

Introduction

The Maroondah Infrastructure & Landscape Guidelines have been developed to assist Council Staff, developers, user groups and other land managers in the appropriate selection of open space infrastructure – furniture, fencing, signage etc – and methods/ styles of landscaping that may be applied to the various classes of open space within Maroondah.

The Guidelines are the culmination of many years of research, trial and practices that have established benchmarks for many of the items and styles listed.

The Guidelines also consider contemporary designs, materials & practices and will continue to evolve as products, technologies, methodologies and community expectations change over time.

There are several guiding principles that underpin these Guidelines and are essential to the selection of appropriate designs irrespective of changes over time. These are:

- Functional Design – practical, safe, durable, accessible & aesthetic design
- Lifecycle Cost – the initial, operational & maintenance costs over the lifespan of the item
- Maintainability – ease and frequency of maintenance & ease of replacement
- Sustainability – minimise use of non-renewable resources, use recycled and recyclable materials, maximise product lifespan.

Other factors to be considered when selecting products and designs/methods for inclusion in these Guidelines are:

- Past performance and recommendations
- Extent and history of previous use within Maroondah
- Availability of appropriate materials, colours & styles
- Local availability
- Changes in industry practices & regulations

The development and production of these Guidelines is a cooperative process involving many Council departments, coordinated and maintained by the Open Space Unit within the Assets Department.

Selection Principles & Criteria

The Maroondah Infrastructure & Landscape Guidelines provide a coordinated suite of site infrastructure and landscape treatments that may be selected to provide appropriate levels of amenity and service and to enhance public enjoyment of the various types of open space identified within the Maroondah Open Space Strategy (2005).

The Open Space Planning Framework developed within the Open Space Strategy identifies a number of Open Space categories based on a three-tiered classification system that defines the catchment, function and specific qualities of open space within the municipality.

To simplify the infrastructure selection process, the landscape setting typology established within the Open Space Strategy has been modified to group similar setting types together as outlined below. As many parks are comprised of a number of setting types, there may be a range of styles employed depending on the exact location and type of facilities provided.

A. ACTIVITY CENTRES & STREETSAPES (A1)

- Paved Area (Urban Plaza) *eg. Croydon Main Street, Strip Shopping Centres*

B. PARKS, GARDENS & BUSHLAND AREAS

B1 Significant Parks and Gardens

Areas of special importance including Regional or City-Wide Open Space

- Exotic, Ornamental or Specimen Planting (Exotic)
eg. Ringwood Lake, Croydon Park, Community Buildings

B2 Informal Parks & Community Recreation Reserves

Areas of open space with a mix of grass, native & exotic vegetation

- Open Grassland (Grassland)
- Open Parkland (Parkland)
- Lake/Waterbody (Lake)
- Crop or Plantation (Crop)
- Tree Plantation (Tree)
- Wetland (Wetland)
eg Brentwood Park, Dandenong Creek, Narr Maen Reserve

B3 Sporting Reserves

Areas of lawn, turf or synthetic surfaces developed for sports or organised recreation

- Specialised Sports Surfaces (SSS)
- Lawn or Managed Turf (Turf)
eg East Ringwood Reserve Oval, Proclamation Park, AC Robertson Athletics Track

B4 Bushland & Natural Areas

Areas of open space dominated by remnant indigenous vegetation

- Bushland/Forest (Bushland)
- Rough Natural Area (Natural)
- Creek Corridor (Creek)
eg Loughie's Bushland, Mullum Mullum Creek

Note 1. Ringwood Urban Design Manual must be applied only within the Activity Centre Area.

Note 2. Use discretion in infrastructure selection where an existing style has been extensively used within a specific park and remains serviceable.
(Replacement in the short term may be impractical).

Selection Matrix

The range of designs proposed for use in each of the major open space groupings –(A1, B1, B2, B3, B4) are presented in the following selection matrix.

- A1 Activity Centres & Streetscapes
- B1 Significant Parks and Gardens
- B2 Informal Parks & Community Recreation Reserves
- B3 Sporting Reserves
- B4 Bushland & Natural Areas

OPEN SPACE CATEGORY	A1	B1	B2	B3	B4
1.0 Bike Facilities					
1.1 Bicycle Parking Hoop	X	X	X	X	
1.2 Bicycle Holding Rail	X	X	X	X	
1.3 Bicycle Parking 'Bike Chain' Hoop	X				
2.0 Bridges and Decks					
2.1 Pedestrian Bridge		X	X		X
2.2 Boardwalks		X	X		X
2.3 Feature Decking		X	X		
3.0 Bollards and Barriers					
3.1 Post and Pipe Rail Fence – Square 'Pyramid Top'		X	X	X	
3.2 Cypress Pine Parking Barrier			X	X	X
3.3 Round 'Dome Top' Bollard			X	X	X
3.4 Square 'Pyramid Top' Bollard		X	X	X	
3.5 Removable Round 'Dome Top' Bollard			X	X	X
3.6 Removable Square 'Pyramid Top' Bollard		X	X	X	
3.7 Recycled Plastic Wheel Stop	X	X			
3.8 Square 'Chamfer Top' Bollard		Refer to detail			
3.9 Removable Round Steel Bollard		Refer to detail			
3.10 Heavy Duty Round Steel Bollard	X				
3.11 Round Steel Bollard		Refer to detail			
3.12 Flexible Guide Post		Refer to detail			
4.0 Drinking Fountains					
4.1 Slimline Drinking Fountain	X	X	X	X	
4.2 Wheelchair Accessible Drinking Fountain	X	X	X	X	
4.3 Recycled Plastic Drinking Fountain			X	X	
5.0 Fences					
5.1 Cypress Pine Post & Rail Fence		X	X	X	X
5.2 Mesh Oval Fence				X	
5.3 Loop Top Fencing	X	X			
5.4 Galvanized Pipe & Double Rail Fence			X	X	
5.5 Square Mesh Fencing (Galvanised)			X	X	
5.6 Ringlock Bushland Fencing					X
5.7 Wire Strand Fencing			X		X

Selection Matrix

OPEN SPACE CATEGORY	A1	B1	B2	B3	B4
6.0 Gates					
6.1 Boom Gate (Manual Operation)			X	X	X
6.2 Boom Gate (Electronic Control)		X	X	X	
6.3 Chicane – Open/Spring Closing Gate			X		X
7.0 Lighting					
7.1 Solar Powered Light Pole			X		
7.2 Park & Trail Light Pole & Fixtures		X		X	
7.3 Bollard & Footfall Lighting	X	X			
8.0 Rubbish Bins					
8.1 Lockable Steel Bin Stand	X	X	X		
8.2 Maroondah Rubbish Bin Enclosure	X	X			
8.3 Maroondah Recycle Bin Enclosure	X	X			
8.4 Park Duraslat Rubbish Bin Enclosure		X			
9.0 Seats, Benches & Tables					
9.1 Urban 'Duraslat' Seat & Bench	X	X		X	
9.2 Urban 'Duraslat' Picnic Setting		X			
9.3 Aluminium Bench Seat				X	
9.4 Timber Park Seat			X		X
9.5 Timber Multi-Purpose Bench			X		
9.6 Timber Park Bench			X		
9.7 Timber Picnic Table		X	X	X	X
9.8 'Prospect Truss' Picnic Setting		Refer to detail			
9.9 Park 'Duraslat' Picnic Setting		X	X	X	
9.10 Park 'Duraslat' Seat		X	X	X	
9.11 Metal Slat Seat	X				
10.0 Paints & Coatings					
10.1 Anti-graffiti Coating	X	X	X	X	X
10.2 Paint Types / Colours	X	X	X	X	X
10.3 Timber Finishes	X	X	X	X	X
11.0 Path and Trail Construction					
11.1 Granitic Gravel Path		X	X	X	X
11.2 Asphalt Path (1800mm)		X	X	X	
11.3 Path Edging		X	X	X	
11.4 Concrete Path (1500mm)	X	X	X	X	
11.5 Equal Access Provisions – Ramps & Grab Rails					
11.6 Steps – Concrete, Timber, Natural Rock					
11.7 Pedestrian Crossings					
11.8 Path Drainage – Boards, Grates Humps & Culverts					
11.9 End-Wall Treatments					

Selection Matrix

OPEN SPACE CATEGORY	A1	B1	B2	B3	B4
12.0 Paving					
12.1 Granitic Gravel Paving					
12.2 Segmental Paving					
12.3 Mass-pour Paving & Patterned Paving					
12.4 Stormwater Infiltration Paving					
13.0 Park Furniture – Feature Elements					
13.1 Memorial Plaques					
13.2 Masts & Flagpoles					
13.3 Fountains & Water Features					
13.4 Sculptural Features					
13.5 Estate Entry Display Walls & Branding					
13.6 Decorative Features – Gazebos, Pergolas & Stages					
13.7 Spotlight & Up-light Housings					
14.0 BBQ's					
14.1 Single BBQ Unit		X		X	
14.2 Double BBQ Unit		X		X	
14.3 Rendered Block / Brick BBQ					
15.0 Shade Shelters					
15.1 Steel Shelter			X	X	
15.2 Timber Shelter			X		X
16.0 Signs					
16.1 Council Property Identification (Multi-colour Sign)	X	X	X	X	X
16.2 Council Property Identification (Blue Sign)		Refer to detail			
16.3 Trail Signs		Refer to detail			
16.4 Plaques – Interpretive Panels / Advisory Signs	X	X	X		X
16.5 Plaques – Commemorative	X	X	X		X
16.6 Interpretive Signs					
16.7 Noticeboards & Information Shelter					
16.8 Way-finding Signs					
17.0 Sports Amenities					
17.1 Coaches Boxes				X	
17.2 Basketball / Netball Tower & Pad		X		X	
17.3 Goal Posts – Football, Soccer, Hockey & Rugby				X	
17.4 Cricket Wicket				X	
17.5 Cricket Practice Nets				X	
18.0 Toilets, Sheds & Other Built Structures					
18.1 Toilet Construction		X	X	X	
18.2 Toilet Fitting Out		X	X	X	
18.3 Storage Sheds			X	X	
18.4 Playground Siting & Design		X	X	X	
18.5 Playground Soft Fall Mulch & Edging		X	X	X	

Selection Matrix

OPEN SPACE CATEGORY	A1	B1	B2	B3	B4
19.0 Landscaping – Civil Works					
19.1 Block Retaining Walls – Keystone Wall		X		X	
19.2 Crib Retaining Walls					
19.3 Timber Retaining Walls					
19.4 Timber Sleeper & Steel Beam Retaining Wall			X	X	
19.5 Terraces					
19.6 Rock Placement					
19.7 Drainage – Grates, Pits & Culverts					
19.8 Irrigation					
19.9 Median Strips – Constructed Surfaces					
19.10 Roundabouts – Constructed Surfaces					
20.0 Landscaping – Planting Works					
20.1 Recommended Plant Lists (Include spacing guideline)					
20.2 Tree Planting	X	X	X	X	
20.3 Tree Surrounds					
20.4 Tree Guards & Stakes					
20.5 Shrub & Ground Cover Planting					
20.6 Planting Bed Preparation					
20.7 Weed Control					
20.8 Mulch – Organic & Inorganic					
20.9 Weed Control & Soil Stabilisation Matting					
20.10 Edge Treatments (Timber, Spade, Bush Logs etc)					
20.11 Grassing and Turfing					
21.0 Vehicle Management in Recreation Areas					
21.1 Vehicle Access – Principles & Design Practice					
21.2 Car & Bus Parking – Principles & Design Practice					
21.3 Traffic Control – Humps & Rumble Strips					
22.0 Water Sensitive Urban Design & Wetlands					
22.1 WSUD Principles & Techniques					
22.2 Water Gardens					

Note: Guidelines shown in red are yet to be developed.

Materials - Benefits & Consideration

The appropriate selection of materials for use in the outdoor environment will have far-reaching effects on public perception of the quality of Maroondah's open space.

Sensitively selected and appropriately sited, high-quality infrastructure can greatly enhance the public enjoyment of outdoor spaces and improve the visual character of the urban area, parkland or natural setting in which it is to be located.

Therefore materials selection should be strongly influenced by the use context and specific landscape qualities of each particular site in which public infrastructure is proposed to be sited.

In urban activity areas & significant parks and gardens:

Select high-quality street furnishings & infrastructure with streamlined modern forms (not overly ornate), constructed of 'urban' materials with combinations of dressed and painted or stained timbers, stainless steel, recycled composite materials and perforated metal.

In informal parks, sporting reserves & community recreation reserves:

Materials selection will vary, depending on the context. In higher-use parks, some 'urban' materials may be combined with more recycled or natural materials. In areas of less intensive use, selection of natural timbers and simple forms may be more appropriate.

In bushland & natural areas:

Select natural materials such as unpainted cypress pine with designs that are utilitarian in nature, simple and robust in form. Recycled materials may also be used to reinforce the message of environmental sustainability.

Wherever practicable, the selection of materials for use in new site developments and the modification, maintenance, repair and/or refurbishment of existing Council assets should consider whole-of-life impacts on the environment.

Selection of materials should be consistent with Council's environmental guidelines and should be informed by life-cycle assessment considerations including:

- impact on natural ecosystem from which the material was extracted/grown
- energy consumption and greenhouse gas emissions in production and use
- toxicity of material in production, use and disposal
- recyclable content and potential for end-of-life reuse or recyclability
- nature of waste generated by disposal of the product
- transport and distribution – preference for local manufacturers/suppliers
- operational effectiveness, durability and maintenance
- impact on project cost and delivery.

Materials selection should also consider emerging environmental technologies and processes that can be demonstrated to deliver environmentally superior results.

In general, public infrastructure should:

- Be appropriate for its intended use
- Be hard-wearing and long lasting
- Be made from sustainably-grown or recycled materials
- Be able to be recycled or re-used
- Have minimal packaging or waste

Materials - Benefits & Consideration

Specific Considerations for Commonly Used Materials (Positives and Negatives)

Aluminium

- + Modern appearance, doesn't deteriorate or rust
- + Can come from a recycled source & be recycled
- + Graffiti easily removed
- + Hard to burn (but can be 'bashed' and dented)
- Can get hot in sunny positions & cold in winter

Stainless Steel

- + Modern appearance
- + Strong material, doesn't deteriorate or rust
- + Graffiti easily removed
- Non-sustainable material

Powder-coated Steel

- + Wide range of colours, can be repainted
- + Very strong (but paint can be scratched easily)
- Can rust if finish is poor or damaged
- Needs anti-graffiti coating to allow easy removal

Timber

- + Natural look and feel
- + Temperature stays relatively constant
- + Can be carved, painted or stained
- + Very strong (but paint can be scratched easily)
- Graffiti is hard to remove - damages surface
- Deteriorates over time - rots
- Can be burnt and cut easily
- Generally not a sustainable material

Recycled Plastic

- + Doesn't rot or deteriorate
- + Composed of recycled materials
- + Graffiti easily removed
- Can warp and expand in full sun
- Can be burnt
- Comes in a limited range of colours

Composite (Fibreglass)

- + Doesn't rot or deteriorate
- + Wide range of colours
- + Can form complex shapes
- + Can imbed non-slip surface treatments
- + Strong and lightweight
- Non-sustainable product

Composite (Wood/Plastic)

- + Doesn't rot or deteriorate
- + Partially recycled material
- + Looks like timber
- + Graffiti can be removed (best with anti-graffiti coating)
- Limited colours/finishes/sizes

Anti-graffiti protection:

All screen-printed signs should have a '3M Anti-graffiti film' applied (anodised aluminium signs and plaques usually do not require a protective film).

Spray-on coatings are available to treat timber, metal and plastic surfaces & can be applied before or after installation - some are sacrificial and need to be re-applied regularly.

Refer to 'Paints & Coatings' Section.

Suppliers

Potential Suppliers	Contact Name	Phone No.	Email / Website
Alltek Welding	Paul Legg	(03) 9738 0999	www.alltek.net.au
Armsign	Brian Clarke	(02) 6625 1122	sales@armsign.com.au
A.R.C. Fences		1800 336 237	www.arcfences.com.au
Artcraft		(03) 9887 0877	melsales@artcraftpl.com.au
BAB Aluminium		(02) 9755 1580	www.bab.com.au
Barling's Woodworks	John Barling	(03) 9724 9600	sales@barlings.com.au
Boral		1300 134 002	www.boral.com.au
Botton & Gardiner		(02) 9667 8100	info@bguf.com.au
DA Christie		(03) 5981 0144	admin@dachristie.com.au
DeNeefe Signs	Mike Healy	(03) 9431 0999	signs@traffictld.com.au
Draffin		(03) 9720 1033	inwel@draffin.com.au
Estate Australia	Lester Earl	1300 654 390	sales@estate-australia.com.au
Form A Sign	Wes Chandler	(03) 9561 7300	asigns@formsign.com.au
Furphy Foundry		(03) 5831 2681	furphyg@mcmedia.com.au
Glennwire Fencing	David Brine	(03) 9876 3335	gwire@pacific.net.au
Ingal EPS	Andrew Eames	(03) 9541 9300	sales@ingaleps.com.au
GR Design & Construct	Andrew Gunnensen	1300 733 492	ahgunnensen@grdesignandconstruct.com.au
JSP Engineering	John Putman	0414 813 676	information@jspengineering.com.au
Landmark Products	Jim Devitsakis	(03) 9391 5090	jim@landmarkpro.com.au
Leda-Vannaclip		(03) 9397 3233	www.ledaint.com
Metalcorp Steel		(03) 9768 1200	msunderl@metalcorpsteel.com.au
Norwood Products	Matthew Earl	(03) 5248 5679	norwood@estate-australia.com.au
Polite Enterprises Corporation		(03) 9462 7400	info@polite.com.au
Replas		1800 737 527	sales@replas.com.au
Road Management Solutions (RMS)		(03) 8878 3500	melbsales@rmssolutions.com.au
Roadwise Safety Solution		0408 354 256	roadwiseaust@gmail.com
Sign & Badge Centre		(03) 9720 8110	orders@signandbadge.com.au
Truline		1800 995 577	sales@trulineaustralia.com.au
Urban Design Group	Darren Rice	(03) 9357 8884	sales@stanfred.com.au
Urban Renewal Street Furniture	Leon Brodzik	(03) 9710 1532	urbanrenewalsf@lexicon.net.au
Vicpole		(03) 9738 0808	sales@vicpole.com.au

Note: This list is not exclusive and does not prohibit use of any other alternative supplier for a similar product.