

2.0 KU-RING-GAI OPEN SPACE SYSTEM

2.1 Function and hierarchy

Open space systems provide for a range of functions – leisure and recreation, conservation and preservation, visual amenity, environmental education and appreciation, drainage, and screening/buffering.

Individual sites within the system may be of local or higher (from district to national) hierarchical significance.

Ku-ring-gai's open space system comprises parks, gardens, bushland, sports grounds and courts, road reserves, civic spaces and undeveloped land with a diverse range of functions and from local to regional hierarchical significance.

The regional facilities (including the National Parks, Ku-ring-gai Wildflower Gardens, St Ives Showground, and Ku-ring-gai Bicentennial Park) have large user catchments and attract visitors from throughout Ku-ring-gai and from other local government areas. The facilities are of superior quality, are unique within Ku-ring-gai, and serve a diversity of uses.

The district facilities (sportsgrounds and larger parks such as Wahroonga Park and Echo Point Park) may be smaller than regional facilities but contain a greater diversity of recreational and/or sporting opportunities than do local parks. Users may walk, cycle or drive up to 7 minutes to access these facilities.

The local or neighbourhood facilities are smaller in size with a primary function to provide for passive recreation. They are normally accessed by foot and are typically distributed within 500 metres walking distance of most residents. They may have multiple functions including providing a break to the rigid form of the urban landscape, habitat for wildlife and accessible recreation areas for local residents.

2.2 Quantity

The Ku-ring-gai local government area has nearly 4,300ha of open space, comprising the following:

Type	Quantity/facilities
Natural areas	<ul style="list-style-type: none"> Nearly 4,000 hectares of bushland - with 2,800 hectares within the three local national parks and 1,200 hectares in 120 Council-managed reserves 75 kilometres of service trails and 100's of kilometres of walking tracks
Parks	<ul style="list-style-type: none"> 53 ha of parkland 334 park and open space areas 97 playgrounds One skateboard facility, and 5 basketball half-courts Several off-road junior cycle tracks
Sports	<ul style="list-style-type: none"> 125 ha of sportsground 42 sportsground complexes (with 52 sport fields and 29 netball courts) 71 tennis courts (at 20 centres) 69 ha Gordon and Turramurra golf courses

Figure 1 Existing Open Space Composition on the following page identifies the type and distribution of open spaces within the Ku-ring-gai LGA.

2.0 KU-RING-GAI OPEN SPACE SYSTEM

2.2 Quantity (continued)

Council-managed open space comprises 334 parks totalling around 1,480 hectares. The majority (80%) of this open space is 'bushland'. The next major category is 'sports fields' (6.6%) followed by 'public golf course' (4.9%), 'parkland' (4.8%) and 'St Ives Showground' (1.7%). The remaining areas are comprised of tennis and netball courts, semi-private sports facilities, the West Pymble Swimming Pool and the Ku-ring-gai Wildflower Garden.

The quantity of different types of open space in Ku-ring-gai was addressed in the 2005 Open Space Strategy which found that:

- The LGA has a generous supply of environmentally significant open space,
- The provision of sportsgrounds (at 1.16 ha/thousand people) is comparative to the traditional standard (of 1.21 ha/thousand),
- Despite this, sports club demands and current levels of use (with most grounds used at full capacity for at least some of the year) indicate that there are insufficient facilities to meet present and anticipated future needs, and
- The provision of (non-sport) parks (at 0.49 ha/thousand people) is low according to the traditional standard (of 1.62 ha/thousand).

2.3 Quality, diversity and usability

To effectively provide for quality recreation experiences, there must not only be a sufficient quantity of different types of open space, but the spaces must also be of sufficient quality, size and configuration to meet the needs of current and potential users.

The critical quality criteria vary for different types of open space but generally include size and shape, terrain, linkage potential and access, appropriate facilities, relationship to surrounding land uses and the presence/absence of attractive natural features and/or design details.

Parks, for example, should provide somewhere to sit in comfort, areas for socialising, quiet spaces, places for children to play safely (and big enough to 'burn off energy') and some contact with the natural world.

Parks that combine a variety of features and uses – contact with nature, pleasant social settings, children's play, cultural interest, varied topography – are usually those that are most valued and most used.

Sportsgrounds should meet the specific sports needs (for training and playing) of user clubs and associations – including quality playing surfaces, goal posts, nets and other equipment, lighting, amenities, carparking, signage, shade and spectator seating.

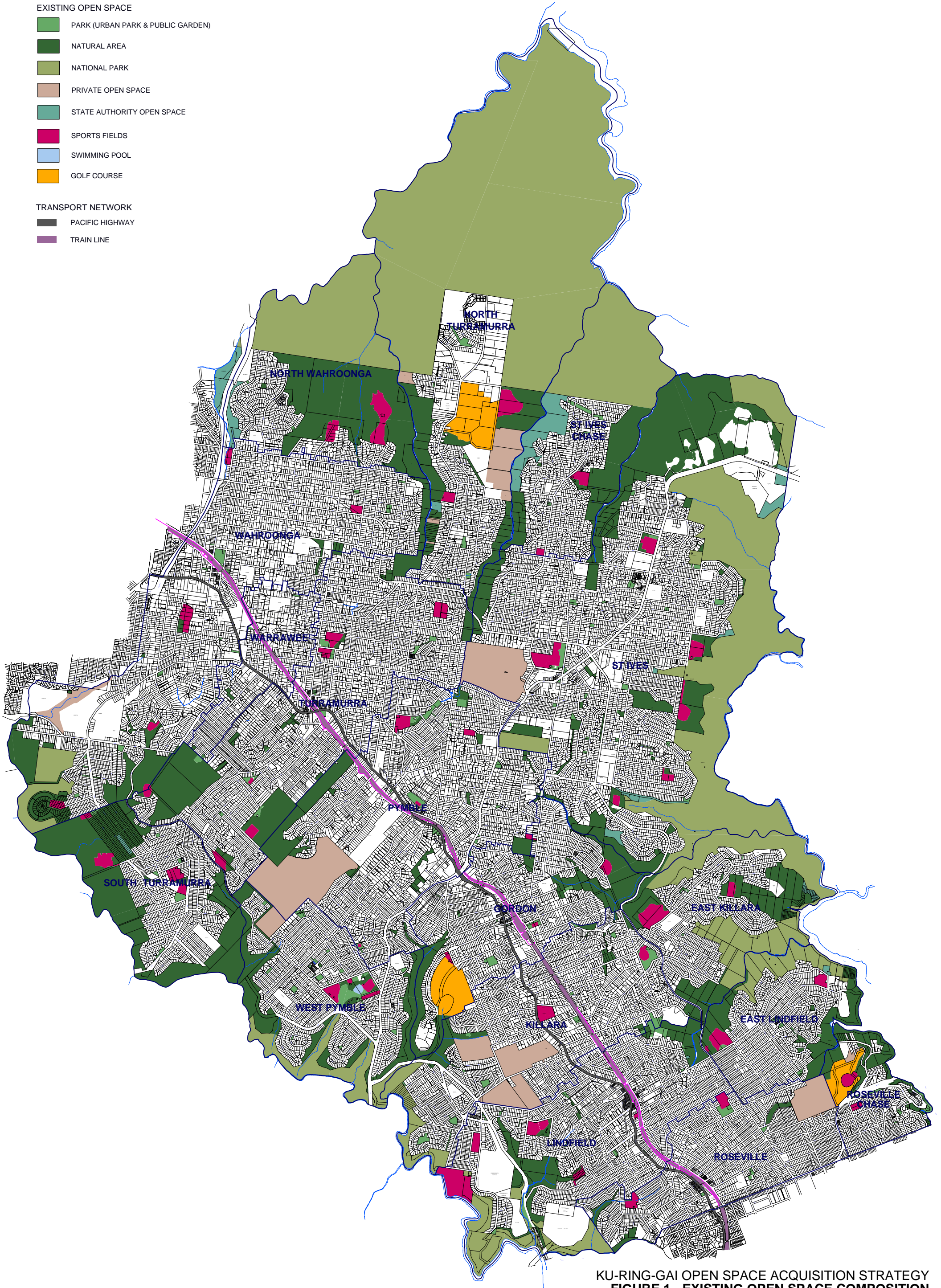
Sportsgrounds, desirably, will also be available to (and attractive to) residents in surrounding precincts (for unstructured recreation activities) when not being used for formal sports activities.

For bushland areas, quality is a function of ecological, visual and other natural values and the condition and suitability of any recreation access facilities (tracks, signage, interpretive materials and picnic/rest facilities) provided.

Open space quality and diversity were also addressed in the 2005 Open Space Strategy which found:

- A relatively high proportion (30%) of local parks are less than 0.2 hectares – a size which does not facilitate the provision of a diversity of 'walk to' recreation opportunities,

- EXISTING OPEN SPACE**
- PARK (URBAN PARK & PUBLIC GARDEN)
 - NATURAL AREA
 - NATIONAL PARK
 - PRIVATE OPEN SPACE
 - STATE AUTHORITY OPEN SPACE
 - SPORTS FIELDS
 - SWIMMING POOL
 - GOLF COURSE
- TRANSPORT NETWORK**
- PACIFIC HIGHWAY
 - TRAIN LINE



KU-RING-GAI OPEN SPACE ACQUISITION STRATEGY
FIGURE 1 - EXISTING OPEN SPACE COMPOSITION
 NOVEMBER 2006
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2.0 KU-RING-GAI OPEN SPACE SYSTEM

- A need for a wider diversity of playgrounds (to include bike tracks, free play areas and access to natural areas - where available - and age appropriate play equipment), large group/family picnic opportunities (shelters, tables, seating) in major parks,
- A need to ensure designated play areas are large enough to incorporate both structured play equipment and 'free play' space,
- A need to provide more 'supportive environments' - visually appealing, accessible and safe spaces that encourage and facilitate physical activity (including 'incidental' activity) - through identifying opportunities to extend linkages (via the use of linear parks, drainage reserves and local links and the development of 'parkstreets',
- Further potential for integrating recreation areas (play areas, picnic facilities, dog off-leash areas) and informal sports facilities with formal sports facilities,
- A need for more district and local cycle and walking routes, and
- A need for more youth opportunities (skate facilities, cycle tracks, more adventurous playgrounds, indoor/outdoor sport/swimming opportunities and 'youth friendly' public places.
- Facilities are important in attracting park use - people might be within 500m to a park but if there is a park within 1500m that has far better facilities users will travel the extra distance.

The Strategy also referenced an April 2002 capital works report to Council, that identified that sports fields were 'poorly constructed' and 'facing significant pressures' and the majority of fields 'do not perform at a level consistent with their need and increasing use is accelerating their decline'. As well, support facilities (lighting, fences, amenity blocks and irrigation) 'are significantly run down or do not address safety issues or needs'. However, significant works have been implemented including the Capital Works Program, and District Parks Masterplanning Process.

2.4 Distribution and Equity

The location of open space is also important. Desirably, open space will be distributed to provide equity of access to open space opportunities for all residents.

With respect to this, however, the Open Space Strategy identified a range of access inequities, including the following:

- A moderately uneven distribution of parks in the LGA – with relatively low per capita provision in Lindfield, Gordon and Roseville (as illustrated in the table below),

Sub-Area Distribution of Local and District Parks

District / suburb	Ha	Ha/1000 people	Square metre per capita
Roseville	4.70	0.48	4.79
Lindfield	4.47	0.38	3.77
Killara	8.59	0.70	7.01
Gordon	2.90	0.44	4.37
St Ives	10.62	0.56	5.58
Pymble	10.93	0.75	7.52
Turrumurra/Warrawee	12.93	0.63	6.26
Wahroonga	62.65	0.59	5.86
TOTAL	62.65	0.58	5.82

Source: Recreation / Open Space Component - Ku-ring-gai S94 Plan 2004-2009
Recreation Planning Associates, July 2004

2.0 KU-RING-GAI OPEN SPACE SYSTEM

2.4 Distribution and Equity (continued)

- Longer than reasonable walking distances (ie more than 500 metres) to local parks for more than 30% of residences within the LGA (as noted in the table below),

Urban Park 'Catchment' Zones, Ku-ring-gai, 2000

Suburb	Residential Properties within Sub-area	Residential Properties within 400 Metres	% properties within park service zones
Roseville	3,012	1,537	51.03
Lindfield	3,931	2,732	69.50
Killara	4,042	2,857	70.68
Gordon	2,106	774	36.75
St Ives	5,960	3,846	64.53
Pymble	4,917	3,670	74.64
Turramurra/Warrawee	6,571	4,717	71.79
Wahroonga	4,378	2,821	64.44
TOTAL	34,917	22,954	65.74

- Longer than reasonable walking distances to playgrounds in Gordon, Lindfield and Roseville and also in some areas of St Ives, Pymble and Wahroonga.

The Strategy found that, due to these distributional inequities and the limited size of many parks (as noted in section 2.3, above), a significant proportion of the population (35%) was not adequately serviced by high quality neighbourhood open space,

In a relatively large LGA such as Ku-ring-gai – where travel distances are quite significant – the unequal distribution of park open space is an important issue. This is particularly so, given the large number of physical access barriers including major roads (Pacific Highway, Mona Vale Road, Eastern Arterial Road and others) and the north shore railway line.

The relatively high proportion of households located outside park service zones (together with the large proportion within close proximity to only small parks or parks requiring further development) is a significant equity issue.

Additionally, because this distribution pattern encourages more people to drive to access 'local' open space, there is a greater likelihood of parking and traffic problems in some areas.

Opportunities to embellish the open space network more equitably should therefore be pursued. In particular, there is a need to address the existing relatively low quantities of parkland in Lindfield, Roseville and Gordon and, as the Residential Development Strategy is implemented, the likely reducing per capita quantities of parkland in the railway corridor and community shopping centre precincts.

2.5 Accessibility

Open space distribution (discussed in section 2.4, above) is a key measure of open space accessibility – in terms of the walking and/or driving distances between residential areas and parks and open space areas.

Other aspects of accessibility include park visibility (the extent to which parks are visible from streets and pedestrian routes), availability (eg not fenced), parking, pathways and cycle routes and 'access for all' design.

2.0 KU-RING-GAI OPEN SPACE SYSTEM

With respect to this, the Open Space Strategy argued the importance of developing 'supportive environments' or 'urban and natural places that encourage and facilitate physical activity – particularly incidental physical activity through active transport - because they are accessible, safe and visually appealing' .

As detailed in the Strategy, supportive environments encompass the following specific elements:

- Attractive and safe open spaces and public domains – with good lighting, seating, shade and areas for play,
- Well designed and landscaped streets – including safe pedestrian facilities,
- Well lit, level and shaded footpaths that provide linkages to parks and other places of interest,
- Walking and cycle paths – with links to schools, shops, places of interest and public transport,
- Availability of interesting facilities within walking and cycling distance, and
- 'Access for all' infrastructure (appropriately graded pathways, kerb ramps, hand rails etc).

The accessibility of the open space system refers to the ability or ease of which, open space can be accessed.

For a local park, the walking distance between it and potential visitors is a widely accepted measure of its physical accessibility – with around 500 metres being the commonly accepted maximum reasonable walking distance to such parks.

Figure 2 (Existing Open Space Catchments), on the following page, depicts the physical accessibility of Ku-ring-gai's parks through the use of 'accessibility circles'. The circles comprise a 400-metre buffer drawn around all of Ku-ring-gai's higher quality local and district scale parks (with 'higher quality' defined as parks of a minimum area of 3,000-metres square and with at least some visitor facilities ie. seating, shade, playground, picnic facilities etc). The maximum straight-line distance to a park within the circle is 400 metres, but many potential users within these circles will have to travel up to 500 metres or more because of street layouts, cul-de-sacs etc.

This accessibility analysis – when undertaken in 2003 in conjunction with preparation of the Ku-ring-gai Open Space Strategy - established that approximately 35% of the population did not have reasonable access to open space. That is, 35% of the population lived in an area not enclosed by an 'accessibility circle' and, by definition, were not within a 500-metre walk of at least one higher quality park.

Areas with the greatest lack of provision included Wahroonga, some areas of Gordon and Roseville.

There are also barriers to park access (such as roads) that may, in some instances, cut across 'accessibility circles' (and, in fact, remove part of a circle from what initially was deemed to be a 'reasonable access zone').

The most significant barriers in Kuring-gai are the Pacific Highway, the rail corridor and the topography (valleys, bushland, creeks etc). The public domain character and intensity of traffic on the Pacific Highway, for example, currently deters pedestrians (especially those with young children) from using this as a route to open space.

The railway connections to Ku-ring-gai are an important component of the transport system and are heavily used by commuters. Stations are well situated across the corridor however the physical nature of the corridor means that access points across do not necessarily relate to desirable pedestrian routes to open space.

2.0 KU-RING-GAI OPEN SPACE SYSTEM

2.6 Connectivity

Connectivity of open space is concerned with the connections between open spaces, including the relationships between open space areas.

There are several areas where park areas adjoin sports fields. This is an important component of the open space system as adjoining park areas offer the potential for use as passive and active recreation, which limits the intensity of use on the actual playing fields.

Other existing connections include those between natural areas and parks. This provides potential for a diversity of recreation experiences, with natural areas offering bushwalks or more nature based recreation and parks offering more opportunity for active recreation and formalised play facilities.

The issues of connectivity and linkages were addressed in the 2005 Open Space Strategy which found that:

- Linkages provide corridors of open space that link parks, natural areas and other sites of interest into a greater whole. This improves access to a range of sites, enhances opportunities for bushland based recreation (including walking, nature appreciation and mountain bike riding), and provides movement corridors for wildlife.

2.7 Environment / landscape

Figure 1 indicates that Ku-ring-gai has a generous supply of open space, however these are predominantly national park or natural areas, with a total area of almost 4,000 hectares of bushland.

The provision of formal parks however was identified in the 2005 Open Space Strategy as being low (0.49 hectares per thousand people) as compared to the traditional standard (1.62 hectares per thousand people) with a total provision of approximately 53 hectares.

The provision of natural areas and national park is an important resource for the community and enables different recreational experiences than provided for in more traditional park and sports field environments. These bushland areas are also an important component of the character of Ku-ring-gai establishing the LGA as an extensively 'green' area.

Environmental and bushland values were addressed in the 2005 Open Space Strategy which found:

- Strong community support for protecting and enhancing the 'green' environment,
- Council concern with bushland fragmentation (and its impact in reducing wildlife movement opportunities and bio-diversity) and a current focus on canopy protection/enhancement and the strategic acquisition of open space 'bio-linkages' to protect critical natural values – and to improve linkages between natural areas (and between natural areas and other types of open space).

2.8 Cultural heritage

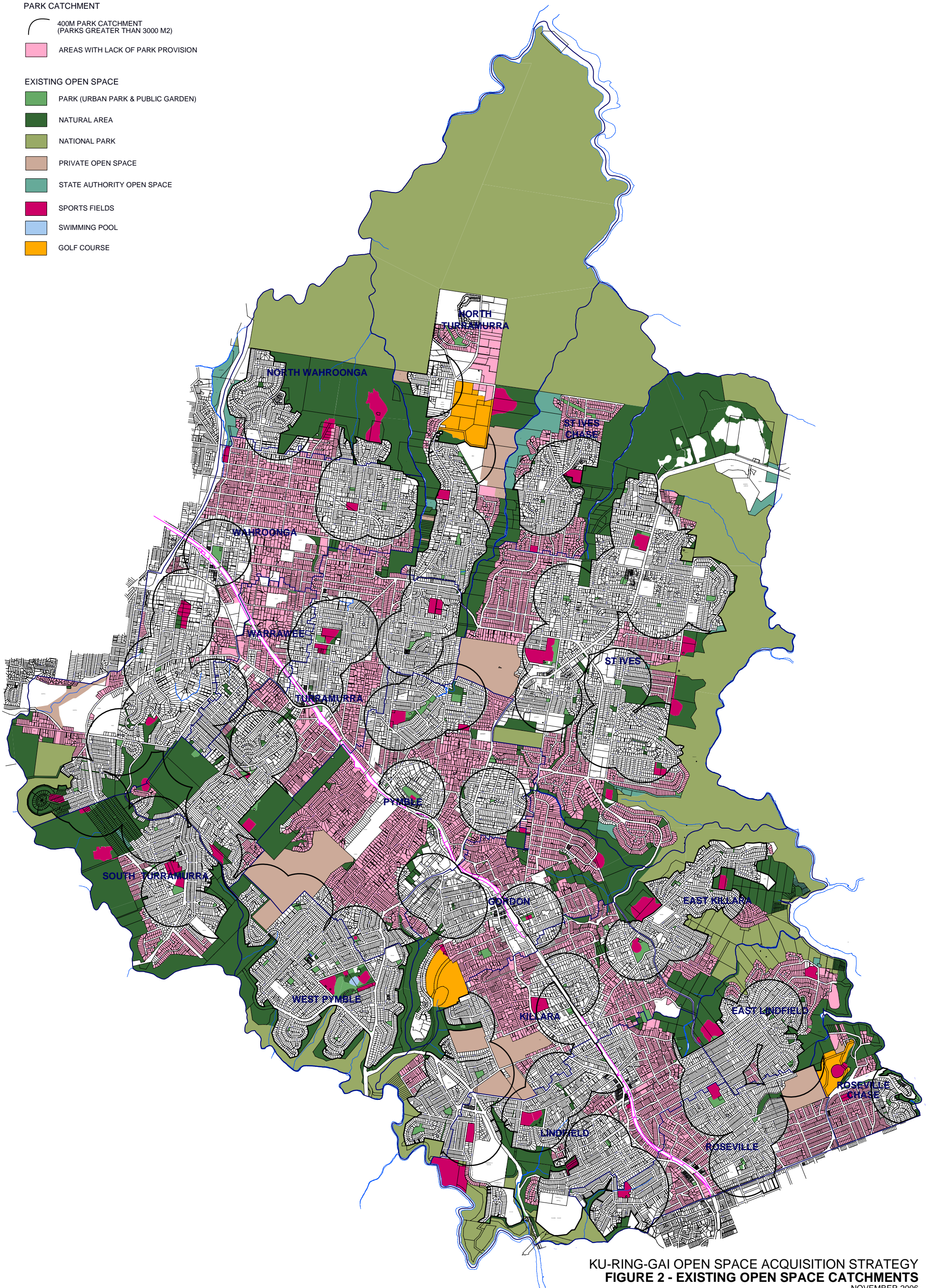
The heritage items within Ku-ring-gai are mainly focused on the architectural heritage of the area. The historic formal parks and gardens are however an integral part of the LGA's open space heritage and provide unique park landscapes that reflect past trends in open space layout and planting. Some of the older parks may be limited in the diversity of recreation opportunities provided, generally providing open grassed areas with formal tree planting.

PARK CATCHMENT

- 400M PARK CATCHMENT (PARKS GREATER THAN 3000 M2)
- AREAS WITH LACK OF PARK PROVISION

EXISTING OPEN SPACE

- PARK (URBAN PARK & PUBLIC GARDEN)
- NATURAL AREA
- NATIONAL PARK
- PRIVATE OPEN SPACE
- STATE AUTHORITY OPEN SPACE
- SPORTS FIELDS
- SWIMMING POOL
- GOLF COURSE



KU-RING-GAI OPEN SPACE ACQUISITION STRATEGY
FIGURE 2 - EXISTING OPEN SPACE CATCHMENTS

NOVEMBER 2006
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2.0 KU-RING-GAI OPEN SPACE SYSTEM

2.9 Summary - Conclusions and implications for the Acquisitions Strategy

As identified, the key values and attributes of open space within Ku-ring-gai include function, quantity, quality, diversity, distribution and equity, access and connectivity, biodiversity and heritage.

However, as also identified, previous studies (including Council's 2005 Open Space Strategy) have found that, with respect to these values and attributes, Ku-ring-gai's open space resources are of variable quality and comprehensiveness.

For example, Ku-ring-gai has a range of excellent facilities and programs (including the National Parks, Ku-ring-gai Bicentennial Park, St Ives Village Green, Echo Point Park and Ku-ring-gai Wildflower Gardens).

However, there are a range of needs and deficiencies – including:

- Insufficient neighbourhood parks in some precincts (particularly in Lindfield, Gordon and Roseville),
- The small size of many parks,
- The under-development of many parks,
- An inadequate diversity of recreation activity opportunity,
- Insufficient district sports facilities,
- Linkages, connections and environments supportive of incidental physical activity,
- More cycle and walking routes, and
- More widely distributed 'access for all' infrastructure.

Previously identified opportunities for improving open space and recreation resources included the strategic enlargement of some parks, the further embellishment of both neighbourhood and district parks, additional and higher quality sports facilities (indoor and outdoor), modern swimming opportunities, and a greater diversification of 'unstructured' recreation opportunities within parks.

The major implication for the Acquisitions Strategy is the clear finding – of these previous studies - that Council's local and district parks are not (in terms of both quantity and suitability) fully meeting the recreation needs of existing populations and do not have the capacity to absorb the recreation needs and demands of new populations.

As such, the open space and recreation needs of the new populations will have to be fully met from the acquisitions and/or embellishments funded from the S94 contributions generated by future residential developments.

Further more, where consistent with S94 nexus requirements, the Acquisitions Strategy should seek to address existing deficiencies (including the small size of parks, connectivity and inequitable distribution) through strategic open space acquisitions and/or embellishments.

3.0 Development in Ku-ring-gai