



VISUAL IMPACT ASSESSMENT

BUMBORAH POINT - EXPANSION OF THE EASTERN SUBURBS MEMORIAL PARK

05 JULY 2018
FINAL DRAFT
PREPARED FOR SOUTHERN METROPOLITAN CEMETERIES TRUST



URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director Peter Haack
Associate Director Rachel Smithers
Senior Consultant Frida Kalantarian
Project Code SA6628
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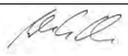
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GLOSSARY OF ABBREVIATIONS/TECHNICAL TERMS

TERM	DEFINITION	ABBREVIATION
Australian height datum		AHD
Amelioration	The ability to reduce the visual impact of a development through siting design colour or screening.	
Background	Parts of a setting that appear most distant typically greater than 1.5 kilometres; also referred to as the regional setting.	
Canopy tree	A tree with a minimum height of approximately 10 metres with an average crown spread of at least 8 metres to 10 metres in width.	
Environmental Impact Statement		EIS
Foreground	The area that immediately surrounds the proposal up to a distance of 0.5 kilometres; also referred to as the local setting.	
Kilometres		km
Landscape and visual impact assessment	The assessment of the impacts of the proposal on landscape and visual values.	LVIA
Landscape character assessment	The process of mapping, describing and evaluating landscapes on the basis of the presence and arrangement of various landscape features.	LCA
Local planning policy framework	Local planning policies are tools used to implement the objectives and strategies of the Municipal Strategic Statement.	LPPF
Metres		m
Middleground	An intermediate area that is a 0.5 kilometres to 2 kilometres distance from the proposal. Also referred to as the sub-regional setting.	
Modification level	The degree to which a development contrasts or blends with its setting.	
Receptor	A location or type of user for which views of the proposal may be possible.	
Significant landscape	The landscape is of national importance.	
Viewer perception	The way in which people respond to what they are seeing as influenced by things other than purely visual, for example noise and economic benefits.	
Viewpoint	Moderate or high sensitivity location from which views to the construction process or components of the proposal may be possible.	
Viewshed	The surface area visible from a particular viewing location.	

TERM	DEFINITION	ABBREVIATION
Visual amenity	The qualities of a landscape setting that are appreciated and valued by a viewer.	
Visual catchment	The area over which an object can be seen within the landscape based on line of sight.	
Visual impact	The result of assessing the sensitivity level of a viewer and the modification level of a development.	
Visual sensitivity	The degree to which various user groups would respond to change based on their expectation of a particular experience in a given setting; for example, the expectation of a high level of visual amenity in a national park.	

1. INTRODUCTION

1.1. OVERVIEW

Urbis Pty Ltd was commissioned by the Southern Metropolitan Cemeteries Trust (SMCT) to undertake a visual appraisal of the land at Bumborah Point Road, Port Botany (the Site), to assess the suitability of the land for an expansion of the Eastern Suburbs Memorial Park (ESMP) (the Project).

1.2. THE PROPOSAL

It is planned to develop the Site for a cemetery to provide an expansion to the existing facilities of the ESMP.

1.3. PURPOSE AND SCOPE OF THIS REPORT

This report outlines the findings of the Visual Impact Assessment (VIA) of the Project.

The objectives of this visual appraisal are to assess the landscape characteristics of the land at Bumborah Point Road and its surrounding, and to consider the visual quality of the Site, its function in the landscape, and its relative qualities within the wider landscape. The work undertaken included an assessment of the existing landscape features of the Site, together with a visual appraisal of the Site and its context. The next step was to identify any landscape mitigation for the proposed development.

The process that Urbis used to undertake this landscape and visual impact assessment included desk-top research and field survey, identification of the landscape and visual values and the analysis and documentation of the findings.

1.3.1. Evaluation objective

The evaluation objective for landscape and visual amenity is to minimise adverse impacts on the built and natural environment (including public open space) and capitalise on opportunities to improve visual amenity.

1.3.2. Structure of this report

The structure of the report is outlined below.

- Section 1 – introduces the report;
- Section 2 – describes the methodology for the assessment;
- Section 3 – describes the context and landscape of the Site;
- Section 4 – describes the components of the Project;
- Section 5 – identifies relevant landscape and visual policy and legislation pertinent to the Project;
- Section 6 – assesses the potential visual impacts of the Project;
- Section 7 – describes the mitigation actions; and
- Section 8 – summarises the assessment findings.

2. METHODOLOGY

While there are no specific legislative requirements for the methodology of an assessment such as this in New South Wales, the industry typically refers to the guidance offered by:

- Guidance note EIA-N04 Guidelines for Landscape Character and Visual Impact Assessment, NSW State Government, Roads and Maritime Services (2013).
- The Guidance for Landscape and Visual Impact Assessment (GLVIA), Third Edition, Landscape Institute and Institute of Environmental Management & Assessment (2013).

The methodology used for this Project is described below, and conforms generally to the direction offered by these guidelines.

This report assesses the visual impact assessment of the Project, that is the day to day visual effects on people's views. Assessment methodology is further outlined in Section 4 of the Guidance note EIA-N04 (RMS 2013). A landscape character assessment was not undertaken.

The method to measure visual impacts is based on the combination of the sensitivity of viewers to the proposed change and the magnitude of the Project on that visual setting or view.

2.1. STUDY AREA

The study area for the purposes of this assessment includes the Site and a viewshed analysis of 1.5 kilometre radius from the Site boundary. A viewshed is defined as the surface area visible from a particular viewing location. As the distance increases from any proposed development, the field of view decreases causing the visibility of components to diminish. Views at or greater than 1.5 kilometres would visually be insignificant or the degree that it intrudes on the view would be minimal. Appendix A defines the visual prominence rationale.

The extent of the Site's potentially visible surface area from a particular viewing location was identified during a desktop study using topographical data. The potential viewpoints were then validated during a field visit to account for potential screening and filtering effect on views from existing vegetation and built form.

2.2. IMPACT ASSESSMENT

The approach for the LVIA is based on an assessment of the change to the landscape setting, including the ability of the landscape to absorb the change, and the sensitivity of the receptor viewing the landscape. The outcome has been considered as a 'visual impact' experienced by the viewer. Figure 1 - LVIA methodology diagram illustrates the key steps for the impact assessment.

The LVIA methodology was predominately drawn from the United Kingdom Guidelines for Landscape and Visual Impact Assessment¹. The determination of viewer sensitivity was based on the United States Department of Agriculture Forest Service, Visual Management System².

The following section outlines the methodology for undertaking the impact assessment for the operation phase.

The impact assessment entailed the following interrelated tasks:

- Existing conditions assessment of the study area - the existing conditions assessment was used to establish the study area and provided a baseline assessment of visual impacts;
- Detailed viewpoint assessment - detailed assessment of every viewpoint in the vicinity of the proposal is not practicable. Therefore, it is accepted practice to undertake a detailed assessment at selected viewpoints that are representative of high sensitivity areas in the vicinity of the proposal. These results can be inferred for other proximate viewpoints with similar views and levels of sensitivity.

¹ The Landscape Institute and Institute for Environmental Management and Assessment LIEMA, (2013), *Guidelines for Landscape and Visual Impact Assessment*, Routledge 3rd Edition

² United States Department of Agriculture Forest Service, (1995), *Landscape Aesthetics – A Handbook for Scenery Management*, Agricultural Handbook No. 701

As such, eight viewpoints were identified from publicly assessable locations. These were selected from the baseline and the field visit; and

- Consideration of night lighting impacts - assessment of lighting impacts is an important part of the VIA. Details of the night lighting impact assessment methodology are provided in Appendix B.

2.2.1.1. Visual sensitivity

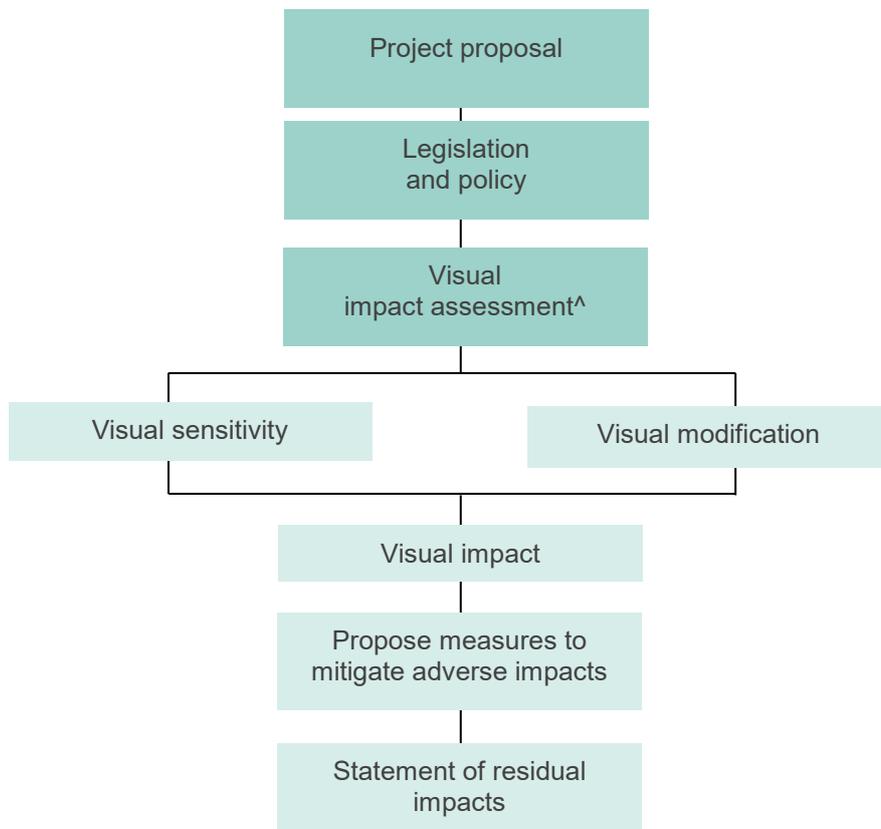
Visual sensitivity is a measure of how critically a change to the existing landscape would be regarded based on the use of the area from where it is viewed (Brush and Shafer, 1975). Different activities undertaken within the landscape setting have different sensitivity levels. For example, tourists who are using the surrounding landscape as a part of a holiday experience would generally view built form interventions within the landscape setting more critically than workers in an industrial setting. Similarly, individuals would view changes to the visual setting of their residence more critically than changes to the visual setting of the broader setting in which they travel or work.

Determining the visual sensitivity depends on a range of characteristics. The primary characteristics used in this study are:

- Land use at the view point (incorporating consideration of the expectation of a viewer of a particular visual experience); and
- Distance to the closest component of the proposal within the viewing angle of the viewpoint.

Typical levels of viewer sensitivity for the assessed viewpoints or adjacent areas are based on land use because this largely defines a viewer's expectation of what they would typically expect within a particular setting. This approach is consistent with the visual management system (United States Department of Agriculture Forest Service, 1995). The typical viewer sensitivity levels relating to land use within the proposal area are outlined in Table 1.

Figure 1 - LVIA methodology diagram



^ Visual assessment methodology approach to the determination of visual sensitivity is consistent with the visual management system (United States Department of Agriculture Forest Service, 1995), *Landscape Aesthetics – A Handbook for Scenery Management*, Agricultural Handbook No. 701.

The next critical component to rating the visual sensitivity is the distance of the proposal from the identified land use area. As illustrated in Table 1, there are three viewing distances to consider:

- Foreground (0 – 500 metres)
- Middleground (501 – 1500 metres)
- Background (> 1500 metres).

As outlined in Appendix A, as the distance increases from the land use area the field of view decreases causing the visibility of the proposal components to diminish or be absorbed in the setting. Consequently, as distance from the viewer to the proposal increases, the level of sensitivity reduces.

Although the number of viewers within a land use area are not considered in determining visual sensitivity levels, it is considered in understanding how frequent the space is utilised by the viewers which assists in placing the overall assigned impact level in context. It is also used to determine the level of risk to the proposal.

2.2.1.2. Visual Modification

The level of visual modification due to a proposed development is a combination of the degree of change and the ability of the landscape setting to absorb the change. The prominence and level of intrusion of the development within the landscape setting is a key determinant of the level of visual modification. The level of visual modification generally decreases as the distance from the proposal to various viewpoint locations increases and views are typically obstructed by vegetation, topography or built form. The assessment of visual modification also assesses the level of visual compatibility of the proposal with the existing landscape setting and therefore the ability of the setting to absorb the changes.

Table 1 – Visual sensitivity determination matrix

LAND USE	VISUAL SETTING				
	FOREGROUND		MIDDLEGROUND		BACKGROUND
	0 – 200 m	201 – 500 m	501 – 1000 m	1001 – 1500 m	> 1500 m
Residential	H	H	H	M	L
Parks, reserves and recreation	H	H	H	M	L
Townships and villages	H	H	H	M	L
Cemetery	H	H	M	L	L
Shared use path	H	H	M	L	L
Secondary road (double carriageway)	M	M	L	L	L
Local roads (single carriageway)	M	M	L	L	VL
Agricultural areas	L	L	L	VL	VL
Port/industrial areas	VL	VL	VL	VL	VL

Legend - H = High, M = Moderate, L = Low, VL = Very Low

A visual modification level has been assigned for each viewpoint taking into account:

- The prominence and level of intrusion of the visual change due to the proposal within the landscape setting; and
- The ability for the landscape setting to absorb the change.

Visual modification is not easily predicted objectively, and interpretation and professional judgment is applied. A clear picture of the modification is determined from a combination of the degree of change to the view due to the proposal including the extent of the area over which changes would be visible, the period of exposure to the view and reversibility.

The assessment of visual modification was based on the proposal concept master plan. It includes consideration of the proposed landscape master plan and considers that the level of amelioration would improve over time as vegetation matures.

Table 2 outlines the five categories of modification used for determining the degree of visual modification potentially resulting from the proposal.

The key considerations in determining the level of visual modification as outlined in Table 2 include:

- Size and scale
 - The scale of the change in the view with respect to the loss or addition of features in the view, and changes to the composition including the proportion of the view occupied by the proposal components;
 - The degree of contrast or integration of the proposal components in the landscape setting with the existing or remaining elements including form, mass, line, height, colour, texture and materiality; and
 - The nature of the view towards the proposal components in terms of duration of the view.
- Geographical extent
 - The angle of the view in relation to sensitive land use.
 - The distance of the viewpoint from the proposal component(s).
 - The extent of the area over which the changes would be visible.

Table 2 – Criteria for determining the visual modification level

MODIFICATION LEVEL	DESCRIPTION
High	The proposal is highly visible and intrusive in regards to the size, scale and geographical extent, and would disrupt views currently experienced from sensitive land use areas and/or strongly contrasts with the existing landscape setting which has limited capacity for change.
Moderate	The proposal partially intrudes in regards to the size, scale and geographical extent or somewhat obstructs current views from sensitive land use areas and/or a noticeable compositional change to the existing landscape setting in which there is moderate capacity for change.
Low	The proposal is barely perceptible resulting in minor deterioration to the view currently experienced from sensitive land use areas; and/or results in a small change to the existing landscape setting in which change is possible without harm.
Very low	There is minimal compositional contrast and a high level of integration of form, line, shape, pattern, colour or texture values between the proposal and the environment in which it sits. In this situation, the proposal may be noticeable, but does not markedly contrast with the existing landscape setting.
Not apparent	There are no views of the proposal components and as such, there is no impact.

2.2.2. Assigning a level of impact

The visual impact therefore is a result of combining the visual sensitivity level with the degree of visual modification using the visual impact determination matrix illustrated in Table 3.

The consequence of the application of the matrix is that (except where the proposal cannot be seen) the proposal would have some adverse impact, whether low, moderate or high, depending on the level of visual modification and viewer sensitivity from the location at which the proposal can be viewed.

Table 3 – Landscape and visual impact determination matrix

		Visual sensitivity				
		H	M	L	VL	
Degree of modification	H	H	H	M	L	VL = Very low
	M	H	M	L	VL	L = Low
	L	M	L	L	VL	M = Moderate
	VL	L	VL	VL	VL	H = High
						Level of landscape or visual impact

2.2.3. Analysis and documentation of findings

- Identify systematically the likely landscape and visual changes from the proposed development;
- Assessment of the impact of the proposed development on the landscape character and features;
- Assessment of the impact of the proposed development on views experienced from the local road network, parks and reserves and shared use paths within the 1.5 kilometre study area;
- Assessment of private residential realm within 150 metres from public accessible vantages points such as driveway crossovers; and
- Identify suitable mitigation measures for the management of the interface areas between the Site and visually important areas such as high sensitive receptors and any important landscape features to avoid, reduce, remedy or compensate for these changes.

2.2.3.1. Consideration of night lighting impacts

There is little guidance locally on the assessment of night time visual impact. Therefore, the methodology applied in this study would be drawn from the United Kingdom. The Institute of Lighting Engineers (ILE) *Guidance Notes for Reduction of Light Pollution* includes a range of categories or zones (Category E1 to E4) with which to describe the lit situation of the landscape. These environmental zones are supported by design guidance for the reduction of light pollution, which can then inform proposed mitigation techniques (refer to Appendix B).

A full night time visual assessment has not been undertaken, however, this report would include a broad assessment of likely lighting impacts. This assessment would include an identification of existing lighting levels within the study area (referencing the ILE environmental zones), identification of the likely sources of lighting associated with the proposal, and a consideration of likely lighting impacts.

Australian Standards do exist for the minimisation of light spill. Regardless of the existing brightness of a particular setting, it is a widely-accepted principal that light spill, particularly upward light spill, be minimised wherever possible.

2.2.3.2. Lighting impact scenarios

Glow

Light glow is typically an upward projection of light that results in illumination of the night sky above a lighting source. It is intensified, or more visually apparent when foggy or cloudy as the light reflects or disperses off water droplets in the atmosphere. Glow is visible over significant distances.

Spill

Spill is light that falls on adjacent sensitive surfaces, both vertical and horizontal, and is most intrusive where it illuminates private open spaces or spills through windows.

Hot spots

Hot spots relate to concentrated areas of bright light in an otherwise less well illuminated setting. Hot spots will be most visible where are elevated.

Kinetic / movement

Lights that change colour or flash can draw the attention of a viewer. As the speed of the colour change or blink increases in speed, so too will its prominence of ability to draw attention.

2.2.4. Mitigation measures

Once the landscape and visual impacts have been determined, mitigation actions are recommended for viewpoints and locations of highest visual sensitivity.

Generally residual impacts would be reduced by at least on level where landscape measures have been proposed and matured due to filtering or inhibiting views to the proposal.

2.2.4.1. Residual impact

The residual impact assessment level has considered the existing view in comparison to the view ten years after proposal opening. Maturation of the landscape plantings that have been included in the design would filter or inhibit views at some locations, potentially reducing the visual impact of the proposal over time.

2.3. LIMITATIONS OF THE ASSESSMENT

There are the following limitations associated with this assessment:

- There is no guidance on the assessment of landscape and visual impacts specific to Australia. Additionally, as mentioned above, there are no specific legislative requirements for the methodology of an assessment such as this in New South Wales. Therefore, the Guidance note EIA-N04 Guidelines for Landscape Character and Visual Impact Assessment prepared by Roads and Maritime Services (2013) and the Guidance for Landscape and Visual Impact Assessment (GLVIA), Third Edition prepared by Landscape Institute and Institute of Environmental Management & Assessment (2013) has been used as a basis for the methodology for this assessment;
- The VIA process aims to be objective and, as such, seeks to describe any changes factually. Potential changes resulting from the Project have been defined. However, the significance of these changes requires qualitative (subjective) judgements to be made. Therefore, the conclusions to this assessment combine both objective measurement and subjective professional interpretation. This assessment has attempted to be objective, however it is recognised that visual assessment can be highly subjective and individuals are likely to associate different visual experiences to the study area;
- This VIA is based on the master plan prepared by Matthew Higginson Landscape Architecture Pty Ltd, Drawing No. CP101-CP103, 18/06/2018;
- The impact assessment is focused on the current land uses and zoning; and
- Methodology, program and timing of the construction works are currently unknown and dependent upon planning approvals. Consequently, construction impacts are not able to be assessed in this report. However, it would be acceptable to predict that there would be impacts during construction and would be similar degree of visual impact to the operational phase assessment findings.

3. SITE CONTEXT AND APPRAISAL

3.1. SITE CONTEXT

The Site is known as Bumborah Point and is located at Bumborah Point Road, Port Botany, as shown in Figure 2 - Aerial photograph.

The Site is located within the Randwick Local Government Area, within the eastern suburbs of the Sydney Metropolitan Area and is located approximately 12 kilometres by direct line from the Sydney Central Business District.

The site is located in the suburb of Port Botany, near to the suburbs of Matraville and Phillips Bay. The area is characterised by a variety of land uses including logistics uses associated with Port Botany, the existing ESMP and residential uses in the suburbs of Phillips Bay and La Perouse. The Site is immediately surrounded to the north by freight and industrial uses, to the east by the existing ESMP, to the south by Yarra Bay and to the west by Port Botany freight and logistics precinct (refer to Figure 2 - Aerial photograph).

As shown in Figure 3 – Zoning, the land to the north of the Site is zoned SP1 Special Activities and SP2 Infrastructure in the *Randwick Local Environmental Plan 2012* (RLEP 2012). To the south-east, RE1 Public Recreation adjoins the Site. Medium to low density residential uses are located further to the east and south-east of the Site.

The topography surrounding the Site gently rises south-easterly to elevations up to 60 metres (m) Australian Height Datum (AHD) (refer to Figure 4 - Topography and elevation). To the west of the Site lies the Yarra Bay.

Yarra Bay Bicentennial Park and Yarra Recreation Reserve are located to the south-east of the Site. Frenchmans Bay and Timbery Park are located to the south of the Site in the suburb of La Perouse.

The area adjoining the south-eastern boundary of the Site, is located within the Botany Bay National Park Heritage Conservation Area as indicated in the RLEP 2012 Heritage Map (refer to Figure 5 – Heritage). The Botany Bay National Park Heritage Conservation Area includes the Botany Bay National Park at La Perouse and extends either side of the national park along the waterfront to Little Bay to the north, and Philip Bay and Bumborah Point to the west.

3.2. THE SITE

The Site is approximately 5.05 hectares (ha) and is roughly an irregular triangular shape. The Site currently accommodates a driveway from Military Road and a carpark with 20 car spaces (refer to Picture 1). The Site is free of built form and is largely covered in thick scrub and weeds.

The Site itself lies at an elevation of between 10 to 20 m AHD rising to a central knoll (refer to Picture 2). Steeper topography is present towards the foreshore in the southern areas of the Site.

The Site is zoned RE1 Public Recreation as shown in Figure 3.

The Site is located within the Botany Bay National Park Heritage Conservation Area as indicated in the RLEP 2012 Heritage Map (refer to Figure 5). The south-eastern corner of the Site constitutes the Yarra Bay Beach and Reserve (item no. 245) which is identified as an item of local heritage significance (refer to Picture 3).

The dominant vegetation communities on the Site are Coastal Sand Tea-tree Banksia Scrub and Beach Spinifex Grassland (refer to Picture 4). The Site also contains several weeds species. No threatened species of flora or fauna are recorded on the Site inspection. For further details on flora and fauna, refer to the *Flora and Fauna Assessment* (Sept 2017), Eco Logical Australia.

There is an informal path from the Prince of Wales Drive car park that provides access to the Site and Yarra Bay beach however it is only provides able abilities (refer to Picture 5).

There are views towards La Perouse at Frenchmans Bay and Botany Bay National Park, Kurnell from the Site (refer Picture 6).



Picture 1 – Existing car park within the Site and entry to the Yarra Bay Bicentennial Park off Military Road.



Picture 2 – The topography of the Site rises to a central knoll (eastern boundary of the Site).



Picture 3 – The south-eastern corner of the Site constitutes the Yarra Bay Beach and Reserve which is identified as an item of local heritage significance.



Picture 4 – Existing vegetation present on the Site.



Picture 5 – The Site is located within the Botany Bay National Park Heritage Conservation Area (south-western corner of the Site).



Picture 6 – Views towards La Perouse (left) and Botany Bay National Park, Kurnell (right).



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BUMBORAH POINT, PORT BOTANY

FIGURE 2: AERIAL PHOTOGRAPH



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PRELIMINARY

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LEGEND

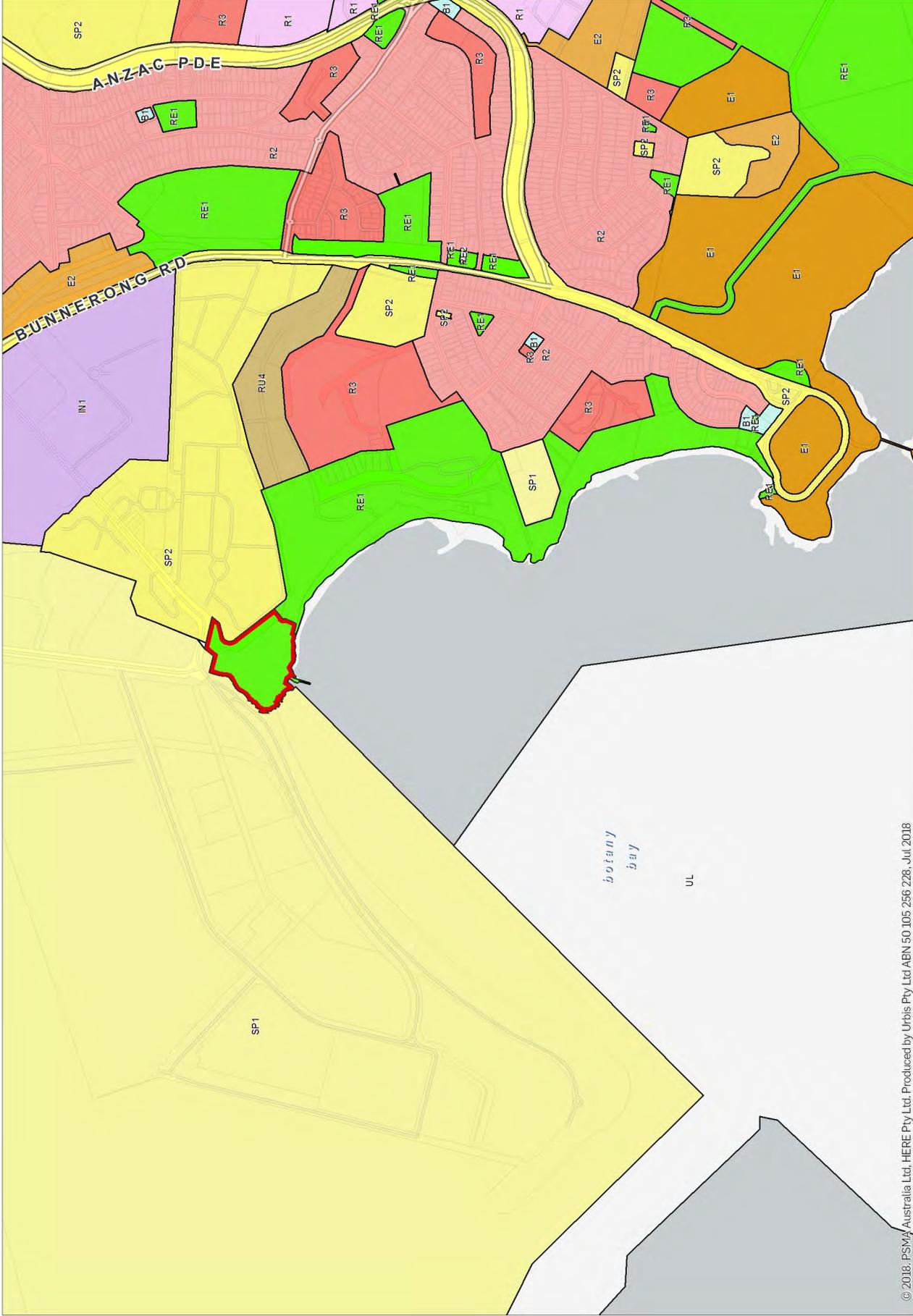


ZONE

- B1 Neighbourhood Centre
- E1 National Parks and Nature Reserves
- E2 Environmental Conservation
- IN1 General Industrial
- R1 General Residential
- R2 Low Density Residential
- R3 Medium Density Residential
- RE1 Public Recreation
- RE2 Private Recreation
- RU4 Primary Production Small Lots
- SP1 Special Activities
- SP2 Infrastructure
- UL Unzoned Land

PRELIMINARY

DATE: 05/07/2018
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 DWG NO: 003-001



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BUMBORAH POINT, PORT BOTANY

FIGURE 3: ZONING MAP



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LEGEND

-  SITE BOUNDARY
-  Less than 10m AHD
-  10m - 20m AHD
-  20m - 30m AHD
-  30m - 40m AHD
-  40m - 50m AHD
-  50m - 60m AHD



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BUMBORAH POINT, PORT BOTANY

FIGURE 4: TOPOGRAPHY AND ELEVATION PLAN



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PRELIMINARY

DATE: 05/07/2018
JOB NO: SA6628
DWG NO: 004-001

LEGEND

 SITE BOUNDARY

HERITAGE ITEM

-  Conservation Area - General
-  Item - General
-  Item - Archaeological
-  Item - Landscape



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BUMBORAH POINT, PORT BOTANY

FIGURE 5: HERITAGE MAP

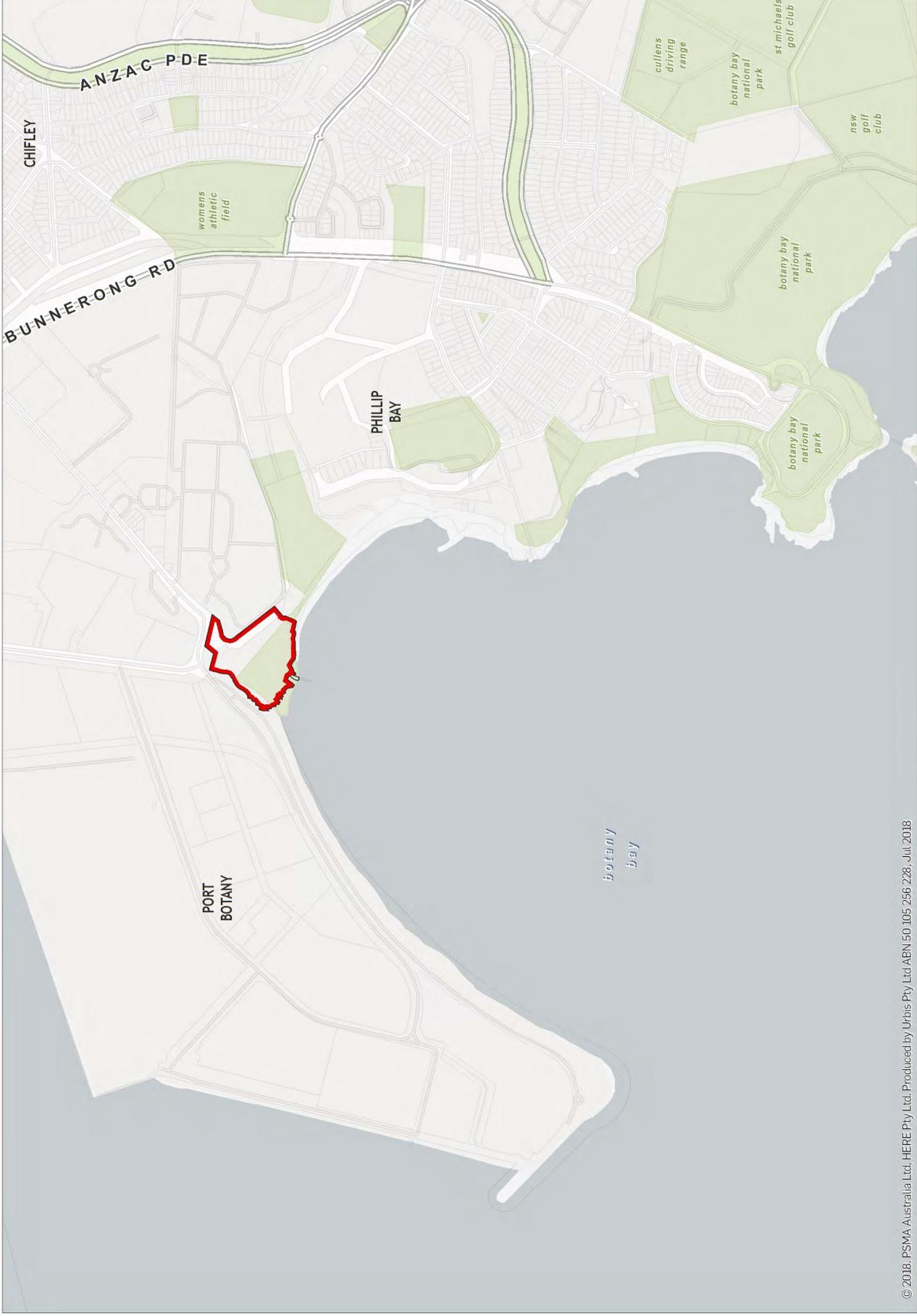


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4. COMPONENTS OF THE PROJECT

4.1. KEY FEATURES

A Landscape Concept Master Plan has been prepared for the Site by Matthew Higginson Landscape Architecture, as indicated in Figure 7 - Landscape Concept Master Plan and at Appendix C. The key elements of the Landscape Concept Master Plan include:

- an upgrade to the existing car park off Military Road;
- retention of existing shared cycle path link within eastern half of the Site;
- provision for vehicle access from existing cemetery road network;
- terraced landforms;
- lawn cemetery plots;
- ash interment plots integrated within landscape walls;
- foreshore promenade providing shared access to/from Prince of Wales Drive and cemetery viewing platform off foreshore promenade with provision for informative signage; and
- boardwalk access to/from Yarra Beach.

The Landscape Concept Master Plan has been planned to accommodate approximately 3,000 additional full body burial plots in addition to space for ash interments. Bumborah Point is to be designed as a contemporary lawn cemetery with some areas of monumental burials adjacent to the existing cemetery.

Lawn cemetery design is considered contemporary cemetery design across Australia and often serves a dual purpose as publicly accessible open space as seen in Picture 7. The proposed lawn cemetery design includes the following key landscape characteristics:

- rows of burial plots predominantly within a manicured lawn to resemble parklands;
- uniform memorials and plaques that generally lay flush to the lawn with minimal protrusion above ground level; and
- path networks through, and to the surrounding areas of the Site, for passive recreational purposes.



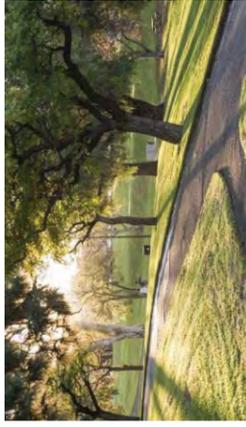
Picture 7 – Precedent images of the landscape character of a memorial park set within a manicured lawn.

4.2. CONSTRUCTION STAGING

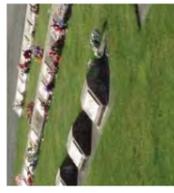
As mentioned, methodology, program and timing of the construction works are currently unknown and dependent upon planning approvals. Consequently, construction impacts are not able to be assessed in this report.

4.3. OPERATION

The hours of operation for the Project will be primarily during the daylight hours of 9 am to 5 pm, and will occur seven days a week.



PARKLAND SETTING



MEMORIALS INTEGRATED IN THE LANDSCAPE



NATIVE FORESHORE PLANTING



FORESHORE PROMENADE



FORESHORE WALK



OPEN SPACE AMENITY LINKED TO REGIONAL FACILITIES



LANDMARK DESTINATION



01 : A PARKLAND CEMETERY

As an extension to ESMP, the site is to be developed as a predominantly lawn burial facility. This approach is appropriate in providing a parkland setting to transition the Yarra Bay foreshore with the monumental graves of the existing cemetery and completing the open space infrastructure that extends to the east.

02 : MONUMENT INTERFACE

The provision of monumental burial plots at the interface with the existing cemetery will provide an integrated transition to the new extension area.

03 : LANDSCAPED COLUMBARIA

Contemporary ash interment is to be provided within the fabric of the landform, utilising retaining structure as opportunity for memorialisation embraced in the landscape.

04 : ABORIGINAL CEMETERY & MEMORIAL GARDENS

A defined and protected area of 125 plots to be allocated to the La Perouse LALC and consecrated as Aboriginal Cemetery.

05 : A COMMUNITY FORESHORE

The Bumbora Point foreshore is to remain a public accessible open space. A shared zone promenade is to be established behind the sea-wall at the western end that provides a gateway to the foreshore zone.

06 : FORESHORE WALK

Proposed as a boardwalk skirting the interface between vegetated coastal slopes and the sandstone beachhead, the walk provides secure access to the beach and links with regional coastal walkways to the east.

07 : A SENSE OF PLACE

Interpretive media celebrating the areas rich history is to be incorporated through the site, with a landmark destination proposed on the foreshore as a central point to contemplate and appreciate the site and its context.

08 : FORESHORE VEGETATION ZONE

The natural vegetation of the foreshore slopes is characteristic of the landscape setting and is to be retained and enhanced.

09 : PARKING

The existing car park off Military Road is to be retained and upgraded to improve access and circulation. The existing car park on Prince of Wales Drive will continue as a public facility for accessing the foreshore.

10 : LINKS TO REGIONAL RECREATION NETWORK

Cycleway / shared path is to be provided through the site linking to with existing routes adjoining the site.

11 : AN INTEGRATED FACILITY

The site is to be developed as an integrated extension of the Eastern Suburbs Memorial Park. Internal road and footpaths are to link with the existing cemetery at the north-east boundary, with clear visual connections through an incidental canopy line transitioning from the parkland setting to the traditional monumental graves.

12 : LANDSCAPE BUFFER

In creating a desirable landscape amenity for the site, existing trees along Prince of Wales Drive are to be enhanced to create a vegetated buffer to the Port Botany Terminals.

LEGEND:

- SITE BOUNDARY
- EASEMENTS
- TREES - EXISTING
- TREES - NEW
- BURIAL AREA - MONUMENT
- BURIAL AREA - LAWN
- ROAD: 3.5m wide one-way; 6m wide two-way
- SHARED PATH/ CYCLEWAY: 2.5m wide
- FOOTPATH: 1.2m wide
- FORESHORE WALK: 1.8m wide

SPECIES LIST - NATIVE VEGETATION ZONE

Botanic Name	Common Name	Mature Height	Mature Spread
Trees			
Acacia longifolia	Sydney Golden Wattle	8m	5m
Banksia integrifolia	Old Man Banksia	10m	5m
Casuarina glauca	Swamp Oak	12m	5m
Melaleuca styphelioides	Paperbark	6m	3m
Shrubs			
Banksia encicifolia	Heath Banksia	6m	3m
Correa alba	White Correa	1.5m	1.5m
Dodonea triquetra	Hop Bush	3m	2m
Grevillea buxifolia	Grey Spider Flower	1.5m	1m
Leucopogon lanceolatus	Lance Beard Heath	2m	2m
Leucopogon parviflorus	Beard Heath	3m	2m
Westringia fruticosa	Coast Rosemary	2m	2m
Xanthorrhoea spp.	Grass Tree	2m	1m
Groundcovers / Climbers / Aquatics			
Carpobrotus glaucescens	Pig Face	0.3m	2m
Dianella caerulea	Flax Lily	0.7m	0.7m
Dianella revoluta	Flax Lily	0.7m	0.7m
Gahnia sieberiana	Saw Sedge	1.5m	1.5m
Lomandra longifolia	Spriny-Headed Mat Rush	1m	1m
Myoporum parvifolium	Creeping Boobialla	0.3m	1m
Scaevola calendulacea	Scented Fan Flower	0.3m	1m

SPECIES LIST - GENERAL CEMETERY

Botanic Name	Common Name	Mature Height	Mature Spread
Trees			
Banksia integrifolia	Old Man Banksia	10m	3m
Callistemon salignus	Willow Bottlebrush	8m	5m
Corymbia gummifera	Red Bloodwood	15m	8m
Eucalyptus botryoides	Bangalay	18m	8m
Melaleuca linearifolia	Snow-In-Summer	5m	3m
Syzygium 'Aussie Southern'	Aussie Southern Lily Pily	7m	4m
Tristanopsis 'Luscious'	Luscious Water Gum	7m	3m
Shrubs			
Callistemon 'Little John'	Little John Bottlebrush	1m	1m
Camellia sp.	Camellia	2m	1m
Correa alba	White Correa	1m	1m
Doryanthes excelsa	Gymea Lily	1.2m	1.2m
Grevillea buxifolia	Grey Spider Flower	1.5m	1m
Phorinia glabra 'Rubens'	Red Tip Photinia	2m	1m
Rhaphiolepis 'Oriental Pearl'	Oriental Pearl Hawthorn	1m	1m
Syzygium 'Aussie Boomer'	Dwarf Lily Pily	1.5m	1.5m
Xanthorrhoea spp.	Grass Tree	1.5m	1m
Groundcovers / Climbers / Aquatics			
Carpobrotus glaucescens	Pig Face	-	2
Dianella caerulea	Flax Lily	0.7m	0.7m
Dianella revoluta	Flax Lily	0.7m	0.7m
Hibbertia dentata	Trailing Guinea Flower	0.2m	1m
Lomandra longifolia	Spriny-Headed Mat Rush	1m	1m
Lomandra 'Tanika'	Tanika Mat Rush	0.9m	1m
Pennisetum 'Nairay'	Nairay Mat Rush	1m	1m
Scaevola calendulacea	Scented Fan Flower	0.3m	1m
SPECIES LIST - LANDMARK & ACCENT			
Botanic Name	Common Name	Mature Height	Mature Spread
Trees			
Araucaria heterophylla	Norfolk Island Pine	10m	8m
Ficus subgignosa	Port-Jackson Fig	10m	8m
Lagestromia indica cvs	Crepe Myrtle	6m	4m



Acacia longifolia



Banksia integrifolia



Casuarina glauca



Melaleuca styphelioides



Correa alba



Dodonea triquetra



Grevillea buxifolia



Leucopogon lanceolatus



Leucopogon parviflorus



Westringia fruticosa

Xanthorrhoea

Carpobrotus glaucescens

Dianella caerulea

Dianella revoluta

Hibbertia dentata

Lomandra longifolia

Lomandra 'Tanika'

Pennisetum 'Nairay'

Scaevola calendulacea