

1. Introduction

Public Open Space (POS) provides an array of social, economic, health and environmental benefits to individuals and to the community as a whole. In all its forms, open space is an essential ingredient for enhancing the liveability of an area and improving the quality of life for local communities.

With changes in housing diversity and population growth the provision, function and quality of recreation spaces has become increasingly more important. Easy access to well designed and diverse open spaces and more recently streetscapes and urban centres will assist in not only meeting demand associated with these changes, but also enhancing the benefits that open spaces provide.

This procedure is designed to outline the minimum standards and technical information required to guide both applicants in the preparation of landscape drawing submissions, and the City in the assessment and determination of submissions.

2. Statement of Intent

This Planning Procedure applies specific rigor to the preparation and assessment of landscape drawings related to strategic and statutory proposals for residential, commercial, industrial or rural-residential development by:

- (a) Applying the objectives and requirements of Liveable Neighbourhoods (WAPC, 2009), WA state government policies and guidelines;
- (b) Ensuring that the objectives and intent of the approved Structure Plan and Subdivision applications are appropriately implemented, and
- (c) Ensuring that infrastructure is designed and constructed in accordance with appropriate Australian standards and adopted planning policies consistent with best management practice.

This Planning Procedure should also be read in conjunction with the following City of Rockingham documentation:

- Planning Policy No.3.4.1 - Public Open Space;
- Greening Plan (CoR,2017);
- Water Efficiency Action Plan (2016);
- Public Open Space Strategy (Draft);
- Planning Procedure No.1.24 - Engineering Approval;
- Planning Procedure No.1.8 - Urban Water Management;
- Planning Procedure No.1.26 - Traffic.

3. Application

As part of its role in the assessment of proposed subdivisions under the *Planning and Development Act 2005* (the P&D Act) and Structure Plans under the *Planning and Development (Local Planning Schemes) Regulations 2015* (the Regulations), the City provides advice and recommendations to the Western Australian Planning Commission (WAPC) regarding the provision and development of POS. The City is also responsible for determining applications for development approval in accordance with the deemed provisions in Schedule 2 of the Regulations, and may apply conditions with respect to the provision, design and landscape of shared spaces, street setbacks and verge areas.

Where a Structure Plan exists, the subdivision and development of land is to be generally in accordance with the Structure Plan and any associated provisions contained in Schedule No.9 of Town Planning Scheme No.2.

Development of POS as part of a proposed subdivision is required to be carried out in accordance with a POS Landscape Plan, the requirements for which are outlined in the City's Planning Policy 3.4.1 - Public Open Space. The City will assess and issue landscape approval and/or impose suitable conditions, as required, to manage impacts, quality and deliverables in accordance with the requirements of the Policy.

When recommending landscape requirements or imposing conditions, the City will consider and assess a proposal having regard to the documents referenced above, as well as the principles set out in the Western Australian Planning Commission's (WAPC's) *Liveable Neighbourhoods 2009*.

4. General requirements

Public opens space developments are assessed based on the requirements of *Liveable Neighbourhoods 2009*, which stipulates that the applicant is to develop POS to a minimum standard including full earthworks, irrigation, grassing of key areas, pathways that form part of the overall pedestrian and/or cycle network and maintenance for two summers (R37 LN 2009).

Specific requirements relevant to each of the approval processes addressed by this Procedure are summarised below.

4.1 Structure Planning

At the Structure Plan stage, City Officers consider the existing land use and the hydrogeological constraints attached to future development of the land and nearby land. Given the importance attached to vegetation retention, the built environment and the residential character outlined in *Liveable Neighbourhoods* the City places great emphasis on strategic planning outcomes when assessing an application with respect to landscape impacts, quality and deliverables.

The primary elements are outlined by the WAPC guidelines as applicable to the placement and development of Public Open Space and are considered as part of the Local Structure Plan assessment process.

- Balanced provision of, and equitable access to nature, sport and recreation opportunities throughout the local government area;
- Projected demographic profile, population growth or decline and housing density (including access to private open space);

- Local neighbourhood identity based on natural and cultural features that contribute to landscape character;
- Creation of a continuous POS network though connected or linear POS for walking and cycling;
- Identification of POS in areas where land is unlikely to be subject to structure planning, to ensure that individual subdivisions do not resulting a fragmented POS network;
- Integrated water cycle management information such as district/regional water management strategies, water supply strategies, water license availability and/or stormwater management planning;
- Identification of where district/regional scale sporting facilities or recreational spaces are required and strategies for the formal acquisition or re-zoning of this land;
- Areas of environmental importance identified through local biodiversity planning;
- Shared use/co-location of POS (e.g. ovals and schools) and facilities with appropriate management plans and procedures.

4.2 Subdivisions

Subdivision applications submitted to the City are cross referenced with the approved Structure Plan with consideration of size, function, utility and usability. Beyond this, detailed landscape and supporting irrigation plans are to be prepared and submitted to the City's Land and Development Infrastructure section to satisfy conditions imposed by the Western Australian Planning Commission (WAPC).

Public Open Space is assessed against the requirements of Liveable Neighbourhoods and considers the following elements;

- Developments should preserve, enhance and ensure the survival and growth of remnant native vegetation. Land that has features of local (or greater) environmental or cultural significance should be incorporated into open space.
- Significant and mature trees and key landmark trees should be protected and identified on all plans, including civil engineering plans.
- Access to parks and open space is to be provided through the street network and can also be provided through purpose designed open space linkages/access ways.
- All path networks should be designed to consider key destination points, the desire to return using an alternate route and to provide a series of activity nodes. Paths are provided to meet the recreational and commuter needs of pedestrians, cyclists, and skaters, etc.
- Paths should be located to protect vegetation, vary views and maximise the recreation and environmental potential of the space. A clear hierarchy of contiguous pathways must be formed from those serving individual dwellings to communal pathways serving local foot traffic and at the highest level, dual use paths.

- Appropriate integration of stormwater design requirements and consideration to urban water sensitive design solutions into POS areas, without restricting or impacting significantly on public access and usability of the space or loss of existing vegetation.
- Plant selection for POS areas should be appropriate to the site specific location and qualities, consideration must be given to the mature qualities of proposed planting and potential for habitat value and the potential risk to become an environmental weed.
- Significant vegetation within road reserves should be assessed for retention and incorporating into the design of the subdivision.
- Developments should provide POS that centrally located, supportive of neighbouring land use and universally accessible.
- Streetscapes designed to incorporate appropriately sized street trees and develop a hierarchy to assist with wayfinding within the overall structure plan area.

Note: The City will consider landscape proposals in excess of the minimum standard, provided that it meets set requirements including but not limited to the following:

- The proposal varies the provision of infrastructure for POS due to its location (i.e. forms part of a regional coastal node, co-located with community purpose sites, or within a town centre) serving the catchment of a higher order POS.
- It can be demonstrated that an increased demand for additional infrastructure due to a high residential dwelling density proposed within the walkable catchment of the POS.

4.3 Development Applications

The deemed provisions in Schedule 2 of the Regulations, forming part of the City's Town Planning Scheme No.2, state that in determining an application for development approval, the City may grant approval without conditions, grant approval with conditions, or refuse to grant approval.

Where applicable, the preparation of a Landscape Plan will be required, demonstrating the aims and provisions of the Scheme have been considered. The Landscape Plan must address all aspects of the particular development and prescribed objectives outlined in the Scheme, which may include; a percentage area of landscaped area, protection of existing environmental assets, landscape buffer zones, visual amenity and environmental sympathetic design outcomes (e.g. urban water sensitive design solutions).

The Landscape Plan must demonstrate the treatment of the development site and the adjoining street setback area (street verge).

4.4 General Requirement Summary

Table 1, below, briefly outlines what information is to be provided for each of the approval processes addressed by this Procedure. This information is a general guide only. Individual site characteristics and extents of development will likely require specific landscape responses, for example wetland management plans or foreshore management plans.

Planning Assessment Level	Documents Required	Includes (minimum)	Reference Documents
Structure Plan	Landscape Masterplan and Conceptual POS Designs	<ul style="list-style-type: none"> • Overall POS Master Plan; • Street Tree Master Plan; • Landscape Concept Plans for each POS; and • Cross sections of streetscapes, extended verges or multi-use corridors. • Determination of POS irrigation methodology 	Liveable Neighbourhoods 2009 WAPC (2009) Better Urban Water Management; Development Policy 2.3; Planning Policy 3.4.1 – Public Open Space.
Subdivision Application	Detailed Landscape and Irrigation Design plans for all POS areas, streetscape/street trees and multi-use areas	<ul style="list-style-type: none"> • Detailed design plans for each POS and/or streetscape/street trees (including detailed irrigation and water source information);and • May require management plan as part of the development of the POS. 	As above, and; Public Parkland Planning and Design Guide (WA); City of Rockingham Irrigation Specifications
Development Application (DA) Small to Medium Scale	Landscape and Irrigation Plan(s) for the Development Site and the adjoining street verge area	<ul style="list-style-type: none"> • Landscape plan to illustrate existing vegetation (retention/removal), all proposed planting; trees, shrubs, groundcovers, turf etc.; areas to be irrigated and by what method. Areas of hardstand, surfaces, feature screens/fences, existing and proposed services that impact the site/development (i.e. existing power line poles, light poles, Telstra pits); and • Indicate the treatment of the adjoining street verge. 	Refer to the conditional approval for the application, which may outline particular landscape elements to be addressed, depending on the site location and the scale of the development; State Planning Policy 7 Design of the Built Environment (in draft) 2016.
Development Application (DA) Large Scale and/or Interaction with Urban Centres	Landscape and Irrigation Plan(s) for the Development Site and the adjoining street verge area	<ul style="list-style-type: none"> • Landscape plan(s) to illustrate existing vegetation (retention/removal), surface treatments i.e. paving details, accessible pathways, all proposed planting trees, shrubs, groundcovers, turf, street furniture (e.g. seats bollards etc.), or feature screens/fences where required, lighting irrigation detail design illustrating mainline and sprinkler design and water source • Indicate the treatment of adjoining street verge, may include street furniture or treatments particular to the site location. 	As noted above and also refer to Local Development Plans, Town Planning Scheme No.2; Streetscape Study/character areas.

Table 1: Development Application Landscape Requirement Summary

5.0 Detail

The landscape documentation must be consistent with all supporting development plans, depending on the application, this may include architectural, civil engineering, electrical and irrigation plans etc. This is particularly important to ensure landscape treatments can be constructed, maintained and remain complementary to the intended outcome.

The amount of information required is dependent on the scale and complexity of the landscape proposal. The following detail outlines fundamental requirements which need to be considered when preparing an application for assessment.

5.1 Groundwater Licence and Irrigation Strategy

A POS Master Plan is prepared as part of the Structure Plan, which identifies the location and size of all proposed POS areas. A supporting groundwater licence must be obtained from Department of Water and Environmental Regulation with sufficient allocation to irrigate all areas of POS at a rate of 7500kL/ha per year.

An Irrigation strategy is required at the subdivision stage to confirm the viability to irrigate all POS within the identified Structure Plan area. The level of detail required for an irrigation strategy will depend on the scale of the application. Consideration should be given to number and location of proposed bores, potential water quality, filtration, quantity (flow rates), and extent of mainline to provide coverage to all POS areas.

The drilling of irrigation bores and subsequent pump, flow details and water quality tests must be in accordance with the City's Standard Irrigation Specifications and submitted to the City for comment, prior to developing detailed irrigation design.

5.2 Existing Vegetation and Site Characteristics

Prior to preparing POS landscape drawings, consideration must be given to the environmental outcomes identified through the Structure Planning process. Where existing vegetation has been identified for retention within POS and/or Road Reserves an Arboriculture report must be submitted outlining the health, quality and safety of vegetation to be retained, including the requirement for any remedial pruning to be undertaken, prior to inclusion in the POS or streetscape design.

5.3 Earthworks, Site Grading and Levels

Ensure that landscape and supporting civil engineering plans show accurately the intended grades for the site while clearly documenting any impact on any existing vegetation or natural contour to be retained. Plans must indicate the extent of batters, heights of any required retaining, or areas of vegetation to be retained, areas of flush kerbing, streetscape interfaces and documented with cross sections and elevations, where necessary. Relate landscape treatment to bulk earthwork design and ensure that the landscape works reflect the preferred engineering drainage solution. Details are to be provided of how batters will be treated, and protected from scour and erosion, while being maintainable.

5.4 Integrated Stormwater Management in Public Open Space

Where stormwater design solutions are to be integrated into POS areas, landscape plans must indicate all attributes of the system, such as inlets/outlets, basin levels, storm event flood levels (1:1, 1:5 and 1:100 year events) biofiltration areas, swales overland flow paths and batter grades.

Integrating stormwater designs into POS should be designed with better urban water management and water sensitive urban design principles (see *Planning Procedure 1.8 – Urban Water Management*) and the requirements outlined in the relevant Urban Water Management Plan (UWMP) for the subdivision, while ensuring that the POS key functions and useability are not adversely compromised.

Any proposal must maintain the environmental intent of the Planning Policy to reduce environmental impact with particular reference to downstream areas especially the protection of urban lakes, wetlands or bushland from nutrient enrichment and weed invasion.

Preference should be given to the use of native plant species found locally in drainage areas and wetlands.

5.5 Surrounding Land Use

Where open space will be provided, determine how the landscape design is to be integrated with the surrounding land use, environmental qualities, infrastructure and engineering outcomes which may affect or be located on that open space. Determine how specific views to adjacent areas will be managed if necessary.

Landscape plans for development applications should address neighbouring and adjoining property/land use interfaces, and determine appropriate treatments for the particular development e.g. provision of screening vegetation, maintaining open views or installation of boundary fencing etc.

5.6 Services Easements

All services and associated easements are to be marked on both the landscape and irrigation drawings, the affected new assets hardscape and soft works, especially street trees are to be checked for suitable compatibility with service locations, and required setbacks.

5.7 Irrigation Detailed Design

Irrigation plans must be submitted to clearly indicate how the landscape design will be watered. Each irrigation plan must ensure that adequate application flow rates are applied to the respective area and all supporting bore and pump data is to be submitted to form part of the assessment. A program schedule with the expected run times of each irrigation station will be required, depending on the irrigation design and bore data, to demonstrate that the irrigation will be in accordance with Department of Water and Environmental Regulation guidelines. Hydrozoning or ecozoning principles will also be required in the development of any proposal. All irrigation must be in accordance with the City's Irrigation Specifications.

5.8 Plant Selection

Planting plans must be submitted and will be assessed on the particular site conditions and surroundings. Consideration is given to the type of POS being created such as a nature reserve, urban setting or local neighbourhood park.

Plant spacing should be based on the mature growth of the plant, for example installing shrub type species at 800mm centres is recommended, rather than dense 500mm centre spacing. While the intent maybe to provide an instant improved visual effect, it will inevitably cause plant deaths and overcrowding requiring plant removal and possibly replanting where necessary.

Individual plant species are assessed for appropriateness based on mature growth, habit/form, maintenance levels, longevity, and to ensure that the plant selected will achieve the required outcomes; such as screening, groundcover - weed suppressant or shade.

Where possible, priority is given to use locally sourced, indigenous species that can withstand the site specific conditions such as referring to the local vegetation group and/or threatened ecological communities wherever possible with priority to species with high habitat values or flora significance.

All planting must be mulched to assist with moisture retention, prevent mower damage and suppress weeds. Planted areas must also be edged from turf areas with a concrete mowing kerb to prevent grass invading planting and assist with mowing operations.

5.9 Universal Access

All POS developments must be accessible via a walking and cycling network and incorporate necessary links to improve the walkability of the local environment.

All landscape developments must ensure universal access is provided to play areas, pathways, carparks, park furniture and park facilities in accordance with the Australian standard that relates to the provision of Disability Access AS1428.

AS1428 comprises four parts:

- Part 1: General Requirements for Access - New Building Works
- Part 2: Enhanced and Additional Requirements - Buildings and Facilities
- Part 3: Requirements for Children and Adolescents with Physical Disabilities
- Part 4: Tactile Ground Surface Indicators for the Orientation of People with Vision Impairment

5.10 Footpath - Cycleway Network and Associated Carparks

Dedicated paths for pedestrian and/or bicycle circulation must be determined in accordance with Liveable Neighbourhoods requirements and AS1428 standards. Ensure that footpath connections are logical, have corresponding pram ramps and relate to identified accesses and crossing areas onto adjacent main roads for pedestrians and cyclists. Ensure that the paths and car parking locations are consistent with the structure plans and civil engineering drawings. Consider the City's preferred cycle route system for location of major cycle ways and connections.

All paths must be in accordance with AS1428, particularly including provision of tactile ground surface indicators where required. Consider appropriate all-abilities carparking in association with POS and provision of continuous access to buildings and/or facilities.

5.11 Development Entry Treatments

Estate entry treatments that include signage or marketing elements requires a development application to be considered by the City. The application must include the location of any structures and construction techniques. Any associated planting beds should be fully documented with location of plants, species, location of mowing edges, surface treatment, etc. Give priority to design solutions that provide for long term low maintenance.

Estate entry statements must be maintained by the subdivider in accordance with the Planning Policy Public Open Space 3.4.1.

5.12 Landscape Buffers, Mounding and Noise Amelioration

If a landscape buffer or mound is to be provided on-site, the Landscape Plan is to show the location, material and construction technique for any structures to be utilised for noise amelioration. Emphasis must be given to details and materials that provide for the long-term life of the structure with minimum maintenance. Ensure that the interface between the buffer, mound, planted area and the adjacent roadway and/or development is able to be maintained efficiently. Develop a proposal that does not leave an area between the road verge and the buffer/mound that is difficult or expensive to maintain on a regular basis. Ensure that the interface between the residential property and buffer/mound provides for safe maintenance and that surface drainage is addressed and not displaced to private property.

5.13 Health and Safety

Landscape design solutions must provide sufficient safety, lighting and surveillance measures in accordance with the 'Designing out Crime Guidelines' (WAPC, 2006). Lighting provision may be required when developing POS that are directly accessed by residential properties or commuter pathways through multi-use corridors. The Landscape Plans are to consider potential trips, slips and falls and the City strongly encourages landscape solutions that consider and remove any potential safety issues.

5.14 Maintenance

Consideration will be given to the POS hierarchy outlined in Planning Policy 3.4.1 - Public Open Space. Future maintenance costs including product availability for replacement will form part of the assessment to ensure life costs are not unreasonable and repairs can be undertaken in a timely manner.

6. Sustainable and Innovative Design Initiatives

Consideration to minimising energy use through design, product selection, alternative energy sources etc. is encouraged.

7. Legislation

All subdivision related works are considered by the City Officer in accordance with the following documents:

- Western Australian Planning Commission- Liveable Neighbourhoods 2009
- AustRoads
- Institute of Public Works Engineering Australasia (IPWEA) Subdivisional Guidelines (2017)
- State Planning Policy 3.1 - Residential Design Codes (as amended from time to time)
- State Planning Policy 7 - Design of the Built Environment (Draft)
- City of Rockingham Town Planning Scheme No. 2

- Local Government Act 1995
- Building Code of Australia 1988
- Health Act 1911
- Planning Policy 3.4.1 - Public Open Space
- Planning Procedure 1.15 - Preparation and Assessment of Development Applications
- Crime Prevention through Environmental Design (CPTED)
- Disability Discrimination Act
- AS1428 - 2009 Design for access and mobility
- AS4970 - 2009 Protection of Trees on Development Sites

8. Interpretations

8.1 Agency Acronyms

WAPC - *Western Australian Planning Commission*

DoW - *Department of Water*

DWER - *Department of Water and Environmental Regulation*

IPWEA - *Institute of Public Works Engineering Australasia*

9. Authority

All planning and development proposals shall have due regard to the information presented in this Planning Procedure to ensure compliance with the objectives and provisions specified in Planning Policy 3.4.1 - Public Open Space.

10. Adoption

This Planning Procedure was endorsed by the Director, Planning and Development Services on 29 March 2019.

11. References

Department of Water (2004-2007) *Stormwater Management Manual for Western Australia*

WAPC (2009) *Liveable Neighbourhoods*

IPWEA (2017) *Local Government Guidelines for Subdivisional Development*

Monash University (2014) *Vegetation Guidelines for Stormwater Biofilters in the South-West of Western Australia*

WAPC (2008) *Better Urban Water Management*

City of Rockingham *Planning Procedure 3.4.1 - Public Open Space*

State Planning Policy 7 - Design of the Built Environment (in draft) 2016

Public Parkland - Planning and Design Guide (WA) 2014