Standard Drawing N° 03-05-103**). Where possible, signage should be placed in front of vegetation or other background to reduce the landscape impact. Prominent signage silhouetted against the sky should be avoided. Letter size should be based on the proximity of the sign to the intended position of the reader.

6.7.2 Regulatory and Warning Signage

Standard Council regulatory signs (eg. ordinance signage) should be provided at the park's primary public access point(s), at strategic locations along the road frontages of the park and throughout the park as required. Warning signs should be installed at sites of potential public risk in the park, such as creeks liable to flooding. Symbol signs should be in accordance with **AS2899 – Public Information Symbol Signs**. Traffic control signage (including signage for cyclists and pedestrians) should comply with **AS1742 – Manual of Uniform Traffic Control Devices**.

6.7.3 Advisory Signage

Directional signs should be provided at the park's primary public access point(s) and other key points of access in the park, such as entry/ exit points to major recreational pathways (refer Council's **Standard Drawing N° 03-05-102**). Walking track markers in Natural areas should comply with **AS2156.1 Walking Tracks Classification and Signage**.

6.7.4 Descriptive and Interpretative Signage

A standard Council park name sign should be provided at the park's primary public access point(s), where the park name has been approved by Council under the Park Naming Policy. Information signs should be provided at the park's primary public access point(s) and any sites of special interest in the park, such as heritage sites. Plaques should be designed in accordance with Council's **Standard Drawing N° 03-05-103**. The content of proposed descriptive and interpretative signage should be submitted for approval with the Landscape Plan.

6.8 Utilities

6.8.1 Water Supply

A 25mm water service connection shall be installed at the park boundary with a water meter and vandal proof water tap. Water supply connections shall be located within 25m of a maintenance vehicle access driveway to enable easy access for maintenance purposes. Water supply connections should be located, designed and constructed to minimise impacts on existing landform and vegetation.

6.8.2 Maintenance Taps

Taps should be provided in a park for maintenance of infrastructure, turf and landscaping. Maintenance taps are only required where a reticulated water supply or pressurised potable water supply is available. Taps should include a 20mm Council vandal proof hose tap fitting.

Taps should be located within 10m of the landscaping, turf or infrastructure to be maintained. The tap should not pose a trip hazard nor should the tap interfere with maintenance activities such as grass mowing. Taps and drinking fountains should be co-located where appropriate.

6.8.3 Electricity

An electricity supply pillar of adequate capacity to meet the existing and future power requirements of the park should be installed at the park boundary. Electricity connections should be located within 25m of a maintenance vehicle access driveway to enable easy access for maintenance purposes. The electricity connections should be located, designed and constructed to minimise impacts on existing landform and vegetation.

6.8.4 Sewerage

A sewerage connection shall be provided at the park boundary if public toilets or buildings are to be constructed in the park. The sewerage connection should be located at the closest point to the proposed development site in the park and a permanent marker should be installed at the sewerage connection.

6.9 Under Surfacing

6.9.1 General

Under surfacing of playgrounds should generally comply with the following requirements:

- grade the site to produce a gentle fall to the edges of the playground to enhance drainage, particularly away from free fall zones and areas of high traffic or activity;
- a swale or bund may be required at strategic locations around the playground to divert overland flow;
- typical drainage treatment will include the installation of a robust plastic agricultural drain, fitted with a filter sock, around the outer edge or below the under-surfacing area and draining to the stormwater system, soakage pit or dispersal structure;
- construct an extruded concrete edge around the perimeter of the playground node and fill the entire node with an appropriate impact attenuation material, in accordance with **AS/NZS442**;
- all features within 1000mm of the proposed playground node (eg. shade structure posts, seats and trees), should be incorporated within the boundary of the under surfacing by at least 500mm, to enhance the aesthetics of the playground and for ease of maintenance of the park;
- impact attenuation should be provided over the entire free fall zone, which extends 2.5m from the furthest extension of any piece of equipment, mobile or static;
- loose fill (softfall) impact attenuation material should be screened 5mm to 10mm approved material, installed to a minimum depth of 250mm uncompacted or 200mm compacted. Where fixings or anchors are required they must be completely concealed. the loose fill material is to be inspected regularly throughout the maintenance period and further fill added if necessary, to maintain the required depth;
- solid impact attenuation surfacing may be pre-formed matting or wet pour synthetic surfacing. As a minimum solid surfacing impact attenuation should be installed under swings, scale swings, slippery dip entrance and exits, fireman's poles, and at the entrance and exits of flying foxes. Coverage should extend the length and width of a flying fox unit.

All finished grass and impact attenuation surfaces should be flush with the concrete edge and internal solid surfacing if applicable, to avoid trip hazards.

6.10 Shade Structures

6.10.1 General

Shade structures are provided over playgrounds to reduce the harmful effects of UV radiation, and to reduce heat. Radiation is at peak levels a few hours either side of midday, whereas heat from the sun can impact on play for longer periods. The shade structure should be offset slightly to the north and west of the play element, to maximise the benefits. Shade structures should be certified by a Consulting Engineer designed and constructed in accordance with relevant Australian Standards, and readily maintainable and approved by Council.

A shade structure should be provided over play elements in district playgrounds. Shade structures are required at local and district playgrounds. Suitable tree species should be planted to provide future shade around local playgrounds, and to ultimately replace the need for a shade structure in Local, District and City parks.

6.11 Visitor Facilities

6.11.1 Picnic Nodes

Picnic nodes should be located at attractive and accessible locations in district and city parks and natural areas. They should usually incorporate a shelter, tables, barbeque, refuse bin, tap and drinking fountain. The indicative layout in **Figure 6.11-A** shows a preferred relationship between various facilities and items of furniture in a picnic node.

Picnic nodes in parks should be designed, located and constructed in accordance with relevant Australian Standards, and the following general requirements:

- locate picnic nodes at focal points or adjoining features or places of special interest in a park;
- in natural areas picnic nodes are located in accordance with the approved Open Space Management Plan;
- ensure picnic nodes complement and enhance other recreation opportunities in a park;
- ensure picnic nodes have continuous accessible path of travel from car parks or adjoining roads;
- ensure picnic nodes have all weather vehicle access for regular cleaning and maintenance;
- ensure the infrastructure provided in picnic nodes is readily maintainable and approved by Council;
- use alternative technologies where appropriate (eg. solar energy where mains power is not readily available, rainwater harvesting).

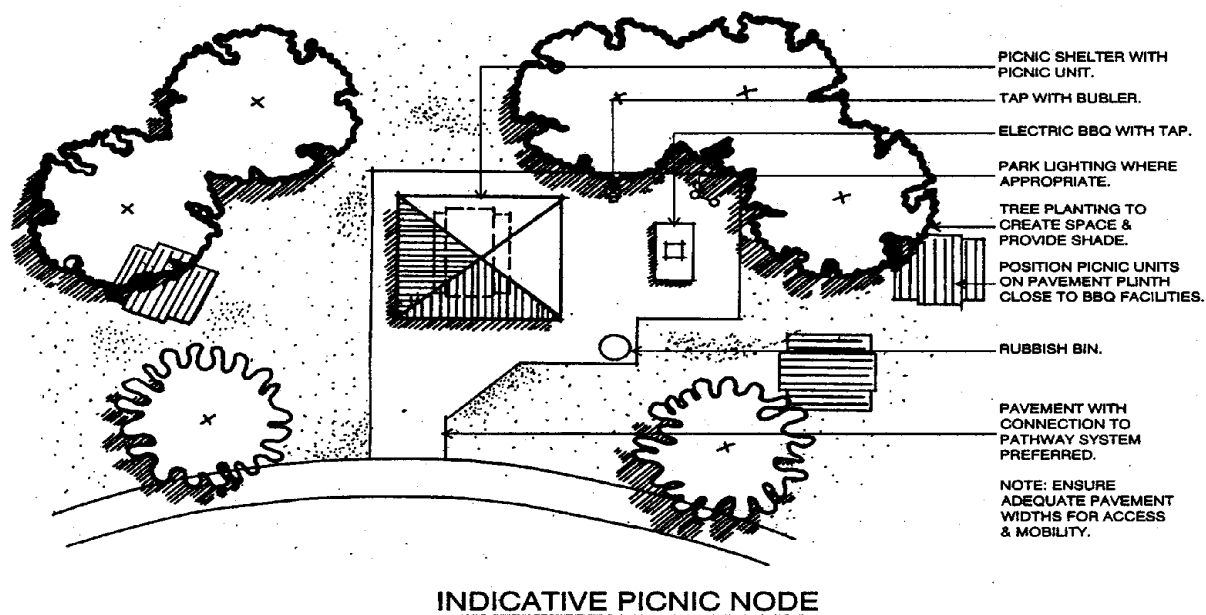


Figure 6.11-A

The type of picnic node provided in a park should be consistent with the park type and its significance established during the park design and development assessment process together with any unique park characteristics, such as natural values. The standards for provision of furniture in picnic nodes are listed in **Table 6.11-A**.

Table 6.11-A Furniture Requirements at Picnic Nodes

Location	Standard
District Parks in Urban and Natural Areas	<p>1 x single plate or 1 x double electric barbecue* (refer Council's Standard Drawing N^{OS} 03-05-104, 03-05-105);</p> <p>1 x picnic shelter;</p> <p>3 x picnic units per barbecue plate. At least one of the picnic units is to be undercover within the shelter;</p> <p>1 x refuse bin;</p> <p>1 x tap and bubbler; or</p> <p>1 x drinking fountain in parks with a formal design theme;</p> <p>1 x light (only within parks where it is appropriate to encourage after-hours use).</p>
Landscape Amenity Parks, Open Space Linkages, Local Parks	Picnic nodes usually not provided. Individual items of park furniture may be required.

* **Refer Section 6.11.2.4 of these Guidelines.**

6.11.2 Park Furniture

Park furniture in parks is designed, located and constructed in accordance with relevant Australian Standards, and the following principles:

- ensure park furniture complements and enhances other recreation opportunities in a park;
- provide a continuous accessible path of travel to furniture;
- ensure park furniture is readily maintainable and approved by Council;
- use alternative technologies where appropriate (eg. durable recycled materials).

6.11.2.1 Seats

Seats should be located to provide an interesting outlook and to maximise summer and midday shade. Seats should be provided in close proximity to a playground or active recreation node, around sports fields, at viewpoints, and at resting points along pathways.

6.11.2.2 Picnic Units

A covered picnic unit or equivalent facility may be provided in conjunction with a playground or other activity space.

6.11.2.3 Refuse Bins

Refuse bins are only provided under exceptional circumstances in local parks, open space linkages, and landscape amenity parks, and in natural areas. Bins should, if possible, be located near a road or the perimeter of the park where they can be serviced without the need to drive the refuse collection truck into the park.

6.11.2.4 Barbecues

Barbecues are not provided in local, open space linkages and landscape amenity parks where demand is low, unless a special need for the facility can be demonstrated. Where barbecues are provided, they usually form part of a picnic node (refer **Section 6.11.1** of these Guidelines).

Council may accept wood burning rather than the standard electric barbecues where mains power is not available, where smoke will not interfere with neighbours, where the risk of bushfire is low, and where fuel collection will not cause environmental harm.

6.11.2.5 Drinking Fountains

Drinking fountains should be provided along district and city park pathways and bikeway networks. Drinking fountains are also required near playgrounds and active recreation nodes where visitor use is high.

6.12 Public Toilets

6.12.1 Public Toilets General

Public toilets are only provided in parks after an objective assessment of potential demand, and where applicable, consideration of the availability of conveniently located alternative non-Council facilities. Demand is categorised as follows:

High Level	High and generally consistent level of everyday use by park visitors, throughout week.
Peak Period	Lower overall level of use, with a peak at weekends or during park functions, sporting events, etc.
Low Level	Limited public use.
Group	Use is primarily associated with the activities of a single club, group, tenant or lessee.

Based on demand, there is a requirement for toilets in many City (destination) parks, and to a lesser extent in district and sport parks, where high-level or peak-period demand exists. Toilets are not required (nor are they desirable) in small local and landscape amenity parks and open space linkages. Lessees will usually provide a toilet within a clubhouse or other community building for group use.

Public toilet buildings in parks are designed, located and constructed in accordance with **Crime Prevention through Environmental Design (CPTED)** principles, relevant Australian Standards, Building Code, and in accordance with the following principles.

- ensure infrastructure in toilet blocks is readily maintainable and approved by Council.
- the toilet should be sited:
 - to avoid nuisance to neighbours;
 - within reasonable proximity to a car park or other demand source;
 - on suitable terrain to facilitate continuous accessible path of travel. Convenient access should be provided for the elderly and disabled;
 - in close proximity to a road, gate or internal maintenance access for servicing;
 - where casual surveillance is possible from surrounding streets and/or other sites of regular people presence.
- where unobtrusive in the landscape:
 - use alternative technologies where appropriate (eg. solar energy, rainwater harvesting).

Composting toilets can be susceptible to fire in the composting chamber and are not acceptable where deliberate arson and vandalism are likely.

If required, securing equipment for the toilet to be locked at night shall be installed.

The type of public toilet building provided in a park should be consistent with the park type and its significance, established during the park design and development assessment process together with any unique park characteristics, such as natural values. The standards for provision of public toilets in parks should comply with **Table 6.12-A**.

Table 6.12-A Public Toilet Requirements

Park Type/ Setting	Standard				
District Park with High Level or Peak Period Use	One toilet block with five cubicles*, at least one with disabled access.				
City Park (Destination Park)	One toilet block with three cubicles, at least one with disabled access. Increased capacity (greater than three cubicles) will only be provided where anticipated use is likely to cause queues to regularly form, in excess of the following queue standards: <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;">High Level Demand</td> <td>Design capacity should meet usual demand with queues no longer than two people per cubicle;</td> </tr> <tr> <td>Peak Period Demand</td> <td>Design capacity should meet usual demand with queues no longer than two people per cubicle. During peak periods*, longer queues may form for no more than half an hour a week.</td> </tr> </table>	High Level Demand	Design capacity should meet usual demand with queues no longer than two people per cubicle;	Peak Period Demand	Design capacity should meet usual demand with queues no longer than two people per cubicle. During peak periods*, longer queues may form for no more than half an hour a week.
High Level Demand	Design capacity should meet usual demand with queues no longer than two people per cubicle;				
Peak Period Demand	Design capacity should meet usual demand with queues no longer than two people per cubicle. During peak periods*, longer queues may form for no more than half an hour a week.				
Parks Along the Foreshore	Incorporate external shower facilities adjacent to beach areas.				

* **Temporary toilets can be provided to supplement capacity for special functions and events.**

6.13 Bike Racks

6.13.1 General

Bike racks in parks shall be designed, located and constructed in accordance with Austroads **Guide to Traffic Engineering Practice Part 14 – Bicycles**, and **AS2890.3 Parking Facilities – Bicycle Parking Facilities**. The standards for provision of bike racks in parks should comply with **Table 6.13-A**.

Table 6.13-A Bike Racks

Park Type/ Setting	Standard
District Parks	
Parks with skateboarding and/or other youth recreation facilities	6 bike racks
Parks with sporting facilities	12 bike racks
City Parks	
Parks with informal recreation facilities and located on a bikeway network	Minimum 6 bike racks
Parks with sporting facilities	Minimum 12 bike racks
Sports Parks	
Formal Sports Parks	Minimum 12 bike racks

6.14 Cultural Heritage Items and Artwork

6.14.1 General

Cultural heritage items include buildings and/ or features with cultural or natural heritage significance listed in the Queensland Heritage Register, as well as any other items of potential heritage interest identified during planning and design of the park.

The inclusion of public art in parks can enrich the cultural life and distinction of places. It can be in response to the environment, to celebrate history, local character and community and add visual appeal to a place. The provision of public art should be in accordance with the Conditions of the Development Permit and/or the approved Landscape Plan.

6.14.2 Siting and Creation of Public Art

The artwork should complement and enhance other design elements in a park. Where appropriate, the artist should work with the local community (eg. schools, community groups) in the design and location of public artwork. As a guide, allow at least 0.25% of the total cost of park development for artwork in urban civic spaces and city parks.

6.14.3 Public Art or Artefacts

Public art or artefacts, from the site, could be appropriate in the following locations in parks:

- activity spaces;
- at entrances to create entrance statements and gateways;
- to provide landmarks and features of interest within the site or open space corridor;
- away from the park but connected visually.

Siting factors to be considered include:

- site context, including history, established uses and values;
- CPTED principles;
- potential visual impact.

6.14.4 Safety

Public art or artefacts are to be located outside of the obstacle free zone of pathways. Items should not have any protrusions or sharp edges that could be a hazard to park visitors. Items should be designed to prevent neck or head entrapment (refer **Appendices B and C of AS1924.2**).

Public art can be feature lit. Lighting requires specific approval of Council and should be considered separately from the requirement for pedestrian lighting.

6.14.5 Maintenance

A detailed maintenance report, incorporating as constructed drawings, installation method, cleaning and re-finishing schedule as well as a list of key contacts such as fabricator(s), artist(s) and suppliers is to be provided to Council prior to final approval and acceptance of the finished heritage items and/or artwork.

6.15 Public Open Space Lighting

6.15.1 Pathway Lighting

a) Design Criteria

Pedestrian pathways or bikeways in Public Open Space Reserves or in separate pathway reserves, shall be provided with appropriate lighting in accordance with the following general minimum requirements (lighting categories):

- pathways between residential allotments P4
- general pathways in open space areas (parkland) P4
- commuter links P3
- other locations (eg. pedestrian underpasses or tunnels), subject to individual assessment.

The lighting standard may vary according to local conditions. Final determination of an appropriate lighting standard, for any particular pathway location, shall be subject to Council approval.

b) Specific Requirements

Power supply for pathway lighting shall be underground and the lighting shall be on Rate 2 Tariff.

Crossing points of pathways across roads or streets shall be subject to individual assessment.

In pathways between or in close proximity to allotments, cut off luminaries will usually be required to prevent glare problems to the adjacent houses.

A street light is to be provided:

- at the entrance to each pathway (may be an existing or proposed street light);
- at every bend or change of alignment greater than 20°;
- at every obstruction or hazard, eg. bridge, stairway, etc.

6.15.2 General Park Lighting

In circumstances where pathway or other lighting is not required within a public open space area, a service pillar with an integral electrical supply shall be installed within these areas for possible future use (eg. barbeques, play equipment, etc).

6.16 Public Open Space Irrigation Systems

6.16.1 General

These Guidelines provide Council's minimum requirements for irrigation systems that are to be located in parks or other Council owned lands.

This section shall be read in conjunction with **Section 3.8** of these Guidelines and Council's current technical manual **Irrigation System Requirements**.

The Consultant shall submit to Council for approval information relating to plan layout, design criteria, materials to be used and system tolerances in accordance with the technical manual **Irrigation System Requirements**.

A bore-fed or recycled water (where acceptable water standards can be sustained) irrigation system, and associated tanks and pumps shall be established for all areas of play on multi-purpose pitches. The irrigation system shall be compatible with Council's operational system, which is current at the time of establishment. The use of potable water for irrigative purposes is undesirable.

6.17 'Establishment Period'

The 'Establishment Period' of 'living' components of the dedicated open space areas should be carried out generally in accordance with this Section of these Guidelines.

The Consultant is responsible for ensuring that 'living' components of the dedicated open space areas are established to the effect that maintenance in excess of a normal Council maintenance regime for each 'living' component is not required. This includes but is not limited to:

- establishment of vegetation to the extent that the vegetation will not perish without excess watering during drought periods;
- 90% area cover of mowable 'A' grade and weed free turf is established to the extent that the turf will not perish without watering or herbicide in excess of a normal Council maintenance regime;
- revegetation to the extent that canopies growth reduces the need for excessive weed removal;
- lake/ pond installation to the extent that an acceptable water quality has been achieved and sustained for a period of x years.

The 'Establishment Period' shall be completed prior to 'On Maintenance'.

6.18 'On Maintenance' Inspection

6.18.1 'On Maintenance' Inspection of Parks, Open Space and Playing Fields

'On Maintenance' inspections of the dedicated open space areas should be carried out generally in accordance with this Section of these Guidelines.

The Consultant is responsible for ensuring that the Council's open space requirements are presented in accordance with the Development Conditions and general category classifications as set out in **Section 6.2.2** of these Guidelines.

The 'On Maintenance' inspections will generally include, but are not limited to, inspection of the following:

- topsoiling and seeding/ grassing to prescribed areas;
- low maintenance and constant grades to mowable surfaces;
- minimum 50mm surface variations where defined;
- stormwater outlets, pollution and siltation control devices are completed and operational;
- maximum longitudinal grading of swales, etc. of 1%;
- removal of debris, rubbish, dead and dying trees, unless fallen and identified as being retained or relocated for ecological reasons in an approved Open Space Management Plan, and rocks larger than 25mm depending on future open space use;
- removal of all declared noxious and/or recognised environmental weeds;
- provision of designated utility connections (sewer, water and electrical reticulation) including appropriate metering and protective devices;
- provision for vehicle exclusion;
- restoration planting to assist wildlife corridors and cleared areas;
- adherence to landscape plans, management plans, irrigation plans, etc;
- provision of approved playground equipment/ recreational facilities;
- playing fields require level playing surfaces;
- 'A' or 'B' grade turf (weed free), as required;
- where parks have frontage to waterways, the treatment of the foreshore should correspond with the outcomes of an impact assessment statement (if appropriate);
- provisions of approved irrigation systems (where provided) including appropriate metering and protective devices.

Notwithstanding normal cadastral survey requirements, 1.5 metre marker posts shall be located adjacent to each corner peg. of dedicated Public Open Space areas that adjoin urban, industrial and rural allotments. The purpose of these marker posts is to reduce fencing errors and to better define Council's maintenance responsibility.

6.19 'Off Maintenance' Inspections

6.19.1 'Off Maintenance' Inspection of Parks, Open Space and Playing Fields

'Off Maintenance' inspections of the dedicated open space areas shall be carried out generally in accordance with this Section of these Guidelines. The inspections will generally include, but are not limited to, inspection of the following:

- 90% coverage of specified grass to prescribed open space areas (playing fields 100%);
- mowable surfaces are easily maintained;
- declared plants and/or recognised environmental weeds;
- successful establishment of landscaping and tree planting (ie. landscape works);
- stormwater outlets, pollution and siltation control devices are functional;
- overland flow paths and swales, etc. are low maintenance;
- approved playground equipment/ recreational facilities is functional;
- foreshore treatments to waterway frontages are performing in a sustainable way as outlined in an impact assessment statement (if appropriate);
- irrigation systems (where appropriate) are functional;
- requirements for establishing living components are achieved in accordance with **Section 16.7** of these Guidelines.

6.19.2 'As Constructed' Requirements

All 'as constructed' requirements shall comply with **Section 10** of these Guidelines and any addendums.