

corridors, natural areas or land for other community uses. This must also be provided as required, in addition to the listed active and passive land provision.

The 3.04 hectares / 1,000 local open space standard does not include provision for district open space, which requires a separate contribution by all residential development within the City, as detailed in the draft District Open Space Development Contributions Plan. The provision of higher quality centralised and accessible local open space areas is recommended rather than the provision of smaller pockets of open space that are more difficult to maintain and are less sustainable.

As a general rule, each release area is to provide for the required local active and passive open space needs and are also required to pay financial contributions to the development of district open space and facilities.

At Council's discretion, the strategic embellishment or 'works in kind' contributions (ie the development of an identified sports facility within the release area in lieu of, or complementary with monetary contributions) may be negotiated and there will be an offset for the required financial contribution. However, the negotiated works or financial contribution must be equal in value to the provision of the required facilities within the development, including the cost to acquire the open space at current developed land costs, to ensure transparency and equity. Any shortfall in provision (land and / or facilities) must be provided as a financial development contribution at the contemporary rate.

Development of open space land will be in accordance with contemporary universal design principles and standards ⁴. The planning and design of open space (both passive and active open space areas, infrastructure and facilities) must provide, to the greatest extent possible, high quality and equitable access for people of all ages and ability levels according to universal design principles.

The development of high quality multi-purpose, co-located facilities is also encouraged, to maximise efficiency and enhance their sustainability.

Areas proposed as active open space shall not be constrained or affected by -

- Power line infrastructure corridors (ie policy of "prudent avoidance")
- Easements for other underground service infrastructure that could inhibit the development of supporting facilities (ie gas, water, sewer, electricity)
- Flood affected land - Active open space shall not be located in detention basins. Active open space shall not be located in areas below the 1% AEP flood event level, unless Council is satisfied that the design achieves quality outcomes, accessibility and ensures water is managed effectively during flood events. Buildings shall not be located within the 1 % AEP flood event zone, but these areas could include pathways and landscaping treatments that are not heavily affected by flood events.
- Steep gradients or slopes.

⁴ *Universal Access to Outdoor Recreation – A Design Guide* by PLAE Inc. (1993) and *Play for All Guidelines - Planning, Design and Management of Outdoor Play Settings for All Children*, Second Edition by MIG Communications (1992)

Locational and design criteria for new open space areas must also reflect –

- the nature of, and likely future changes to, the demographic and socio-economic profile of each new release area (based on contemporary population statistics, and other relevant social research)
- the social and cultural needs of different communities
- the condition and 'useability' of the open space based on the physical location, topography, opportunities, and existing other uses (eg drainage)
- access to local open space within a reasonable 'walking' distance (min. 500 metre radius), and the available access and transport options for neighbourhood, district and regional parks (including public transport, private vehicles, walking, cycling, and other mobility aided devices).

Required Process

In planning for open space in the City's release areas, compliance must be demonstrated with the following requirements –

1. Proposed new open space areas have been planned, designed and provided in accordance with the planning principles and guidelines for open space, as adopted by Council in the PLANS Report (March 2004), and the subsequent requirements as set out in the Open Space Action Plan.
2. Initial planning for the proposed new open space areas is undertaken in consultation with Council staff, to ensure that plans are consistent with Council's requirements. Further consultations are required at each key stage during the development of draft Open Space Plans to ensure continuing consistency.
3. Planning for open space in the release areas must be supported by information regarding proposed numbers and types of dwellings, and the likely demographic profile for the incoming release area population, to demonstrate that the open space areas and facilities provided meet the specific needs of those communities.
4. Planning for open space in the release areas must be supported by plans for ongoing management, including cost estimates for management and maintenance.

6. CITY WIDE CONTEXT

Regional Parks

6.1 Penrith Lakes Scheme

Background

Penrith Lakes is a major extractive industry site, of more than 2,000 hectares, that supplies sand and gravel for Sydney's building sites. The site is located north of the Penrith City Centre, and east of the Nepean River. When extraction is completed, this site will provide a significant water based recreational resource for Western Sydney. Rehabilitation of the quarried area will provide 2 main recreational lakes, a wildlife lake, a number of smaller water bodies, and an urban area.

The PLAN Study references the Penrith Lakes Scheme Parklands and Recreation Planning Study, which outlines the key elements for its future recreation development, including –

- The lake system to be managed for water quality outcomes with more intense human use located in the southern lakes
- areas for bushland, with wildlife corridor and habitat areas to complement surrounding bushland areas and encourage an increase in native flora and fauna
- land for informal recreation (including playing fields, picnic and BBQ areas, gardens, swimming areas, walking and cycle tracks)
- land to be developed for uses that may require built facilities (including golf courses, boat clubs, restaurants, cafes, accommodation).

Community Views

Consultations through the PLAN Study indicated that, of those surveyed, there was general support for –

- the scheme to include a Regional Park for use by the whole community, with cycle ways, picnic areas, aquatic activities, and fishing
- the construction of off-road cycleways, and provision of shuttle bus services from the Penrith City Centre to the Lakes
- active and passive recreation uses of the site
- use of part of the water bodies for sailing small craft
- the site's development to incorporate complementary cultural and public art structures, and
- opportunities for access to the Nepean River from the Penrith Lakes site.

Proposed Directions

The PLANS Report identifies some proposed directions for the site including -

- Regional water-based park for use by all sections of the community, both Penrith residents and visitors
- Provision of a range of 'soft' activities and services, such as cycleways, picnic areas, non-powered aquatic activities, and fishing
- Provision of a network of off-road cycleways connecting the various sub-precincts within Penrith Lakes, connections to the Penrith City Centre, adjoining bushland and other recreational precincts along the Nepean River
- Provision of commercial and community adventure type activities, such as an interactive water park and / or water adventure centre (subject to feasibility investigations)
- Provision of water bodies appropriate for sailing and recreational small craft (such as kayaks and canoes), and wetlands for nature-based experiences
- Continued development of international standard aquatic facilities to complement existing rowing course and white-water rafting facility, and
- Provision of a range of cultural experiences through public art and embellishments.

Other potential opportunities, identified since the completion of the PLANS Strategies, include –

- a National initiative / base for Universal Design in partnership with others
- a National Water Institute facility
- a multi-purpose sports and entertainment dome complex incorporating innovative energy efficiency, sustainability and universal design features. Provides for indoor tennis, soccer, touch football, hockey, beach volleyball, sports lounge and retractable seating to cater for special events
- facilitating partnerships to develop a Universally Designed playground / 'Sprayground' facility and an outdoor entertainment amphitheatre
- a range of aquatic activities including motorised boating in designated zones for recreation, tourism generation activities and for special events
- a regional water based universally designed sensory garden based on the model at Osaka's Oizumi Ryokuchi Park in Japan
- a regional sustainable City Garden based on the 'Australian Garden' model at the Cranbourne Botanic Gardens in Melbourne that displays local history
- a Centre of Excellence for Inclusive Action Learning, Adventure Challenge Education and Environmental Interpretation and Education based on the model at Bradford Woods, Indiana, USA
- a Centre of Excellence for Eco-Tourism education and training
- a range of eco tourism ventures based on the proposed Wildlife Lake
- a Scientific Research Facility specialising in water quality, fresh water aquatic ecosystems, aquaculture, water management and innovative water based recreation opportunities
- a Next Generation concept health and fitness facilities and a fitness circuit that caters for a range of ages and levels of ability, and
- opportunities for 'dog friendly' park spaces.

The PLAN Study has identified potential recreation and leisure activities on the site, and the views expressed above will contribute to the identification of appropriate Parklands activities in consultation with PLDC and other stakeholders.

6.2 St Marys Release Area

Background

This site (formerly known as the ADI site) is a large rectangular parcel of land with an area of 1,535 hectares, which is located adjacent to the suburbs of St Marys, Cambridge Gardens, Werrington Downs, Werrington County and Cranebrook, and also includes land within Blacktown. The Sydney Regional Environmental Plan No 30 – St Marys (REP 30) identifies broad land uses including urban, employment, Regional Park and Regional Open Space.

Since the preparation of SREP 30, an additional 250 hectares of bushland, listed by the Australian Heritage Commission (AHC) on the Register of the National Estate, will be conserved. Proposed development includes a Regional Park (900 hectares), employment land (73 hectares), and about 3,100 dwellings (approximately 9,000 people) in the Penrith section.

Community Views

Consultations through the PLAN Study indicated that, of those surveyed, there was general support for –

- the inclusion of regional and district facilities in the development, and
- a Regional Park to conserve the valuable environment of the site (flora and fauna habitat) with low-key passive recreation.

Proposed Directions

The PLAN Study identified proposed directions for this site, including –

- Establishing a new Regional Park to ensure appropriate flora and fauna habitat areas are preserved
- Establishing a large park that provides for a range of passive and active recreational and sporting facilities, and to accommodate the needs of future residents
- Investigating the feasibility of establishing a sports facility to service a catchment beyond the immediate residential base, and
- Investigating the feasibility of establishing an 'environmentally sustainable' centre for research and educational purposes (pending the outcome of any proposals planned for the Castlereagh site).

The proposed district facilities within the release area include -

- a senior AFL and cricket venue, local level playground, (St Marys Eastern Park Regional Open Space)
- a district level sports pavilion & field / outdoor entertainment venue
- provision of 6 full size playing fields, 4 mini fields, basketball / netball courts to serve local needs, lighting, car parking, spectator seating / shelter
- a district level universally designed playground facility, amenities, shared path circuit

The PLAN Study identified potential recreation and leisure activities on the site, and the views expressed above will contribute to the identification of appropriate Parklands activities. A Plan of Management is being prepared for the proposed Regional Park, and there will be opportunities for further consultation and discussion regarding its future.

6.3 Ropes and South Creek Corridors

Background

The Department of Infrastructure, Planning and Natural Resources prepared a Strategic Regional Open Space Management Plan for the Ropes and South Creek Open Space Parkland. A series of workshops and community consultation sessions were held with a wide range of stakeholders in 2004.

Broadly, the major aims and proposed directions of the Plan are –

Vision for the Corridors

- To strengthen the perception of the parklands system as an integrated resource providing a diverse range of passive and active recreational opportunities
- To enhance, rehabilitate and maintain the biodiversity and natural systems of the parklands, focussed on the creeks as healthy and dynamic natural filters for the catchment
- To ensure that the parklands provide scenic and green parkland linked to their urban context by a highly accessible network of local and district pathways
- To conserve, care for and manage the cultural assets of the parklands and promote them as an educational, interpretive and tourism resource
- To secure critical infrastructure within the corridor at minimal loss of amenity
- To promote strategic and integrated planning and management of the parklands that recognises their local and regional values

Key Strategic Directions

Recreation Access and Circulation

- Develop a series of sport precincts and associated passive recreation facilities at regional and district levels
- Ensure all indoor and outdoor sports facilities close to the creeks address the creeks
- Upgrade and enhance all district level sports reserves and local reserves within the corridor
- Improve transport links, paths and cycleways within and around the parklands and major reserves

Environment, Conservation and Landscape Character

- Implement a range of actions in line with Catchment Management Boards policies and Stormwater Management Plans to improve water quality in Ropes and South Creek
- Continue bush regeneration and revegetation activities that are occurring along the creeks and their environs
- Develop and maintain a high quality scenic environment throughout the corridors

Heritage Interpretation and Education

- Promote both Aboriginal and Non Aboriginal cultural heritage of the site
- Establish a district heritage walking trail within the South Creek corridor to link the numerous Aboriginal and European heritage sites in this locality, use signage to interpret their difference
- Adapt and develop schools, tertiary and general community awareness and education programs for the locality using the corridors as a key resource
- Develop a parklands orientation and interpretive strategy that brings together the disparate array of park signs

Infrastructure, Planning and Management

- Convene a working group from within the new management body for the parklands to specifically address the security, integration and management of powerlines, substations and corridor easements
- Place the entire parkland under one parkland statutory document
- Develop a parklands wide coordinated Management Group to administer the implementation of this Plan.

The development of a Precinct Plan for the South Creek Corridor extending from the M4 to the railway line is currently underway with the assistance of Clouston Associates Consultants that will add further information about planning considerations and future opportunities within this precinct.

7. PENRITH CITY PLANNING CLUSTERS

The PLANS Report recommended the identification of 'clusters' on which to base the detailed investigations to develop the City's Open Space Action Plan.

Identification of each 'cluster' involved consideration of suburb and population characteristics, geographic barriers, and the major transport systems that can also create physical obstacles within suburbs.

Each of the clusters is described separately, with a summary of the open space assets in each cluster, and a general description of recommended open space and parks improvements.

Details of all proposed improvement works for parks and open space and estimated costs are listed in the Schedule of Works within the draft Open Space Development Contributions Plan.

CLUSTER 1 – Mulgoa, Wallacia

Parks Network	Number	Area (hectares)	Play - grounds
Cluster Area		6287	
District Parks	0	0	0
Neighbourhood Parks	4	48.5	1
Local Parks	2	5.75	0
Pocket Parks	2	0.4	1
Natural Areas	3	27.75	0
Linear Drainage	0	0	0
Totals	11	82.4	2



Mulgoa and Wallacia are located in the south-western corner of the City. The area is bounded to the west by the Blue Mountains National Park and the Nepean River. The two villages support communities focussed on rural activities, and larger residential homes on acreage. There is some potential for additional dwellings adjacent to the eastern side of Mulgoa Village.

Given the rural nature of the area, many recreational and leisure activities take place on private land. The identified Neighbourhood, Local and Pocket Parks in this cluster, however, provide local opportunities for play, recreation and leisure, and places to meet and socialise.

Demographic analysis of this cluster area (between 1991 and 2001) indicates a population that is generally ageing, with significant increases in the proportion of residents aged over 50 years. However, it is estimated that the Glenmore Park release area will have a higher proportion of children and young adults compared to the Penrith LGA.

There are improvements recommended for three of the Neighbourhood Parks, one Local Park and one Natural Area.

The northern section of this cluster also includes the site for the Glenmore Park expansion. The total site area is 225 hectares, which includes land designated by the Australian Heritage Commission on the Register of the National Estate as forming part of the Mulgoa Natural Area. The total developable urban area is 125 hectares. The proposed recreation facilities within the main active recreation precinct for this site include –

- A multi-purpose AFL and athletics track and field sports ground
- 2 rugby league fields with cricket in between
- Local netball and basketball courts
- Neighbourhood playground, shared amenities and storage facilities, seating, car parking, shared pathway circuit, shade structures and landscaping

CLUSTER 2 – Orchard Hills (south), Luddenham, Badgerys Creek, Kemps Creek, Mount Vernon

Parks Network	Number	Area (hectares)	Play - grounds
Cluster Area		10409	
District Parks	0	0	0
Neighbourhood Parks	3	35.2	1
Local Parks	0	0	0
Pocket Parks	0	0	0
Natural Areas	0	0	0
Linear Drainage	0	0	0
Totals	3	35.2	1



The area that includes Orchard Hills (south of the M4), Luddenham, Badgerys Creek, Kemps Creek and Mount Vernon is situated in the south- eastern corner of the City. It is bounded by the City of Liverpool to the south, and the City of Blacktown to the east. This cluster has a strong rural character, with limited potential for additional dwellings identified in Council's adopted Rural Strategy, to protect the area's rural nature and landscape values.

As in other rural areas of the City, many recreational and leisure activities take place on private land. The identified Neighbourhood Parks provide the public open space and meeting focal points for these communities.

This cluster is also served by open space areas just outside the southern boundary of the City (including Bill Anderson Park, Badgerys Creek Park and the baseball field south of Elizabeth Drive).

Demographic analysis of this cluster area (between 1991 and 2001) indicates a population that is generally ageing, with significant increases in the proportion of residents aged over 50 years.

There are improvements recommended for two of the Neighbourhood Parks within this cluster.

CLUSTER 3 - St Clair, Erskine Park

Parks Network	Number	Area (hectares)	Play - grounds
Cluster Area		1562	
District Parks	0	0	0
Neighbourhood Parks	2	12.6	1
Local Parks	6	25.3	1
Pocket Parks	42	19.3	10
Natural Areas	3	72.8	3
Linear Drainage	28	42.9	1
Totals	81	172.9	16



St Clair and Erskine Park are located along the south eastern border of the City, and is bounded to the east by the City of Blacktown. This cluster is an established urban area. There is limited potential for additional dwellings (as dual occupancies) in St Clair and Erskine Park.

There are many open space areas (from Pocket Parks to Neighbourhood Parks) dispersed throughout the cluster, with two major Neighbourhood Parks including the Mark Leece Sporting Complex and adjoining areas in St Clair, and the Peppertree Reserve in Erskine Park. There are significant areas of Drainage Reserves within St Clair, and Erskine Park has a higher concentration of smaller Pocket Parks.

Demographic analysis of this cluster indicates an ageing population with significant increases in the above 45 age groups, but also a considerable proportion of young people, with higher numbers of teenage youth in St Clair, and 0-14 year olds in Erskine Park.

There are improvements recommended for the two Neighbourhood Parks, two of the Local Parks, two of the Natural Areas, and nine of the Pocket Parks. Five of the Pocket Parks are recommended for review.

CLUSTER 4 - St Marys, North St Marys, Oxley Park, Colyton

Parks Network	Number	Area (hectares)	Play - grounds
Cluster Area		1733	
District Parks	1	15.2	0
Neighbourhood Parks	1	6.0	1
Local Parks	12	116.0	9
Pocket Parks	69	22.0	30
Natural Areas	1	51.9	0
Linear Drainage	12	9.8	0
Totals	96	220.9	40



The St Marys, North St Marys, Oxley Park and Colyton cluster is situated in the mid eastern section of the City. This is an established residential area, and is bounded to the east by the City of Blacktown.

Demographic analysis of this cluster indicates an ageing population with significant increases in the over 50 age groups, but still with significant numbers of young people. Trends have to date indicated a declining youth, teenage and young adult population (between 1991 and 2001).

Oxley Park is an area of the City that has significant future potential for changes to the current form of housing, from single detached dwellings to medium density multi-unit development. Initial analysis of the potential future social profile for these areas suggests that there will be a minor shift towards more households on lower incomes, and also more private renters.

There is projected to be more younger persons (between 15 and 44 years), a decrease in the number of older persons, and an increase in lone person households and single parent families. These potential social changes have been considered in the development of the City's Open Space Network.

There are improvements recommended for the major District Park (South Creek Park), the Neighbourhood Park (Ridge Park), ten Local Parks, sixteen Pocket Parks, and one Linear / Drainage Reserve. Thirteen of the Pocket Parks are recommended for review.

CLUSTER 5 - Londonderry, Berkshire Park, Llandilo

Parks Network	Number	Area (hectares)	Play - grounds
Cluster Area		7715	
District Parks	0	0	0
Neighbourhood Parks	3	7.9	2
Local Parks	0	0	0
Pocket Parks	1	0.6	0
Natural Areas	0	0	0
Linear Drainage	0	0	0
Totals	4	8.5	2



The Londonderry, Berkshire Park and Llandilo cluster is located in the north eastern section of the City. This rural area is bounded by the City of Blacktown to the east, and the City of Hawkesbury to the north. This cluster includes the ADI site, with approximately 3,000 dwellings proposed for the Penrith section of the site.

Similar to the other rural clusters, there are greater opportunities for recreational and leisure activities to take place on private land. The area includes three smaller Neighbourhood Parks which serve as a meeting point for a larger catchment area, but a more dispersed population.

Demographic analysis indicates an increasing young adult and elderly population in Berkshire Park, and an ageing population in Llandilo and Londonderry.

There are improvements recommended to each of the three Neighbourhood Parks. Planning continues on the proposed ADI Regional Park and Regional Open Space. The district level facilities currently being explored for their potential development within the ADI Regional Open Space are outlined on page 13.

CLUSTER 6 - Agnes Banks, Castlereagh, Cranebrook (north), Penrith (north, west of Castlereagh Rd)

Parks Network	Number	Area (hectares)	Play - grounds
Cluster Area		5398	
District Parks	1	7.9	0
Neighbourhood Parks	1	1.2	1
Local Parks	0	0	0
Pocket Parks	0	0	0
Natural Areas	3	2.3	0
Linear Drainage	0	0	0
Totals	5	11.4	1



The cluster of Agnes Banks, Castlereagh, Cranebrook (north), Penrith (north of the railway line and west of Castlereagh Rd) is situated in the north western section of the City. The Nepean River and the City of Blue Mountains provides the western edge of this rural area.

This cluster has a strong rural focus, and includes Penrith Lakes, with approximately 4,900 dwellings proposed for the site. The Nepean Raceway, adjacent to the Agnes Banks Nature Reserve, caters for motorised sports.

Demographic analysis indicates an ageing population, with a significant increase in the teenage age groups, and significant numbers of young people in the Cranebrook / North Cranebrook area.

There is significant potential for regional recreation and leisure activities and areas within the proposed parklands at Penrith Lakes. There are also improvements recommended in Smith Park in Castlereagh.

CLUSTER 7 - Emu Plains, Emu Heights and Leonay

Parks Network	Number	Area (hectares)	Play - grounds
Cluster Area		1362	
District Parks	2	7.0	1
Neighbourhood Parks	4	55.2	2
Local Parks	4	10.7	3
Pocket Parks	24	7.5	7
Natural Areas	3	18.4	0
Linear Drainage	7	7.8	0
Totals	44	106.6	13



The Emu Plains, Emu Heights and Leonay cluster is bounded to the west by the City of Blue Mountains, and to the east by the Nepean River. This is an established residential area, with limited potential for additional dwellings. The area is characterised by the recreational and leisure opportunities provided by the Nepean River, and major Neighbourhood Parks including Emu Park, Leonay Oval and Emu Green.

Demographic analysis indicates an ageing population with a significant increase in the over 50 age groups. There is a considerable decline in the 0-14 age groups, particularly in Emu Plains and Leonay.

There are improvements recommended to the District Park at Regatta Park (east and west), at each of the Neighbourhood Parks, three Local Parks, four Pocket Parks. Four Pocket Parks are recommended for review.

Riverlands

The parklands adjacent to the Nepean River are an attractive and popular destination for visitors. 'The Riverlands' precinct includes Tench and Weir Reserves, and Regatta Park East and West.

The precinct provides a focus for passive recreation, including picnics and 'day out' experiences, and aquatic activities including the Nepean Belle and Platypus floating restaurants, power boats, water and jet skiing, rowing and canoeing on designated sections of the River.

The proposed Great River Walk (planned to follow along the Hawkesbury Nepean River for 570km, from Broken Bay to the Southern Highlands) will improve access to and along the River. Pathways will also link the Great River Walk with the Penrith City Centre and the Lewers Gallery.