

PENRITH LAKES PARKLAND

DRAFT VISION PLAN



Office of
Sport
Penrith Lakes



**REPORT BY NSW GOVERNMENT
ARCHITECT'S OFFICE**

**PREPARED FOR
OFFICE OF PENRITH LAKES**

DECEMBER 2014

© Crown in right of NSW through the Office of Finance & Services 2014.

This publication is copyright and may incorporate moral rights of an individual. Other than for the purposes of and subject to the conditions prescribed under the Copyright Act, no part of it may, in any form or by any means, be reproduced, altered, manipulated, stored in a retrieval system or transmitted without prior written consent of the copyright owner or owner of moral rights. Any inquiries relating to consents and use of this publication, including by NSW Government agencies must be addressed to the Government Architect's Office, NSW Public Works.

TABLE OF CONTENTS

1	THE VISION	7
1.1	Introduction	9
1.2	What is Penrith Lakes?	13
1.3	Why this Vision Plan?	14
1.4	Context	16
2	THE PLAN	20
2.1	Strategic Directions	23
2.2	Penrith Lakes Parkland	26
2.3	Precinct Plan	28
3	FUTURE DIRECTIONS	30
3.1	The Precincts	32
3.2	Site Considerations	49
3.3	Development Considerations	54
3.4	Next Steps	58
	Acknowledgements	63

ABBREVIATIONS

GAO	- Government Architect's Office
OoS	- Office of Sport
OPL	- Office of Penrith Lakes
PLDC	- Penrith Lakes Development Corporation
SIRC	- Sydney International Regatta Centre
PWS	- Penrith Whitewater Stadium
the Plan	- the Penrith Lakes Parkland Vision Plan
the Deed	- the Deed of Agreement
the Parkland	- Penrith Lakes Parkland
SEPP	- State Environmental Planning Policy


ILLUSTRATIONS

Penrith Lakes Current Local Context	8
Regional Greenspace Network	8
The River and the City Context	9
Penrith Lakes Vision Plan	22
Design Principles	24
Precinct Plan	28
Southern Leisure Precinct	34
Sports and Events Precinct	36
Chain of Ponds Precinct	38
Urban Precinct	40
Main Lakes Precinct	42
Wildlife Lake Precinct	44
Riverbank Precinct	46
Flood Management Plan	53

CARING FOR COUNTRY

The Office of Penrith Lakes acknowledges the traditional custodians, the Darug Peoples, of the land on which the Parklands are situated.

The Office of Penrith Lakes will work in a respectful manner with Aboriginal people in Caring for Country and aims to treat Aboriginal people, their cultural heritage, customs and beliefs with respect.

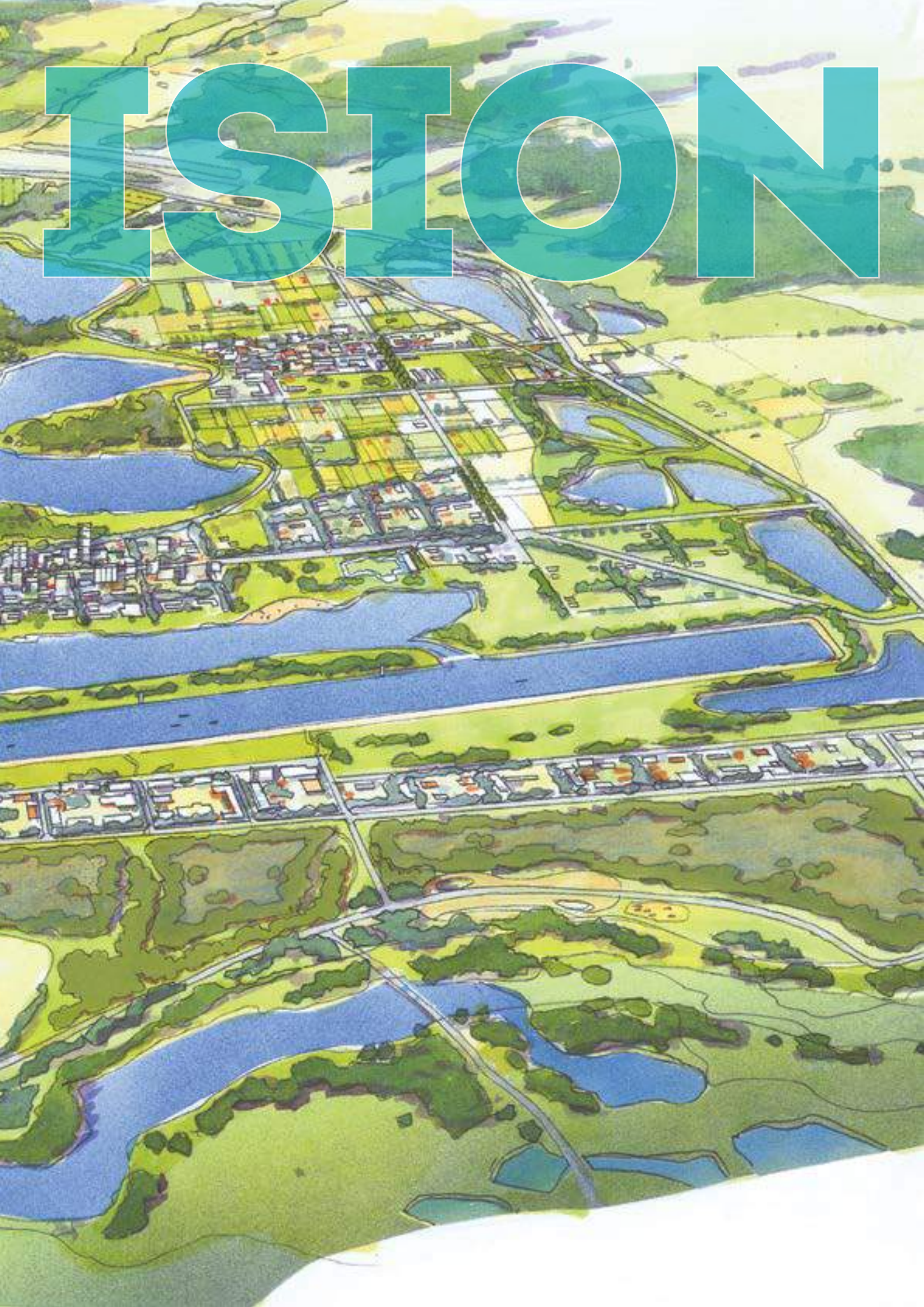
An aerial artistic rendering of a parkland development. The image shows a large body of water (a lake or reservoir) in the center, surrounded by green spaces, paths, and some buildings. A bridge or causeway crosses the water. The overall style is a colorful, painterly illustration. The word 'THE' is written in large, stylized, teal-colored letters across the top of the image.

THE





**PENRITH LAKES
PARKLAND WILL BE A
PLACE OF VAST LAKES
AND OPEN SPACES.**

It will offer the Penrith community and the people of NSW a place to gather for new adventures around water that could evolve into a 21st century parkland where people live, work and play.

VISION







SYDNEY REGIONAL CONTEXT

-  Major Urban Centres
-  Hawkesbury Nepean/ Great River Walk
-  Regional Open Space
-  Metropolitan Regional Trails



PENRITH DISTRICT CONTEXT

-  Regional Open Space
-  Penrith Lakes Site
-  Main Railway Line
-  Main Roads
-  Great River Walk



1.1 INTRODUCTION

Penrith Lakes is a 1,940 hectare site located on the eastern banks of the Nepean River and the foot of the Blue Mountains. At around five times the size of Sydney's Centennial Parklands, the site is vast and provides the opportunity for water based activities as well as more gentle and quiet pursuits like bushwalking and bird watching. Penrith Lakes represents a remarkable opportunity to transform the site of a former sand and gravel quarry into a 21st Century parkland and system of lakes.

Since the 1980's the Penrith Lakes Development Corporation (PLDC) has operated a sand and gravel quarry at Penrith Lakes. The 1987 Deed of Agreement between PLDC and the NSW Government provides for the transfer of lakes and some land to the NSW Government when mining at the site finishes as a major parkland and lakes system for the Penrith community and the people of NSW.

PLDC is responsible for the post-mining rehabilitation of the land, as well as the construction of basic park facilities and the infrastructure needed for a healthy lake system. However the rehabilitation specified in the original deed will not meet contemporary standards for urban parks. Additional work will be needed to develop the parklands beyond the standards envisaged in the original agreement.

In 2011, the NSW Government established the Office of Penrith Lakes to oversee the completion of the site's rehabilitation and prepare a vision - which acts as a guide for future development of the site.

In consultation with a range of stakeholders and community

representatives, the Office of Penrith Lakes has developed this draft Vision Plan. The vision is to deliver a 21st Century parkland that could eventually support a community where people are able to work and live as well as walk, cycle, swim, paddle and play.

The draft Vision Plan draws on the site's long and remarkable history, its strong natural values, rich cultural heritage and magnificent scenery and aims to:

- ♦ provide a starting point for consultation with the local community about what they want to see at the site
- ♦ create the framework for the future which establishes the significant values of the site and provides direction for its gradual and sequential development
- ♦ provide a consistent and comprehensive approach to the development of the site within certain considerations (see Section 3.3)
- ♦ support all levels of government, other agencies, developers and consultants in delivering the project
- ♦ support and integrate with relevant planning instruments and development controls
- ♦ ensure it fits into the wider metropolitan planning strategy for the Sydney Basin.

The draft Vision Plan identifies the existing world class facilities of the Sydney International Regatta Centre (SIRC) and the Penrith Whitewater Stadium (PWS), both developed for the Sydney 2000 Olympic Games, as the foundation for Penrith Lakes Parkland as a possible centre for sport and recreation.

The draft plan also identifies a range of uses and activities that could be located throughout seven precincts.

These include active and passive recreation as well as urban development. It distinguishes areas that could be protected for quiet activities, and wildlife refuges from areas for active land and water based pursuits. It locates critical entry points and circulation routes, and outlines opportunities and key considerations for future development.

DEVELOPMENT CONSIDERATIONS

There are a range of considerations that will impact on the development of the Penrith Lakes Parklands. These include issues related to extent of urban land for development, flood management and evacuation, access, traffic, services, landscape, parklands and lakes. These issues must be addressed by and incorporated in a Plan of Management and Development Controls to be proposed for future development within the Parkland

Details of these development considerations are in Section 3.3.

STAGED DELIVERY

Penrith Lakes will evolve over the next 20 years and, given the size of the site, will need to be divided into areas which can be developed and delivered to the community in stages over time.

This draft Vision Plan is the starting point and it will require input, ideas, imagination and feedback from the local community to deliver a site which could become one of Western Sydney's most significant recreational assets. The draft Vision Plan will be placed on public exhibition so the community has the opportunity to contribute ideas and commentary about what they would like to see at Penrith Lakes Parkland.

A SNAPSHOT OF PENRITH

10

Penrith Lakes Parkland
Draft Vision Plan
Office of Penrith Lakes

Up to
640ha
of recreational
lakes

A
**Wildlife
Lake**
to provide habitat
and attract fauna

Up to
148ha
of water quality
treatment ponds

sports &
events
related land



LAKE PARKLAND

Penrith Lakes Parkland
Draft Vision Plan
Office of Penrith Lakes

11

PRECINCTS

- 1** SOUTHERN LEISURE
- 2** SPORTS & EVENTS
- 3** CHAIN OF PONDS
- 4** URBAN
- 5** MAIN LAKES
- 6** WILDLIFE LAKE
- 7** RIVERBANK

26km

of new lake
foreshore

Up to

830ha

of parkland

approximately

20km

of planned cycle
& pathways

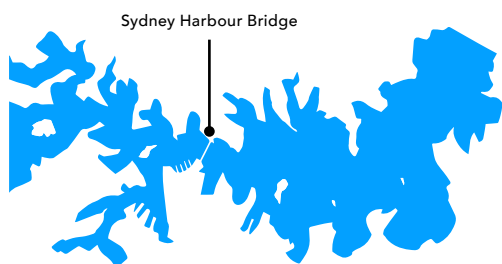
a
vibrant new
community



1.2 WHAT IS PENRITH LAKES PARKLAND?



Penrith Lakes
788 ha



Sydney Harbour
2600 ha

Situated above a distinctive elbow-shaped bend in the Nepean River, Penrith Lakes lies between the Yellomundee escarpment to the west and the Cranebrook Escarpment to the east. It stretches 6.5 kilometres from north to south, and is 3.5 kilometres across at its widest point.

The Nepean River defines this landscape. With 23 recorded floods of varying intensities since 1789, the river has shaped both the land and the communities along its edges. The river carved through the underlying sandstone and shale, revealing steep escarpments and depositing gravel, sand and silt along its broad and terraced floodplains. For thousands of years the river provided sustenance, stone tools and meeting places for the Darug Peoples. In the early 19th Century, the reliable supply of alluvial soils along the Nepean encouraged European agricultural settlement, characterised by small communities dispersed along an east/west grid and extensive forest clearing.

As Sydney expanded after World War II, the extensive river deposits of sand and gravel, laid down over thousands of years, became a major source of building materials for the Sydney region. Over the last 40 years, extraction has left a network of large basins and service roads. As quarrying nears its conclusion, this landscape approaches its third significant transformation. The quarry pits, depleted of gravel, are now filling as lakes with run-off from surrounding areas. This will have an overall dimension similar to Sydney Harbour east of the Harbour Bridge. The quarry rims are currently being rehabilitated as lake edges, and the entire site will be surrounded by expanses of regenerated fields and grassy woodland. Traces of previous land use will be dispersed across the parkland, which include remnants of mining operations as well as Aboriginal and European heritage sites and buildings, providing important reference points for future development of the parkland.



Image by Tim Throsby, 2013

WHY THIS 1.3 VISION PLAN?

22.5km
of planned cycle
and pathways

Following years of uncoordinated gravel and sand extraction, the Penrith Lakes Development Corporation (PLDC), a consortium of three mining companies, was established in 1980 to manage the orderly extraction and eventual rehabilitation of Penrith Lakes. In 1987 the PLDC entered a Deed of Agreement with the NSW Government. The Deed makes provision that when the land has been rehabilitated there will be a process of dedication of lakes and parklands to the Government and PLDC will retain the opportunity to develop land designated for urban use. No decision has been made about any urban development and the amount and location of urban land is currently under investigation and negotiation with PLDC. Any urban land to be developed will be subject to appropriate planning approvals and take into account flood evacuation requirements and other issues. The map on page 22 shows the area of investigation for possible future urban development. With mining now drawing to a close, quarried areas are progressively being rehabilitated in accordance with the requirements of the Deed, and in preparation for their transfer to the NSW Government.

Since the signing of the Deed in 1987, PLDC has commissioned a number of master plans for Penrith Lakes. Each reflects the changing trends and aspirations of the time, acknowledges and addresses the site’s scale, the diverse recreational opportunities afforded by its vast lakes and the adjoining river, and the strong cultural heritage and natural environmental values of the site.

In 2011 the NSW Government established the Office of Penrith Lakes (OPL), to manage the planning, design and governance transition of Penrith Lakes from an active quarry to a major regional parkland.

Recognising the importance of the site and building on the preceding studies and proposals, OPL in partnership with the Government Architect’s Office (GAO), conducted a Vision Workshop in 2013 as a first step toward developing this draft Vision Plan. The workshop involved five design consultancies, a broad range of stakeholders and a panel of design critics in a series of activities which generated the vision, strategic direction and preliminary concepts for this Vision Plan.

This program consisted of three consecutive workshops comprising:

- ♦ a detailed briefing and a site visit covering its history, preceding studies and plans
- ♦ preparation of preliminary concepts by the design teams and feedback from the design critics
- ♦ more fully developed concepts by the design teams
- ♦ development and testing of the vision and strategic directions.

The outcomes of the workshop have directed and informed the development of the draft Vision Plan in two significant ways.

There was strong consensus among workshop participants regarding the changing approach to master planning. Over the last two decades, the planning of parklands of this scale and significance has changed from producing fixed and expensive 'master plans' based on grand visions, to more strategic approaches based on flexible, open ended frameworks that evolve to meet changing needs, and are realised and funded progressively.

Typically, implementation of this new type of vision spans several decades. This draft Parkland Vision Plan sets out a coherent vision which has the capacity to accommodate change and commits to the ongoing stewardship of this complex landscape in a staged way over time addressing the development considerations.

The workshop process also established that Penrith Lakes is today on the cusp of a significant moment in its history; a moment with an opportunity to draw together for the first time the numerous and interwoven threads of its rich narrative, lending purpose, coherency and meaning to a rehabilitated and regenerated landscape.

The draft plan provides the broad framework for this to happen, with the diversity of transformation ranging across urban, recreational, ecological and cultural offerings. It provides an adaptive fit with a focus on regeneration of landscape, cultural and economic values, and importantly could reinstate the site's connection to the Nepean River and to the City of Penrith.

Therefore this draft Vision Plan has been developed to:

- ◆ get the community involved and seek ideas and input about what it would like to see at Penrith Lakes
- ◆ provide information about some of the opportunities and challenges the site presents and which need to be addressed
- ◆ provide some initial ideas about possible future uses for key areas of the site for consideration and feedback
- ◆ get the community thinking which areas are the priority for delivery.

The draft Vision Plan recognises that there will be a diverse range of views on the future of Penrith Lakes. It is important that all views from stakeholders and the community are heard and incorporated into the future planning of Penrith Lakes.



Image by Tim Throsby.
Castlereagh Penrith Lakes: Landscape and Urban Design, Hassell, 2007

1.4 CONTEXT

THE NEPEAN RIVER IS – AND HAS BEEN THROUGH HISTORY – THE MAKER AND FOCUS OF THIS LANDSCAPE; FOR MANY THOUSANDS OF YEARS IT WAS THE SOURCE OF SUSTENANCE, TOOLS AND MEETING PLACES FOR THE DARUG PEOPLES

THE METROPOLITAN CONTEXT

With the westward growth of metropolitan Sydney following World War II, Western Sydney rapidly became a major centre of residential population and employment, with Penrith identified and planned as a regional city by a succession of state governments since 1968.

For a decade or more various State and Council strategies have identified Penrith Lakes as a state significant development. The NSW Government’s 2013 draft Metropolitan Strategy, with its vision for a strong global, liveable and local city, promotes the strengthening of Penrith City as the regional hub for office, retail, administration, recreation and culture, leading to an anticipated capacity for 8,000 additional jobs.

The Strategy supports continuing planning around Penrith Lakes to achieve a new centre for housing, employment and recreational uses in the longer term. It also specifically identifies the important ongoing role of the SIRC and the PWS, which lie at the heart of the Penrith Lakes site, as venues for national and international events. The Metropolitan Development Program identifies a dwelling potential of 4,900 at Penrith Lakes.

At the local government level, Penrith City Council has recognised the need to capitalise on the planned and evolving growth of the region by establishing a stronger, more coherent and liveable town centre and in particular by reconnecting the city with its river. The Penrith Futures program lays out a bold vision for these initiatives and provides the

basis for exploiting the critical synergies between river, lakes, mountains and city.

In recent years, the provision of additional regional green space in Sydney has been restricted by land availability and fiscal constraints. At the same time, the reasons to increase the supply of parks have expanded and become more urgent. They include continued population growth, particularly in Western Sydney, and the growing awareness of the relationship between healthy living and the built environment.



THE IMPORTANCE OF REGIONAL PARKLANDS

Urban parks provide critical and diverse social, ecological and economic benefits to their cities. They improve liveability, amenity and public health. They deliver important ecosystem services by assisting with moderating air temperatures, conserving habitat, and cleaning and storing water. They enhance community interaction and create a sense of identity and belonging. Finally, they increase amenity and property values and diversify recreational, educational, tourism and leisure opportunities.

Cities thrive on open spaces of diverse types and scales; local pocket parks, and informal and formal sports fields are as critical to overall urban health as small bushland reserves and extensive habitat corridors lacing through the urban areas.

Regional parks, typically large in scale, provide a mix of recreational activities not available in local parks. They appeal to large and varied segments of the population, and have catchments that may extend across local government areas and in many cases draw visitors from across a city. The scale of regional parks makes them important components of overall urban form, corridors of green which buffer and define developed areas.

The Sydney metropolitan area features a suite of distinctive regional parks. Each has emerged from a range of unique circumstances, has its own special legislation and governing entity, and each is large and complex. These parklands comprise some of Sydney's major open space assets. From east to west they include the

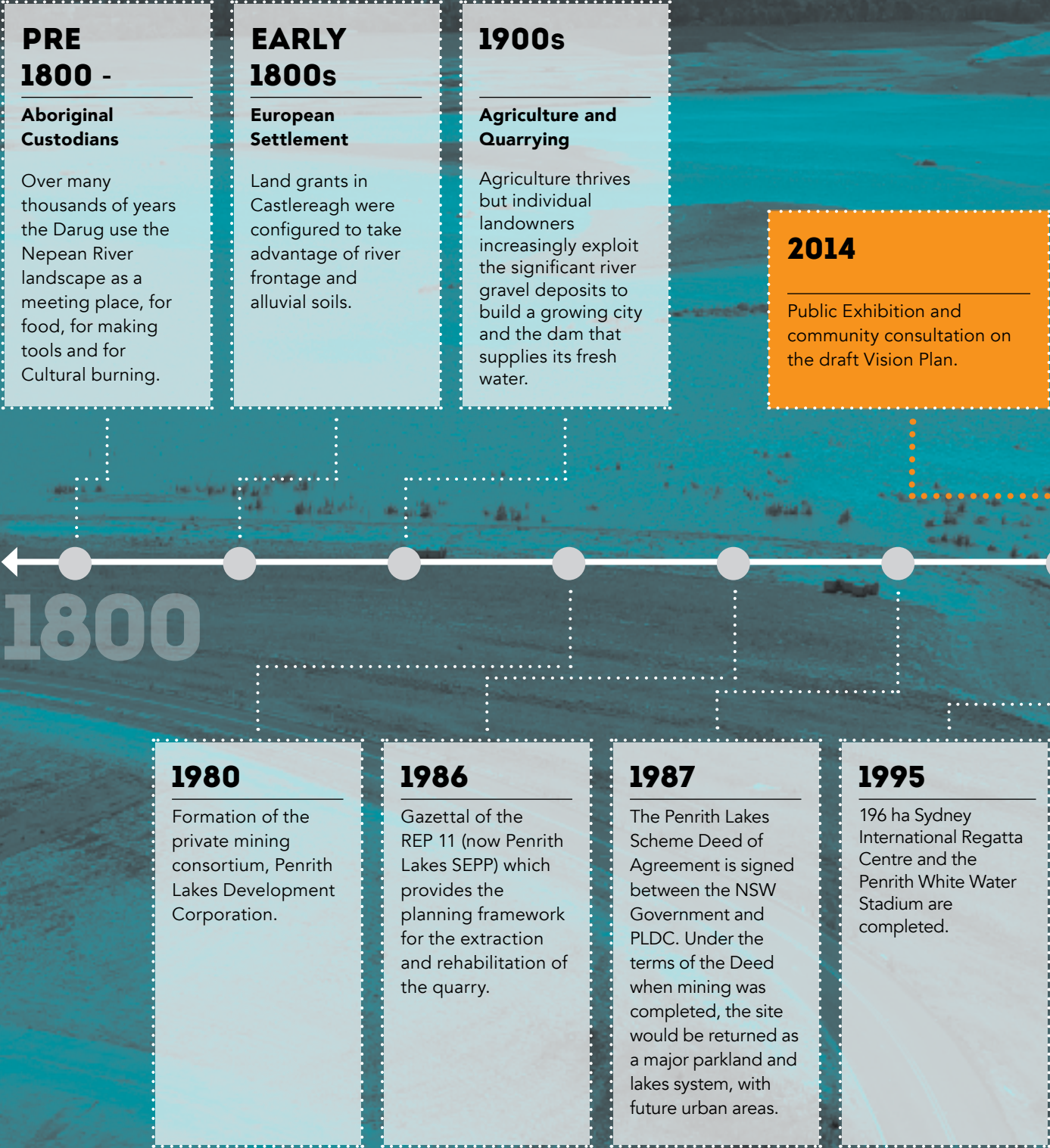


360 ha Centennial Parklands; the 640 ha Sydney Olympic Park and the 5,280 ha of the Western Sydney Parklands.

Penrith Lakes Parkland will become the fourth of these large regional parks in metropolitan Sydney. Penrith Lakes Parkland's strongest attraction could be water based activities that cannot be provided anywhere else in the western part of the city including sailing, rowing, white-water rafting, paddle boarding and other water sports. This new parkland could also be a recreation, tourism and environmental education destination between Sydney and the Blue Mountains and complement the existing mosaic of national parks and reserves in Western Sydney.

SIRC
currently attracts
500,000
visitors a year

THE STORY SO FAR...



2015

- ♦ Draft Penrith Lakes Parkland Vision Plan is finalised and adopted.
- ♦ Amendment to SEPP Penrith Lakes Scheme.

2016–2017

- ♦ Planned completion of PLDC land transfer to NSW Government.
- ♦ Governance arrangement established.
- ♦ Development of Penrith Lakes Parkland Precinct Plan and Plan of Management.

2016–2037

- ♦ Staged development of Parklands

2014

2037

2000

Sydney 2000 Olympic Games use the first stage of Penrith Lakes for rowing, kayaking and regatta events.

2005

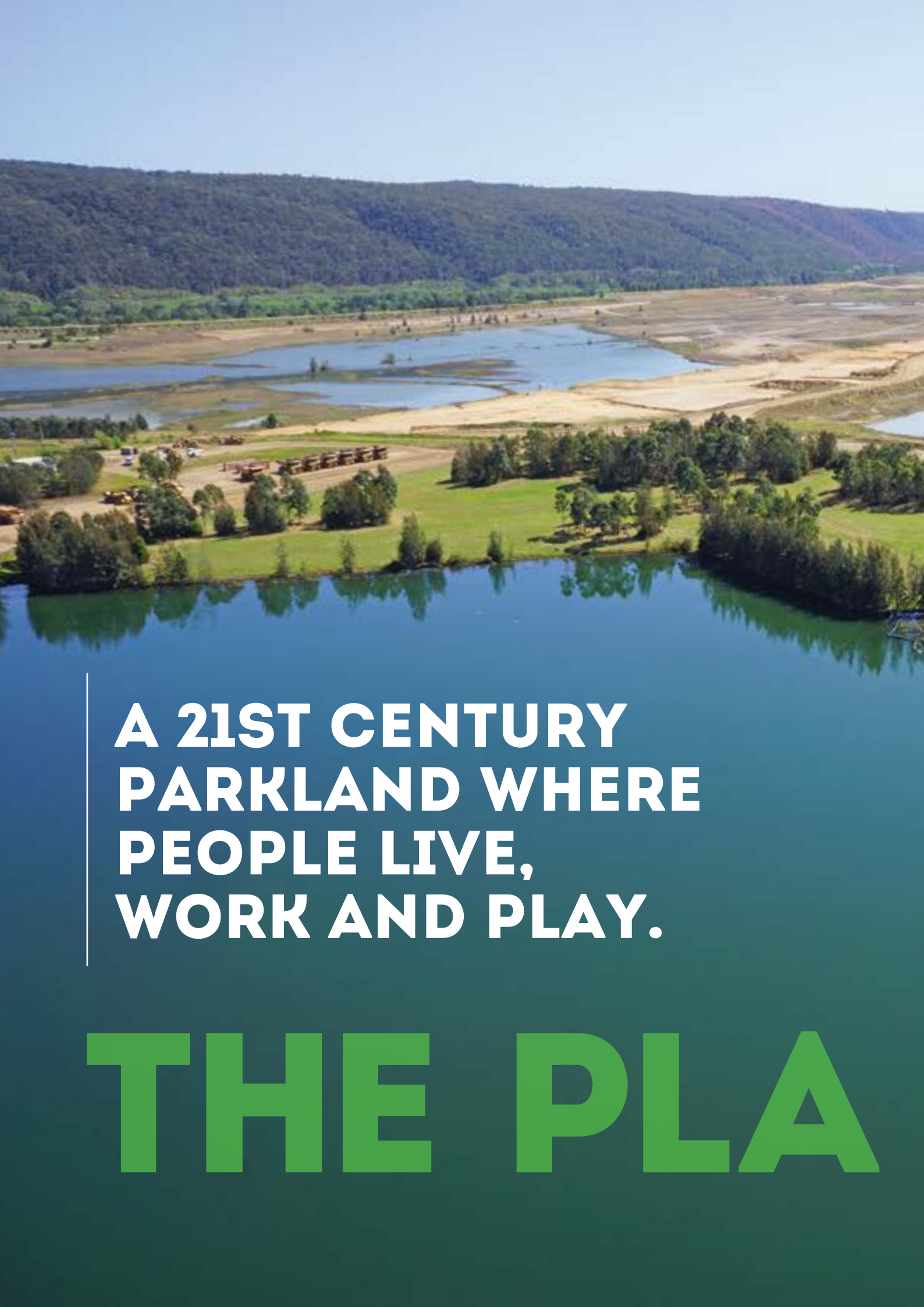
Penrith Lakes Scheme is included in the NSW Government's Major Projects State Environment Planning Policy. PLDC relocates Old Castlereagh Road.

2011

NSW Government establishes the Office of Penrith Lakes.

MAY 2012 – 2013

NSW Government begins to develop the Penrith Lakes Parkland Vision Plan. Vision workshops held in 2013.



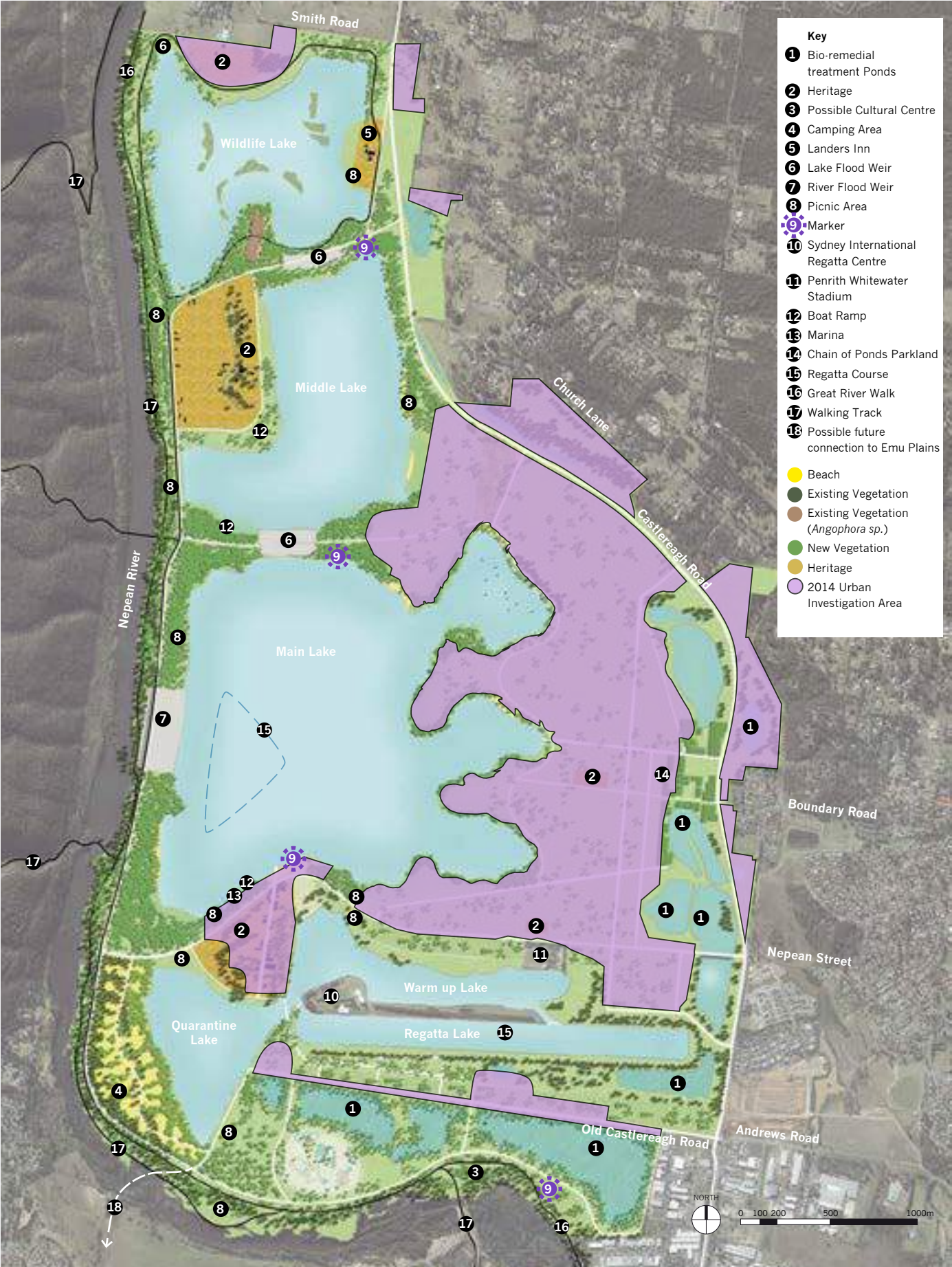
**A 21ST CENTURY
PARKLAND WHERE
PEOPLE LIVE,
WORK AND PLAY.**

THE PLA



N

PENRITH LAKES PARKLAND DRAFT VISION PLAN



**PART 2 SETS THE
FRAMEWORK FOR THE
DEVELOPMENT AND
DELIVERY OF THE
PENRITH LAKES
PARKLAND:**

Strategic Directions. Establishes the six values informing and underpinning the draft Vision Plan.

The Experience. Describes the three goals for the parkland visitor user experience.

The draft Vision Plan. Illustrates the strategic concepts proposed.

Design Principles. Graphically represent the guiding design elements that anchor the draft Vision Plan.

The Precincts. Identifies the seven distinct geographic areas of the parkland and their possible land use activity, focus and character.

2.1 STRATEGIC DIRECTIONS

**PENRITH LAKES PARKLAND
WILL BE A PLACE OF VAST
LAKES AND OPEN SPACES.**

**IT WILL OFFER THE PENRITH
COMMUNITY AND THE
PEOPLE OF NSW A PLACE TO
GATHER FOR NEW
ADVENTURES AROUND
WATER THAT COULD EVOLVE
INTO A 21ST CENTURY
PARKLAND WHERE PEOPLE
LIVE, WORK
AND PLAY.**

- 1. Innovation** – to deliver a distinctive type of parkland, with public recreational facilities integrated with opportunities to live and work.
- 2. Partnership** – to engage with the community and stakeholders to create parklands of sustainable beauty, health and meaning to the people of Penrith and NSW.
- 3. Respect** – to honour and reveal the site's Aboriginal, pastoral, sporting and mining histories, and to provide a parkland for future generations.
- 4. Evolution** – to provide a parkland that evolves in response to its social, environmental and economic conditions.
- 5. Balance** – to balance social, economic and environmental objectives.
- 6. Foresight** – to plan for the future and ensure a fit within the planning strategy of wider Sydney.

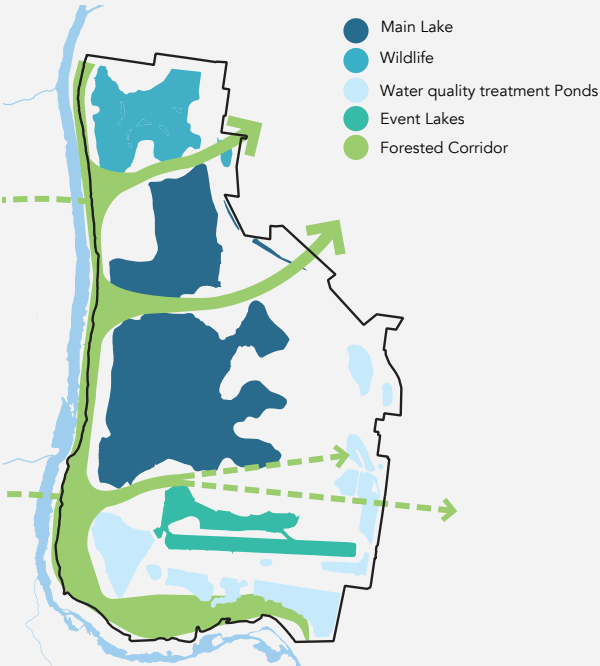
THE EXPERIENCE

Adventure – a variety of rich and exciting experiences through a range of facilities, lakes and landscapes.

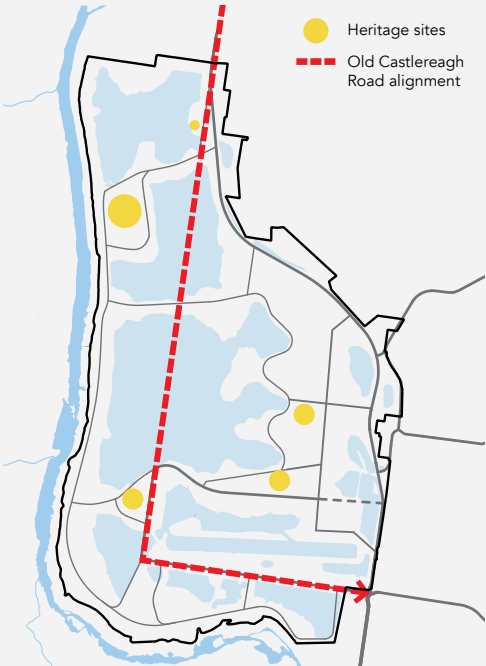
Connection – enhance physical, cultural and ecological connections between the Nepean River, the people of Penrith and the surrounding regions.

Diversity – diverse opportunities for recreation and environmental engagement and possibly in time, innovative residential and commercial settings.

DESIGN PRINCIPLES



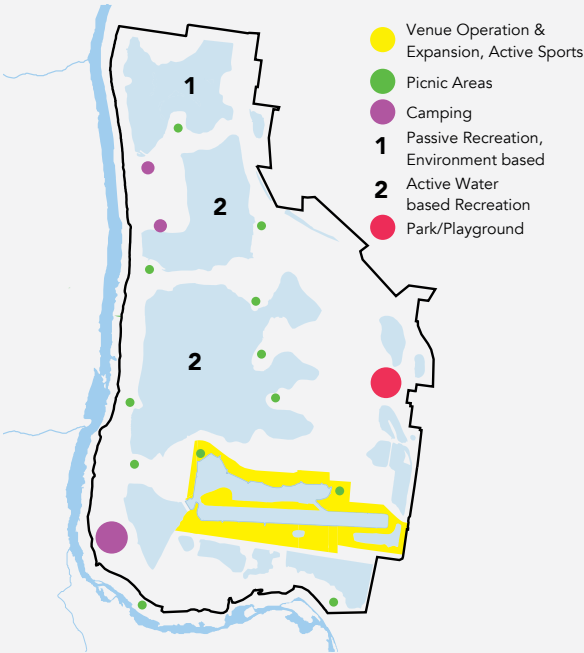
1. **An integrated green network and a system of lakes**
A forested corridor along the Nepean River will be the ecological spine of the parklands: “green fingers” will extend from the corridor to connect with existing nature reserves on the Castlereagh plateau. A lake system will provide for diverse experiences and activities including water based recreation, flood and water quality control, wildlife habitat and eco tourism.



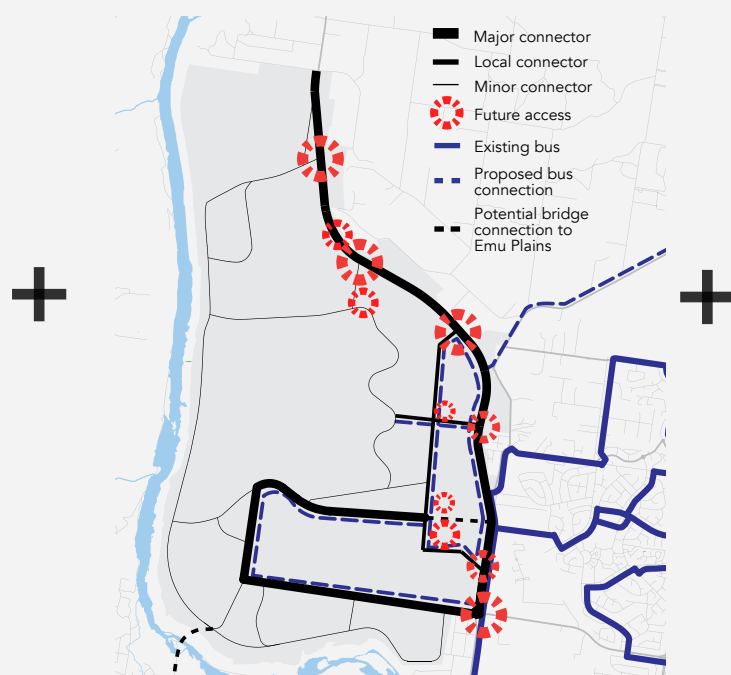
2. **Activate heritage precincts and features**
Respect the existing natural and cultural heritage features of the site. Create opportunities for interpretation and adaptive reuse of the heritage buildings and their curtilage including uses that support and complement their significance. Acknowledge the alignment of Old Castlereagh Road.



5. **Unique parkland destinations**
Build on the unique parkland opportunities to create notable destinations. The existing historic sites and cultural centre could support interpretation, tourism and events. Certain lake frontages could become active lakefront hubs and the existing SIRC and PWS could be incorporated into the Sports and Events Precinct – a specialist hub with complementary uses such as extreme sports, accommodation and tourism.

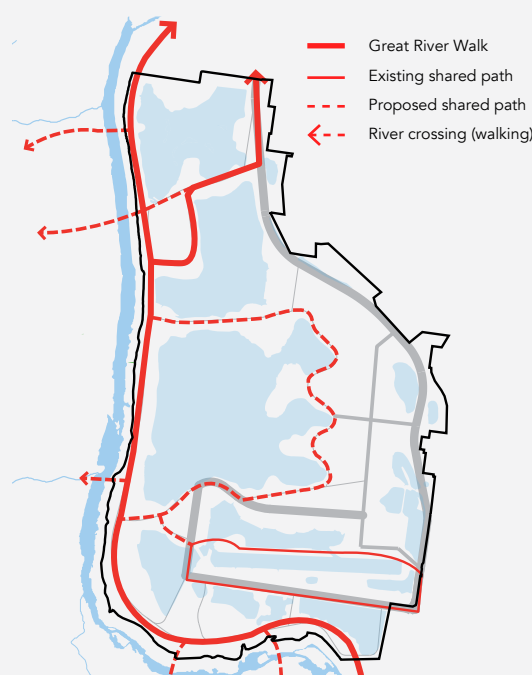


6. **Recreation opportunities**
Establish Penrith Lakes as a place of diverse recreational choices with water based recreation as the highlight. Other opportunities include formal sports in the Sports and Events Precinct, active and passive recreation throughout the parkland as well as camping and picnicking. The parkland could also be known for its extensive pedestrian and cycle network.



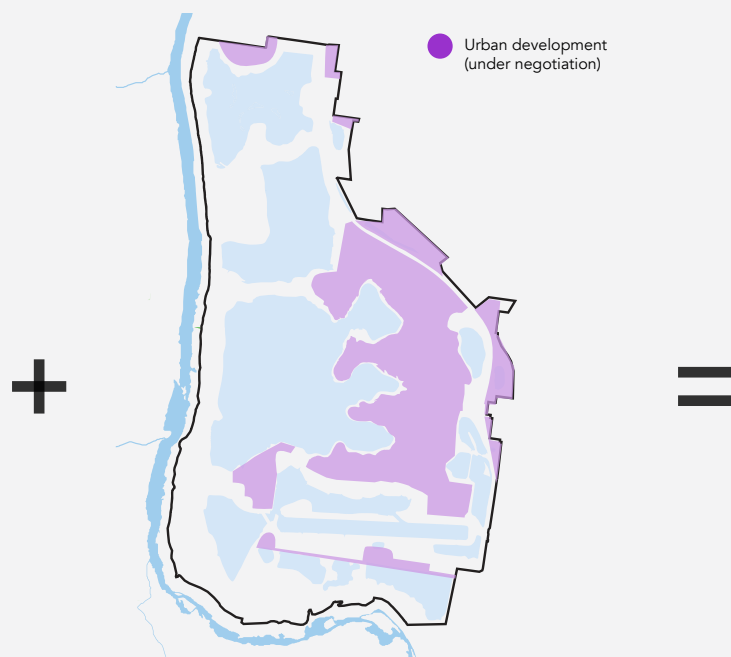
3. An integrated road and public transport network

Rationalise existing haul roads to create an integrated network of roads and parkways to create an animated and interconnected place. The existing public transport network should be integrated into the site and grow to meet the future needs.



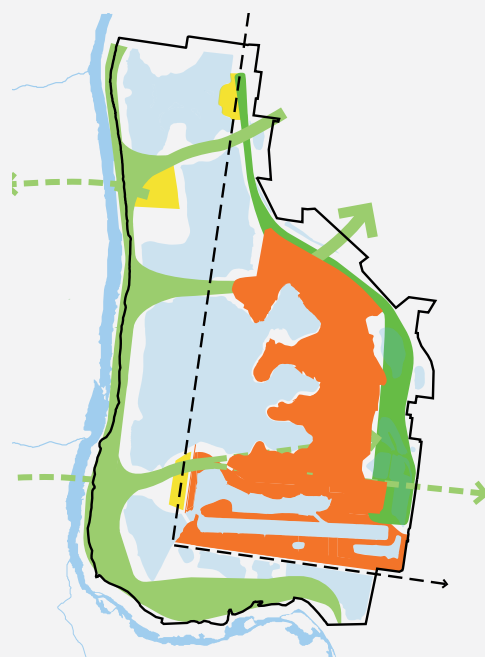
4. An integrated pedestrian and cycle network

Create a variety of tracks and trails to allow for non vehicular movement across the site including paths designed for bicycles, mountain bikes and hiking.



7. Possible urban development

Create a focus for mixed use (for example commercial and retail activities) and residential settlement. The exact area of land available for urban development is under negotiation and yet to be confirmed.



8. How it fits together

The Lakes, the Great River Walk, the venues, the natural and cultural heritage and any urban development could all form part of the mosaic that is Penrith Lakes Parkland. Individually these elements could offer a memorable experience and in combination become a powerful magnet for Greater Sydney.

2.2.

PENRITH LAKES
PARKLAND

IT WILL BE SIMILAR
IN SCALE TO THE EASTERN
SIDE OF SYDNEY HARBOUR
AND FEATURE A UNIQUE
RANGE OF INFRASTRUCTURE,
LANDFORMS, VISTAS,
AND EXPERIENCES.

Penrith Lakes Parkland could evolve over the next 20 years to become one of the largest water based recreational urban parklands in Australia. It will be similar in scale to the eastern side of Sydney Harbour and feature a unique range of infrastructure, landforms, vistas, and experiences.

The lakes, with their vast surfaces and varied foreshores, will dominate the mosaic of the parklands. The lakes are a result of mining operations, and each is unique: they range in scale from the Main Lakes to the smaller ‘Chain of Ponds’ lining the eastern perimeter of the site. Each will be surrounded by diverse landscape types and elements including fields, forests, grasslands, headlands, beach/foreshores, wetlands, sports facilities and heritage buildings and sites. The distinctive variations in size, experience and surrounds could be highlighted as the parkland develops.

The draft Vision Plan proposes seven distinct precincts, (discussed in further detail in section 3.1):

- 1 Southern Leisure
- 2 Sports and Events
- 3 Chain of Ponds
- 4 Urban
- 5 Main Lakes
- 6 Wildlife Lake
- 7 Riverbank

These precincts and the lakes will be accessed by a network of roads and paths with remnants of mining haul roads being used to create narrow causeways and land bridges, which separate the lakes and form the basis of circulation. The network of paths and the system of park drives will be a key part of an animated and interconnected park. Visitors will be able to access the various facilities and experiences within the parkland by car, on foot, bicycle and mountain bike. The weirs along the causeways, will control water flow and visually mark transition points.

Along the western and southern edge of the parklands, new paths will connect to the Great River Walk. The alignment of Old Castlereagh Road will be partially reinstated from Landers Inn southward to create access to the Wildlife Lake.

Lake edges will be accessible for pedestrians, while tree planting should be extended for climate control and aesthetics, and to strengthen the visual link to the Nepean River corridor.

The established water based activity at SIRC and the PWS could be expanded and diversified through the creation of a Sports and Events Precinct.

The southern-most precinct, due to its proximity to transport, established facilities and the Nepean River will become an important threshold for the parkland. It will be a gateway which could accommodate groups of people and additional recreational, educational, commercial and mixed use facilities.

In the northern and western portions of the parkland, activities and development will be more dispersed and smaller in scale, with the northern reaches of the Wildlife Lake the most protected and quiet.

The Main Lake and Middle Lake with their extensive foreshore areas and prominent headlands, could feature continuous public waterfront access along their points and bays. This could include boardwalks for promenades, pebble and sandy beaches for water based play, and forested headlands offering opportunities for retreat and discovery.

The northern portion of the parklands will have limited access and could focus on enhancing wildlife habitat and opportunities for environmental engagement, particularly bird watching. The two heritage buildings in this area, Landers Inn and Hadley Park, with their unique historical settings and proximity to the Wildlife Lake, present potential for adaptive reuse as ecotourism and/or environmental education facilities.

The Urban Precinct would be the focus of urban development at Penrith Lakes Parkland, possibly characterised by various densities within a terrain of rural residential, open grassland and urban farming. Any new urban structure should reflect the texture and alignment of previous landholdings.

The forested western edge of the site creates a visual, physical and ecological transition between the lakes, the Nepean River and the Blue Mountains escarpment. This area also includes eight kilometres of the Great River Walk, and will function as the physical

and ecological spine of the parklands, unifying the circulation system and linking the parklands to the river corridor. The creation of a series of lookouts along the Great River Walk could reveal and highlight the drama of the escarpment meeting the river, as well as providing opportunities for resting and picnicking.

The western and southern edges of the parkland are vegetated primarily by Sydney Coastal River Flat Forest, a rare and endangered ecological community under the *NSW Threatened Species Conservation Act (1995)*. To assist in the regeneration of the River Flat Forest, the approximately nine kilometres of river bank could be enhanced by re-vegetating the river corridor. The regional scale of this effort could provide a network of diverse habitat and recreational opportunities – such as smaller parks, camping, walking, cycling and trails. The resultant corridor of riverbank forest would also provide the opportunity to contribute to regional scale biodiversity by extending ‘green fingers’ to the east, across the land bridges within Penrith Lakes Parkland and establishing connections to the nature reserves in greater Penrith.

COMMERCIAL OPPORTUNITIES AND REVENUE GENERATION

Governments around the world are increasingly expecting that large regional parklands, such as the proposed Penrith Lakes Parkland, will generate income that can assist in the funding of parkland development and maintenance.

The three largest existing regional parks in Sydney, the Western Sydney Parklands, Sydney Olympic Park and the Centennial Parklands include a range of revenue generation components. These include spaces for events such as concerts and festivals, cafes and restaurants as well as a number of long term leases for compatible commercial activities for offices, retail outlets and some industrial developments. There are also many international examples, such as Central Park in New York City and Hyde Park in London, where the generation of revenue is critical to the parks’ budget.

Like these other examples, and given its scale, it is essential that the proposed Penrith Lakes Parkland be able to generate income to assist in the funding of park maintenance and the development of better parkland facilities.



PRECINCT

2.3 PLAN

PRECINCT 1 SOUTHERN LEISURE PRECINCT

A diverse landscape of river flats with regenerating habitat and expansive wetlands with bio-remedial plantings.



PRECINCT 3 CHAIN OF PONDS PRECINCT

The Chain of Ponds includes deep lakes suitable for a range of water-based activities.



PRECINCT 2 SPORTS & EVENTS PRECINCT

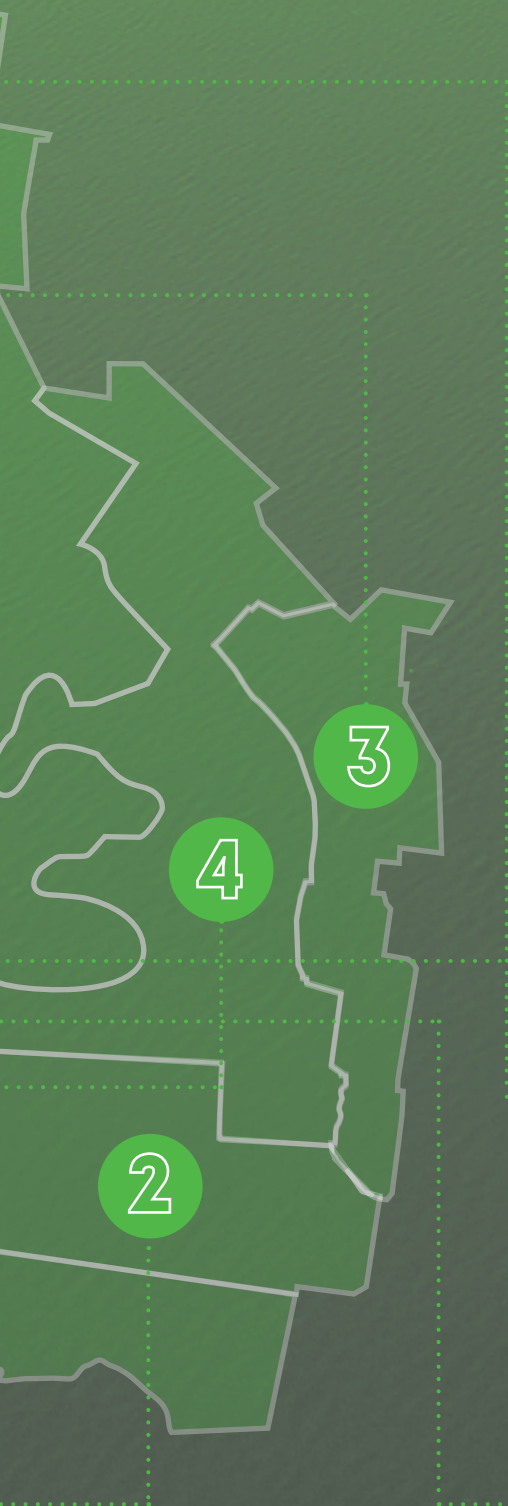
This precinct could be a hub for sport related development that will build on and enhance the existing Sydney International Regatta Centre and Penrith Whitewater Stadium.



PRECINCT 4 URBAN PRECINCT

The Urban Precinct could have appropriate levels of urban development, subject to planning approvals.





PRECINCT 5 MAIN LAKES PRECINCT

The Main Lake and the Middle Lake are the two largest lakes and have a variety of conditions and frontages that could allow a range of activities such as sailing, kayaking and boating.



PRECINCT 7 RIVERBANK PRECINCT

The Riverbank Precinct will be the primary point of engagement with the river, incorporating the Great River Walk with other tracks and pathways.



PRECINCT 6 WILDLIFE LAKE PRECINCT

A rehabilitated landscape that provides a habitat, attracts wildlife and supports flood and water quality management.





DIRE

An aerial, artistic rendering of a parkland area. A large body of water, likely a lake or reservoir, dominates the center. A long bridge spans across it, connecting different landmasses. The surrounding areas are lush with green trees and grass. There are some buildings and infrastructure visible on the distant shore. The overall style is a colorful, hand-drawn illustration.

FUTURE CTIONS

**PART 3 OUTLINES THE
POTENTIAL FUTURE FOR THE
PENRITH LAKES PARKLAND IN
DETAIL BY DESCRIBING THE SEVEN
PRECINCTS, AS WELL AS SITE AND
DEVELOPMENT CONSIDERATIONS
THAT FORM THIS DRAFT VISION PLAN.**



**PENRITH LAKES WILL
BE A VAST, COMPLEX
AND RECONSTRUCTED
LANDSCAPE WHICH
CHALLENGES OUR
UNDERSTANDING
OF NATURAL AND
MAN-MADE
ENVIRONMENTS.**

3.1 THE PRECINCTS

This section describes the seven precincts in detail. For each precinct, there is a description of possible desired future character, objectives and opportunities.



**SOUTHERN LEISURE
PRECINCT**



**SPORTS & EVENTS
PRECINCT**



**CHAIN OF PONDS
PRECINCT**



**URBAN
PRECINCT**



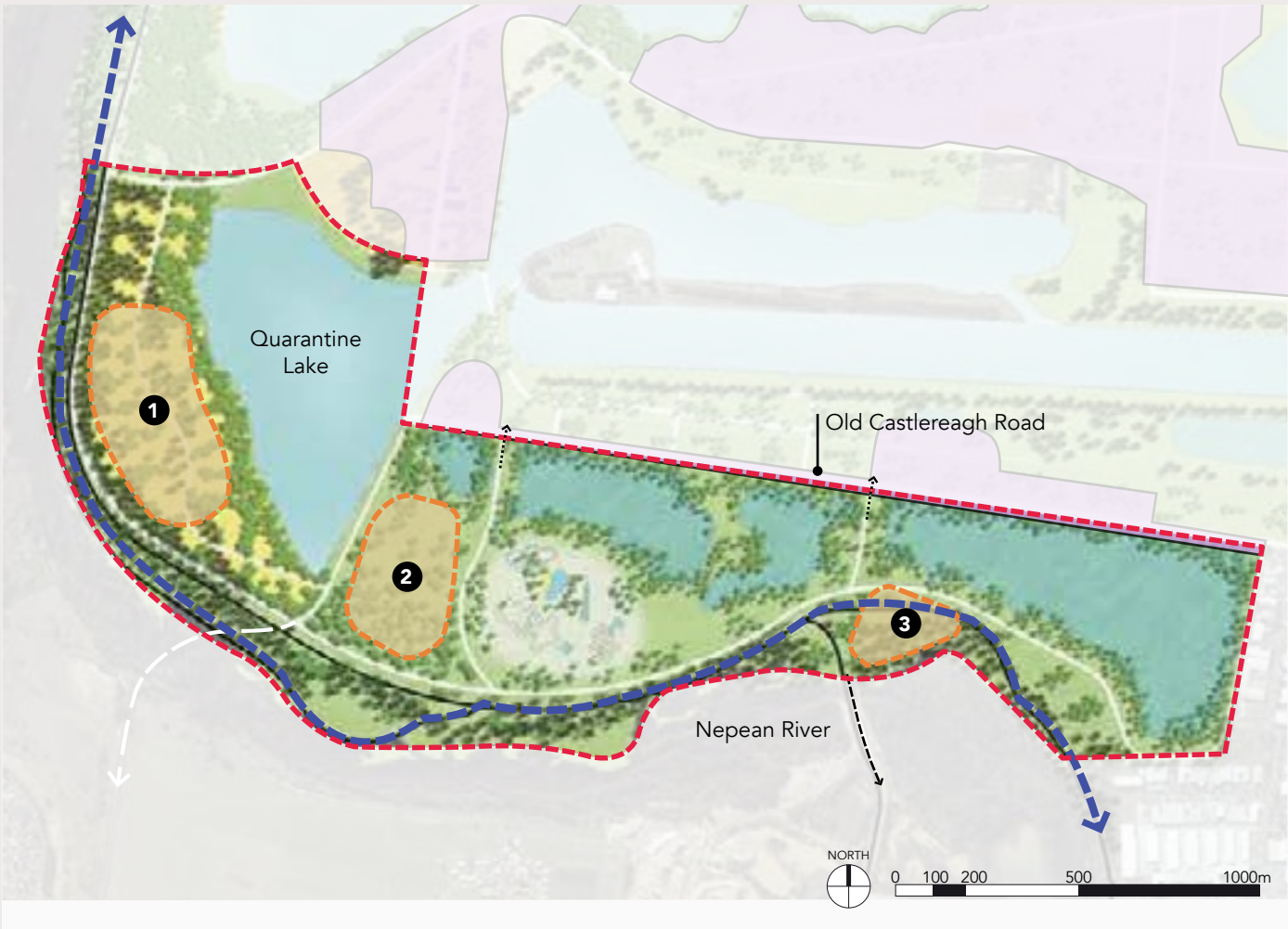
**MAIN LAKES
PRECINCT**



**WILDLIFE LAKE
PRECINCT**



**RIVERBANK
PRECINCT**

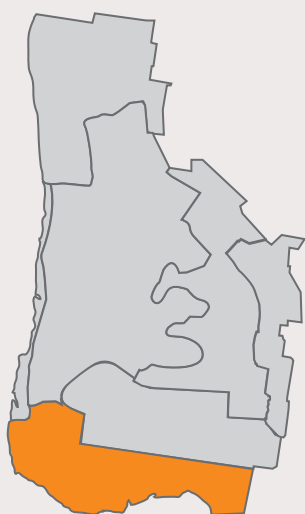


KEY

- | | | | | |
|----------------------------------|---------------------------------------|-------------------------------|-------------------|--|
| 1 Passive Recreation and Camping | 3 Possible Cultural/Indigenous Centre | Water Quality Treatment Ponds | Walking Track | ↔ Possible River Crossing |
| 2 Picnic Area | ↔ Possible Pedestrian Underpass | Great River Walk | Precinct Boundary | ↔ Possible future connection to Emu Plains |

1

SOUTHERN LEISURE PRECINCT



PRECINCT DESCRIPTION

The Southern Leisure Precinct sits within the 'elbow' of the Nepean River. It is bounded by the Nepean River to the south, Old Castlereagh Road to the north and industrial uses to the south east.

It is still used for extraction and processing of sand and gravel materials, and includes a system of tailings ponds. These are screened from Old Castlereagh Road by landscaped berms.

Two vehicle underpasses under Old Castlereagh Road are used for internal access by PLDC. An existing crossing connects the haul road to the Boral plant on the southern side of the river. The Great River Walk extends partly into the site.

POSSIBLE FUTURE CHARACTER

A diverse landscape of river flats with regenerating habitat and expansive wetlands with bio-remedial plantings.

This river frontage will form the southern end of a parkland 'spine' – the re-vegetated river embankment that will extend to the Wildlife Lake, nine kilometres to the north. The precinct could provide a network of diverse habitat and recreational opportunities such as smaller parks, camping, walking and cycling.

OBJECTIVES

- ♦ provide opportunities for an Aboriginal and Cultural Interpretation Centre
- ♦ link with the Great River Walk to establish a southern entry point / orientation for visitors
- ♦ provide connections with the Sports and Events Precinct to the north
- ♦ provide access to the river and wetlands engagement
- ♦ establish a link to Emu Plains
- ♦ create opportunities for a variety of parkland recreation spaces
- ♦ provide an opportunity for compatible commercial activities.

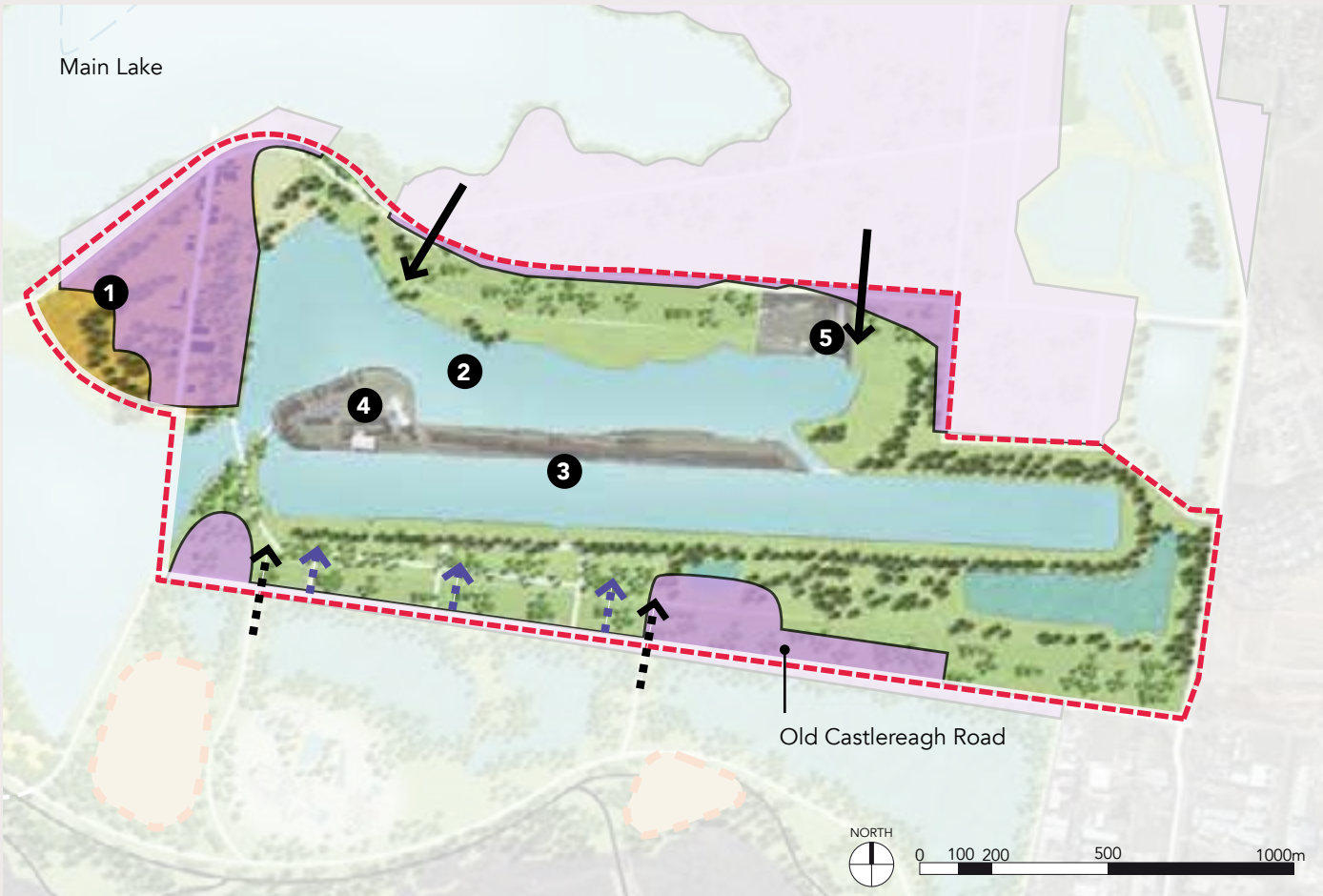
FUTURE OPPORTUNITIES

Having the most immediate links to the Nepean River, the Southern Leisure Precinct could provide opportunities by:

- ♦ creating a range of recreation uses such as Aboriginal cultural centres, wildlife reserves, themed recreation parks and camping
- ♦ enabling the existing tailings ponds to form a chain of treatment ponds that are integral to water quality management at Penrith Lakes
- ♦ extending the Great River Walk into the Penrith Lakes site
- ♦ engaging with the river edge and linking the recreation uses in this precinct
- ♦ widening the Old Castlereagh Road
- ♦ improving the short term access to the Southern Leisure Precinct from the north
- ♦ creating a new coach access and car parking facilities.



Image by Tim Throsby

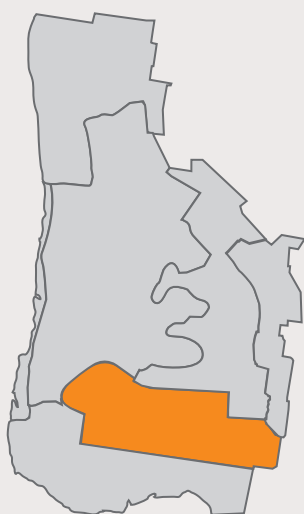


KEY

- | | | | |
|-----------------------|--|-------------------------------|-------------------------------|
| 1 Heritage | 4 Sydney International Regatta Centre | Possible Pedestrian Underpass | Precinct Boundary |
| 2 Warm Up Lake | 5 Penrith Whitewater Centre | Venue Entry Gates | Water Quality Treatment Ponds |
| 3 Regatta Lake | | | |

2

SPORTS & EVENTS PRECINCT



PRECINCT DESCRIPTION

This precinct incorporates the Sydney International Regatta Centre (SIRC) and Penrith Whitewater Stadium (PWS), the Castlereagh group heritage sites and some ancillary sites for administration, education and cultural uses along Old Castlereagh Road. This is currently the most publicly accessible part of Penrith Lakes, having been completed for the Sydney 2000 Olympic Games. The precinct is bounded by Old and New Castlereagh Roads to the south and east and quarrying activity to the north and west.

Manicured parklands encircle the lakes, with the Olympic 'brand' still evident in much of the site infrastructure. The heritage areas retain a strong rural character with quarrying activity least evident in this part of the site.

POSSIBLE FUTURE CHARACTER

This precinct could be a hub for sport related development that builds on and enhances the existing rowing and whitewater centres. A new circuit road could contain both venues, provide new entry points and improve access into the site. A range of complementary commercial uses such as tourism, educational, sporting and training facilities could be clustered along the circuit road and blend into the park setting.

New development at the intersection of Old and New Castlereagh Roads would mark the entry to this precinct and the parklands beyond.

Towards the west, the Castlereagh group could be preserved within an extended curtilage area that supports suitable related uses. A Conservation

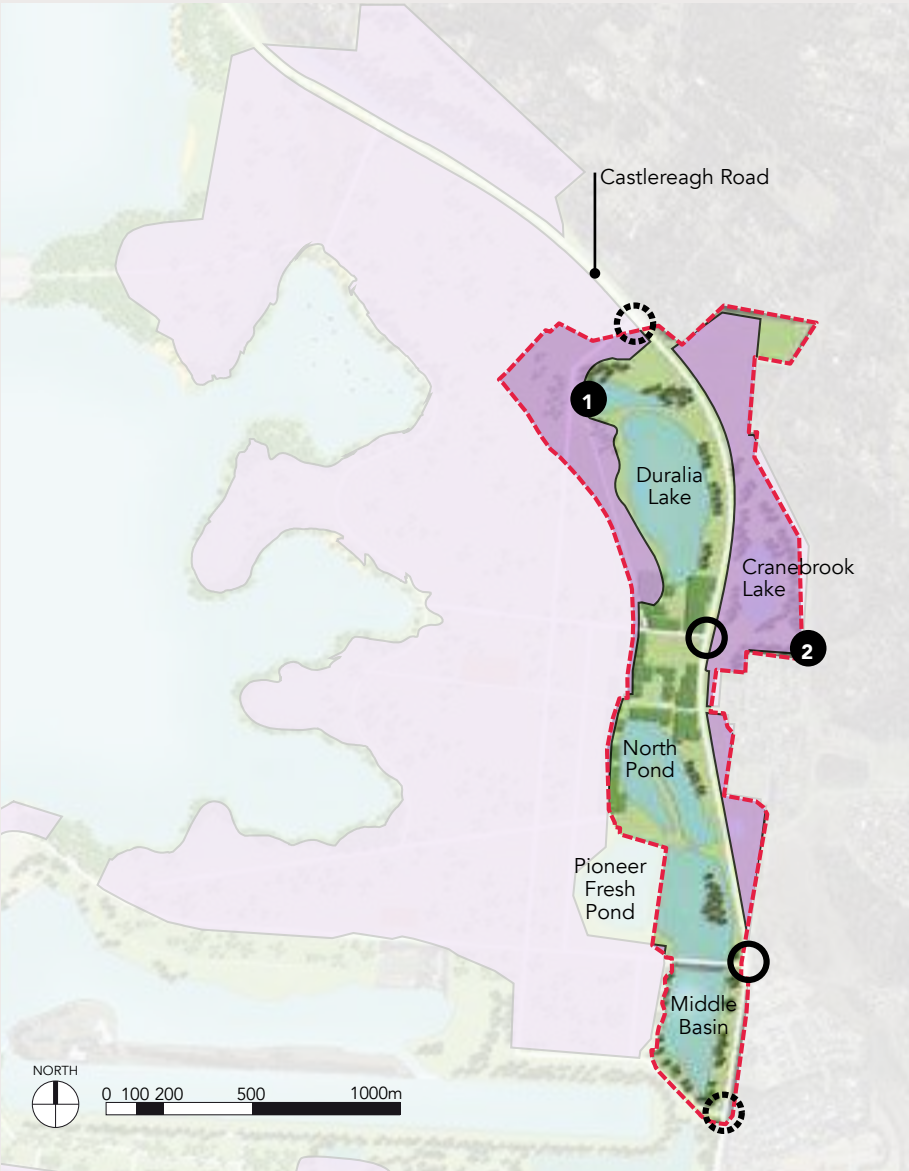
Management Plan will need to guide the use and development of the heritage items.

OBJECTIVES

- ♦ improve event and visitor access
- ♦ provide a continuous and connected road network to improve access into the site
- ♦ preserve and enhance the Olympic legacy
- ♦ maintain optimal rowing conditions at the SIRC
- ♦ establish complementary commercial, sport related uses to support and enhance the existing facilities and create employment
- ♦ create complementary cultural uses for the Castlereagh group such as interpretation, accommodation, retail, commercial and community uses which maintain the village character.

FUTURE OPPORTUNITIES

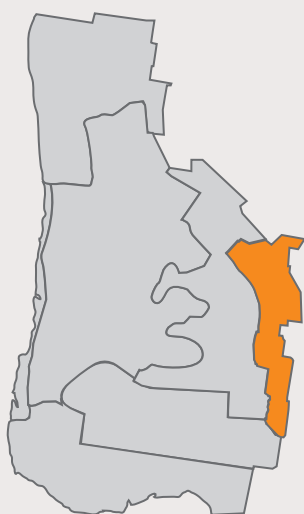
- ♦ facilitating sport, tourism and cultural opportunities around the precinct
- ♦ widening of Old Castlereagh Road
- ♦ connecting Old Castlereagh Road with McCarthy's Lane to support public transport and enable additional perimeter access to both the SIRC and PWS
- ♦ utilising existing underpasses to access the Southern Leisure precinct
- ♦ providing additional parking at the new gateways.



- KEY**
- 1 Public Swimming Facilities, Beach and Amenities
 - 2 Penrith Lakes Environmental Educational Centre (potential)
 - Future Intersection
 - ⊙ Upgrade Existing Intersection
 - Chain of Ponds
 - Precinct Boundary

3

CHAIN OF PONDS PRECINCT



PRECINCT DESCRIPTION

The Chain of Ponds Precinct is located on the eastern side of the lakes scheme and sits between Castlereagh Road and the Urban Precinct. The lakes within the precinct perform a vital component of the lakes water cycle. The water from these lakes travels south and ends up in the Regatta Centre lake before entering the larger lakes in the scheme. The Chain of Ponds includes deep lakes suitable for a range of water-based activities.

POSSIBLE FUTURE CHARACTER

The precinct will be unique in character and will challenge perceptions of a created landscape. Infrastructure would be needed to allow maximum engagement by the public with the lake and its parkland edge. The infrastructure and amenities could be grouped together to form a public swimming facility on the north western end of the lake. This could provide a strong sense of place and scale within the wide open extraction landscape. Such a facility would allow easier control of the swimming area.

The new amenities could form a courtyard on the lake providing the potential for unique swimming experiences and a sense of containment for the introduced 'beach' within.

OBJECTIVES

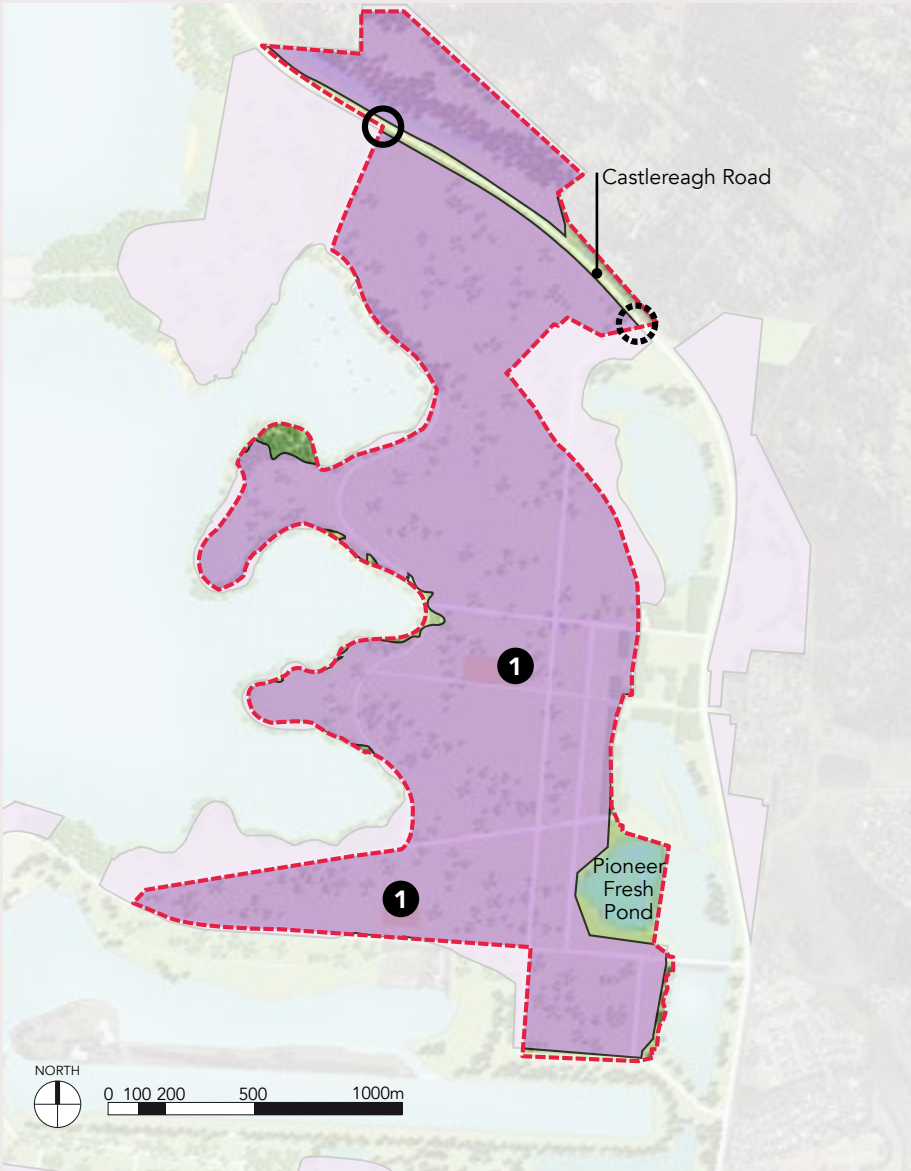
- ♦ Create community parklands around a chain of ponds which will be accessible off New Castlereagh Road, McCarthy's Lane and Farrell's Lane
- ♦ Retain and work with left over traces of the extraction landscape to make a more interesting parkland
- ♦ Provide easy and accessible access to water based recreation
- ♦ Provide a range of passive recreational activities that responds to the surrounding mix of land uses.

FUTURE OPPORTUNITY

- ♦ Improving water, parkland and Nepean River access for the community
- ♦ Creating a number of different destinations with different user experiences
- ♦ Enabling future commercial opportunity for cafes and recreation
- ♦ Providing a potential location and facilities for the Penrith Lakes Environmental Educational Centre.



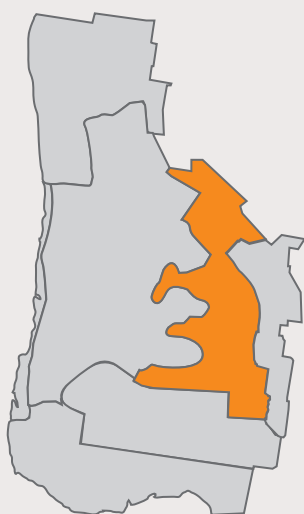
Image by Tim Throsby. Hassell, 2007.



- KEY**
- 1 Heritage
 - Future intersection
 - Upgrade existing intersection
 - Water Quality Treatment Ponds
 - Precinct Boundary

4

URBAN PRECINCT



PRECINCT DESCRIPTION

The Urban Precinct is bounded by the Castlereagh Escarpment to the east, SIRC and the PWS to the south and Main Lake and Middle Lake to the west.

New Castlereagh Road passes through the precinct, separating the base of the escarpment from the floor of the valley. The road alignment follows a system of ponds that collect and treat the storm water that is the primary source of water for the Penrith Lakes system.

While much of the original agricultural landscape has disappeared, McCarthy's Cemetery remnant heritage site is a reminder of this earlier settlement period.

POSSIBLE FUTURE CHARACTER

This precinct would be the focus of urban activity within the Penrith Lakes Parkland, possibly characterised by higher density nodes within a terrain of mixed development, open grassland and community gardens. Any new urban structure should reflect the texture and alignment of previous landholdings.

Lake frontages to the west could be linked by a continuous parkway and wooded headlands to screen views of the urban areas from the lake.

Along the Castlereagh Road frontage, water based recreation parks could form the foreground to the new community.

The exact extent and location of urban land that could possibly be developed is still to be determined and will be subject to planning approvals. Further investigation of flood management and evacuation will be undertaken prior to any urban development being approved.

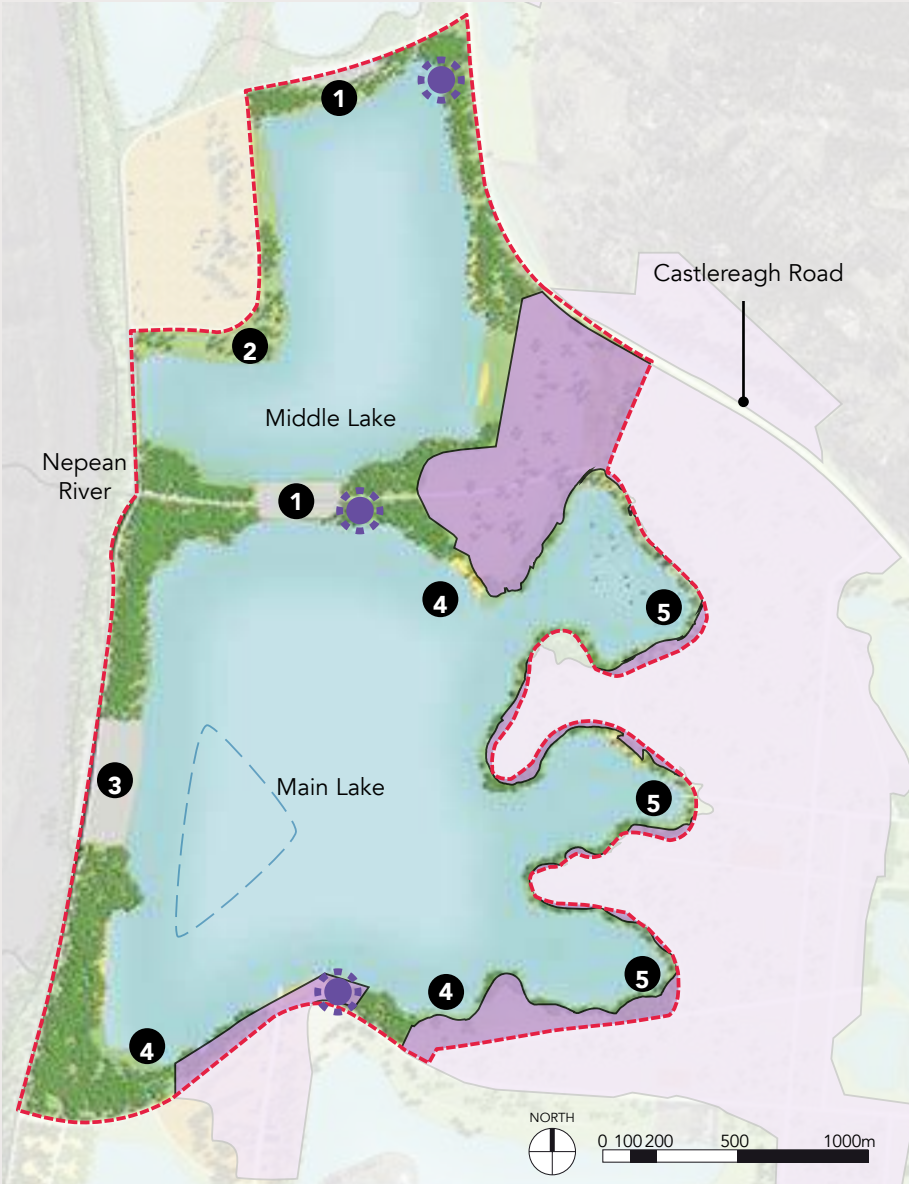
This will be informed by the Hawkesbury-Nepean Valley Flood Management Review Stage Two currently being undertaken by the NSW Government.

OBJECTIVES

- ♦ develop a vibrant urban community
- ♦ work with PLDC in preparing a Precinct Plan
- ♦ integrate the McCarthy's and Poplars sites within the urban landscape
- ♦ ensure a vibrant and active waterfront is developed between the Urban and the Main Lake Precincts
- ♦ ensure urban development is built above the 1:100 flood level consistent with current legislation.

FUTURE OPPORTUNITIES

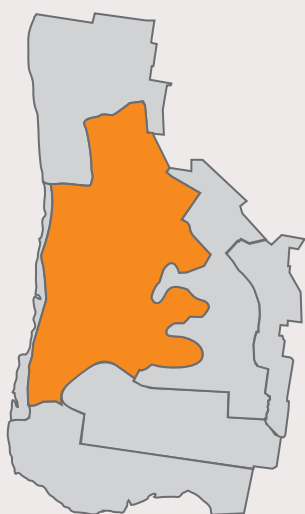
- ♦ enhancing sport related commercial development uses that could be concentrated towards the south adjoining the SIRC and PWS
- ♦ exploring possible opportunities in the supporting urban development zone such as a golf course, cemetery, school, university, TAFE, market gardens or other compatible residential uses
- ♦ utilising existing underpass at Farrell's Lane to form a major link between the Cranebrook and Lakes Village communities
- ♦ creating an active lake frontage with cafes and kiosks that are accessible to the public and create a strong connection with the Main Lake.



- KEY**
- 1 Lake Flood Weir
 - 2 Picnic Area
 - 3 River Flood Weir
 - 4 Beach and Park
 - 5 Activated Lake Foreshore
 - Visual Marker
 - Precinct Boundary

5

MAIN LAKES PRECINCT



PRECINCT DESCRIPTION

Main Lakes comprises the two largest lakes proposed (Middle Lake and Main Lake), the lake edges and the causeway that separates them. The precinct is bounded by the Riverbank Precinct to the west, Urban Precinct to the east, Wildlife Lake to the north and the Sports and Events precinct to the south.

The edges of both lakes will be engineered with weirs and overland flow paths to control rising water levels during flood conditions.

POSSIBLE FUTURE CHARACTER

These lakes are expansive – equalling the wider stretches of Sydney’s outer harbour. Each bay and headland could develop a distinctive identity and in time, its own name. The variety of conditions and frontages could allow a range of uses to coexist – from active water based recreation, supported by access points and lakeshore amenities to passive recreation areas, lookouts and walking paths.

The re-vegetated embankment of the riverbank spine and vegetated land bridges will characterise the western edges of the lakes, while vegetated headlands will frame views of the communities beyond.

A series of markers across the lakes will signify the original alignment of Old Castlereagh Road and form an organising axis through both lakes.

OBJECTIVES

- ♦ provide a range of recreation areas from sailing, kayaking and boating
- ♦ provide vehicle access via a parkway to encircle both lakes
- ♦ establish the Great River Walk along the western edges
- ♦ integrate flood infrastructure into the overall lake edge design
- ♦ express and interpret the original alignment of Old Castlereagh Road for heritage purposes
- ♦ ensure a vibrant and active waterfront is developed on the eastern and southern side of the Main Lake between the Urban and the Sport and Event precincts.

FUTURE OPPORTUNITIES

- ♦ creating larger reaches for both lakes that are suited for sailing regattas and sea plane landing
- ♦ forming smaller bays and inlets that are suited for moorings
- ♦ establishing expansive parks with areas for BBQs and picnics set within a lake side setting
- ♦ creating visual markers along the Old Castlereagh Road alignment
- ♦ developing an active waterfront as part of a publicly accessible foreshore and connection to possible urban development.



Image by Tim Throsby. Hassell, 2007.

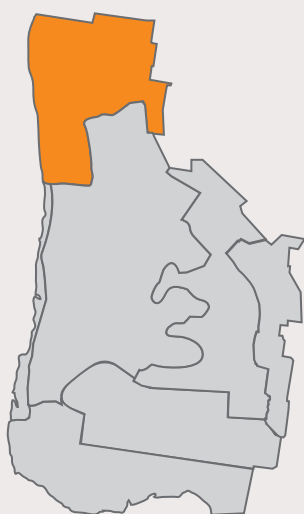


KEY

- 1 Howells Heritage Area
- 2 Hadley and Nepean Parks Heritage precinct
- 3 Lake Flood Weir
- Landers Inn
- Walking Track
- Remnant Angophora Stand
- Water Quality Treatment Ponds
- Great River Walk
- Precinct Boundary
- Possible Pedestrian River Crossing

6

WILDLIFE LAKE PRECINCT



PRECINCT DESCRIPTION

The Wildlife Lake Precinct is bounded by Smith Road to the north, the Nepean River to the west, Castlereagh Escarpment to the east and the Main Lakes and Riverbank Precincts to the south.

The precinct and its immediate surroundings are characterised by a number of important landscape features such as wildlife corridors (in the Blue Mountains National Park and the Castlereagh Escarpment), remnant natural landscape (native flora and creek beds), Aboriginal heritage (in situ archaeological artefacts), early European heritage and historic properties such as Nepean and Hadley Park, the Landers Inn and Howell's House.

The lake will be irregular, with embankments engineered to both control rising water levels and promote development of new habitats. The lake will also comprise a system of small islands to support habitat development.

The lake is and will continue to be charged from treatment ponds at the base of the escarpment and immediately to the east of Castlereagh Road.

POSSIBLE FUTURE CHARACTER

Wildlife Lake will be a rehabilitated landscape that attracts wildlife and supports flood and water quality management. It could be the focus for passive recreation activities such as wildlife observation, walking and guided tours, heritage and environmental interpretation.

The Nepean River edge will provide a terrestrial conservation environment where human interaction will be minimal and vehicle access limited.

The eastern edge could provide opportunities for education and research, and controlled interaction with the lake environment.

The original alignment of Old Castlereagh Road will be expressed as lookouts and with markers to align with those further to the south.

OBJECTIVES

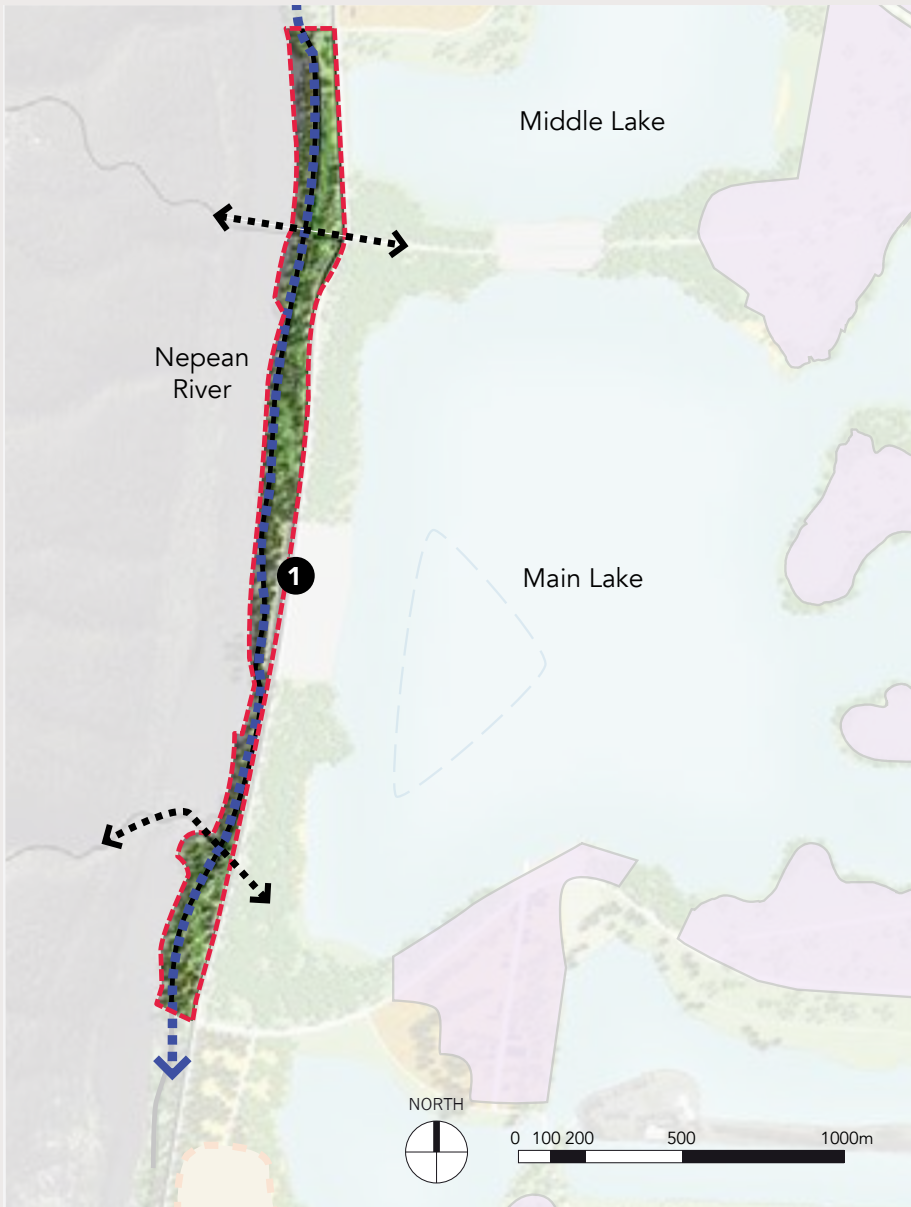
- ♦ provide a habitat for wildlife
- ♦ preserve and interpret the heritage buildings and their curtilage through a viable adaptive reuse including uses that support and complement their significance
- ♦ provide interpretation for Indigenous and Non-Indigenous artefacts
- ♦ incorporate the Great River Walk into the landscape of the precinct
- ♦ provide an opportunity for compatible commercial activities.

FUTURE OPPORTUNITIES

- ♦ creating an opportunity for the community to experience a wildlife habitat, such as educational and school excursions
- ♦ connecting heritage interpretation, accommodation, community uses, conference, eco-tourism, environmental education, field study facilities and visitor information for Nepean and Hadley precinct
- ♦ respecting cultivation and agricultural uses in the Hadley and Nepean Park areas
- ♦ providing hospitality, educational and tourism related activities.



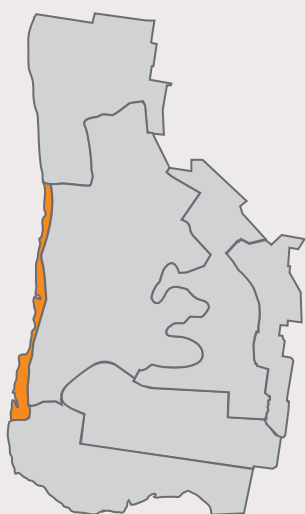
Image by Tim Throsby.



- KEY**
- 1 River Flood Weir
 - Possible Pedestrian River Crossing
 - Walking Track
 - Great River Walk
 - Precinct Boundary

7

RIVERBANK PRECINCT



PRECINCT DESCRIPTION

This precinct is bounded by the Nepean River to the west, Main Lakes to the east, Wildlife Lake to the north and Southern Leisure Precinct to the south. It forms a ridge of land that separates three of the new lakes from the river edge and extends along more than three kilometres of the steepest section of river embankment, sitting about eight metres higher than normal river levels.

As this area is a designated conservation zone with archaeological artefacts and remnant native vegetation, it has been least affected by quarrying activity, but there has still been some degradation of the existing native vegetation.

A 500m long section will be engineered to form a weir and will be inundated by rising flood waters from time to time.

POSSIBLE FUTURE CHARACTER

This area is the physical and ecological spine of the Parklands. It marks the edge of the floodplain and the interface with dramatic Blue Mountains escarpments and gorges.

The precinct will be the primary point of engagement with the river, incorporating the Great River Walk with secondary tracks and pathways. These should be integrated with the embankment at various levels to maintain access when river levels are rising. In the longer term, the weir could be bridged to improve access along the river.

Lookouts could be positioned towards key landmarks and vistas in the Blue Mountains and crossing points could connect to existing walking tracks in the Yellomundee Regional Park.

This precinct is a key connection between the two major heritage sites at Penrith Lakes.

OBJECTIVES

- ♦ provide a biodiversity corridor that connects the Wildlife Precinct with the Southern Leisure Precinct
- ♦ provide community access to the Nepean River
- ♦ continue the Great River Walk so that key connections are created back into the Penrith Lakes Parklands and to river crossing points
- ♦ re-vegetate the river corridor to support a diverse habitat.

FUTURE OPPORTUNITIES

- ♦ creating river crossings that link new walking trails with existing paths in the Yellomundee National Park
- ♦ formalising walks to connect the camping area at the river bend with eco camping grounds south of the Hadley and Nepean Park heritage area
- ♦ enhancing access to river kayaking and boating
- ♦ promoting diverse recreational opportunities, such as smaller parks, camping, walking and cycling
- ♦ expanding the cycle network into the Blue Mountains for mountain biking activities.



**NEW OPEN SPACES,
STREETS AND
CORRIDORS COULD
FRAME OR ALIGN
WITH SIGNIFICANT
VISTAS**

3.2 SITE CONSIDERATIONS



A wide range of background and operational aspects of the Penrith Lakes Parkland site have been considered and assessed in developing this draft Vision Plan. They include:

TOPOGRAPHY

The Penrith Lakes Parkland site forms the floor of the Nepean River valley and falls approximately six metres from the southern to the northern end of the site. The site is generally about thirteen metres higher than the Nepean River's normal water levels which also fall from south to north (about 5m). The Blue Mountains escarpment to the west, and the Castlereagh Escarpment to the east create a dramatic backdrop to this floodplain, and converge towards the north of the site.

OLYMPIC LEGACY

The Sydney 2000 Olympic and Paralympic Games created the legacy of the SIRC and PWS. Key features of the Olympic legacy include:

- ♦ the competition and warm up lakes which accommodate both active and passive water sports and are also a setting for local events
- ♦ world class facilities for a range of water based sports which attract international and national events
- ♦ the landscape setting includes established parklands with extensive stands of casuarinas, cycleways, picnic areas and amenities.


CLIMATE

The Penrith climate is generally more extreme than Sydney's coastal areas. In summer Penrith experiences hotter temperatures, due mainly to the absence of cooling sea-breezes. The average mean summer temperatures are between 18 degrees to 30 degrees and in the winter 6 degrees to 18 degrees.

SIGNIFICANT VIEWS

Views within, into and from the Penrith Lakes site are among the most distinctive and evocative physical characteristics of the area. These include:

- ♦ the foothills of the Blue Mountains which form a striking backdrop to the floodplain. The profile of the Blue Mountains is inscribed by gorges that reflect the path of the Nepean River and its tributaries
- ♦ the foothills, together with the Castlereagh Escarpment to the east, which enclose the site and reinforce the expanse of the floodplain
- ♦ striking panoramas from external elevated lookouts at Emu Plains, Hawkesbury and Yellowrock
- ♦ vistas of key landmarks within land adjacent to the site, such as the Poplars, Hadley Park and Christ Church
- ♦ remnant vistas such as the former Castlereagh Road corridor, which visually connects Landers Inn with the Methodist Church.



**DECADES OF FRAGMENTED
DISTURBANCE HAS LEFT
THE PENRITH LAKES SITE
WITH RELATIVELY
UNDISTURBED POCKETS OF
REMNANT NATIVE FLORA,
DARUG ABORIGINAL
ARCHAEOLOGICAL SITES
AND EXAMPLES OF EARLY
EUROPEAN SETTLEMENT ON
THE RICH ALLUVIAL PLAINS
OF THE NEPEAN RIVER.**



HERITAGE

Decades of fragmented disturbance has left the site with relatively undisturbed pockets of remnant native flora, Aboriginal archaeological sites and examples of early European settlement on the rich alluvial plains of the Nepean River. This legacy includes:

- ♦ Darug Aboriginal sites of significance throughout Penrith Lakes with the greatest concentrations at the northern end of the site and along the banks and terraces of the Nepean River
- ♦ properties, rural structures, gardens, churches, cemeteries and industrial sites that date from first European settlement of the area as far back as the early 1800s
- ♦ an angophora stand at the northern end of the site is a remnant of the extensively vegetated alluvial plain prior to land clearance brought by early European settlement
- ♦ remnants of the Old Castlereagh Road which connected Penrith and Richmond and was the 'main street' for the early farming community that occupied the site
- ♦ historical sites such as McCarthy's Cemetery which is the oldest surviving Catholic burial ground in Australia
- ♦ remnant vegetation within identified conservation areas including the banks of the Nepean River, the Smith Road conservation area and the Cranebrook Escarpment and Vincent Creek conservation areas on the eastern boundary of the site.

REGIONAL INFRASTRUCTURE

Public transport to Penrith Lakes Parkland is provided from Penrith railway station and bus services to Penrith CBD which stop at Castlereagh Road. Additional bus services during major events bring visitors into Penrith Lakes.

The area does not have any dedicated bicycle facilities and it is currently rural in nature with limited pedestrian facilities.

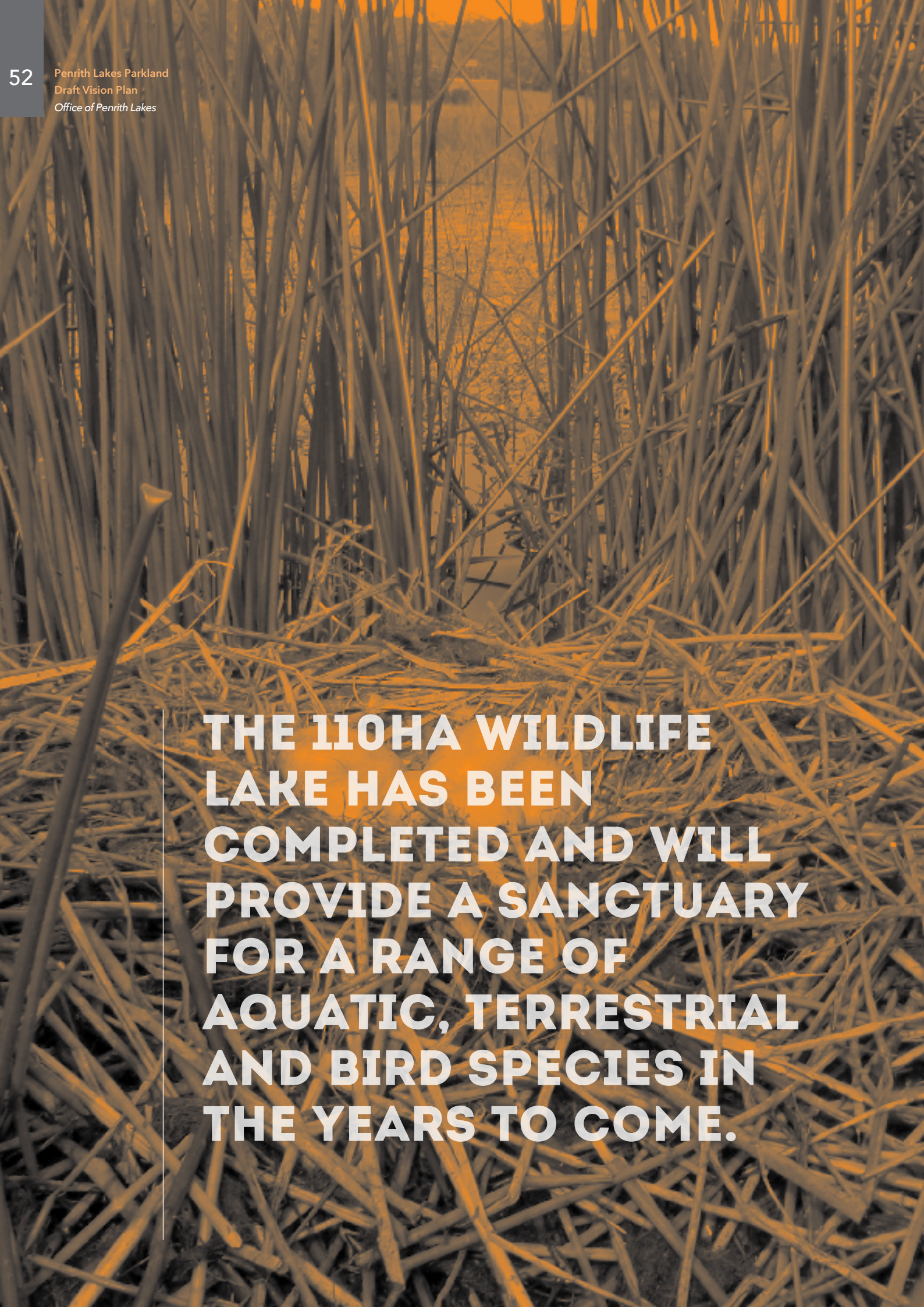
The traffic network effectively supports existing events at the site and is well linked to regional road networks via the Mulgoa and Northern Road connections to the Great Western Highway, the M4 and the M7.

ADJACENT LAND USES

The site sits within a transitional landscape of farmlands that are being redeveloped for both industrial and suburban uses. There is a diverse range of land uses around the Penrith Lakes site – ranging from Yellomundee Regional Park to the west, low density infrastructure and industrial uses on the floodplain to the south, newer industrial and residential development to the east, and rural and residential settlement overlooking the lakes in the north.

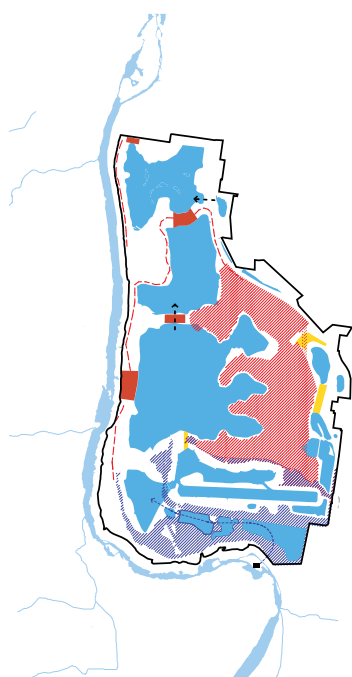
COMMUNITY FACILITIES

Part of the Penrith Lakes site is already a major park amenity for the local community, providing water based sport facilities, internal cycleways and well maintained parklands. However, there is little other community infrastructure nearby.



**THE 110HA WILDLIFE
LAKE HAS BEEN
COMPLETED AND WILL
PROVIDE A SANCTUARY
FOR A RANGE OF
AQUATIC, TERRESTRIAL
AND BIRD SPECIES IN
THE YEARS TO COME.**

Wildlife Lake
1km long x
1km wide



Flood Management Plan

- Weir
- Floodway
- ▨ Areas above 100 year ARI
(As nominated by PLDC)
- ▨ Areas above RL 22 (Southern
precincts only)
- ← Overland flow channel
- Floodway

ECOLOGY

The 110 ha Wildlife Lake has been completed and will provide a sanctuary for a range of aquatic, terrestrial and bird species in the years to come. International migratory bird species are also being targeted for this lake. The other lakes will be colonised with aquatic vegetation and stocked with native fish. In addition to this, the Chain of Ponds is a constructed wetland ecosystem.

WATER AND FLOODING

Water and flooding is an integral consideration and some important investigations have taken place. The key elements to take into consideration are:

- ♦ the creation and maintenance of nearly 700 ha of lake requires a water supply to match the evaporation losses from the lakes' surface. The Nepean River is to be the source of water to fill the lakes and is contingent on the water access licence and the development consent being issued by the NSW Government
- ♦ swimming and boating goals have been set for the lakes and the PLDC is undertaking extensive water quality testing and modelling to establish a management regime to best enable these outcomes. It is expected that mechanical aeration and other water quality control devices will be required in the lakes along with active management of recreational uses.
- ♦ an approved Water Management Plan has been developed by PLDC
- ♦ PLDC has undertaken extensive flood investigations in the design of the lakes to achieve positive outcomes. This incorporates infrastructure to enable the lakes to cater for the considerable flows which will enter and leave the system in a severe flood event. The lakes system has also been carefully designed not to adversely impact on the flood behaviour for communities at the perimeter of the site as well as the wider Hawkesbury Nepean system



3.3 DEVELOPMENT CONSIDERATIONS

THE FOLLOWING SUMMARISES THE SIGNIFICANT INFRASTRUCTURE, AND LANDSCAPE QUALITIES AND FEATURES THAT WOULD BE REQUIRED TO SUPPORT THE DEVELOPMENT OF THE PENRITH LAKES PARKLAND.

The following considerations will need to be addressed by and incorporated in the Plan of Management and Development Control Plans to be proposed for future development within the parkland. The objective of these considerations is to ensure the parkland is integrated and accessible for the potentially wide variety of uses and activities possible in a safe, efficient and appealing environment.

GENERAL LANDSCAPE

- ◆ Preserve existing diverse landscape characters including remnant river embankments, historically significant farms, park settings for SIRC and PWS and the new lakes system
- ◆ Rehabilitate part of the site to regenerate native vegetation of the Nepean River floodplain
- ◆ Protect the site’s significant trees and parks
- ◆ Protect and strengthen the Olympic landscapes including the Regatta Lake edge plantings and urban forests
- ◆ Preserve and improve the view characteristics of the site
- ◆ Align new open spaces, streets and corridors with significant vistas
- ◆ Place new buildings without obstructing existing views, especially from external elevated vistas
- ◆ Maintain views of the river embankment from the Castlereagh escarpment.

PARKLANDS AND LAKES

- ◆ Manage the native flora and fauna, lake ecology, weeds, feral animals and fire
- ◆ Support a broad range of water and land based recreational activities
- ◆ Incorporate the flora of the Cumberland Plain Woodland and Sydney Coastal River Flat Forest
- ◆ Preserve existing and encourage potential habitat corridors within the Penrith Lakes site, especially around the lake shores and the Nepean River



- ◆ Recognise and enhance existing and potential linkages to other habitat corridors on the Cumberland Plain – especially linkages to the Nepean River and the Cranebrook Escarpment
- ◆ Monitor the health and biodiversity within the lake system, paying particular attention to the monitoring of weeds and exotic fish species

- ♦ Manage the flora and fauna within open space areas (terrestrial and aquatic)
- ♦ Incorporate buffer zones to protect existing stands of native vegetation.

FLOOD MANAGEMENT AND EVACUATION

- ♦ Construct urban development in line with capacity of evacuation infrastructure and the approved Water Management Plan
- ♦ Design development so that any flood water travelling down the Nepean River would pass through the area without causing significant damage to Penrith Lakes
- ♦ Minimise potential flood damage and losses
- ♦ Provide access so the entire site is able to be safely evacuated consistent with regional evacuation requirements
- ♦ Develop to building design standards that are better suited for flood conditions
- ♦ Analysis of evacuating vehicle numbers from downstream



communities indicates that the existing road infrastructure does not presently have capacity to accommodate any additional urban development. These assessments are ongoing, to identify future upgrades to enable the vision for Penrith Lakes Parkland to be achieved

- ♦ Strategies for flood evacuation from Penrith Lakes will take impacts on existing local and regional evacuation routes into account.

URBAN AREAS

- ♦ Ensure any urban development is built to the appropriate geotechnical standards set out in the Precinct Plans
- ♦ Define public spaces and streets with trees of appropriate scale, and species
- ♦ Link existing plantings with new plantings of locally endemic species to strengthen and develop local ecology and identity
- ♦ Maintain a primary palette of endemic and native species that supports local wildlife and promotes rehabilitation of the parklands and lake areas
- ♦ Enhance environmental amenity through provision of shade and sunlight, increased humidity, reduction in the diurnal temperature range and noise dampening
- ♦ Enhance streets through well-proportioned landscaped setbacks suited to the street character



- ♦ Integrate landscaping in private developments with landscaped corridors
- ♦ Develop to urban design standards that minimise event noise and light impacts.

PUBLIC AREAS

- ♦ Set aside land for streets, parks, through site links and public spaces
- ♦ Design streets and public spaces in accordance with best practice urban design principles
- ♦ Provide a continuous and accessible pedestrian network
- ♦ Prioritise pedestrian convenience and safety
- ♦ Connect to the local and regional pedestrian networks
- ♦ Provide amenity, solar access and adequate shade to all footpaths
- ♦ Maximise surveillance of the public domain and views of the public areas
- ♦ Provide for public art.

REGATTAS AND EVENT
CAPABILITY

- ◆ Competition conditions should be consistent for the full length of the regatta course
- ◆ New development should protect the venue from uneven wind conditions, especially cross winds that affect one lane more than others
- ◆ Landscape treatments be designed to minimise wind channelling
- ◆ Location, height, alignment and profile of new development should be configured to maintain consistent conditions in the SIRC
- ◆ Proposed new development to be modelled to demonstrate that competition conditions are not affected
- ◆ Preserve and enhance the capacity to host events as well as provide for recreation, residential and employment uses
- ◆ Consolidate an events precinct within the Old Castlereagh / McCarthys Road circuit to provide for special access requirements and events overlay
- ◆ Maintain exclusive road corridors for bus movements during all major events
- ◆ Ensure adequate public car parking within the Sports and Events Precinct during major events
- ◆ Ensure the parkland and all residential and commercial premises can be accessed by alternate routes if roads are closed for events

- ◆ Provide additional access points to both the SIRC and PWS to distribute traffic and enable staging of simultaneous events.

ACCESS

- ◆ Develop a network with capacity to cater for proposed uses
- ◆ Adjust high traffic generating land uses to match road and public transport capacities
- ◆ Locate residential and employment uses near to public transport services, and as a minimum within 400m walking distance to a bus stop
- ◆ Provide a network that is safe for all and supports motorists, cyclists, pedestrians and public transport users
- ◆ Provide a network of footpaths and cycleways for access to local facilities and public transport
- ◆ Promote high quality major event public transport services
- ◆ Maintain regular public transport services, road access and parking supply sufficiently during major events



- ◆ Improve public transport services within the site and between the Penrith CBD and Emu Plains
- ◆ Create a network of new streets within sub precincts to facilitate vehicle access.

TRAFFIC

- ◆ Construct upgrades to collector roads adjacent to Penrith Lakes Parkland
- ◆ Widen the roads to support emergency evacuation
- ◆ Create a network of collector and local streets within Penrith Lakes Parkland, configured to enable street closures during events without impacting on vehicle movements into and through any urban area
- ◆ Build a parkway system (separate to the urban area street network) to provide visitor access to the more remote parts of the parklands
- ◆ Provide laybys and shelters along the major collector streets
- ◆ Develop a new street and park road connections and intersection upgrades to New Castlereagh Road.

PUBLIC TRANSPORT

- ◆ Provide an extension of the timetabled services into the site via the Old Castlereagh Road circuit.

DESIGN EXCELLENCE

- ◆ Design quality or 'design excellence' is a fundamental consideration for all development and applies particularly to key sites that front the lakes, are visible from new Castlereagh Road, are within heritage precincts or fall within significant view corridors.

BUSINESS FRAMEWORK

- ◆ Ensure all business activities respect and draw on the site's unique values and the objectives of the parkland
- ◆ Design and manage leases, licenses and sponsorships for business activities against a suite of parkland specific business principles
- ◆ Recognise and manage the evolutionary nature of business with respect to the site's capacity and limitations.

SERVICES

- ◆ Upgrades to existing water supply reservoirs, pumping stations and trunk mains. New reticulation mains, isolation valves, hydrants and property connection points
- ◆ Upgrades or duplication of existing sewer mains
- ◆ Create a new electrical zone substation to support longer term development of the parklands and urban area
- ◆ Develop a medium term extension of the existing high pressure gas network and installation of new pressure reduction substations

- ◆ The existing telecommunications network will need to be augmented to support new development.

COMMUNITY FACILITIES

- ◆ Provision of facilities that support the social, health, cultural and recreational needs of existing and future communities, such as schools, libraries, places of worship, child care, sporting fields and community centres.

HERITAGE

- ◆ Conservation and interpretation of the natural and cultural heritage of the site in accordance with the conservation strategy and the various conservation management plans developed in collaboration with PLDC.



3.4 NEXT STEPS



This draft Vision Plan is an important step to guide the transformation of the Penrith Lakes site into the Penrith Lakes Parkland. To achieve the vision it will be necessary to develop a governance structure, have strong community input and a logical planning framework that achieves the appropriate balance of opportunities for development, recreation and conservation.

STATUTORY PLANNING

PLDC is currently managing the extraction of sand and gravel and rehabilitation of the Penrith Lakes site including the staged formation of a series of interconnected lakes. The continued extraction and rehabilitation program is permitted under *State Environmental Planning Policy (State and Regional Development) 2011* which identifies the Penrith Lakes site as a state significant site for the purposes of undertaking extraction, rehabilitation and lake formation.

Separate to this, *State Environmental Planning Policy (Penrith Lakes Scheme) 1989* (SEPP Penrith Lakes) provides a development control process for the implementation of the Penrith Lakes Scheme (the Scheme) and to restrict development within the Penrith Lakes site that would be inconsistent with or inhibit the delivery of the Scheme. The Scheme promotes the staged rehabilitation and landscaping of the Penrith Lakes site and envisages the preparation of some land for future urban purposes.

The Scheme and SEPP Penrith Lakes provide a broad framework but are lacking in detail as to how the anticipated future development will be achieved and what controls are required to guide that development. This draft Vision Plan reflects upon the objectives and outcomes of the Scheme and presents a new and more comprehensive vision for possible development of the Penrith Lakes Parkland.

This draft Vision Plan will inform and guide the future planning of Penrith Lakes Parkland precincts, noting the issues related to possible urban development.





GOVERNANCE

The Office of Penrith Lakes (OPL) within the Office of Sport was established in 2011 to manage the NSW Government’s interests in the completion of the Penrith Lakes and develop a long-term vision for the site.

In consultation with stakeholders, OPL has developed the draft Penrith Lakes Parkland Vision Plan which provides a vision for the future land use of the site. The draft Vision Plan is now being placed on public exhibition for consultation with the local community. Once the feedback and ideas from the community have been carefully considered, the NSW Government will refine and finalise the Penrith Lakes Parkland Vision Plan and consider plans for implementation and future governance arrangements. In the interim, the Office of Penrith Lakes will continue to have carriage of the community consultation process and finalisation of the plan.

COMMUNITY INPUT

The final form of Penrith Lakes could take at least 20 years to deliver with areas of the parkland evolving and being delivered to the community gradually in stages.

In July and August 2013, the Office of Penrith Lakes and the Government’s Architect’s Office, held three workshops that involved a broad range of stakeholders to help develop the vision of the project. Participants included representatives from Penrith City Council, the University of Western Sydney and University of NSW, local Aboriginal people, the local business community and some of the state’s most widely respected architects.

However this draft Vision Plan is just the starting point for the community and stakeholders to have their say. It will require input, ideas, imagination and feedback from the community and stakeholders to transform a former mine to a parkland and lakes system that the whole community is able to use and enjoy.

Looking south-west over the proposed Wildlife Lake

PRESENT



FUTURE



Image by Tim Throsby.

HOW TO HAVE YOUR SAY?

KEY QUESTIONS FOR COMMUNITY INPUT

- 1. What would you like to see developed at Penrith Lakes?
- 2. What do you think about the proposed precincts?
- 3. What uses or activities would you like to see at the site?
- 4. What ideas do you have about the future uses of the site?
- 5. What would you see as the priority precincts for delivery to the community?



HOW TO HAVE YOUR SAY

There are a number of ways you can make a submission and have your say:

-  **Online**
www.opl.nsw.gov.au
www.haveyoursay.nsw.gov.au
-  **Email**
opl@sport.nsw.gov.au
-  **In Person**
Attend an open house where you can have your questions answered.
For further details contact Office of Penrith Lakes at opl@sport.nsw.gov.au or 02 8754 7928.

Please note that submissions will be made public unless a request is made and valid reasons provided for them to be treated as confidential.

NEXT STEPS

The Government is interested in your views on the future of Penrith Lakes. Once submissions have been received they will be reviewed and considered in developing a long term plan for the site.

ACKNOWLEDGEMENTS

The Office of Penrith Lakes would like to thank the individuals, Indigenous people, government agencies and organisations in the feedback and input into this draft Vision Plan.

We also extend special thanks for the energy and enthusiasm of the participants in the Penrith Lakes Vision Workshop and Design Studio. In particular the critical and creative input from the six design teams: Hassell, Hill Talis Architecture & Urban projects, McGregor Coxall, Spackman Mossop & Michaels, the NSW Government Architect's Office, and Tyrrell Studio which was invaluable in formulating the draft Vision Plan.

Furthermore we acknowledge the previous studies prepared for Penrith Lakes including those undertaken by Urban Pacific, Cox Architecture, Pittendrigh Shinkfield Bruce, CLOUSTON Associates and Nettleton Tribe and Spackman Mossop Michaels.

The Penrith Lakes Scheme would never have become this place of vast lakes and open spaces for public recreation without the enthusiasm and vision of Boral, Holcim and Hanson in rehabilitating all of the degraded quarry areas and in generously contributing up to 80 percent of this private land for recreational benefit to the Penrith community and Western Sydney.

