# **Putney Hill residential development**

# Concept Plan Landscape Report







# Prepared for:



Frasers Putney Pty Ltd Level 3, 541 Kent St Sydney NSW 2000

# Prepared by:



**Environmental Partnership** (NSW) Pty Ltd Suite 3:01 22-36 Mountain St Ultimo. NSW. 2007. Ph: (02) 9281 7007 Fax: (02) 9281 7222 Email: admin@epnsw.com.au ABN 53 088 175 437

# **TABLE OF CONTENTS**

	INTRODUCTION
1.2	RELATED STUDIES / DOCUMENTS
1.3	EXISTING PLANNING CONTROLS
2.0	THE SITE
2.1	CONTEXT
2.2	GEOLOGY AND SOILS
2.3	TOPOGRAPHY AND DRAINAGE
2.4	ACCESS
2.5	EXISTING VEGETATION & HABITAT
3.0	DESIGN PRINCIPLES
	OD IEOTIVEO
3.1	OBJECTIVES
3.1 3.2	GUIDING DESIGN PRINCIPLES
	0202011120
	0202011120
3.2	GUIDING DESIGN PRINCIPLES
3.2 <b>4.0</b>	GUIDING DESIGN PRINCIPLES  DESIGN STRATEGIES
3.2 <b>4.0</b> 4.1	GUIDING DESIGN PRINCIPLES  DESIGN STRATEGIES  GENERALLY
3.2 <b>4.0</b> 4.1 4.2	GUIDING DESIGN PRINCIPLES  DESIGN STRATEGIES GENERALLY STREETSCAPE
3.2 <b>4.0</b> 4.1 4.2 4.3	GUIDING DESIGN PRINCIPLES  DESIGN STRATEGIES GENERALLY STREETSCAPE PUBLIC OPEN SPACE

CONCLUSION

**BACKGROUND** 

1.0

5.0

# 1.0 BACKGROUND

# 1.1 Introduction

Redevelopment of the Royal Rehabilitation Centre Sydney (RRCS) site is a significant project that ultimately will incorporate:

- new rehabilitation and disability facilities,
- residential development,
- · public and private open space, and
- development and improvement of services and infrastructure.

Frasers Property have acquired the area of the site identified by the previous Concept Plan approval as residential development. RRCS is separately developing a new hospital and rehabilitation centre to the Morrison Road frontage along with the "Recreation Circle" facilities adjoining the hospital to the south. Frasers Property is responsible for the development of the the proposed "Central Parkland" and detention basin.

This landscape concept report describes the key site characteristics and outlines a series of guiding principles which will inform ongoing development of design.

# 1.2 Related Studies / Documents

The preparation of the landscape concepts for Putney Hill has occurred concurrently with the following specialist studies:

- Tree Assessment (Urban Forestry Australia)
- Flora & Fauna Report (UBM Ecological Consultants)

# 1.3 Existing Planning Controls

# 1.3.1 Commonwealth Legislation

# **Environment Protection and Biodiversity Conservation Act 1999**

The Commonwealth legislation provides a national framework for environment protection through a focus on protecting matters of national environmental significance and on the conservation of Australia's biodiversity.

Where possible open space should reflect environmental protection and enhancement philosophies although where features of environmental significance are present.

# 1.3.2 State Government Legislation Environmental Planning & Assessment Act 1979 Determination of Major Project

The RRCS redevelopment project received initial planning consent from the Minister of Planning on the 23rd of March 2006. Consent was given based on a number of conditions including the following which are of most relevance to the landscape component.

# Location of Central Parkland



Figure 1: Aerial view of the existing site

Source: Nearmap

# **Condition B8 Landscape and Public Domain Management**

Prior to the lodgement of an initial application for development on the subject site a landscaping and public domain management plan for the subject site will be formalised by the proponent and agreed by the Department, in consultation with Council where appropriate and implemented by the proponent to the satisfaction of the Department, in consultation with Council.

The landscape and public domain management plan will be prepared and undertaken by a suitably qualified person(s) and will provide (but not be limited to):

- 1) A safe pedestrian environment that seeks to minimise contacts and conflicts with the road network, by providing green linkages / corridors to / from the main open space areas.
- 2) Open space that is perceived unequivocally by members of the public, by its proper site planning and design, to be welcoming, accessible and inclusive.
- 3) Well designed engineering functions that do not dominate or alienate the use and enjoyment of open space.
- 4) Facilities that will attract users to the park, including facilities that normally associates with successful design of open space.
- 5) Retention of significant vegetation that will enhance the amenity of the development, helping to place the development within its local context.

It is noted that a Landscape and Public Domain Plan was prepared by RRCS prior to this subdivision application

# Condition C2 Density and Relationship to Surrounding Community

 The integration of open space, recreational facilities, childcare and community and health facilities with the residential development, to ensure that not only will the newly created communities be sustainable, both socially and environmentally, but that existing residents in the local community will also benefit from the total development.

### **Condition C4 Landscaping**

The proponent will adopt landscaping designs being in accordance with the following principles:

- To create a variety of landscape public open spaces which respond to the existing topography and landscaped features, and are appropriate for the intended purpose of each of open space.
- To create a unique sense of place in different precincts of the development, and landscaping on the collector roads which harmonises with Council's public domain landscape strategies.
- To preserve mature trees and landscaping features.
- To provide shade along pedestrian pathways and streets through the planting
  of street and park trees. When selecting species, consideration to be given to
  drought tolerance, winter solar access, summer shade and provision of habitats.
- To provide a high quality, low maintenance suite of street furniture that is located to provide amenity for walkers and park users.
- To provide shade for parking areas so that cars can be parked in the shade ideally reducing the need for intensive air conditioning.
- To reduce crime in public places by creating safe open spaces that are overlooked by dwellings and that have at least two access points.
- To minimise water usage and maintenance by selecting hardy, drought tolerant native and exotic plants, including those listed on the Sydney Water Plant Selector
- To reduce environmental weeds by selecting plants that are non-invasive or indigenous.

# 1.0 BACKGROUND

- To treat stormwater on subject site through landscape techniques such as wetland and planted swales.
- To provide a range of habitats for indigenous fauna including birds and arboreal mammals, insects, reptiles and amphibians through selection of plant species and planting composition.
- To increase water penetration by the use of permeable parking bays.
- To provide accessible paths of travel wherever possible as an integrated part of the open space network.
- To provide a landscape that can be maintained without excessive labour, water or nutrient inputs.
- In the event that approval is given for a wet detention basin, the design to avoid the need for fencing, by maintaining a depth of less than 300mm for the first two metres from the edge of the permanent water line. Plant species along the edges of the detention basin to be selected for the ability to withstand periodic inundation and periods of prolonged drought. Species in areas that will be permanently wet to be selected with consideration given to provision of habitat for birds, frogs and insects.

The proponent will adopt a design philosophy for elements in the public domain, including landscaping and street furniture, which will reflect the character of Putney, to be developed in consultation with Council to the satisfaction of the Department.

The proponent will design the proposed Central parkland area to function as both usable public open space and a stormwater detention basin.

# Condition C10 State Environmental Planning Policy Building Sustainability Index (BASIX)

 Landscaping in accordance with the Oculus recommendations with nominated water resistant plant species suited to the Wianamatta Shale soils, and soft landscaping to be minimised.

# **Local Government Act 1993**

The Local Government Act provides the legislative framework for a council's day to day operation. The Act emphasises a council's responsibility to actively manage land and to involve the community in developing a strategy for management. Of particular relevance is the requirement for all council property classified as Community lands to be categorised in accordance with the guidelines for the categorisation listed in the Local Government (General) Regulation (cl.6B-6JA). For lands categorised as Natural Area, specific planning and management strategies are to be provided. Strategies must reinforce and reflect the core objectives for community land listed in the Local Government Act (s. 36E-N).

# Water Management Act 2000

The Water management Act aims to provide for the sustainable and integrated management of the water sources of the state. In particular protecting the water sources and associated ecosystems through effective management and ecological sustainable development practises.

The Act identifies the role of Controlled Activity Approvals to replace the 3A Approval process for a specific activity in on or under waterfront land. Separate Aquifer Interference Approvals are to be required where activities involve excavation that may impact on underground aquifers.

# 2.0 THE SITE

The following site landscape appraisal is provided for the Frasers Putney site overall with specific issues related to the stage one area highlighted. Images this page focus on the stage 1 area.

#### 2.1 Context

The overall site covers an area of approximately 16ha and has its major street frontage at 600-640 Victoria Road, Ryde. The site is bounded by Victoria Road to the north-east, Charles Street to the east, Morrison Road to the south-west, and Princes Street to the west. The Charles Street frontage comprises an entry road along with landscape curtilage, with the majority of the frontage being formed by the Putney Village (south) and existing residences (north).

The Putney Hill development comprises the majority of the site. The balance of the site will be the replacement of the RRCS facility which will also comprise the Central Parkland, Wetland, Recreational Circle and the Rehabilitation Centre facilities to the southern corner of the site. It is bordered by existing residential properties to the east, and the existing retirement village to the south. Refer to the Overall Landscape Plan drawing LP.00-04

#### 2.2 Geology and soils

The Ryde area is generally typified by Hawkesbury Sandstone geology, overlaid with Wianamatta Shale. The site has been subject to a reasonably high degree of modification with the present landscape condition and topography suggesting that the existing soils are primarily clay based.

#### 2.3 **Topography & Drainage**

The topography of the site is varied, with several zones of intense grade up to 1(v):5(h). This is particularly evident to the areas extending down from the corner of Prince Street and Morrison Road, and in the stage 1 area to the north from the Existing Fig trees desirable for retention Central Parkland detention basin.

The existing stormwater detention basin is the focus for stormwater movement from both the northern and southern slopes of the site. The basin also receives overland flow and piped drainage from adjoining residential areas to the west and north west.

The stage 1 area slopes steeply to the south / south west creating which creates a number of challenges for access provision but at the same time affords a number of opportunities related to qualities of public and private space, views, and solar access. The stage 1 area is typified by a 14 metre change in levels from north to south and an average slope of 1(v):10(h).

#### 2.4 Access

Access is currently focused to entrances from Charles Street, Morrison Road and Victoria Road. The existing access is generally oriented towards vehicles via the adjoining and internal road network. Pedestrian access is ill defined due to a lack of formalised footpath provision. Redevelopment of the site should focus on increasing pedestrian accessibility and amenity through increased footpath provision, and greater accessible public open space.

The level changes to be negotiated in the stage 1 area, will mean that universal access will be balanced against such factors as likely usage and visual impact and will be focussed to key routes.



View from centre of site to Weemala



Existing tree planting to western boundary





Existing trees to west boundary desirable for retention



Fig trees adjoining Morrison Road frontage

# 2.0 THE SITE

# 2.5 Vegetation & habitat

This landscape report draws upon several investigations in the development of vegetation management strategies. An initial Landscape Report prepared by Oculus in 2005 identified the following:

"Benson and Howell (1990) suggest that the Ryde area would have supported a Turpentine-Ironbark Margin Forest - a sub-community of Sydney Turpentine-Ironbark Forest (STIF) currently listed as an endangered community in the Threatened Species Conservation Act. The site has been almost completely cleared in the past and the fieldwork undertaken sighted only two trees that could be presumed to be from this community and are large enough to be considered remnant individuals."

Investigations undertaken over the last 2 years include several inspections and related reports by Urban Forestry (Arborists) to identify tree conditions and significance, and a Flora & Fauna Impact Assessment which was undertaken by UBM Ecological (2011). The UBM Impact Statement identified several broader areas of vegetation it says are beleived to be STIF within the broader former RRCS Putney site, whilst no threatened flora species were identified. Three fauna habitat types were identified with all being assessed as having 'low value'. The Impact Report makes a number of recommendations which the landscape concept has considered;

- potential retention of groups of trees identified as being possible STIF remnants - noting however that most of these trees were not identified in the Urban Forestry arborists assessment as being significant based on condition,
- relocation of existing hollows to proposed significant areas of open space,
- maximising proposed open space tree & shrub species as STIF community species,

The UBM arborists assessment was undertaken in October 2007 and supplemented in October 2010 to evaluate condition and life expectancy of existing tree canopy, and to provide a tool to guide site planning and development.



Major Blackbutt specimen near Victoria Road to be conserved



Existing Palm and Podocarpus specimens on existing entry avenues to be transplanted into stage two open space areas



Existing Fig specimens - specimen on right to be retained - potential transplanting of right specimen

# 3.0 DESIGN PRINCIPLES

# 3.1 Objectives

Planning objectives as set out in Condition B8 of the Determination of Major Project, under the Environmental Planning and Assessment Act include:

- 1) A safe pedestrian environment that seeks to minimise contacts and conflicts with the road network, by providing green linkages / corridors to / from the main open space areas.
- 2) Open space that is perceived unequivocally by members of the public, by its proper site planning and design, to be welcoming, accessible and inclusive.
- 3) Well designed engineering functions that do not dominate or alienate the use and enjoyment of open space.
- 4) Facilities that will attract users to the park, including facilities that normally associates with successful design of open space.
- 5) Retention of significant vegetation that will enhance the amenity of the development, helping to place the development within its local context.

In keeping with these over arching objectives, development of the concept design for the Frasers Putney development has focused on a number of specific design objectives.

# Variety of open space

Provide open space that enables a range of functions and usage. Fundamental to the variety of open space is creating spaces that are utilised and enjoyed by the adjoining residents and the greater community by offering a diversity of open space and recreational experiences.

# Site responsiveness

Provide open space that responds to existing site qualities, and continues to reflect and contribute to the character of the surrounding area.

# Accessibility

Given the context of the site and the potential for use by disabled or less mobile users, an overall approach to providing disabled access wherever possible has been adopted. In addition the development aims to optimise accessibility of informal public open space to adjoining streetscapes and related communities. This objective is realised with consideration of the constraints of the site in relation to existing steep grades.

# 3.2 Guiding Design Principles

The following parameters outline key principles that inform design development across the site.

# **Landscape Character / Public Domain**

Landscape design will seek to integrate the development with adjoining public domain. This aims in particular to provide a sense of continuity to adjoining streetscapes that will encourage broader public access and use of public spaces.

Ryde Council has recently developed a Public Domain Strategy for Ryde Town Centre and is exploring proposals for other town centres within the LGA. The aim is not to definitively design public domain but to establish a coordinated fabric of materials and design finishes and to identify specific opportunities for public domain enhancement both functionally and aesthetically. Putney Village aligns closely with Ryde Town Centre in terms of locality, but will reflect a secondary hierarchy of design and materials finishes.

Recent footpath widening works to Charles Street have integrated quality clay pavement and will incorporate coordinated street furniture. Ryde town centre is implementing a granite pavement as the highest level surface to major streets and concrete or asphalt with granite banding to secondary streets.

It is proposed that the Putney village public domain fabric is extended through the Putney Hill development including:

#### **Pavements**

- use of matching clay pavement to nodal locations in streetscapes and within parks as accent or design feature
- use of concrete paths to general internal footpaths and pavements
   Furniture
- use of "Botton & Gardiner" seating bins and bollards to parks and courtyards as per Council's street furniture palette

#### Lighting

• any use of pedestrian pole top lighting to match Ryde Council works to neighbourhood centres (type to be confirmed)

# **Tree Planting**

• integration of street tree species themes that provide linkages to surrounding streetscapes and existing on site plantings - the Ryde Public Domain Strategy provides a comprehensive basis for street tree and understorey planting.

The objective of this coordinated approach is to ensure that street and footpath pedestrian entries from Charles Street, Morrison Road, and Victoria Road visually present as continuing street themes, and provide a cue for continuation of public access and use that can be reinforced by signage.

#### Access

Of importance to the function of public open space is its accessibility to the broader community, linking the immediate context of the space (often a new development) to its surrounding context. Key cycle routes of relevance to the Frasers Putney stage 1 site include:

- Parramatta River foreshore off road cycle track and pedestrian path (south via Charles Street);
- Morrisons Bay / Buffalo Creek off road cycleway (east via Parramatta River foreshore off road cycle track, or Victoria Road);

# 3.0 DESIGN PRINCIPLES

Cycle connections linking to these routes should be reinforced where possible through cycle friendly design which may include cycle racks etc.

Within Putney Hill, gradients preclude code compliant cycle access links from north to south. Pathways to verge areas can cater for shared family cycle (off road) links through the development while the low speed local road environment will cater for recreational and commuter cycle access to the external on road system. Facilitating desirable connections includes the linking of the internal public open space (and private residences) to the street based pedestrian path system and on road cycle access, and then beyond the site to the broader pedestrian and cycle access network, including the unmarked cycle path along Charles Street.

As noted in landscape Character / Public domain it is important that the connections to public street promote the legibility of public accessibility through continuation of pavement themes and those of other streetscape elements.

# **Crime Prevention Through Environmental Design (CPTED)**

The design of the landscape aims to provide attractive open space experiences that consider the safety and security of its users. There are four CPTED principles that have been considered to minimise the opportunity for crime:

#### Surveillance

Clear sightlines between spaces including public and private interfaces have been established. Native grasses have also been proposed to a number of areas that provide an attractive landscaped environment, but also allow clear sightlines as the planting is low in height.

## Access control

The public open space areas have been designed to encourage use by the local and wider community, providing a well used open space that deters crime.

# • Territorial reinforcement

It is envisaged that the local community will maintain a sense of community ownership over the open space areas, and will gather and enjoy the recreational and visual amenity provided, again deterring opportunities for crime. Public ownership of open space areas has also been promoted by utilising Council's palette of furniture and other material treatments.

# Space management

The open space areas aim to provide for recreational opportunities as well as being attractive spaces that are both well maintained and well used by the community.

# **Vegetation Management**

Existing vegetation is seen as a key site attribute providing immediate amenity and contributing to landscape function (eg. shade, screening), visual character and environmental values. Significant specimens will be integrated into the design scheme wherever possible, as a key design consideration. New plantings will also aim to enhance and continue existing vegetation patterns, in terms of species selection and location. The tree assessment undertaken by Urban Forestry Australia identified five categories of existing trees on site based on arboricultural and ecological significance, health and life expectancy.

Planning and design will ensure that conservation of existing trees through retention and transplanting where possible is optimised. Proposed planting will increase the net number of trees (existing and new) on the site.

# 4.1 Generally

The development of landscape concept design proposals for the stage 1 area address the key principles as indicated of Figure 2 below. These include:

# Open Space

- The central parkland open space is the focal public open space for the new community.
- An open space integrated a rain garden basin and adjoining a number of existing trees provides and open space / landscape link from the Central Parkland to Church Street
- A series of open spaces which provide for communal use by residents, pedestrian linkages, and green landscape character occur across the site.
   Where possible these integrate existing trees
- A landscaped buffer to Calvary Retirement Village to the western boundary

#### Access

- The street system promotes public access through the site supported by key pedestrian links through open spaces.
- Access is focussed on legible and logical links that can also add to the recreational experiences of the public domain.
- Public entries to Putney Hill will optimise and reinforce connections from adjoining areas through pavement and other streetscape treatments in keeping with Ryde Council's Public Domain Strategy.
- A through avenue links from Victoria Road to Church Street integrating a shared access path. Evergreen tree canopy marks this route and reduces the visual scale of the road corridor



Figure 2: Landscape Concept Plan

 Secondary road access with medium scale evergreen tree canopy provide access to residences - where north facing courtyards occur deciduous tree canopy is integrated

# **Scenic Amenity**

- Several key existing plantings will be protected and retained as key building blocks for the landscaped character if the site. In additional several Fig, Frangipani, and Canary Island Date Palm specimens will be transplanted to new locations on site where feasible
- Provision of extensive new tree plantings integrated with retention where possible of significant existing trees will provide an attractive landscape setting.

## **Environmental and Recreational Amenity**

- A variety of open space characters aims to ensure that a variety of visual and recreational experiences are offered.
- Open space is sited to take advantage of existing topography, views, and tree canopy. Where possible existing established trees will be retained to continue the environmental and visual amenity provided and also offer instant landscape amenity including shade to open space areas.
- New plantings will further consolidate a predominantly native vegetation character for the development overall.
- Targeted use of deciduous plantings will be incorporated to provide seasonal amenity and visual display.

### Sustainability

Ongoing design development will have regard for the following principles of environmentally sustainable design.

# Planning and design

- Conserve valuable resources (eg. Light-weighting) and avoid waste
- Use recovered or recycled content materials where practical
- Minimise / eliminate water usage and reduce reliance on mains supplies
- Use low or non-toxic materials to reduce impacts on the environment
- Maximise the recovery of components and materials at end-of-life.

## Materials

- Reuse demolition components materials or recycled content materials that can meet required engineering specifications
- Source materials locally to reduce transport impacts and support the community
- Use materials that have a lower environmental impact

# Fabrication

- Use prefabricated structures or fabricate components off-site where possible
- Build bulk quantities of structures / components if practical
- Use techniques that maximise recovery at end-of-life (eg. screwing not nailing)
- Use contractors with a proven track record of minimising environmental impacts Construction
- Keep construction sites as small as possible and manage it carefully
- Use environmentally friendly construction techniques
- Minimise material and vehicle movements on and off the site
- Use contractors with a proven track record of minimising environmental impacts Maintenance
- Implement and monitor maintenance schedules to maximise the structure's life
- Fix things before they break or as soon as a problem is identified

### Disposal at end-of-life

- Maximise the quantity of materials recovered at end of life
- Reuse whole components initially moving through to the raw material (eg. Fill, crushed concrete)

# 4.2 Streetscape

# Generally

Streetscape planting incorporates street trees, verge treatments, and buffer plantings adjoining building frontages that address the street. The streetscape component of the landscape is important in establishing an attractive and appealing public domain and to enable access through the site in an environment of high visual and physical quality.

The streetscape character of adjoining public domain must fundamentally be considered in landscape design of the internal streetscapes to the development.



### Victoria Road

The dominant element of the Victoria Road frontage is the existing Canary Island Date Palm avenues, which includes an entry avenue to the RRCS site. Planning of ongoing development stages will consider the role of these plantings and relationship with other desirable planting for buffer purposes to the Victoria Road frontage. Potential for transplanting of these specimens within the ongoing development stages will be examined.

### Morrison Road

The Morrison Road frontage is typified by several varied characters ranging form the intermittent / nodal mature trees on the hilltop adjoining the existing Weemala complex, the central zone typified by major plantings adjoining the frontage including a significant Fig specimen, and a selection of Brushbox species to the eastern half of the frontage, and thirdly the hospital redevelopment zone adjoining the Putney Village Centre which is currently open and utilitarian in character. The new hospital development will present a contemporary built form and improved landscape frontage to Morrison Road

#### Charles Street

Charles Street is typified by detached residntial housing with very limited street tree canopy afforded some character by the roads undulating and sinuous alignment in the north. Private gardens provide the main contributions to streetscape as a "barrowed" landscape with the exception of church grounds to the hilltop . The existing Tallowwood and scattered Brushbox plantings to the entry road off Charles Street are important landscape elements. These are retained in the Central parkland development phase by Frasers Putney.

#### Princes Street

Likewise Princes Street is characterised by limited street tree canopy.



Victoria Road frontage



Morrison Road frontage



Charles Street entry



Princes Street frontage

# **Proposed Streetscape types**

The landscaping of internal streets responds to several factors:

- their access role for vehicular and pedestrian movement
- their relationship to built form and private and public space
- · consideration of related scale and solar access issues
- creation of a legible typology that supports the street hierarchy of the new development and recognises the context of surrounding streets

# **Proposed Streetscape types**

The stage 1 development area requires the development of three street types:

- Minor Collector Road
- 2. Access Roads
- 3. Laneways

The approach to these is described in the table below and the cross sections on the following page.

Location / Use	Desired Character
Minor Collector Road	
main north south Link Road between Victoria Road to Charles Street entries	Optimise the retention of existing Fig specimens through their nodal use along local road - where space allows.  Tall evergreen canopy that has strong local context will establish a strong visual avenue through the site to the main access road. Tall species with an open canopy will have a strong visual impact on the street without adversely affecting street lighting.
Access Roads	
Loop residential access roads providing access to residential garages and basement carparking	Streetscape to recognise:  Overshadowing of any south facing private space desirability of solar access to any north facing spaces Potential reduction in heat loading benefit of trees to north south running streets the need for tree canopy to counteract scale of adjoining buildings views from south facing terraces / balconies
	Deciduous species options to limited locations will enable protection of winter solar access to north facing courtyards
	The integration of evergreen and deciduous plantings will ensure green relief at all seasons and promote an individual character
Laneway	
private road access to detached housing parking along eastern boundary	Provide canopy to enhance visual amenity in scale with available space Avoid overshadowing of any adjoining residences

Generally the road verges will be handed over to Council for ongoing maintenance .

# 4.3 Public Open Space

# **Central Parkland**

The Central Parkland area is the focal public open space on the site serves a number of functions to the site and the community:

- i. central community parkland for non organized recreation
- ii. toddlers playspace
- iii. landscape feature
- iv. stormwater detention for 1:100 ARI rainfall event.

The Central Parkland is effectively positioned to provide a major visual focus to the site and the interface between hospital and residential areas. The gently sloping grassed areas with a permanent water body sustained by environmental flows provide an attractive landscape setting. As identified in the engineers stormwater descriptions for design features of permanent water body, stormwater inputs to the pond will provide regular aeration of permanent water body. The need for supplementary mechanical aeration as is often provided to similar water bodies will be assessed at design development stage.

The stormwater role of the parkland has implications for the use and related design of the parkland. The basin will hold the 1:100 ARI event which means in this occurrence the full area of the park could be expected to be inundated. The 1:50 event will also impact on an area of the park, however the playspace area will be above regular inundation.

Design and materials finishes have been established to deal with the flooding characteristics of the park. The lower lying loop path which lies within the zone of inundation is a concrete structure which will be designed to not be structurally affected by flooding, as is the case for low concrete walls forming the proposed terraces to the south eastern sector of the park.

A playspace will be provided above the 1:10 event.

Maintained grass areas within the park that provide the detention role for major events will be a maximum of 1:6 grade to allow for easy walk out egress from the area.

The principle of dual use is well established for both playing fields and other types of parklands and requires that park design and placement of elements reduces potential issues for follow up. This includes:

- ensuring that path surfaces in regular inundation zones are structural adequate to cater with inundation
- minimising erodible surfaces within regular inundation areas (loose gravels etc)
- · locating furniture where possible out of regular inundation areas
- allowing for aeration of permanent water body to address water quality and insect issues



# 4.4 Private Open Space

# 1 Communal private open space

At various locations communal private open space will be provided that will be accessible to residents and in some cases the public. These spaces will:

- · accommodate access to buildings within a landscaped setting
- provide for passive recreation by residents
- provide a landscaped setting for buildings

Due to the limitations to equity of access for a broad range of residents and the public, and the capacity to provide long term landscape planting in particular tree canopy contributing to site habitat, it has been resolved not to pursue communal open space to building roofs. Rather the amount of on ground open space has been increased from that of the previous site masterplan to provide more accessible and functional open space.

The communal private open space will be maintained by Community Title.

# 2 Extended street frontages / landscapes

At various points along the minor collector road localised widening in the street frontage landscape will be provided.

The widenings address a number of objectives:

- provide for retention of key existing tree specimens
- provide for variation and diversity in the street scene
- allow for integration of electrical sub stations
- · can provide opportunities for seating





Examples of similar landscape outcomes to private open space



landscaped frontages to residences will enhance the amenity of the street environments



Existing Fig specimens to be retained - which are focus of proposed widened landscape frontages

# 4.5 Private Space

Private open space is broadly categorised under the three development types:

- Apartments
- Townhouses
- Detached Houses

Design of these spaces must consider the varying spatial, and physical qualities of these open space areas and the anticipated use.

## **Apartments**

Apartments may include balcony or terrace spaces off living areas to provide private open space opportunities for these residents. These areas will provide space and solar access to enable drying of clothes, relaxing and entertaining. Planting to these areas will be generally limited to planter boxes and pots, which will also assist in the flexibility of use for residents.

Also important to the amenity of the apartments is the adjoining open space areas which can be viewed from windows and balcony areas. Concept development for open space designs must consider both the usability and visual quality at ground level, whilst also considering the views to and into open space areas.

# **Townhouses**

Townhouses will generally provide off street parking to individual garages, with driveways located off the internal site roadways. To reduce the impact of hard paved areas, garden beds will be incorporated to the driveway frontage areas,. Garden bed areas will provide display planting that also enhances the overall visual quality of the streetscape, complementing adjoining street tree planting.

Open yard areas are provided to the rear of townhouses. These spaces would include a combination of surfaces including paving, turf and garden beds. It is envisaged that provision of small trees to these yards would also be beneficial and may include deciduous species that maximise summer shade and winter sun.

Due to the varied topography across the site, walling elements between townhouse lots may be required to enable level outdoor spaces. These may include a variety of materials that complement both the architecture of the buildings and the landscape.

### **Detached Houses**

Stand alone house blocks are part of the housing mix for Putney Hill. Open space is provided in open yard areas in varying proportions to the front and rear of the houses. Similarly these areas will provide a variety of landscape treatments with the front yards incorporating some level of garden bed planting to provide a buffer from the street, and enhance the visual quality of the street frontages.

Tree planting will be incorporated into front or rear yard areas. Additional tree planting will also be incorporated into rear yard areas.

# Frontage Landscape

To streets through the development landscaped frontages will be provided to the various types of residential buildings. These will be on private space, but contribute to the streetscape character of the public domain.









Examples of similar landscape outcomes to private space

# 5.0 CONCLUSION

# 5.1 Summary

The Putney Hill development concept plan, is compatible with the objectives and requirements of relevant policies and strategies.

Development of the site will provide a high quality of housing at a variety of scales and incorporate a unique range of open space opportunities, both of public and private open space.

Proposed planting species are predominantly native, with 75% of open space tree and shrub species identified on OEH web-site as belonging to the endangered Sydney Turpentine Ironbark Forest community, which previously was the dominant vegetation cover on the site.

Proposed tree retention will accommodated the retention of established trees providing habitat as well as significant large specimens that will provide enhanced character to the new development punctuate the streetscape, and contribute to the variety of open space experiences and landscape character.

Total tree removal on site will be offset by new tree plantings, neutralizing any trees loss. Many existing trees are identified in the Arborists report as being of poor health. New tree plantings will be robust, predominantly native species with a cohesive character.