GUIDELINE TO LANDSCAPE MUNICIPAL INFRASTRUCTURE STANDARDS

Principles and Planning behind the Standards

Publication Number:	Guideline to Landscape Municipal Infrastructure Standards: Principles and Planning Behind the Standards Edition 1 Revision 0	
Date of Effect:	APRIL 2019	
Supersedes:	Nil	
Endorsed By:	Karl Cloos	Director, Infrastructure Planning
Approved By:	Ken Marshall	Executive Branch Manager, Roads ACT

Document Information

Document	Key Information
Document Title	Guideline to Landscape Municipal Infrastructure Standards: Principles and Planning behind the Standards
Next review date	
Key words	
AUS-SPEC Base Document	

Revision Register

Edition/ Revision Number	Clause Number	Description of Revision	Authorised By	Date
Draft/1		First Issue		00/00/2018
Draft/2		Second Issue		13/07/2018

CONTENTS

1 INTRODUCTION

1.1 Canberra and Urban Open Space

Canberra is a unique city where landscape principles are an integral part of the planning system. The importance of the landscape has its origins in Walter Burley Griffin and Marion Mahony Griffin's design for Canberra which was strongly influenced by the Garden City and City Beautiful movements.

The design presented a city which was cradled in the bush landscape and abounded with open space for recreation and social interaction. The highly organised urban realm placed urban open space as imperative to creating an egalitarian city.

Through the development and spread of Canberra beyond its original urban boundary the importance of the landscape setting (hills ridges and buffers) and urban open space (parks, playgrounds, ovals, streetscapes etc) has been retained. Today the landscape holds both a significant legacy role and its own modern planning paradigm for social, environmental and economic purposes to the city.

1.2 Urban Open Space

This document includes information and principles intended to assist planners and designers to deliver urban open spaces in the ACT.

Urban Open Spaces are important to the urban environment and in the creation of sustainable neighbourhoods and cities. Urban Open Spaces have an important role in promoting sustainability as they influence interpersonal relationships and the relationship between people and the city.

There are numerous benefits of well designed and integrated urban open space. Health can be improved by integrating and encouraging exercise and active travel into our day-to-day activities, and the safety and security of our neighbourhoods enhanced by providing attractive and welcoming spaces. Physical and visual connection with Urban Open Space and nature also has a positive impact on mental health and relaxation. Equity of access to Urban Open Spaces is important to personal wellbeing and enriching communities. The liveability of our neighbourhoods can be improved by well integrated and well designed spaces.

Well designed and integrated Urban Open Spaces and networks have direct benefits to developers. The marketability of developments can be improved by catering for people's desires for healthy lifestyles, and family and community living, as well as increased property value. This includes public open space, private open space and streetscapes.

1.3 Purpose

This document serves two functions, the first as a guide to the principles behind some of the Municipal Infrastructure Standard (MIS) documents, to assist in their interpretation or how to frame discussions with TCCS on deviations from the MIS documents and secondly as an interim planning tool.

As an interim planning tool this document extracts and expands on some of the planning items from the former Design Standards document (Design Standards for Urban Infrastructure) and from the current planning principles from which the standards are based. The planning items identified in this document are in addition to those identified in the Territory Plan, where there is any discrepancy between those listed in this document and the Territory Plan the more onerous of the two takes precedent.

This document provides principles for the landscape guidelines for both urban renewal and Greenfield developments. Canberra continues to grow at the fringes providing new neighbourhoods on land previously utilised for other purposes and these neighbourhoods face new challenges and pressures to which the Urban Open Space must respond. At the same time the existing urban realm is increasingly subject to redevelopment and urban consolidation, while there are instances in which the existing Urban Open Space can accommodate these increases in population density and use, there is also a need to ensure that it is not overstretched or has the ability to be adapted for these new demands.

The following principles underpin the landscape MIS documents:

> Support liveable cities:
> Ensure low maintenance and cost effective landscapes:
> Maintain Canberra's unique landscape values:
> Promote best practice design and planning: and
> Keep Urban Open Spaces relevant and meaningful to the city as a system and to the community.

Urban Open Space must support a number of interests often competing for resources and space. The values of the landscape in the ACT include:

> Recreation (active and passive, formal and informal):
> Transport (active travel and public transport):
> Ecological functions (for flora, fauna and water): and
> Climate change mitigation and adaption.

The key concerns for landscape in Canberra's Urban Open Space are:

> Changing housing typologies and densities:
> Increased population:
> Infrastructure cost versus demand:
> Aging infrastructure:
> Aging population:
> Spatial constraints:
> Development costs:
> Maintenance:
> Bushfire:
> Conservation and habitat protection:
> Climate change:
> Sustainability: and
> Health and wellbeing.

The guidelines provide a basis for prioritising asset reliability, planning for climate adaption and providing for sustainable development. The scale of modern urbanisation and its accompanying challenges to planning, quality of life, mobility and access to basic resources need to be addressed by the Urban Open Space provided.

The goal is to assist in the delivery of successful urban environments that enrich Canberra and create a more liveable city for current and future generations.

1.4 What is Urban Open Space

Urban Open Space is typically public unleased land that is used as parks, playing fields, active travel pathways and landscape buffers. Urban Open Space includes all types of landscape settings within the urban context from Commonwealth Park and Lake Burley Griffin to neighbourhood parks and play spaces right down to street verges and medians. Urban Open Space encompasses a wide range of facilities and functions including signage, active travel facilities, sporting facilities, play spaces, street and park furniture and green infrastructure.

A full list and description of urban open space typologies is found in *MIS 16 Urban Open Space* and the Plans of management:

> *Canberra's Urban Lakes and Ponds Plan of Management;*
> *Inner Canberra's Urban Parks and Sportsgrounds Plan of Management;*
> *Tuggeranong's Urban Parks and Sportsgrounds Plan of Management;*
> *Woden and Weston Creek's Urban Parks and Sportsgrounds Plan of Management;*
> *Belconnen's Urban Parks, Sportgrounds and Lake Ginninderra Plan of Management; and*
> *Plan of Management for Urban Open Space and Public Access Sportsgrounds in the Gungahlin Region.*

1.5 Why have Urban Open Space

In the Garden City context open space is important for establishing a sense of community. To build that community it is integral that open space is aesthetically pleasing, brings nature into the urban fabric and offers high social function to create active and safe places that foster a sense of place and community.

Urban Open Space is vital to the liveability, function, resilience and environmental performance of a city. Well planned and designed Urban Open Space provides opportunities for passive and active recreation, formal and informal recreation, social interaction, softens the built environment, and makes a place more attractive and amenable.

Urban Open Space is an important tool in addressing climate change and providing ecological benefits.

Urban Open Spaces should also support and encourage active and healthy lifestyles including but not limited to active travel.

Quality Urban Open Space attracts people, reduces stress, improves health, increases productivity, and increases land value. Well designed Urban Open Space also benefits businesses and can be a key driver in commercial vitality while improving quality of life.

Access to quality Urban Open Space is an important aspect of creating a liveable city that best meets the needs of its citizens.

1.6 Climate change and Urban Open Space

Canberra's landscape is both affected by climate change and a great medium for adapting to and mitigating climate change. *The ACT Climate Change Adaption Strategy: Living with a Warming Climate 2016* identifies projected changes due to climate change which affect the city and its landscape:

> Increasing temperature and heat waves:
> Changes to the rainfall patterns and increased drought:
> Increased number of severe storm events and potential flood events: and
> Increasing bushfire weather (including an increase in severe fire weather days in spring and summer).

Urban Open Space and green infrastructure must address climate change in two ways:

1. Mitigation - activities that reduce, eliminate or prevent Green house gas emissions. For instance reducing the heat island effect through increased canopy cover or shifting transport modes from high energy consumption modes to active travel; and

2. Adaptation – activities that make the open space and green infrastructure resilient to the changing environment. For instance trees that cope with warmer weather or landscapes which are not affected by flood events, or sustainable irrigation or passive watering management practices.

Ideally Urban Open Space should both mitigate and adapt to climate change.

To make the ACT safer and more resilient the urban open space and green infrastructure should:

> Provide heat refuges during hot weather including access to rivers and water bodies, shade and spaces with cooling winds:
> Reduce vulnerability to bushfires:
> Slow water movement through the landscape and adapt the landscape to storm events and flooding (WSUD, water bodies, increased permeability, scour protection and flow paths):
> Address the urban heat island (consider evapotransporation, evaporation and shade):
> Consider the albedo effect (consider materiality and colour, hard and soft surfaces):
> Consider solar access to adjoining blocks:
> Increase canopy cover: and
> Be planned and designed to encourage active travel and public transport to reduce reliance on energy intense forms of travel. This should be provided in streets (on-road and off-road) and parks.

Requirement: Shading of the Urban Open Space creates cooler local temperatures reducing Urban Heat Island and can reduce electricity demand for artificial cooling. The quantity and quality of available soil volume for trees influences what trees can be used and the mature size of the trees. Street trees shall allow for suitable soil volume and quality for the growth of trees to provide a minimum 70% projected canopy/shade cover of the road reserve calculated at mature canopy radius as identified in MIS 25 Plant Species for Urban Landscape Projects. Priority shall be given to shading pedestrian facilities (paths) and hard surfaces (road, driveways).

Requirement: Avenues and/or groups of shade trees shall be provided along active travel routes to provide a minimum of 50% projected canopy/shade cover of the path at mature canopy radius as identified in MIS 25 Plant Species for Urban Landscape Projects.

Consider: Location of water quality control ponds and ornamental water bodies to provide localised cooling and relief from Urban Heat Island.

Failing to adequately address climate change will reduce the liveability of the ACT and result in a decline in human health and wellbeing.

For more information refer to:

> *AP2: A new climate change strategy and action plan for the Australian Capital Territory 2012;*
> *ACT Climate Change Adaptation Strategy: Living with a Warming Climate 2016;*
> *ACT Water Strategy 2014; and*
> *Enabling Adaptation in the Australian Capital Territory 2014.*

Requirements relating to urban open space and climate change are summarised in the following table:

Requirement
Street trees will, at maturity, shade not less than 70% of the road reserve in the estate at noon on the summer solstice. Note: Maturity is the estimated canopy size at 20 years of age.
Avenues and/or groups of shade trees will, at maturity, shade not less than 50% of the path at noon on the summer solstice. Spaces between shade shall not be greater than 15m. Note: Maturity is the estimated canopy size at 20 years of age.
Trees will, at maturity, shade not less than 50% of parks and public open space at noon on the summer solstice. Note: Maturity is the estimated canopy size at 20 years of age.
Urban Open Spaces shall achieve the following: a) Provide local cooling and relief from the Urban Heat Island b) Located to provide overlapping cooling radii Located close to vulnerable people including near child care centres, hospitals, residential care accommodation, retirement villages, supportive housing and public housing.

2 URBAN OPEN SPACE

2.1 Planning for urban open space

The *Territory Plan* is the key planning document in the ACT, all information contained in this document are provided to assist practitioners in the planning and design of landscapes to TCCS requirements and aspirations. All requirements and considerations within this document shall be in accordance with the *Territory Plan*, if there are any contradictions between this document and the *Territory Plan* the *Territory Plan* shall take precedent.

2.1.1   Assessing existing assets

General: Each Urban Open Space is part of the wider network throughout the city, it is important to consider the surrounding areas, the existing and future development to ensure facilities respond to the area and are consolidated with the wider network.

Requirement: The provision of Urban Open Spaces or upgrade of a space shall include an assessment of existing facilities. The assessment shall cover:

> Typology and facilities:

- Identify functions (ecological links, play space, active travel routes)
- Identify the size of spaces and if they include 'kickabout' spaces, ovals or other recreational facilities
- Identify the age groups they cater for
- List the level of play spaces (neighbourhood, central, CRIP, District)
- Identify the type of play space (nature, structured, combination)

> Distribution and connectivity (coverage accounting for barriers to active travel):

- Identify routes connecting open spaces to the proposed development (refer **Siting and Distribution** for coverage distances)

> Suburban, urban and natural context:
> Current and projected population density and demographics:
> Accessibility: and

- Identify existing and potential barriers to active travel (major roads without crossing points, topography, natural features)

> Quality.

- Number of activities
- Character
- Attractiveness
- Age/maintenance

The results of the assessment should inform the distribution and types of Urban Open Spaces provided in a new estate or how the existing spaces can be best upgraded.

2.1.2   Siting and distribution

General: Urban Open Spaces are integral parts of a neighbourhood and district planning. In the Garden City context open space is important for establishing a sense of community. To build that community it is integral that Urban Open Space is aesthetically pleasing, brings nature into the urban fabric and offers high social function to create active and safe places that foster a sense of place and community. The use of Urban Open Space is closely linked to the community it is located within, and the specific needs and desires of that community. Urban Open Space sitting and distribution should respond to existing and projected community needs and desires.

Requirement: The planning of Urban Open Space shall:

> Improve liveability and usability:
> Respond to climate change (refer **Climate Change and Urban Open Space**):
> Address community and environmental function. Provide a range of sizes and typologies that responds to local neighbourhood, district and city scales:
> Respond to character:
> Support and encourage active travel:

- Convenient paths of travel (direct paths that consider distance and topography):
- Accessible paths wherever feasible:
- Provide tree-lined paths: and
- Streets with good connectivity.

> Consider the surrounding development typology, demographic and existing or future developments:

- Fitness and play spaces, sporting facilities and fitness trails near residential dwellings:
- Plazas and parks near commercial or mixed use areas (group centres, town centres etc):
- Accessible spaces for aged care/aging population: and
- Ensure that urban open space near high dwelling density caters for a wide range of users and encourage use via:

  o high vegetation cover:
  o high level of choice (multiple seating nodes, multiuse spaces):
  o a variety of facilities (seating, fitness and play spaces, open grass areas): and
  o connectivity via green spaces and active travel routes.

Consider: The planning of Urban Open Space shall consider:

> People/Community:

- Facilities people need and want:
- Safety and perceived safety:
- Spaces and facilities for various user groups: and
- Social interaction to various levels (positioning seating that overlooks activity, grouping facilities within an open space to heighten the sense of activity).

> Environment:

- Retention of existing trees (refer **Green Infrastructure**):
- Opportunities to incorporate stormwater management:
- Wildlife corridors:
- Access from dwellings to the open space (greater distances promote car based travel, shorter distance/amenable routes promote active travel): and

- Local character and landscape identity.

> Economic Development:

  - Business opportunities:
  - complimentary uses and spaces near commercial zones or hubs:
  - street and park furniture which compliments adjoining activities (table and chairs for take away food, bicycle facilities near destinations): and
  - Play spaces and sporting facilities near shops, schools and community facilities (that are open access/non-restricted in use) to create hubs of activity and support local business.

> The resilience and flexibility to meet future needs and activities:
> Views to and from open space, view corridors, and overlooking:
> Co-locating high order Urban Open Space (such as District Park, Central Neighbourhood Park or CRIP) and sports facilities with other social infrastructure such as schools, and community facilities:
> Direct physical relationship of higher dwelling densities to Urban Open Space (frontages and connectivity, overlooking and passive surveillance): and
> A need based approach to Urban Open Space sizing and facilities in urban consolidation areas and near higher dwelling densities.

Requirement: The planning of play spaces shall be:

> At least 95% of residences shall be located within:

  - 500m path of travel from a neighbourhood play space. It is acceptable for residences to be within 500m of a higher order play space in place of a neighbourhood play space.
  - 1.1km path of travel from a Central Neighbourhood or CRIP play space. It is acceptable for residences to be within 1.1km of a higher order play space in place of a central neighbourhood play space, CRIP play space or neighbourhood oval: and
  - 2.5km path of travel from a District Park play space, Town Park play space or District ovals.

> Multi-unit blocks shall be a maximum 500m path of travel from a neighbourhood play space (or a higher order play space):
> Provide a variety of play space sizes:
> Select suitable sites that incorporate existing landscape features:
> Select sites which will maximise utilisation, by being visually prominent and easily accessible:
> Provide a variety of play space typologies (nature play, play equipment etc): and
> Ensure spaces allocated are of appropriate size to accommodate play spaces with appropriate setbacks. Refer *Play equipment siting setback requirements, MIS 21 Recreation Facilities*.

Refer *Territory Plan Estate Development Code R67* for further siting requirements.

Consider: The spread of Urban Open Space sizes, recreational facilities and play spaces across a suburb should:

> Provide increased Urban Open Space amenity around compact blocks and multi-unit sites (sites with less on block open space and higher population density):
> Utilise micro parks to improve local amenity and provide some facilities such as seating between destinations:
> Consider topography, slopes can be difficult for accessibility but can create engaging recreation facilities and play environments:
> Respond to and influence adjacent land uses: and

> Connect with active travel routes.

Coverage shall be measured by path of travel between the block boundary of the residence and the destination within the open space (not the open space boundary). Landscape features and street networks that disrupt connectivity have noticeable impact, increasing with longer distances. This demonstrates why path of travel is more influential on access and coverage. The following diagrams demonstrate how path of travel distance can be shown.

Figure 1 – 500m Coverage for Neighbourhood play space (or higher order Play Space)

Figure 2 – 1.1km Coverage for Central Neighbourhood play space or CRIP (or higher order play space)

Figure 3 – 2.5km Coverage for District Park play space, Town Park play space or District ovals

For more detailed information on coordinating Urban Open Space planning and active travel routes refer:

> *MIS 05 Active Travel*

Requirements relating to the planning of urban open space are summarised in the following table:

Requirement

95% of proposed blocks for *residential use* comply with at least one of the following:
  a) Not more than 500m path of travel from at least one of the following:
      i.   a neighbourhood play space
      ii. a central neighbourhood play space
      iii. a CRIP
      iv. a town park play space
      v.   a district park play space
      vi. district ovals or neighbourhood ovals containing a play space.
  b) Not more than 1.1km path of travel from at least one of the following:
      i.   a central neighbourhood play space
      ii. a CRIP
      iii. a town park play space
      iv. a district park play space
      v.   district ovals or neighbourhood ovals.
  c) Not more than 2.5km path of travel from at least one of the following:
      i.   a town park play space
      ii. a district park play space
      iii. district ovals.

Note: The distance shall be measured from the residential block boundary to the play space. The play space is defined as the immediate area of play facility (eg play ground) and not the block boundary.

Multi-unit blocks shall not be more than 500m path of travel from at least one play space or oval.

Note: The distance shall be measured from the residential block boundary to the play space. The play space is defined as the immediate area of play facility (eg play ground) and not the block boundary.

Urban Open Spaces containing play spaces shall have dimensions adequate to accommodate the play space and all setbacks as listed in *MIS 21 Recreation Facilities*.

Urban Open Spaces containing play spaces shall provide shaded seating (trees or shade structures)

The network of Urban Open Space shall achieve the following:

a) provide a variety of play space sizes

b) provide a variety of play space typologies (nature play, play equipment and 'kickabout' spaces)

c) provide shelter from environmental conditions (high winds, sun)

The network of Urban Open Space shall provide a range of sizes and typologies that responds to:

a) local neighbourhood, district and city scales

b) user groups (young, adolescent, adult, aged, elderly)

c) the needs and demands of surrounding residential densities and land uses

Suggestion: This may be demonstrated through an Open Space Strategy for the estate.

2.2　Urban Open Space elements

2.2.1　Green infrastructure

Green infrastructure is the network of "blue and green" spaces, Green Infrastructure assets are the individual components that make up the green infrastructure network such as water ways, water bodies, urban forests, trees, plants and other living components.

Green Infrastructure should:

> Protect and enhance biodiversity and ecological functions (trees, grasslands, water courses etc):
> Seek to enhance existing landscape features and processes where intervention is warranted (such as around retention of existing trees or where water ways are integrated into new developments or where there are good views):
> Facilitate stormwater management:
> Be resilient:
> Address climate change: and
> Regenerate degraded landscape features and processes or missing links (such as habitat corridors).

Requirement: New estates shall identify opportunities for existing and potential green infrastructure works including but not limited to:

> Assessment of existing trees and retention of the trees and tree stands of high value in accordance with the Tree Protection Act:
> Environmental assessment of ecosystems and retention of high value or endangered environmental features:
> Assessment of water flow and drainage corridors and potential for WSUD initiatives: and
> Areas with other/ambient qualities such as good views.

The appeal and value of a suburb can be greatly enhanced by the retention of existing trees and vegetation, water ways/drainage corridors and landscape features. The planning of new estates shall consider the following techniques for retention of existing trees and vegetation:

> Road alignment – where green infrastructure assets occur in the suburban areas, vary the alignment of roads and services to avoid them:
> Open space – locate open space to incorporate existing green infrastructure and retain corridors of trees through the subdivision:
> Play spaces – play spaces are not to be located directly under canopies of mature stands of trees unless the trees have been assessed and approved for safety:
> Verges – alter verge widths to accommodate existing trees, for up to 10 metres:
> Carriage way medians – dense stands of trees or drainage lines may be retained in adequately sized islands between carriage ways:
> Roundabouts – a large tree within a roundabout can be a significant landmark and place making element. Where considering the retention or planting of a tree within a roundabout ensure sightline and setback requirements can be met.
> Landmarks – design road layouts to use landmark trees and landscape features for orientation and aesthetic effect, for example at the top of a hill or in a park opposite an intersection: and
> Design block layout so that a tree will not straddle a boundary between leased and unleased land, ensure that lease boundaries are not close to a tree trunk and that the majority of a tree canopy is incorporated inside a single block or the road reserve.

For more detailed information on green infrastructure refer:

> *MIS 08 Stormwater*
> *MIS 15 Urban Edges Management Zone*
> *MIS 16 Urban Open Space*
> *MIS 24 Soft Landscape Design*
> *MIS 25 Plant Species for Urban Landscape Projects.*

2.2.2   Street and park furniture

An Urban Open Space may or may not include Street and Park furniture. For a list of street and park furniture that can be included in different types of urban open space refer *MIS 16 Urban Open Space Annexure A.*

Street and Park furniture can be designed and placed to improve the function and amenity of urban open space. Amenable spaces will include street and park furniture which supports human activity and encourages increased participation and duration spent in the open space network.

Street and Park furniture influence the patronage of a space. Highly urban environments receive more use when options are provided; plazas for instance should contain a range of furniture for people to gather close together or individually. In planning of furniture provision the designer should consider that people have a tendency to congregate at "edges", "intersections" and "active nodes". "Edges" that view or abut high levels of activity are the most popular; these may include seating walls near streets or paths with high pedestrian activity and seating nodes near play spaces or other recreational uses. Shade and water are also attractors and important for longer visits during hot weather. Water is particularly important for younger children and the elderly.

The provision of Street and Park furniture must also consider safety and ensure that places to sit or linger are safe, such as not providing furniture near public toilets as they legitimise loitering which can increase opportunity for anti social behaviour and create a sense of fear or actual danger for vulnerable users. For more information refer to **Safety** and the *Crime Prevention through Environmental Design General Code.*

Street and Park furniture also has the power to influence user groups (gender, elderly, family, individual etc). If furniture is located in an area that is expected to provide special attraction it is most likely that the dominant user group will claim the space which can exclude other users. Where warranted, Urban Open Spaces should provide multiple instances of the furniture so casual and smaller user groups have an opportunity to use the facilities without any feeling of intimidation. When a wide range of the people are encouraged to use a space, the less dominant any one user group becomes so the space becomes more safe and equitable.

Consider: In the design of Urban Open Space consider the following:

> Providing a number of seating nodes within an Urban Open Space:
> Providing drink fountains where long time frame use occurs:
> Providing bicycle racks near destinations to encourage active travel:
> Providing furniture which generates activity and use:
> Clustering furniture to generate activity: and
> Utilising robust construction and materials to resist vandalism.

For more detailed information on street and park furniture refer *MIS 20 Street and Park Furniture.*

2.2.3 Wayfinding

Wayfinding involves visual cues and physical signs. Broad landscape visual cues include local landmarks such as hills, lakes, rivers and built infrastructure that users can identify to locate themselves and assist in wayfinding. Signs are a more direct form of wayfinding clearly identifying place and directions to destinations. Urban Open Space should utilise both tools to inform wayfinding and encourage active travel.

For more detailed information on Wayfinding and Signage refer to *MIS 22 Signage for urban parks and open space* and *MIS 05 Active Travel.*

2.2.4 Recreation facilities

Urban open space may contain recreation facilities such as fitness and play spaces, sporting facilities, skate parks and dog parks.

Urban Open Spaces without recreation facilities may have environmental functions but only have limited or passive benefits to the community. The skilful planning and integration of quality recreation facilities in Urban Open Space directly influences the liveability of the neighbourhood and city. The needs of any community are varied and continue to change over time, recreation facilities provided need to respond to the communities within which they are located. A well balanced approach to the distribution and typology of recreation facilities creates vibrant, active and attractive spaces.

The amount and types of recreation facilities provided in any one Urban Open Space may be as minimal as a single seat or in the case of a town park include seating, play spaces, exercise equipment, recreational paths, and barbeques. The quantity and types of recreation facilities must respond to the network and community needs (refer **Planning for Urban Open Space**).

The provision of recreation facilities in Urban Open Space shall respond to the Open Space Category and community expectations/needs refer *MIS 16 Urban Open Space*.

For more information refer to *MIS 21 Recreation Facilities* and the following sections of this document:

> **Play**
> **Skate parks and wheeled play**
> **Dog parks - animal play**

2.2.5 Maintenance

Maintenance of Urban Open Space and green infrastructure influences the community's perception and behaviour. Well maintained spaces have higher patronage and more broadly have a positive impact on perception of the area, safety and encourages community to look after the asset.

The planning and design of Urban Open Space influences the ease and cost of maintenance. Planning of Urban Open Space should consider how landform and spatial planning will affect maintenance operations such as mowing, weed management and recreation facility management. Making high management assets easily accessible reduces maintenance costs and time required for maintenance activities.

"Eyes on the street" makes for less vandalism, in turn reducing maintenance costs. Urban Open Spaces that are safe, comfortable, inviting and incorporate passive surveillance reduce the likelihood of antisocial behaviour.

Stewardship, when the community feels a connection to a space they develop a sense of ownership and they are more likely to look after the space and report damage or wear and tear. The community is more likely to form this connection when spaces are well located, active, inviting and provide for daily uses.

For more specific information on maintenance requirements for each type of urban open space and refer to the following MIS documents:

> *MIS 16 Urban Open Space:*
> *MIS 17 Shopping Centres and Commercial Areas:*
> *MIS 20 Street and Park Furniture:*
> *MIS 23 Public Toilets:* and
> *MIS 24 Soft Landscape Design*
> *MIS 22 Signage for urban parks and open space*

3   PLAY

Play is important for the development of children and their inclusion in the city. Play provides opportunity for personal growth and physical and mental wellbeing of children, adults and communities. Play is an important way to communicate and create bonds between people within a community.

3.1 Fundamentals of play

3.1.1   What is play?

Play develops skills in interaction, communication, balance, understanding of the world and their own bodies, in which children learn to express and challenge themselves.

Play is mental and physical engagement that is:

> Fun:
> Important to the physical and mental development of all children:
> A part of education:
> Social:
> Creative: and
> A fundamental right of all children (*article 31 of the UN convention on the rights of the child 1989*).

3.1.2   Why play?

Play assists children in developing:

> Problem solving skills:
> Independence:
> Physical strength:
> Flexibility and to deal with change:
> Gross motor skills:
> Fine motor skills:
> Spatial awareness:
> Resilience:
> Risk awareness:
> Understanding of the environment:
> Language:
> Literary skills:
> Culture:
> Community building:
> Social skills and respect for other: and
> Health bodies and minds.

Play provides opportunity for children to be active and has cognitive and emotional benefits.

Play is also beneficial for fitness, not only for children but for adults and the elderly too.

Play also helps create bonds between carers and children and strengthens community networks.

3.1.3 Types of play

Play is experienced through some or all of the seven senses:

> Sight – the eyes detect images of visible light and generate electrical nerve impulses for colours, hues and brightness. Recognition and interpreting visual stimuli through comparison with experiences.
> Smell – the chemical, odour molecules in the air received via olfactory receptors.
> Taste – capacity to detect the taste of substances such as food, minerals and poisons. Not to be confused with the sense of flavour, that is a combination of taste and smell. Sweet, bitter, sour, salty and umami.
> Hearing – detection of vibrations, changes in pressure through time perceived through the ear or hearing device.
> Touch – perception generally associated with the skin and hair follicles and the variety of pressure receptors. Firm, brushing, heat, cold.
> Vestibular – the perception of our body in relation to movement through the environment. Acceleration, g-force, body movement and head position.
> Proprioception – the sense of relative positioning of neighbouring parts of the body and strength of effort used for movement.

Play which engages these senses is important in the development of children as individuals and in a social context. Further, many of these types of sensory engagement are essential in the learning process assisting in the development of lateral thinking, and literacy and numeracy skills. Regular engagement of these senses through play increases children's attention spans and their ability to focus on tasks.

3.1.4 Challenge and risk

Challenge and risk are important components of play spaces. Interesting and challenging play spaces promote healthy development in children. Early encounters with risk can help children develop the ability to deal with those risks and overcome fears. Children are prone to explore risky activities, exploration of risk in manageable environments can manage the level of negative outcomes and mitigate unacceptable outcomes.

All risks should be evaluated against the benefits of said risk. Exposure to risk allows children to develop awareness of their abilities, weaknesses and gives opportunity to develop their capabilities and good decision making skills. While allowing children to explore risk and make decisions on how they engage with an environment is essential, it is important that play spaces avoid exposing children to unacceptable hazards or dangers. These include hazards which children may not perceive or foresee, for instance it is important to ensure fall zone surfacing and entrapment standards are met. It is also important the level of risk is perceived by the user, for instance climbing a rock is perceived as more risky than climbing a platform of the same height however (dependent on fall zone material and surface slip resistance) both are equally risky. The higher perceived risk generally engages the user more in the activity and may reduce complacency.

The level of risk and safety in play spaces must meet all legal requirements and should be shaped by community expectations.

3.1.5 Accessible and inclusive play

Play spaces should be accessible and inclusive. All people are equally valued and have the same opportunity to participate.

In inclusive play spaces all people are given the opportunity to develop their skills and abilities and are supported to reach their full potential.

Accessible or universal design provides environments that are useable for people of any age or ability.

Play spaces provide varying degrees of challenge and spaces that develop skills in agility and therefore do not allow for access by all, to all areas. However, play spaces should maximize interaction for all users and provide inclusive environments, further, providing a scale of challenge gives less mobile or able persons controlled environments to expand their abilities and develop skills. This is also important as people age to slow, minimise or eliminate decline in mobility and dexterity. Inclusive play provides a sense of belonging and strengthens community ties.

3.1.6   Nature play

Nature play emphasises interaction with nature and learning about the function and value of nature. These play spaces are important to provide diverse and creative play activities and contribute to a more sustainable play space network. Natural elements offer high play value and are often totally adaptable to the needs of children. They may include:

> mounds and boulders:
> trees and shrubs:
> creative areas for cubby building:
> logs:
> sculptures:
> sand: and
> water.

Faced with a play environment that is rich in natural elements encourages children to use imagination to create and explore through play. Risk and challenge are inherently present in nature play and allow levels of engagement at the choice of the individual child.

Malleable elements within the play space allow children to shape their play experience and fully engage in play, highly malleable environments are shown to significantly increase the amount of time children engage in play. Sand and water are good examples of highly malleable elements which children engage with for extended periods of play. Other examples include leaves, sticks, twigs, bark and soil.

When planning a natural play space area, considerations include:

> Relevant Australian Standards such as adequate fall zones and softfall surfacing:
> Clear and accessible pathways are provided:
> Minimise maintenance requirements and create easy mowing edges where the play space area abuts grassed parkland:
> Plants are carefully selected to ensure that they are non-toxic, non-woody and that plants with sharp or spiky features or requiring harsh pruning leaving stubs (such as formal hedges) are avoided:
> Loose items such as pebbles, sand, small logs, leaves, seed pods, cones and bark are readily available for children to incorporate into their play:
> Larger items that are not intended for moving are heavy enough (approximately 80-200kg depending on shape, size and weight distribution) not to be able to be shifted by 2 strong adults:
> Boulders and rocks that may be used to construct sandpit edges, creek beds, stepping stones, etc. have rounded edges, are non-slippery when wet and do not present foot, finger or other entrapment:
> Providing natural elements that may attract birds, butterflies and insects, however caution should be used to avoid attractors for the likes of bees, wasps, snakes and spiders:
> Encourage interaction by children of all ages and multi-generational play: and
> Preserve and protect cultural, environmental and heritage features.

3.1.7   Art elements in play spaces

Artwork can be effective in creating unique play spaces. Involving the community and local children in design and creation of an art installation can be an excellent way of engaging community in the development of a play space or park.

Permanent artwork installations in play spaces shall:

> Be robust, durable and easy to maintain:
> Reflect the unique identity of the local community and landscape character: and
> Be multi use.

Where possible artwork installations should also be play elements that children can interact with. Relevant Australian Standards will apply to any art installation in public open space. The above excludes temporary, supervised art/play events, such as use of boxes, hay bales, hessian or other temporary art materials.

3.1.8   Water play

Water is a unique sensory element that is easy to manipulate and can capture children's attention for extended lengths of time. It provides opportunities for children to create their own play environments, experiment with texture (mixing with other materials, dirt, sand etc), flow (dams, floating leaves and twigs) and presents unique challenges and risks that other play media cannot convey. Water is also a strong attractor for play during hot weather.

Water play can also support corporative play in the creation of channels and flow paths as well as competition with boat or leaf races.

Water play is most effective when it is integrated with other play elements and material (sand, pumps, channels etc).

While the risks of water play are important for children's development, safety considerations must be adequately addressed particularly (but not exclusively) in regards to water quality, supervision, prevention of drowning and environmental health factors such as mosquitoes.

For more detailed information on Water Play refer to *MIS 21 Recreation Facilities.*

3.1.9   Skate parks and wheeled play

Skate parks and spaces that cater for wheeled play are important facilities in assisting child development and while they cater for all ages they are particularly important for providing spaces for pre-teen and adolescent age groups.

Well distributed and easily accessible skate infrastructure can reduce unwanted "miss-use" of other infrastructure. This can give skaters a sense of belonging and inclusion within the area and it's Urban Open Space which can reduce anti–social behaviour, reduce damage to other infrastructure such as walls and seats and increase activity within local Urban Open Spaces by a wider range of the community.

Skate parks are typically provided at the district scale while wheeled play spaces are suitable for Urban Open Spaces from neighbourhood parks up.

For more detailed information on Skate Parks and Wheeled Play refer to *MIS 21 Recreation Facilities.*

3.1.10   Dog parks – animal play

Dogs are popular pets in the ACT and valued members of their households. Dogs in the urban environment need the opportunity to exercise off-lead. Dog parks provide this opportunity for exercise and socialisation in a contained environment. This activity benefits both the dogs and their owners.

A Dog Park is an enclosed area designated for dog owners to exercise, play and socialise their dogs.

Dog Parks are typically provided at a district scale. The planning of dog parks should consider access and parking facilities.

For more detailed information on Dog Parks refer to *MIS 21 Recreation Facilities.*

4 SAFETY

Safety is not only an assessment of risk and hazards but an understanding that the built and natural environment can influence the safety and wellbeing of our community. This document primarily discusses the later; Safety in Design is the responsibility of all designers and shall be carried out as required by law.

The following principles are listed to optimise the safety outcomes for planning and design of Urban Open Space:

> Safe streets, parks and neighbourhoods:
> Inclusive Urban Open Space:
> Increase patronage of Urban Open Spaces:
> Safe and inclusive Urban Open Space: and
> Reduce opportunities for antisocial behaviour and crime.

To achieve the principles the planning and design of Urban Open Space shall:

> Maximise visibility and surveillance:
> Provide safe movement, good connections and access, including the provision of alternative routes to pedestrian tunnels or bridges:
> Maximise activity, both volume of users and extending time of day use: and
> Comply with all MIS document requirements for safety and CPTED principles (*Crime Prevention Through Environmental Design General Code*).

The planning and de*sign of Urban Open Space is highly influential on safety, b*oth in terms of danger posed by the physical environment (falls, impacts etc) and crime (actual and perceived safety). In regards to safety and the physical environment the planning and design of Urban Open Space must comply with all relevant codes and standards including Australian Standards and Austroads (refer to MIS documents).

The perceived safety of a space is highly influential on patronage and inclusivity. When perceived safety is improved the actually safety of a place is generally improved through higher pedestrian activity and the number and diversity of users in and passing through the space. Conversely places perceived as unsafe may become more unsafe due to irregular use and low pedestrian volumes. Well designed safe Urban Open Spaces strengthen communities through increased social interaction. Safe Urban Open Spaces also assist in the creation of healthy and sustainable neighbourhoods through the promotion of active travel and increases public transport use.

In turn the design of safe Urban Open Spaces improves safety of houses, streets, neighbourhoods, districts and cities. Improved safety also reduces maintenance costs, refer to **Maintenance**.

Urban Open Space should complement the Urban Design and planning structure of the area. This includes urban structure, legibility and walkability.

For more information refer to the *Crime Prevention Through Environmental Design General Code*.

![ACT Government logo](ACT Government)

Transport Canberra and
City Services

APRIL 2019