ENVIRONMENT AND OPEN SPACE
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- Refer to Section 5.6.2 – Access and linkages to open space.
5.1 INTRODUCTION

5.1.1 STUDY AREA

The study area is the whole of the City of Ryde Local Government Area.

5.1.2 SCOPE

The scope of the study covers the following environmental areas:

- Biodiversity
- Riparian Lands
- Air Quality
- Noise
- Receiving Water Quality
- Flooding and Stormwater quantity
- Bushfire
- Ecologically Sustainable Development
- Climate Change
  - Acid Sulphate Soils
  - Land Stability
  - Waste

Open space in this study comprises all land zoned RE1 (Public Recreation) and E2 (Environmental Conservation). This includes all parks, sportsgrounds and bushland areas. Zone E2 has been assigned to all land categorised as bushland under Section 36 of the Local Government Act 1993. This study also includes public footpaths as open space.

Land zoned RE2 (Private Recreation) covers areas such as golf courses and is not included in this study. Zone E1 (National Parks and Nature Reserves) is managed by the NSW Department of National Parks and Wildlife and is also not included.

This study covers both local and regional open space. Local open space is generally used only by residents in close proximity to it, and provides limited facilities. Regional open space comprises large spaces with extensive recreation opportunities such as Ryde Park, Putney Park, Field of Mars Reserve and the parks along the Parramatta River. These spaces attract users from both inside and outside Ryde local government area.

5.1.3 PLANNING CONTEXT

This Environment and Open Space Study will be integrated with other studies to form the draft City of Ryde Local Study which will be the principal foundation document for the new City of Ryde Comprehensive LEP 2011. The preparation of the Comprehensive LEP is a requirement of the Department of Planning and will articulate a vision for land use planning in the whole of the City of Ryde and also provide a single mechanism that coordinates and focuses Council’s planning activities.

The NSW Government’s Metropolitan Strategy provides a broad framework for promoting and managing Sydney’s growth over the next 25 years and is the basis for the Local Study.

A key objective of the Metropolitan Strategy is to protect Sydney’s natural environment, waterways, biodiversity, clean air and heritage.

The Draft Inner North Subregional Strategy translates some of the actions listed in the Metropolitan Strategy into directions and actions to be addressed at a local level. Many of these have been incorporated in the City of Ryde Local Study and its supporting documents, including the Environment and Open Space Study, for example:
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Metropolitan Strategy

E2.1 Improve health of waterways, coasts and estuaries
E2.2 Protect Sydney’s unique diversity of plants and animals
E2.3 Improve Sydney’s air quality
E2.5 Minimise household exposure to unacceptable noise levels
E3.4 Minimise and recycle waste
E3.5 Manage the environmental impacts of tourism
E5.1 State Government to implement the National Climate Change Adaptation framework
E5.3 Councils to identify natural hazards and risk management measures in principal LEPs related to climate change
F1.2 Improve the quality of regional open space
F1.3 Improve access to waterways and links between bushland, parks and centres
F2.1 Improve the quality of local open spaces
F2.2 Investigate future options for open space provision and management
F2.3 Provide for urban civic space in planning for centres
Draft Inner North Subregional Strategy

E2.1.5 Inner North councils should continue to promote water sensitive urban design

E2.1.7 The Sydney Metropolitan Catchment Management Authority will, with the assistance of councils, progressively undertake stream mapping to enable councils to develop planning controls to protect regionally significant riparian corridors

E2.2.1 State Government and councils to consider regional biodiversity matters to inform principal LEPs

E2.5.2 In preparing principal LEPs councils should identify and consider major noise sources

E3.4.1 Councils should ensure development does not encroach on the Artarmon or Ryde Waste and Recycling Centres and land use conflicts are minimised through appropriate planning controls

E3.5.2 Regionally significant open space land will be conserved and managed to ensure continued contribution to biodiversity, recreational opportunities and the scenic amenity of the subregion

E5.1.1 Council should consider the latest available information when planning for natural hazards in their Principal LEPs

E5.3.1 Councils are to plan for land affected by flooding in accordance with The NSW Government Flood Prone Land Policy and Floodplain Development Manual

E5.3.3 Councils are to develop bushfire prone land maps and Bush Fire Risk Management Plans to inform the development of their draft LEPs

F1.2.1 Inner North councils and State Government to focus on enhancing the capacity and quality of existing open space

F1.3.1 Councils to work in partnership with State Government departments to improve access to waterways and links between bushland, parks and Strategic Centres and local centres

F2.1.1 Councils to maintain or enhance the provision of local open space particularly in centres and along transport corridors where urban, and particular residential, growth is being located

F2.1.2 Councils to have an open space embellishment program that improves facilities to encourage use

F2.1.3 Councils to consider mechanisms to increase the capacity of local sports fields to a district level

F2.1.4 Councils to develop links between smaller reserves to create diversity and broader user experience

F2.1.5 Councils to consider modifying under-utilised open space for informal activities such as skating, basketball, netball and cafes

F2.3.1 Councils to identify opportunities to enhance existing civic space and provide new civic spaces

F3.1.1 Councils to investigate the provision of additional multipurpose indoor sports facilities to meet the needs of the current and future populations of the subregion
Key elements of the Draft Inner North Sub-Regional Strategy of relevance to the Environment and Open Space study include:

- The City of Ryde has a growth target of 12,000 new dwellings by 2031. This increase will equate to approximately 30,000 new residents in Ryde.
- A target of 21,000 new jobs is to be provided in the LGA by 2031.

See Appendix B – response to the Metropolitan Strategy.

5.1.4 METHODOLOGY

The methodology for the preparation of the Environment Study involved:-

- Commissioning EcoLogic Australia to undertake a series of issues papers on the environmental areas listed above.
- Review of relevant and/or complementary DCP guidelines, studies and programs undertaken by the City of Ryde.
- Consultation with some key internal stakeholder groups.

There was no additional, original scientific research into any of the environmental areas above. Instead the study process focussed on a review of a range of existing studies, strategies, plans and guidelines, including:-

- Bushland of Ryde - Biosphere Environmental Consultants (2007)

Government Guidelines and State Legislation which have informed the development of this study include:

- Department of Environment Climate Change and Water – Guidelines for Strategic Planning
- Environmental Planning and Assessment Act 1979 – Section 117 Directions
- Department of Planning – various planning circulars and practice notes
- Various State Environmental Planning Policies
- Current or recent state government guidelines on relevant issues eg flood plain risk management planning, adapting to sea level rise, planning for bushfire protection etc
- Various local government guidelines eg LGSA Affordable Management of Urban Riparian Areas Options paper, noise guide for local government.

See Section 3 for a comprehensive summary of the documents which have informed this Study.
The methodology for the preparation of the Open Space Study involved:

1. Review and analysis of existing planning documents and statistics which include:
   - The State Government’s new planning system and documents: Metropolitan Strategy and Draft Sub Regional Strategy Inner North Subregion Plan,
   - State Environmental Planning Policies and Ryde City Council management documents that guide the future direction of parks, past studies and studies presently being developed by the City of Ryde on parks,
   - Demographic statistics and population projections to 2031,
   - Open space strategies presently prepared by other Councils within Ryde’s subregion,
   - Current provisions relating to open space within LEP 2008.
2. Identification of key issues associated with the provision and utilisation of parks in the City of Ryde such as demand, location, uses, access and quality.
3. Formulating strategies which will set the direction for the provision and protection of open space within the City of Ryde to 2031.

CONSULTATION

The Environment Study was undertaken with input received from the following internal stakeholders:

- Urban Planning Unit
- Environment Unit
- Catchments Unit
- Group Manager Environment and Planning

No direct consultation with external stakeholders was undertaken for the Environment Study. However a range of public and private stakeholders were consulted at various times during the preparation of many of the documents which inform the Environment Study, eg Eastwood Flood Plain Risk Management Planning.

No direct community consultation was undertaken for the Environment Study. However community consultation was undertaken during the development of a number of documents which inform the Environment Study, such as:

- Ryde 2030 Community Strategic Plan (under preparation)
- Shrimptons Creek Parkland – Master Plan and Plan of Management (2009)
- Draft Eastwood Flood Plain Risk Management Plan (2009)
- City of Ryde (consolidated) LEP 2010
- Various DCPs eg EnergySmart, WaterWise

No consultation was undertaken for the preparation of the Open Space Study; however two resident surveys regarding open space and leisure needs were carried out by the City Of Ryde in 2009. The results of these surveys are detailed in section 5.1 and have been used to determine directions and actions in this strategy:

City of Ryde Leisure and Recreation Needs Community Consultation Report

(April 2009)

The purpose of this study was to source, directly from the community, Ryde residents’ views on their current and future leisure and recreation needs.

The document outlines the results from 377 completed individual surveys of local Ryde residents.
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*Ryde 2030 Community Strategic Plan (in progress)*

This will be an overarching visionary plan for the Ryde Local Government Area. It will be used by government and community organisations to plan for services and programs to meet the needs of the Ryde community.

As part of the formulation of this Plan a survey was recently conducted of local residents, and open space was included as an issue. Section 5.1 includes the results from this survey.

**Relationship to the Integrated Open Space Strategy (under preparation)**

This Environment and Open Space Study concentrates on the protection and provision of open space. An Integrated Open Space Strategy (IOSS) for the City of Ryde will be prepared in 2010/11 and will cover protection and provision of open space (far more comprehensively) and also uses of open space in Ryde. It will review open space zonings and will inform future planning controls.

The IOSS will develop a set of planning principles to guide the management, development and use of open space. It will develop a set of hierarchies that reflect the different levels of activity, differing roles of open space and take a citywide view about open space. Hierarchies will be developed for playgrounds, sports grounds and parks that will assist the organisation in making decisions about the future development, management and use of open space.

The project will involve assessment of the quality, recreational, structural/landscape, amenity, ecological, flood mitigation, educational, social and cultural, and health roles of open space. It will also address the boundaries of bushland areas, that may have an effect on the location of land zoned E2. The project will assess the accessibility of open space and facilities for disabled people.
The strategy will include an Implementation Plan that will identify and prioritise a set of actions, initiatives and timescales for the delivery of the identified open space outcomes. The Implementation Plan will also establish a means of assessment, performance indicators and targets for these actions and initiatives.

The IOSS will investigate all pertinent aspects of open space management and use, including:

- Establishing a clear understanding of the types of open space and their distribution across the City;
- Providing a comprehensive framework that will assist in the management and future planning of our open spaces;
- Recognising the recreational, environmental and social values of open space;
- Establishing a clear understanding of stakeholder and community needs in relation to open space;
- Establishing clear linkages and corridors between key points of interest, town centres and transport nodes and suggesting enhancements;
- Identifying future actions to ensure that the values of open space are sustainably managed; and
- Maintaining and enhancing the open space embellishment program to improve facilities and encourage use.

The IOSS will include extensive consultation with the community, and will explore possible land acquisition for open space and rationalisation of existing parks. There will be particular emphasis on acquisition of sites adjoining existing open space to enlarge and/or improve access to it. Open space near centres will also be investigated for acquisition.

Figure 5.3 Kitty’s Creek Reserve
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ENVIRONMENT
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5.2 EXISTING SITUATION

5.2.1 CITY OF RYDE’S ENVIRONMENT

The City of Ryde has a diverse natural and built environment, reflecting the natural qualities and settlement history of this important and sizeable local government area (LGA) within Sydney’s Inner North Region.

The geography and settlement pattern of Ryde is defined by its natural features, most particularly the Parramatta River and Lane Cove River National Park which form the Southern, Eastern and Northern boundaries of the LGA. Another striking feature is a high, distinctive ridgeline extending from Top Ryde West to Eastwood and Brush Farm House. The two main rivers and Lane Cove National Park support a considerable variety of native bushland and associated flora and fauna, which is unusual for an LGA with an Eastern boundary only 12 kms to the Sydney CBD.

Ryde is fortunate to contain Ramsar protected wetlands of international significance for migrating birds and a number of reasonably intact, regionally significant ecological communities, ranging from the remnant salt marshes of the Parramatta River foreshores at Melrose Park to the sandstone outcrops and undisturbed bushland of the Lane Cove National Park. Many 100’s of species of native birds, animals and plants have been recorded in Ryde, some of which are remnants of formerly significant ecological communities in the Sydney Basin as a whole.

As the aerial photo in Fig 5 shows, however, Ryde LGA is essentially an urban area with a residential population of 100,000 and a larger, additional day time population which commutes in to Ryde to study at its many educational institutions eg Macquarie University, Ryde TAFE or to work in one of its 6 town centres. This includes Macquarie Park, North Ryde, which is identified as a Specialised Centre in the Metropolitan Strategy because of its national significance as a research and employment centre, with a day-time working population of some 35,000 people.

Ryde LGA is an area of intense urban activity, with large tracts of residential, retail and commercial development spread throughout an LGA which is criss-crossed by major roads, railways and other infrastructure, including “the Bennelong Funnel”, a major flight corridor for Sydney Airport.
As a result of its essentially urban nature, Ryde's natural environment consists mostly of relatively isolated pockets of remnant vegetation, often located within riparian areas along its two major rivers and major urban creeks, such as Buffalo and Strangers Creeks (pictured above) and Shrimptons Creek, both of which flow North to Lane Cove River. Ryde's remnant plant and animal communities are surviving in an area which is subject to significant urban growth and a great range of urban impacts, ranging from stormwater pollution and weed infestation to feral cat predation.

Ryde residents are, however, mostly appreciative and protective of their remnant bushland areas, parks and water ways. Qualitative and quantitative research by the City of Ryde over many years consistently demonstrates the considerable value that the community ascribes to their “natural” environment of Ryde. Many people state that they have chosen to live in Ryde LGA because of its environmental qualities, which combined with its proximity to the CBD and a range of services and employment opportunities, make it a desirable location to live and work. Some 22% of the population of Ryde live and work in the Ryde LGA, which is the highest percentage of all the LGA’s within Metropolitan Sydney.
Most recently, the City of Ryde has embarked on the development of the Ryde 2030 Community Strategic Plan. The process has involved numerous focus group discussions, over 1000 written community survey forms, art competitions and the like. Analysis of community feedback for 2030 demonstrates, once again, how much the community value “their” natural environment in Ryde. They want it protected, enhanced and accessible to the community.

This Environment Study provides a platform for responding to the community expectations set out in Ryde 2030 through a combination of statutory and strategic planning measures.

The Study also complements a range of other relevant Council programs and activities being implemented across the LGA, such as sustainability, environment protection, bushland conservation and flood protection.

5.2.2 GEOGRAPHY

The City of Ryde has an area of 40.65 sq kms and lies in the central northern part of the Sydney Metropolitan area, approximately 12kms from the centre of Sydney.

The topography of Ryde ranges in height from sea level to almost 100 metres encompassing large areas of undulating ground. The area is bounded on the south by the Parramatta River and on the north and north east by Lane Cove River. The land between the rivers is known as the Hornsby plateau, dominated by ridges of high ground running east/west and falling away toward Lane Cover River.

The rocks underlying the Ryde district are quite ancient, dating back several hundred million years. A layer of Ashfield Shale overlies a layer of Hawkesbury Sandstone. This is a quartz sandstone with minor shale lenses, which dominates the Sydney district (Herbert 1983). However, much of the Ryde district is situated on soils derived from the overlying shale (Chapman and Murphy 1989), forming a moderately undulating landscape, stretching between the Parramatta and Lane Cove Rivers.

Along Ryde’s eastern and northern flanks, the Lane Cove River and its tributaries have cut quite deeply into the overlying shale, creating an often craggy sandstone landscape. The soils derived from this sandstone are less fertile than those derived from the shale on the adjoining ridges. A similar pattern has occurred on Ryde’s southern boundary, along the Parramatta River.

The steepness of the landscape adjacent to the rivers means that many parts of Ryde enjoy extensive, attractive views across large areas of Sydney. The often steep valleys offer numerous vistas. The steepness of the valleys and their relatively infertile soils have often prevented substantial development, with the result being that they largely remain as parks, foreshore bushland and/or or drainage corridors.
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Figure 5.5 City of Ryde
RYDE’S FLORA, FAUNA, BUSHLAND AND OPEN SPACE AREAS

The Ryde LGA is fortunate to have remnant bushland and riparian areas that contain important biodiversity values. Many of the reserve areas within Ryde are associated with watercourses and are linear. Existing ecosystems include shale forests transitioning to sandstone woodlands on the ridgelines and forests in the gullies; mangroves; salt marshes and seagrasses. A number of state and nationally listed threatened species and regionally significant ecological communities are present in Ryde.

Flora

Ryde is the home of a number of complex indigenous plant communities, including:

- Sydney Turpentine-Ironbark Forest,
- Blue Gum High Forest,
- Shale / Sandstone Transition Forest,
- Sydney Sandstone Gully Forest and Ridgetop Woodland
- Estuarine Complex.

Figure 5.6 Banksia spinulosa
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They have evolved in response to the natural ecological processes of the region and the influences of its underlying geology, soil, climatic conditions, drainage patterns, and the activities of animals and people. Plant communities and species have adapted to these conditions over thousands of years and are now finely tuned to and dependent on local landform, soils, moisture and nutrient levels, and the frequency of fires, floods and droughts that naturally occurred in the Ryde area.

The largest and/or most significant bushland remnants in the Ryde area can be found in the Lane Cove River National Park and Council parks and reserves.

NB The community nomenclature listed above is in the course of being revised.

Fauna

Studies show that certain animal groups that originally inhabited parts of the Ryde LGA are now rare or absent, whilst others have survived relatively unscathed. Native fauna groups which have suffered significant decline are:

- Terrestrial mammals (such as native rodents, bandicoots and wombats), which have almost completely disappeared from the area. The only remaining native terrestrial mammals are Long-nosed bandicoots in Tasman Park and Echidnas, Easter Bush Rat and Brown Antechinus in the Field of Mars Reserve.
- Large reptiles have been extensively eliminated. This includes goannas, large snakes, dragons (such as Bearded Dragons) and large skinks (such as Blue-tongue Lizards). Over the years these reptiles have been deliberately killed (mainly snakes), accidentally killed or killed by domestic animals.
- Frogs have declined significantly. Most reserves have only 1 or 2 species.
- Native Fish diversity has all but disappeared in local creeks.

The fauna groups that are still well represented in the area are forest and woodland birds. In some of the larger bushland reserves the tree canopy has been retained and reserves are close enough together so that birds can move freely between bushland areas. Some bird populations have, however, declined significantly eg wading birds and small passerines that require mid-canopy cover for protection.

Invertebrate populations have also been significantly reduced in most areas of Ryde.

Bushland and open space areas

The open space system in Ryde comprises a diverse mix of sporting facilities, passive open space, foreshore reserve and bushland.

The LGA has 355 hectares (Ha) of parkland divided into 207 parks of varying sizes, with the smallest being equivalent in size to a single house block and the largest being the Field of Mars Reserve, which has an area of 51 Ha. Many of these parks have been accorded E2 status in the LEP (see 3.3.1 in this document).

There are 98 playground areas offering a variety of play equipment, ranging from one or two pieces in the small pocket parks to the large, elaborate play opportunities at Putney Park. Sports provided for include athletics, baseball, basketball, softball, netball, tennis, cricket, soccer, hockey, lawn bowls, croquet, Australian Rules football, rugby, volleyball, as well as dog training at various locations.
Thirty-seven parks in the City of Ryde are either all or partially Crown land. These include Ryde Park, Anzac Park, Magdala Park, Brush Farm Park and Putney Park.

Council is responsible for all maintenance, development and use of these parks.

Bushland areas include Lane Cove National Park, which plays an important role in the provision of open space for both local residents and the wider Sydney community. The Buffalo Creek Corridor is also a valuable part of Ryde’s bush land and open space system, stretching from Ryde Park through the Field of Mars Reserve and Wildlife Refuge to Lane Cove River.

The foreshore reserve areas, particularly along the Northern side of the Parramatta River, are important components of the open space system in Ryde. Significant reserves along the Parramatta River include Meadowbank Park, Shepherd’s Bay, Putney Park and Morrisons Bay Park. These areas contain a range of items of Aboriginal and European heritage significance. They provide visual and boat ramp access to the Parramatta River and are popular settings for passive recreation activities such as sailing, sculling, walking, picnics and barbecues. An important on-going program is the establishment of a shared walking and bike path along the Parramatta River, to link the foreshore areas and maximise pedestrian and cycle access to and along the River foreshores.

Figure 5.8 Parramatta River Walk, Meadowbank

5.3 REVIEWED PLANS, STRATEGIES & PROGRAMS – ENVIRONMENT

5.3.1 LOCAL ENVIRONMENTAL PLANS AND DCPS

RYDE LOCAL ENVIRONMENTAL PLAN 2010

As part of its planning reform agenda, the Dept. Planning has developed a Standard LEP which provides a format for the preparation of LEPs by all Councils in NSW. The Standard LEP specifies land use zones, uses that may be to be permitted within those zones, a series of model planning provisions and standard definitions. Council’s are obliged to prepare new LEPs in line with the new format.

Draft Ryde LEP 2008 was prepared in line with the Standard LEP and it is this document (rather than the Ryde Planning Scheme Ordinance) which will be amended to form the comprehensive LEP.

(a) Zoning and Land Use of Public Open Space

Under Ryde LEP 2008, land under Council’s care control and management and used as open space is zoned either:

- E2 Environmental Conservation or
- RE1 Public Recreation

E2 Environmental Conservation

On 5 May 2009 Council resolved that the draft LEP be amended to apply E2 zoning to all land in the City of Ryde categorised as bushland under Section 36 of the Local Government Act, 1993. A total of 81 areas have been zoned accordingly.
The objectives for E2 Environmental Conservation zone under LEP 2010 are as follows:

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.

The land uses permitted in the E2 zone reflect the objectives and include environmental protection works, drainage, earthworks, environmental facilities, utility installations.

RE1 Public Recreation

All other land under Councils care control and management and used for open space purposes has been zoned RE1 Public Recreation. The objectives for RE1 Public Recreation zone under LEP 2010 are as follows:

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.
- To enable related uses that will encourage the enjoyment of the land for recreational purposes.
- To enhance, restore and protect the natural environment for recreational purposes.
- To provide adequate open space areas to meet the existing and future needs of the residents of Ryde.
- To protect and enhance the natural bushland in such a manner that enhances the quality of the bushland and facilitates public enjoyment of the bushland compatible with its conservation.

The land uses permitted in the RE1 zone reflect the objectives and include environmental protection works, business identification signs, community facilities, environmental facilities, kiosks; recreation areas, recreation facilities (indoor), recreation facilities(outdoor), restaurants and roads.

Land gazetted as National Park within the City of Ryde is zoned E1 National Parks and Nature Reserves and are under the control of National Parks Division within the Department of Environment, Climate Change and Water

There are a number of areas of land which are used for private open space purposes and are zoned RE2 Private Recreation under LEP 2008. Such land contains a variety of private recreation uses from bowling greens to large clubs.
(b) Environmental clauses

Under Ryde LEP 2010 the following clauses provide environmental controls over a number of areas:

- Clause 3.3 Environmentally sensitive areas excluded (mandatory clause under Standard LEP)
  
  This clause identifies areas of environmental sensitivity where it is inappropriate for exempt or complying development to take place. The Standard LEP lists specific exclusion areas.

- Clause 5.9 Preservation of trees or vegetation (optional clause under Standard LEP).
  
  The aim of the clause is to preserve the amenity of an area through the preservation of trees and other vegetation.

- Clause 5.10 Heritage Conservation (mandatory clause under Standard LEP).
  
  The aim of the clause is to conserve the heritage significance of Ryde including heritage items and conservation areas, archaeological sites and sites of Aboriginal heritage significance.

- Clause 6.1 Acid sulphate soils (local clause)
  
  The objective of this clause is to ensure that development does not disturb, expose or drain acid sulphate soils and cause environmental damage.

- 6.3 Foreshore building line (local clause)
  
  The aim if this clause is to ensure that development in the foreshore area will not impact on natural foreshore processes or affect the significance and amenity of an area.

- 6.4 Eastwood Urban Village (local clause)
  
  This clause aims to restrict or constrain development in areas of Eastwood affected by the 100 year ARI stormwater inundation event, if the development would increase hazard to persons or property.

Parts of DCP 2008 which address specific environmental areas include:-
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7.1 Energy Smart, Water Wise – The aim of this Part is to provide a strategic framework for achieving sustainable development thorough best practice energy and water management. This is currently under review.

7.2 Waste Minimisation and Management – The aim of this Part is to minimise the overall environmental impacts of waste and foster the principles of ecologically sustainable development and encourage building designs and construction techniques which will minimise future waste generation. This Part is being reviewed and will be placed on exhibition for community comment in the near future.

8.2 Stormwater Management – The aims of this Part are to foster an approach to stormwater management in Ryde which supports ecologically sustainable development and urban catchment management principles and practices. Key drivers are the need to improve receiving water quality in the City of Ryde (e.g. Lane Cove and Parramatta River) and to ensure no increase (and where practical) a reduction in the frequency and adversity of flooding.

9.6 Tree Preservation – The aim of this Part is to ensure the preservation of existing trees which contribute to the amenity, visual quality and healthy environment of the City of Ryde.

The following “area specific” Parts of DCP 2008 address environmental issues such as solar access, energy efficiency, noise mitigation, public transport or floodplain management in the following identified areas.

- Eastwood Town Centre
- Meadowbank Employment Area
- West Ryde Urban Village
- Ryde Town Centre
- Gladesville Urban Village
- Macquarie Park Corridor, North Ryde

Other Parts of DCP 2008 contain controls to ensure that environmental and sustainability issues and needs are properly addressed in other, broader development categories within the City of Ryde such as:

3.3 Dwelling Houses and Dual Occupancy – One of the aims of this Part is to encourage environmental sustainability in the low density residential areas. In line with this aim, controls are provided to maintain backyards and private open space to facilitate the greening the Ryde and the protection of trees and vegetation that provide important wildlife corridors throughout the City and improve stormwater drainage.

3.5 Multi Dwelling Housing – One of the aims of this Part is to ensure that such development does not have any adverse environmental impact.

Several sections of DCP 2008 are either currently under review or scheduled for review to ensure that the most up to date standards are applied to environmental and sustainability issues and concerns within the City of Ryde.

5.3.2 OF MANAGEMENT

Under the Local Government Act the use and management of open space land which is classified as ‘Community Land’ is required to be carried out in accordance with the following:

- The plan of management applying to the land.
- Any law permitting the use of the land for a specified purpose or otherwise regulating the use of the land.

Under the Plan of Management, land is classified as one or more of the following:

(a) natural area (b) a sportground (c) a park (d) an area of cultural significance (e) general community use.
Land that is categorised as a natural area is to be further categorised as one or more of the following:

(a) bushland (b) wetland (c) escarpment (d) watercourse (e) foreshore (f) a category prescribed by the regulations.

5.3.3 ENVIRONMENT STRATEGY 2007 - 2010

On 17 July 2007 Council’s Committee of the Whole adopted the City of Ryde Environment Strategy 2007-2010. This Strategy is one of the principle strategic documents referred to in Council’s Management Plan 2010-14. It is structured as a high level document to guide efforts by Council and other stakeholders to best incorporate sustainability considerations and outcomes into everyday initiatives, systems and processes.

The Strategy is also being used to increase public awareness of sustainability principles, issues and concerns and to encourage the community to actively participate in the achievement of priority outcomes identified in the Strategy.

The Strategy aims to balance economic, social and environmental issues under a governance framework. It is not intended to be an action plan but rather a strategy against which action plans are measured. The Environment Strategy 2007 – 2010 is due to be reviewed in 2010.

This Environment Study will give expression to a number of the priority areas identified in the Environment Strategy, in particular:

- **5.0 Community Sustainability** – eg biodiversity, water quality and catchment management, air quality, waste management

- **5.2 Environmental Performance**

- **6.0 Key Sustainability Outcome Areas** – eg environment, resource conservation sustainable practices, community culture and future direction

- **7.0 Implementation and Monitoring**
5.3.4 CITY OF RYDE MANAGEMENT PLAN 2010 - 2014

The Draft City of Ryde Management Plan 2010-2014 was adopted by Council on 11 May 2010 for public exhibition in June. The plan details the key projects, initiatives and actions that Council will undertake over the next year. It provides the strategic direction for Council.

The City of Ryde is working toward sustainability in the Environment through Council’s planning and decision-making processes.

The commitment to the Environment is to maintain an ecologically sustainable City through the management of its natural and physical environment.

Key outcome areas for the environment include the following:
- Clean air though better integrated transport systems
- Clean water through control of pollution entering our waterways and through protection of such waterways
- Preserved natural ecological systems and areas
- Strong links to the past through protection, conservation and interpretation of our heritage
- Sustainable practices in buildings, waste management, transport energy systems and water use.

Figure 5.12 Macquarie University Station – opened February 2009
Relevant strategies in the Management Plan include:-

- Support use of public transport systems and establishment of integrated transport nodes to reduce car dependency, with a subsequent reduction in air pollution and greenhouse gas emissions.
- Encourage active transport (walking and cycling) by providing appropriately located, safe and attractive facilities as well as programs to promote and encourage active transport.
- Introduce systems to reduce waste to landfill and to minimise health and safety risks in the City.

5.3.5 RYDE 2030 COMMUNITY STRATEGIC PLAN

The NSW Department of Local Government requires all councils in the State to develop a community strategic plan for at least the next 10 years. The intention is that this over-arching plan will provide the context and framework for the full suite of supporting strategies, plans, servicing programs and projects which are developed and implemented during the course of a 4 year council term. The Community Strategic Plan is the long term, holistic and strategic document which provides continuity and guidance for the community, councillors and staff at every stage in the electoral cycle.

The Ryde 2030 Community Strategic Plan is presently being developed and it is anticipated that it will be completed in late 2010.

The process involves:-

- Comprehensive community and stakeholder consultation
- Establishment of 4 theme committees to consider the impacts and consequences of the goals and strategies being developed, from a social, environmental, infrastructure and governance perspective
- Establishment of an Expert Advisory Panel and Staff Sustainability Steering Committee to review outcomes, provide guidance and to assess the practicality of implementing the recommendations from an organisational perspective, taking into account quadruple bottom line principles.

Environmental issues in Ryde have emerged as a top priority in the 2030 Community Strategic Plan. The community is articulating very clearly its aspirations for the Ryde environment and its expectations of the role which Council should play in protecting and enhancing Ryde’s natural environment and the quality of life enjoyed by its residents.

This Environment Strategy recommends statutory and strategic planning approaches to support Council and its stakeholders to implement programs identified as priority areas in the 2030 Strategic Community Strategic Plan, ranging from climate change mitigation to bushland protection.

5.3.6 ENVIRONMENTAL GUIDES/ POLICIES/PROGRAMS

SUSTAINABILITY LIVING GUIDE

Developed in conjunction with The Natural Strategies Group, this Guide is designed to help Ryde residents take action to live more sustainably at home and in the community. The Guide contains information about how small, easy changes can have positive impacts on the environment and enhance personal health and well being.

BUSHCARE PROGRAM

Bushcare facilitates the involvement of volunteers in the management of natural areas, mainly on public land, through the use of bush regeneration techniques and practices.
Environment &
Open Space

Bushcare encompasses a wide variety of activities including:

- plant identification
- woody weed removal
- hand weeding
- track maintenance
- site assessment and monitoring
- fauna observations
- water quality testing

Volunteer Bushcare Groups are currently working at 20 different sites throughout the Ryde LGA.

**RYDE GREENHOUSE GAS REDUCTION ACTION PLAN 2007-10.**

As a member of the International Council for Local Environmental Initiatives (ICLEI) and Cities for Climate Protection Australia Program (CCP), the City Of Ryde has begun to implement a series of management plans and objectives to address the Greenhouse effect. The Ryde Greenhouse Gas Reduction Action Plan (GGRAP) was prepared in conjunction with the City’s Local Air Quality Management Plan 2004/2009 to achieve the following Corporate (Council) and Community Emission Reductions Goals:

- a 30% reduction in Corporate (Council activities) emissions on 2003/2004 levels by 2012/2013
- a 20% reduction per capita of Community emissions at 2001 levels by 2010

The community sector includes residents, schools, commercial and industrial businesses.

Energy usage remains the largest contributor to greenhouse gas emissions in both sectors and the GGRAP sets out specific City Of Ryde Council and community projects and strategies to address how Council will achieve the stated ERG’s through more efficient energy use.

Other City Of Ryde Corporate focus areas covered in this GGRAP include policies and procedures, staff education and development of partnerships. The GGRAP aims to influence the behaviour of the community in a number of ways. This includes introduction of incentives, strengthening requirements for new developments and providing leadership by CoR’s own actions. Various community projects have also been identified.

**WATER QUALITY MONITORING STRATEGY**

The City of Ryde is implementing a biological and chemical water quality monitoring program targeting the following 5 main creek systems within the LGA.

- Terrys Creek
- Shrimptoms Creek
- Porters Creek
- Buffalo Creek
- Archers Creek

The program began in September 2004 and is being delivered over 7 years. Sampling occurs each year during the months of Spring and Autumn.

Figure 5.13 Water quality testing
OTHERS

Numerous other initiatives relating to the catchment and creek health have been undertaken in recent years by Council, ranging from the Eastwood Canal Waste Wise Project to the more recent Catchment Connections Program, in partnership with other Councils in the Upper Parramatta River catchment.

5.3.7 ENVIRONMENTAL STUDIES

A number of environmental studies commissioned by Ryde in recent years have informed development of this Environment Study and its recommendations.

URBAN BUSHLAND IN THE RYDE LGA BY OCULUS LANDSCAPE ARCHITECTURE URBAN DESIGN ENVIRONMENTAL PLANNING APRIL 2001

In November 1998 Council commissioned a bushland corridor mapping project to gain an overview of the extent and type of remnant bushland and other vegetation in the Ryde LGA. The study’s main aim was to map all remnant bushland in Ryde and to digitise the information for use on Council’s GIS mapping system.

In August 2000 Council expanded the study to update the vegetation maps and to prepare a comprehensive information database for the management and restoration of bushland and other vegetation in Ryde.

The Study produced the following:

- A map showing the “present day” extent and location of remnant indigenous and other vegetation in the Ryde LGA and the conservation status of such areas.
- A map showing the approximate location of ecological communities in 1956.
- A map showing the approximate location of ecological communities prior to 1750.
- A comprehensive species list for each ecological community occurring in Ryde.

Much of the bushland identified is located within parks on Council owned and /or managed property. However remnant bushland was also identified on private property.

Council resolved on the 27 November 2001 that the Oculus report and vegetation maps be used to inform Council’s planning and decision making processes and that s149 Certificates include information regarding remnant vegetation.

In line with the Council resolution, the information from the Oculus study has been used in the assessment of Development Applications where they occur on land identified as containing vegetation of a high conservation status, or to inform management options for land in a designated bush fire protection zone or buffer.

INSTABILITY RISK ZONING – COFFEY PARTNERS INTERNATIONAL PTY LTD. MAY 1991

A study was undertaken in 1990 to allow designation of zones within the City according to levels of risk with respect to land instability and erosion potential. The study was to assist in the assessment and determination of Development and Building Applications.
The Report identified low, medium and high risk zones in Ryde.

The results of the study were summarised on a map (see 75) and recommendations provided as to the likelihood of slope failure and the nature of reports needed to be submitted with any Development Application for these areas.

A further report on Instability Risk Zones was undertaken in July 2002 and June 2003 by Geotechnique Pty Ltd. The aim of the report was to update information that had been received in 1991 and provide information on additional areas that appeared not have been covered or identified in the 1990 report.

The information on instability risk zoning is used by Council in the assessment of Development Applications, Exempt and Complying development and in development of strategic plans and policies.

BIOSPHERE ENVIRONMENTAL CONSULTANTS PTY LTD – FLORA AND FAUNA STUDIES

CoR commissioned Biosphere in 2006 to undertake systematic surveys to identify, list and map indigenous and exotic flora and fauna in 54 bushland parks and reserves within the City of Ryde. Identification and mapping of vegetation communities in the three reports prepared by Biosphere was undertaken in line with the NSW Department of Environment and Climate Change diagnostic species lists for determining vegetation communities at that time (Tozer 2003). The reports are part of a long-term assessment and management program for bushland reserves in the City of Ryde. An initial aim of the surveys was to provide standardised “baseline” information about the biodiversity in each of the 54 reserves. Comments on remnant fauna from the 3 year study are found in section 3.2 of this Report.

The first of the Biosphere studies of flora and fauna was completed in 2006 and has targeted the following four parks and reserves: Brush Farm, Lambert Park, Darvall Park and Field of Mars Reserve Wildlife Refuge.

The second report covers studies completed in 2007 and includes the following 15 parks and reserves:

- Terrys Creek catchment: Forrester Park; Forsyth Park; Pembroke Park; Lucknow Park; Somerset Reserve; Ivanhoe Reserve
- Buffalo Creek catchment: Barton Reserve; Burrows Park; Minga Reserve; Pidding Park (and data from the Field of Mars Reserve complementary to data from the 2006 Report)
- Kittys Creek catchment: Kittys Creek Reserve; Martin Reserve; Portius Park; Pryor Park
- Parramatta River foreshore: Memorial Park

The third report includes survey results from studies completed in 2008 from an additional 35 parks and reserves, as listed below:

In 2008 CoR commissioned EcoLogical Australia to undertake an Environmental Planning Strategy for the City of Ryde.

The Strategy was informed by a series of Issues Papers on the following themes:-

- Biodiversity
- Bushfire
- Riparian Lands
- Water Quality
- Acid Sulphate Soils
- Land Stability
- Air Quality
- Noise
- Sustainability
EcoLogical combined the major findings from each of the Issues Papers into an overarching Environmental Planning Strategy. This document contained a discussion about each of the major themes and recommendations for consideration and incorporation in this Environment Study and in the proposed new LEP and its accompanying DCPs’, strategies, plans and programs.

EASTWOOD FLOOD STUDY

In NSW, councils have prime responsibility for local planning and the management of flood liable land. The State Government has developed and adopted a Flood Prone Land Policy and issued a Floodplain Development Manual to assist councils in managing flood impacts. The Policy is directed at providing solutions to existing flood problems and to ensure that new development is compatible with flood hazard and does not create additional flood problems.

Flooding problems within Eastwood town centre and other areas within the Terry’s Creek catchment are well documented. Significant flooding problems were experienced in Eastwood and environs in 1967, 1984 and 1989. It is estimated that over 70 houses or commercial properties experienced above floor flooding in the November 1984 flood.

The City of Ryde opted to commence a detailed floodplain risk management planning process in Eastwood and the Terry’s Creek catchment, in accordance with the State Government’s Flood Prone Land Policy. The process is in four parts:-

1. Flood Study – to define the nature and extent of flooding;
2. Floodplain Risk Management Study – a detailed evaluation of options for managing flood impacts on existing and proposed development;
3. Floodplain Risk Management Plan – a Plan adopted by CoR to manage and mitigate flood impacts on people and property over the short to long term.
4. Implementation Plan – a Plan outlining a staged program of priority works and activities to address flood risk in Eastwood and Terry’s creek catchment.

The Study process has been overseen by the Eastwood and Terry’s Creek Floodplain Management Committee, consisting of councillors, Council staff and representatives from major stakeholder groups (eg DECCW, SES and Sydney Water Corporation).

The Eastwood and Terrys Creek Floodplain Risk Management Strategy and Plan was adopted by Council in October 2009.

5.3.8 GOVERNMENT POLICIES AND REQUIREMENTS

DEPARTMENT OF ENVIRONMENT, CLIMATE CHANGE AND WATER (DECCW)

DECCW has prepared a document entitled “Guidelines for Strategic Planning for the Metropolitan Sydney Area”. The guidelines provide assistance to councils in addressing biodiversity, environmental protection, natural resources management and natural hazards management.
The Guidelines are designed to help councils to prepare their Local Plans and LEPs. DECCW recognises that LEPs are a key mechanism for the identification and protection of environmental and conservation values through strategic planning and development control.

DEPARTMENT OF PLANNING – PLANNING CIRCULARS AND PLANNING PRACTICE NOTES

The Department of Planning has released a number of planning circulars and practice notes providing guidance on the way in which the Standard LEP is to be used in the development of new Local Environmental Plans.

Particular planning notes that are relevant to the Environment Study and the comprehensive LEP include the following:

- PN 09-005 Local environmental plan zone objectives
- PN 09-002 Environmental Protection Zones
- PN 06-002 Preparing LEPs using the standard instrument, standard zones

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 – SECTION 117 DIRECTIONS

Section 117 of the EP&A Act allows the Minister for Planning to give directions to councils regarding the principles, aims, objectives or policies to be achieved or given effect to in the preparation of draft LEPs. They are therefore an important statutory requirement. Issues relating to consistency with section 117 directions must be settled before draft LEPs can be certified for exhibition.

Section 117 Directions relating to environmental issues in Ryde are as follows:

- 2.1 Environmental Protection Zones
- 4.1 Acid Sulphate Soils
- 4.3 Flood Prone Land
- 4.4 Planning for Bushfire Protection
- 7.1 Implementation of the Metropolitan Strategy.

STATE ENVIRONMENTAL PLANNING POLICIES

State environmental planning policies (SEPPs) deal with issues significant to the state. They are made by the Minister for Planning. The following SEPPs apply to the City of Ryde and relate to environmental issues.

SEPP (Building Sustainability Index: BASIX) 2004 – Gazetted 25 June 2004

This SEPP operates in conjunction with Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Regulation amendment in 2004.
Environment &
Open Space

SEPP No. 19 - Bushland in Urban Areas – Gazetted 24 October 1986

This SEPP protects and preserves bushland within certain urban areas, as part of the natural heritage or for recreational, educational and scientific purposes. The policy is designed to protect bushland in public open space zones and reservations, and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

Deemed SEPP no 27 Parramatta River (originally gazetted as a SREP in 2001?)

The Department of Planning commissioned a series of regional strategies and plans for Sydney Harbour and Parramatta River Estuary, providing guidance on a range of catchment and foreshores protection issues.

OTHER STATE LEGISLATION, PLANS AND GUIDELINES

Both the Commonwealth and State Governments have developed numerous pieces of legislation relating to environmental issues and areas, many of which are relevant to the content, objectives and/or recommendations in this Environment Study.

Examples include:-

- Catchment Management Authorities Act (2003)
- Threatened Species Conservation Act (1995)
- Contaminated Lands Management Act (1997)

State Agencies have also issued various guidelines and policies on issues ranging from flooding and riparian zone protection through to the construction of sustainable commercial buildings. The approach advocated in many of these guidelines has informed the development of this Environment Strategy and its recommendations.

5.3.9 OTHER RELEVANT INITIATIVES

GREEN STAR

In addition to the BASIX SEPP outlined in 3.8.4 above, the Green Building Council of Australia (GBCA) has created the Green Star national environmental rating system, for use in the evaluation of environmental design and construction of buildings. The Green Star system is administered by the GBCA.

The tool was first developed for commercial buildings and has since been extended to include retail, multi-unit residential, health care and education buildings. The rating is a two staged process – Office Design and As Built. Both tools rate the predicted performance of a building in the following 8 areas of environmental performance:-

Management, indoor environment quality, energy, transport, water, materials, land use and ecology, emissions and innovation. Buildings are designed to achieve a rating between 4 green stars (best practice) and 6 green stars (world leadership).
NATIONAL AUSTRALIAN BUILT ENVIRONMENT RATING SYSTEM (NABERS)

NABERS is a post construction, performance-based rating system which can be used to evaluate the extent to which a building has achieved the performance anticipated by its Green Star rating. It is a national initiative managed by the NSW DECCW.

The NABERS system was originally designed for commercial buildings and has now been extended to include residential, retail and hotel development. It measures the amount of energy and water used by the building per year, as well as the quality of the indoor environment and the quantity and type of waste generated. It therefore “captures” the way the building is being operated and managed on an on-going basis, rather than relying on design criteria and performance expectations.

The NABERS system rates a building’s performance from 1 star (poor) to 5 star (best building performance).
5.4 ENVIRONMENTAL ISSUES AND RECOMMENDATIONS

5.4.1 INTRODUCTION

This chapter contains a more detailed assessment of each of the 12 environmental areas under consideration in this Study, with each section structured as follows:

- issues and concerns
- recommended actions for consideration in the following:
  1. LEP
  2. DCPs, and/or
  3. other CoR guidelines, plans and programs

**Tier 1** recommendations have been developed for consideration in the short term by the Local Strategy team (i.e. during 2010 and 2011), in consultation with relevant CoR units with operational responsibilities for each environmental area e.g. Environment, Catchments, Parks.

It is anticipated that many of these recommended actions will be incorporated in the finalised Local Study and will be given expression as clauses in the LEP 2011.

**Tier 2** recommendations have been developed for consideration as possible amendments to the City’s DCP to be undertaken in the short to medium term (e.g. 2011–2013).

**Tier 3** recommendations mostly relate to existing or proposed programs being undertaken by other parts of CoR and/or external stakeholders.

The tier 3 programs are identified because they are an “implementation mechanism” to deliver results on the ground. They should, however, be viewed as recommendations only and should not be perceived as CoR commitments at this early stage.

The 12 environment areas considered in Chapter 4 are:

- Ecologically Sustainable Development
- Biodiversity
- Riparian Lands
- Air Quality
- Noise
- Receiving water quality
- Flooding and Stormwater quantity
- Bushfire
- Climate Change
- Acid Sulphate Soils
- Land Stability
- Waste
5.4.2 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

Issues

The achievement of ecologically sustainable development (ESD) in Australia is an overarching policy objective at federal, state and local government level. This Study has used a commonly accepted summary definition of ESD which is “development which meets the needs of current generations without compromising the ability for future generations to meet their own needs”.

The more comprehensive definition of ESD which appears on the Federal Department of Environment website – National Strategy for Ecologically Sustainable Development (1992) is as follows: ‘using, conserving and enhancing the community’s resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.’

ESD is supported by four guiding principles:-

- The precautionary principle
- Intergenerational equity
- Conservation of biodiversity
- Full cost accounting of all materials (see NSW POEO Act)

In NSW the basic tenants of ESD and its four guiding principles have been incorporated into a raft of policy and legislation including the NSW State Plan, the Sydney Metropolitan Strategy, Environmental Planning and Assessment Act, Protection of the Environment Operations Act, Local Government Act.

In the last decade the importance and urgency of achieving ESD is gaining acceptance amongst the community as a whole, due to the increasingly serious predictions of accelerating climate change and the very significant social, economic and environmental consequences associated with it. The challenge of living more sustainably is now accorded equal significance, in political terms, to traditional challenges such as education, defence and health services.

The results of the community consultation for the Ryde 2030 Community Strategic Plan illustrate the community’s aspirations in the area of sustainable living. Ryde residents value their “natural” environment in Ryde. They want to protect it and enjoy it in a way which is sustainable. Socially people are striving for the “local neighbourhood” feel. They aspire to live and/or work in a place which is connected, socially cohesive, attractive and safe. Economically, Ryde residents are looking for reliable and fulfilling jobs which meet their needs in terms of job security, working conditions, professional development, income and work/life balance. In an increasingly congested Sydney, many people aspire to work close to home to minimise the time, cost and “hassle” of extended commuting by car or public transport. Ryde “leads the field” in this regard in Metropolitan Sydney, with 22% of Ryde residents working within the LGA, compared to an average of 8% to 14%.

The challenge for councils such as the City of Ryde is to incorporate ESD objectives into statutory planning instruments, strategies, plans and guidelines to achieve sustainability outcomes “on the ground” in Ryde. One of the challenges in this process is to keep up to date with the rapidly evolving area of sustainability.
In summary, the ESD objective at Ryde is to:-

1. develop and implement plans, strategies and programs to minimise the ecological footprint of people in Ryde (residents, workers, students and visitors) and
2. mitigate impacts on them from unsustainable activities and processes eg traffic congestion, air and water pollution, climate change, weed infestation and noise.

The CoR Management Plan (Key environmental outcomes E1 to E8) provides a good platform to support ESD within Council, particularly in relation to some of the priority works and activities identified for implementation in Ryde. Other strategic documents which identify ESD as a core objective include the CoR Environment Strategy (2007-2010), State of the Environment Report and Integrated Transport and Land use Strategy (2008).

The Local Study provides the basic foundation for the strategic planning and development control framework to achieve ESD through the development process, with each of its component parts such as “Centres and Corridors”, “Housing” and “Transport” making a contribution.

This Environment Study addresses the challenge of ESD from an environmental perspective by separating Ryde’s “living environment” into its constituent parts such as riparian areas, water, and air. It recommends ways to achieve ESD outcomes in each of these areas through effective and integrated environmental planning and development control.

Implementation of the recommendations in the Environment Study will help to achieve the following ESD outcomes:-

- best practice energy and water management
- protection and enhancement of biodiversity and ecological health (land and water)
- cleaner air
- enhanced local amenity
- best practice waste management
- appropriate bush land management and bush fire protection
- protection from the long-term impacts of climate change eg rising sea levels

To address ecologically sustainable development from a land use planning and development approach, the following recommendations are proposed:-

**Recommendations**

**LEP**

1. The “aims” of the new LEP to include a new clause that addresses the need for ecologically sustainable development.

2. A local provision to be included in the new LEP stating that 4 green stars (GBCA star rating) is a minimum standard for development for all types of buildings which can be assessed using the relevant GBCA assessment tool > 1,500 sqm.
DCP

1. **Review Energy Smart section of the City of Ryde DCP (section 7.1)** to ensure adoption of best practice controls and design standards to mitigate generation of greenhouse gases and other sources of air pollution from all building types.

2. **The DCP section for the town centres to be reviewed and amended to include controls that support the LEP clause for 4 green star (GBCA star rating) and provide guidance on the use of the incentive provisions.**

3. **The DCP section for the town centres and corridors to be reviewed and amended to include controls that support transit orientated development and pedestrian-friendly precincts to facilitate a reduction in car dependency and increased active transport and public transport use.**

**Other activities**

1. **Partner with development stakeholders, land owners and land user groups to achieve measurable ESD outcomes through development in Ryde eg commercial developers in Macquarie Park, neighbourhood groups, business associations, agency landowners eg Macquarie University (MQU), Dept. Housing.**

2. **Work with the GBCA and other key stakeholder groups eg DECCW, major commercial landowners, MQU, Macquarie Park Forum on the viability of establishing “green precincts” in Ryde eg Macquarie Park.**

3. **Provide information, training, advice and support (eg fact sheets, information sessions) to assist building owners and occupants to understand the challenge of living sustainably and to actively pursue ways of reducing their ecological footprint, with a particular focus on youth.**

4. **Seek sources of funding to support the development and implementation of ESD programs and initiatives involving target groups (eg major landowners) throughout Ryde.**

5.4.3 **BIODIVERSITY**

**Issues**

Ryde is fortunate to have an impressive variety of remnant bushland, saline foreshore and riparian areas, many of which have significant biodiversity value (see figure 15). Local ecosystems include shale forests transitioning to sandstone woodlands, gully forests, mangroves, salt marshes and seagrasses. In Ryde there are a number of state and nationally listed threatened species and ecological communities.

None of the natural areas in Ryde are free from disturbance. Some vegetation communities have disappeared completely following European settlement eg tall heath and native grasslands. Most native fauna groups have declined in diversity, with the most seriously affected groups being ground-dwelling mammals, large reptiles, native fish and frogs. The fauna groups that are still well represented in the area are forest and woodland birds, with Terrys Creek bushland providing an important stop-over area for migrating birds. Lane Cove National Park is part of a regional corridor linking reserves and large tracts of vegetation to the northwest.

Biodiversity in Ryde is subject to a range of threats. This includes edge effects such as weed infestation, feral animals, non-native predatory birds (eg Indian Mynas), night light pollution, development pressures, bushland fragmentation and genetic isolation. In addition, riparian areas and receiving waters suffer from a range of catchment impacts. These range from changes to creek flow and increased channel erosion, siltation, pollution from stormwater run-off and sewer overflows, weed infestation and destruction of in-stream habitats.

These threats and impacts are being addressed by the City of Ryde through a number of programs and plans of management, as summarised in section 3.
Environment & Open Space

Figure 5.17 Vegetation Communities in Ryde

Department of Planning (2005) Sydney Harbour Foreshores and Waterways Area Development Control Plan

Client: Ryde City Council Project No.: 196-01

City of Ryde Local Planning Study
This section makes a number of recommendations to support and strengthen Council’s capacity to protect the City’s biodiversity through its strategic planning and development control activities.

**Recommendations**

**LEP**

1. Continue to support the E1 zoning for land owned or managed by NPWS in the LGA eg Lane Cove National Park and Wallumatta Reserve.

**DCP**

1. Review and enhance DCP 2010 (eg Section 9.6 Tree Preservation, Section 4.5 Macquarie Park) to strengthen the controls relating to biodiversity eg deep soil-planting and landscaping on private and public land.

**Other activities**

1. Encourage the establishment and/or consolidation of linkage programs to support the creation of ecological corridors, both within the LGA and to adjacent areas, in particular Lane Cove River National Park. This can include community lands plans of management, strategies for riparian lands (including foreshores improvements and links) and the Catchment Connections project.

2. Develop and/or continue to support strategies to enhance and manage vegetation communities in other parts of Ryde (outside of E1 and E2 zoned areas) which are recognised in appropriate studies and reports as being of value to the community.

Figure 5.18 Undisturbed native vegetation, Mars Creek
5.4.4 RIPARIAN AREAS

Issues

The City of Ryde is bound to the north, east and south by two rivers. The Parramatta River to the south is the most definitive boundary. Lane Cove River and its tributary, Terrys Creek form the boundary between Ryde, Ku-ring-gai and Hornsby LGAs.

Not only do the rivers provide the City of Ryde with two of its principal boundaries, but they are also a major contributor to its identity as a “green” suburb in Sydney’s Inner North. Residents in Ryde enjoy easy access to the foreshores of these two significant rivers and their estuaries.

The riparian lands in Ryde contain the majority of Ryde’s threatened species and ecological communities. These areas, in particular Lane Cove National Park, form important natural corridors and provide landscape connectivity throughout the inner north region. Riparian areas are also important for protecting water quality by reducing run-off and intercepting suspended solids and nutrients before they enter receiving waters.

A number of riparian management issues are evident within Ryde, including:

- concentration of weed species;
- nutrient loading of stormwater discharging to bushland;
- loss of ephemeral freshwater habitat;
- changes in flow patterns of creeks caused by stormwater control, sediment loading;
- engineered impacts on urban streams eg pedestrian and road bridges, channelling, concrete reinforcement of creek banks;
- erosion of creek banks, as a result of stormwater management, pedestrian access, in-stream and riparian works;
- mangrove and development encroachment on Coastal Saltmarsh.

NB Coastal Salt Marsh in the Sydney Basin is listed as an Endangered Ecological Community under the Threatened Species Conservation Act.

The Department of Water and Energy (DWE) requires councils to classify riparian lands according to DWE’s standard stream categorisation, including the application of buffer zones. DWE Guidelines recommend an inner and outer riparian zone of 20ms and 40 ms respectively.

This requirement establishes core riparian zones (CRZs) from the top of the stream bank. The guidelines also require a native vegetation buffer with a recommended minimum width of 20 ms from the stream bank in upper stream sections and 40 ms in the middle and lower sections.

It is unrealistic to apply the CRZ requirements to many of the urban creeks in the Ryde LGA, because they are already highly disturbed and are located in a predominantly suburban setting. There is however potential for implementing the principles of the CRZ for Parramatta River, Lane Cove River, sections of Terrys Creek and other relatively intact creek corridors.
Figure 5.19  Condition of Riparian Areas in City of Ryde
The condition of creeks within the City of Ryde has been mapped under the Sydney Metropolitan Waterways Health Strategy and summarised in the Figure 18 (above).

There is insufficient detailed information available on many of the riparian areas in Ryde, which limits Council’s ability to develop sufficiently detailed maps of all riparian areas and recommended approaches to manage them appropriately. The necessary level of information is however available for Shrimptons Creek and Buffalo Creek.

The protection and conservation of the City’s riparian areas through strategic planning and development control needs to be undertaken in stages as/when the necessary detailed survey and mapping work is completed.

The following recommendations are proposed to advance the process of conserving and enhancing riparian areas in the City of Ryde through the planning and development control process:-

**Recommendations**

**LEP**

*No amendments required at this stage.*

**DCP**

*No recommendations at this stage.*

**Other activities**

1. *Undertake further investigation and analysis of all riparian areas in Ryde (including the generation of necessary maps) to inform creek management and the protection and management of riparian areas.*

2. *Develop Riparian Area Guidelines for incorporation in the DCP to deliver development outcomes to protect and enhance riparian areas in Ryde through the implementation of WSUD and other approaches (see section 4.7).*

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Figure 5.20 Shrimptons Creek passing under Waterloo Road, Macquarie Park
5.4.5 AIR QUALITY

Issues

External air quality in urban areas is an important environmental planning consideration because poor air quality can impact significantly on human and ecological health. Direct health impacts include increased risk of respiratory illness and associated conditions which can lead to chronic health issues (e.g., asthma) and increased mortality. Poor air quality can also impact on ecological processes locally and/or contribute to greenhouse gas impacts at a regional or national level (see section 4.1 – Ecologically Sustainable Development). Odours also impact on amenity.

Because of its location in the Inner North, the City of Ryde is affected by air quality impacts from within the LGA and also from the Sydney region as a whole, particularly vehicle emissions generated by the many tens of thousands of vehicles passing through Ryde each day on major arterial routes such as the M2 Motorway, Victoria, Epping and Lane Cove Roads. Air quality impacts in Ryde are also affected (positively and negatively) by regional airshed movements.

Both the Metropolitan Strategy and Inner North Subregional Strategy contain targets for improving regional air quality which reflect long-standing objectives in the Government’s “Action for Air” Strategy and supporting objectives in the Metropolitan Strategy, for example its objectives relating to Centres, Corridors and Transport.

The City of Ryde has translated these regional goals into a range of strategies, plans and programs ranging from the ITLUS (Integrated Traffic and Land Use Strategy) and the Greenhouse Gas Reduction Plan through to programs such as the Energywise DCP and implementation programs to reduce back yard burning and buy-back fridges.

The COR Management Plan (key objectives E1 to E8) also focuses to a considerable degree on issues which directly or indirectly affect air quality.

Figure 5.21 Traffic on Lane Cove Road, Macquarie Park

The Local Study and its various sub-strategies and studies (including this Environment Study) present an opportunity to reduce impacts and improve air quality through a combination of planning and development control measures, including:

- Controls and guidelines to reduce energy consumption and the resulting production of greenhouse gases eg guidelines to support energy efficient building design and operation.
- Facilitation of transit orientated development and walkable neighbourhoods to increase active transport and public transport use and reduce the vehicle kms travelled in Ryde every day (and the air quality impacts arising).
- Measures which support the “greening” of Ryde eg through protection and enhancement of vegetated areas, to help minimise air quality impacts from a range of sources including dust and CO2 emissions.
- Regulation and enforcement to reduce air pollution from various sources in the community, including industry, back yard burning, smoky vehicles and bush fire management.
Environment &
Open Space

Clearly there are strong links between the air quality section of this Environment Study and other elements of the Local Study, in particular the local studies relating to Centres and Corridors, Open Space and Transport.

The recommendations in this section focus on air quality issues associated with the built form and development activity.

**Recommendations**

**LEP**

As per LEP recommendations for ESD section 5.4.2.

**DCP**

As per DCP recommendations for ESD section 5.4.2.

**5.4.6 NOISE**

**Issues**

The World Health Organisation defines community noise as follows – “community noise includes the primary sources of road, rail and air traffic, industries, construction and public works and the neighbourhood”.

Impacts on amenity and human health resulting from noise include:

- annoyance
- interferes with social behaviour and verbal communication
- sleep disturbance (and all associated health and social consequences)
- performance at work and school

Studies show that environmental noise is having an increasing effect on the community because of higher residential densities and traffic volumes. It is estimated that 1.5 million Sydney residents (a third of the population) are exposed to outdoor noise levels which may affect sleep and amenity. The OECD defines this as noise in the range of 55 to 65 decibels (dBA). The studies show that residencies in Sydney fronting major arterial roads and rail corridors experience elevated noise levels and resulting amenity impacts. Studies within Ryde have verified that noise levels along some road corridors (eg Lane Cove Tunnel entry/exit, M2) have noise levels between 55 and 65 dBA.

Clause 102 of the SEPP (Infrastructure) 2007 requires certain types of development next to roads with more than 40,000 AADT (average annual daily traffic) to have specific layout and design features incorporated to ensure that noise levels in any bedroom are less than 35 dBA and less than 40 dBA in all other rooms in the building.

In the SEPP the categories of development include housing, child care centres, schools, hospitals and places of worship.

The following major arterial roads in Ryde exceed 40,000 AADT

- Victoria Rd at Adelaide St
- Epping Rd at Wicks Rd
- Lane Cove Rd at Delhi Rd
- Church St at Junction St
- Blaxland Rd at Victoria Rd

There is a quite comprehensive range of planning guidelines issued by the State Government to more effectively manage noise through environmental and land use planning and development control eg Noise Guide for Local Government (DEC 2004) . Guidelines at a local level are, however, patchy. Some CoR strategies and plans take account of noise eg City of Ryde DCP Delhi Rd, which requires setbacks and landscaping at certain locations along Delhi Road.

Early findings from the Ryde 2030 Community Plan survey show that the community is very concerned about local urban amenity and the impacts on it, in particularly traffic noise. The community is keen for Council to implement strategies, plans and programs...
to protect and enhance local neighbourhood amenity, particularly in those parts of Ryde undergoing rapid change, redevelopment and urban consolidation. The community expects that best practice urban design and sustainability measures will be developed and implemented by the CoR to protect amenity and maintain/improve the quality of life in urban areas in Ryde.

The recommendations in this Environment Study relating to noise can complement and/or enhance recommendations in other sections of the Study, for example air quality and sustainability. They also relate closely to other sections of the Local Study such as Centres and Corridors, Open Space, and Transport.

Recommendations

**LEP**

No amendments required at this stage. The State Government has drafted noise guidelines for major corridors. It is recommended that these be applied to all residential development along rail lines and major roads, as defined in the Guidelines e.g. > 40,000 AADT (average annual daily traffic).

**DCP**

No further recommendations

**Other programs**

No further recommendations

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**Figure 5.22**  
Construction activity can be a major source of noise
Environment & Open Space

5.4.7 RECEIVING WATER QUALITY

Issues

A defining feature of the Ryde LGA is its physical and social connection to the Parramatta and Lane Cove Rivers. These regionally significant waterways form major estuarine sections of Sydney Harbour.

The responsibility for managing these rivers, creeks and estuaries and their respective catchment areas is shared between various Councils (including CoR) and state agencies.

The rivers and estuaries contain a number of ecologically sensitive areas within, or downstream of the Ryde LGA, including Coastal Saltmarsh which is listed as an endangered ecological community under the Threatened Species Conservation Act 1995 and Seagrass, an important nursery habitat for young fish which is protected under the Fisheries Management Act 1994.

The catchments also contain various areas of terrestrial ecological significance such as Lane Cove National Park and significant freshwater riparian and/or wetland areas.

There are three principal factors which impact on receiving water quality in urbanised catchments, all of which are exacerbated by low rainfall and drought periods.

**Urban development** causes loss of riparian vegetation and native fauna, altered flow rates and the introduction of exotic species, all of which lead to the reduction of ecosystem function and poor water quality.

**Stormwater pollution** reduces water quality through increased nutrient and sediment loads, gross pollutants and toxic elements in stormwater run-off.

**Sewer overflows** reduce water quality through increased nutrients and bacteria leading to algal growth, reduced oxygen, increased turbidity and toxicity.
City of Ryde is addressing receiving water quality in Ryde through a variety of programs and activities. This includes capital works, parks management, ecosystem management, stormwater asset management, regulation and enforcement. Various planning and development control approaches are recommended in this section to complement the measures outlined above.

**Recommendations**

**LEP**

The new LEP to include a clause relating to stormwater quality. The objective of the clause is to ensure that stormwater is managed in a way which "minimises stormwater quality impacts on receiving waters, riparian areas and areas of high biodiversity value and helps contribute to the maintenance and restoration of environmental qualities and waterways health".

Note: The provisions of the clause would relate to the WSUD (water sensitive urban design) section of the CoR DCP 2010.

The clause is to apply to all development above a certain size (ie) 6 or more townhouses/villas, other development of four storeys or more, and/or development with a floor space of more than 2,000 sqm.

**DCP**

1. **Introduce a Water Sensitive Urban Design (WSUD) section of the CoR DCP.**

   Note: The WSUD DCP could contain detailed guidelines and case study approaches to achieve the following objectives:-
   
   a) protection and enhancement of natural water systems (creeks, rivers, wetlands etc);
   b) treating urban stormwater to meet water quality objectives for reuse and/or discharge to receiving waters;
   c) matching the natural water runoff regime as closely as possible (where appropriate)
   d) reducing potable water demand through water efficient fittings and appliances, rainwater harvesting and wastewater reuse;
   e) minimising wastewater generation and treatment of wastewater to a standard suitable for effluent reuse opportunities and
   f) integrating stormwater management into the landscape, creating multiple use corridors that maximise the visual and recreational amenity of urban development.

The WSUD DCP could have the following stormwater and waterway stability management targets:-

- 90% reduction in the post development mean annual load of total gross pollutant loads (greater than 5 mm).
- 85% reduction in the post development mean annual load of Total Suspended Solids (TSS).
- 60% reduction in the post development mean annual load of Total Phosphorus (TP).
- 45% reduction in the post development mean annual load of Total Nitrogen (TN).
- For development in catchments flowing directly to category 1 and 2 waterways, match the post-development 1 year ARI peak flow to that of the pre-development scenario from the outlet of the site. This can be achieved through appropriate OSD controls.
Environment & Open Space

2. Update and/or revise other relevant sections of the CoR DCP, where necessary to encourage water sensitive urban design solutions for storm water management eg:
   - Section 4.5 Macquarie Park
   - Section 7.1 Energy Smart, Waterwise
   - Section 8.2 Stormwater management
   - Section 8.3 Floodplain management

Other activities

1. Revise CoR public domain manuals, strategy documents, work practice manuals, design specifications and guidelines to incorporate WSUD objectives and practices.

2. Training for CoR planning and operations staff on WSUD.

   Note: There is potential to work with Council’s Public Works Group to develop a program to update, revise or replace work practice manuals, design specifications (eg for road drainage) to incorporate WSUD best practice.

3. Preparation of Information Sheets on stormwater quantity and WSUD.

4. An education and community program about WSUD and other water quality programs.

5.4.8 FLOODING AND STORMWATER QUANTITY

Issues

Overland flow paths, waterways and natural creek lines have played a significant role in shaping the pattern of settlement in Ryde and the location, nature and function of buildings and public infrastructure. Avoiding the risk of stormwater inundation and the resulting economic and social impacts is a priority objective for the planning instruments, strategies and guidelines administered by the City of Ryde.

The topography, soils and catchment characteristics of Ryde can generate significant storm run-off and flooding, as evidenced by the documented major floods affecting Eastwood, Macquarie Park and other areas of Ryde in 1967, November 1984 and February 1990.

In addition to risks to people and property, stormwater run-off and flooding generate considerable environmental and water quality impacts in riparian zones (which are typically overland flow paths) and receiving waters downstream.

Traditional approaches to stormwater management rely on “hard” engineered works to protect property and people and to shift stormwater off-site and downstream as quickly and efficiently as possible. In a highly urbanised area such as Ryde, the cumulative impacts of this traditional approach can exacerbate flooding impacts downstream and impact significantly on bushland and riparian areas, creek corridors, receiving water quality and the ecological health of streams, rivers and aquatic environments.

In recent years new approaches to stormwater have challenged the traditional “hard” engineering approach, through the introduction of on-site detention and other controls to reduce the downstream impacts of stormwater flows. In some situations, the construction of stormwater quantity measures can also generate stormwater quality
improvements, for example through the implementation of vegetated overland flow paths, swales and in some cases, retention basins and artificial wetlands.

The NSW State Government has initiated a major program to encourage local councils to undertake a sophisticated process of flood plain risk management analysis and planning. Concerns about increased storm intensity, run-off and sea level rise associated with climate change has also provided the impetus for local councils to revise their approach to stormwater management and the design of buildings and stormwater management infrastructure.

The advent of water sensitive urban design in the last decade has changed stormwater management significantly. New integrated approaches are being designed and implemented to achieve stormwater quantity and quality outcomes in a manner which is sensitive to the challenges of climate change.

**Planning and development controls relating to flooding and stormwater management in Ryde**

At present CoR has generic and quite broad planning provisions in the LEP and DCP relating to development activity in most of Ryde, and the mitigation measures generally required to protect development and some adjoining areas from flooding and stormwater inundation. More tailored provisions have, however, been developed for the Eastwood and Terrys Creek catchment (see below).

Council is undertaking a major review of flooding and stormwater management in accordance with the State Government’s Flood Land Policy (Flood Plain Planning Guidelines and Flood Plain Development Manual).

Council has commenced this process with a detailed flood study, risk assessment and flood plain risk management plan for the Eastwood/Terrys Creek Catchment.

Some more specific controls have been subsequently incorporated into LEP 2010 (clause 6.4) relating to development activity in the Eastwood Town Centre.

The proposal is to incorporate these generic provisions on flooding into DLEP 2011, starting with the Eastwood/Terrys Creek catchment.

Over time the LEP clause will be extended to other catchments, once the detailed flood modelling and flood risk management planning process has been completed.
The following recommendations address the issues discussed above:-

**Recommendations**

**LEP**

Incorporate the Eastwood/Terrys Creek flood planning model clause into LEP 2011. This new clause would replace the clause 6.4 LEP 2010 “Eastwood Urban Village – Development Intensification” (this clause restricts development activity due to flooding and stormwater issues).

*Note: The clause will apply to Eastwood/Terrys Creek Catchment initially and may be extended to other catchments on the completion of the flood plain management program outlined in the State Government’s Flood Planning Guidelines.*

**DCP**

1. Prepare a section in DCP 2010 (Ryde Draft DCP section 8.3), relating to development activity and flood plain management. The provisions in the DCP would be based on the proposed DCP within the “Eastwood and Terrys Creek- Flood Plain Risk Management Study and Plan”. The DCP could develop a refined set of controls to manage flooding risk and impacts on the full spectrum of land-uses.

2. Based on the provisions of the Flood Plain Management DCP, a revision of other relevant CoR DCPs will be required to ensure compliance with the flood plain planning.

**Other activities**

Preparation of plain English information materials for owners and/or occupants of property in the flood plain re: the outcomes of the flood plain management planning process, issues arising and consequences for building owners/occupants, developers and/or the broader community in areas at risk of flooding.

**5.4.9 BUSHFIRE**

**Issues**

Bushfire Prone Land maps are required under s146 of the EP&A Act and need to be updated and reviewed by the NSW Rural Fire Service (RFS) every 5 years. They trigger development assessment provisions for areas that are, by virtue of their proximity to a bushfire hazard, at significant risk in the event of a bushfire. The area designated as bush fire prone land includes a buffer that extends beyond areas that may be directly affected by bushfire. This buffer area helps protect against ember attack, radiant heat, smoke and other factors.

The City of Ryde Bushfire Prone Land map below was adopted by the RFS in 2007.

As the map illustrates (Fig 24 below), the majority of bush fire prone land in Ryde is adjacent to Lane Cove National Park. There are also some relatively isolated areas of remnant bush land > 1 Ha in other parts of the LGA eg Brush Farm House on the Western edge of the LGA. Often these bush fire prone areas follow creek corridors and development is typically located well above the creek and its strip of remnant bush. This elevated position can make some development in Ryde particularly vulnerable to bush fire risk.
Climate change will increase the bush fire threat in some parts of Ryde because the average number of days with a very high or extreme risk of bushfire will increase. Currently in Sydney the average number of days affected by very high or extreme bush fire risk is 8.7 days and CSIRO estimates that this will increase by 0.4 to 2.4 days in the next decade (ie) up to a third more.

Another issue of concern is smoke impacts on the environment and residential amenity, safety and health associated with back burning or actual bushfires. At certain times of year, bush fire smoke can contribute to quite significant, localised air quality impacts including reduced visibility.

LEP requirements in relation to bushfire need to satisfy requirements articulated by the NSW Rural Fire Service in their guidelines entitled “Planning for Bushfire Protection” 2007. The RFA document is linked to BCA (Building Code of Australia) documents relating to construction of buildings in bushfire prone areas and bushfire planning.

It should be noted that in populated, intensively developed areas such as the City of Ryde, conflicts can emerge when the establishment of bushfire protection buffer areas impacts on the environmental qualities and ecological health of remnant bushland, riparian lands and the flora and fauna within them. Similarly the establishment of buffer areas can result in clearing and/or back burning in areas which provide important open space and habitat. A related issue is the need for asset protection areas (eg buffers) to be established on private land. In some situations this can impact on the extent and ecological health of remnant vegetation on private land, particularly when the regeneration and reproduction of plant species are dependent on heat or smoke induced germination associated with a more frequent fire regime.

The EP&A Act and the guidelines for “Planning for bushfire protection” have put in place a range of planning provisions and processes to protect property, land and people from bush fire risk. This complements the range of measures undertaken by land owners and land managers eg National Parks and Wildlife Service, CoR to minimise bushfire. It is therefore not necessary to develop additional planning provisions within local instruments and documents such as the CoR LEP 2010.

It is, however, recommended that the City of Ryde undertake a number of activities to complement the processes already underway, as outlined overleaf.
Figure 5.25 Bushfire prone areas in Ryde
**Recommendations**

**LEP**

*No further recommendations.*

**DCP**

*No further recommendations.*

**Other activities**

Review the CoR "bushfire prone lands map" in accordance with Rural Fire Service Guidelines, taking into account relevant, available scientific data and current best practice in areas such as:-

- minimising bushfire risk through bush and land management, appropriate built form, urban design etc
- managing bushfire prone areas on public and privately owned land
- managing risk from bush fire in ways which, as far as practicable, minimises conflict with other priorities outlined in this Environment Study eg protection of water quality, maintenance of biodiversity and wildlife corridors etc.

*Note: As appropriate, update bushfire maps on CoRs web site and other web content, including links to Rural Fire Service and other information sources and/or guidelines.*

**5.4.10 CLIMATE CHANGE**

**Issues**

As articulated in section 4.2 above (p39), Council’s approach to ESD reflects the need to (i) reduce the community’s ecological footprint and (ii) minimise the impact on the community from unsustainable activities and processes such as traffic congestion, air and water pollution and climate change.

This section focuses on the consequences of climate change for Ryde’s community and its local environment and makes recommendations about how the consequences can be addressed through environmental planning and other City of Ryde strategies and programs.

Scientific evidence nationally and internationally continues to demonstrate (with increasing certainty) that human induced climate change is happening and the consequences are being revealed in a variety of biophysical ways, for example rising sea levels, more extreme weather events, decline in ecological health eg coral bleaching, and so on. Political debate about what the community could or should do in the face of climate change has intensified over the last few years. A key milestone was achieved in December 2009 when world leaders met in Copenhagen to review the Kyoto Agreement and start negotiating the next phase of international effort to address climate change in an equitable and sustainable manner.
Environment & Open Space

The potential effects of climate change on Sydney are being assessed intensively. This includes sophisticated modelling about expected future changes in sea level and weather patterns. By 2030 (which matches the time period addressed in the Sydney Metropolitan Strategy), average summer temperatures in Sydney are expected to rise by 0.2 to 1.6 degrees Celsius (CSIRO 2007). Models predict that average rainfall will have decreased in Sydney by 13% by 2030, but extreme 1 day to 3 day weather events will increase. Initial studies at State and Federal level indicate that sea level in Sydney Harbour is expected to increase by 18-59 cm over the next 50 to 100 years. There is evidence that this may be a conservative estimate and that sea level rise could be higher within this timeframe (see below).

Climate change is expected to cause a range of impacts and changes to the natural and urban environment in Ryde, including:

- Increased storm surges and flooding, resulting in an increase in risks to people and property and increased environmental damage eg erosion of riparian areas;
- Sea-level rise, resulting in increased erosion of foreshore areas, inundation of low-lying areas eg estuarine wetlands along the Parramatta River and damage to foreshore buildings and structures eg bridges, ferry stops.
- Increased risk of bushfire and an increase in the intensity of bushfires, with subsequent increased risk of damage to people, property and the bushland environment in Ryde.
- Increased heat impacts on buildings, people and the environment (with consequent impacts on both indoor and outdoor amenity).

In environmental planning terms, the challenge is to develop a suite of controls, strategies and guidelines which will help minimise climate change impacts on people, property and the environment in the short to long term.

The State Government is taking steps to address climate change impacts through the strategic planning and development control process. To this end, the NSW Dept of Planning issued a “consultation draft” in October 2009 entitled “draft NSW Coastal Planning Guideline – Adapting to Sea Level Rise”. The guideline was complemented by some supplementary advice in December 2009, provided to councils by the Dept of Environment, Climate Change and Water, which set out requirements for councils to follow when undertaking a range of strategic planning and development control activities.

The advice states that “the NSW Government considers that it is appropriate and requires councils to adopt sea level rise projections of 0.4m at 2050 and 0.9m at 2100 in land planning and other decision making. The use of the Federal Government’s “worst case” projection is not considered appropriate in NSW for decision making by councils”. The advice goes on to confirm that adoption of the sea level rise projections above are sufficient evidence that councils have acted in “good faith” and would therefore receive an exemption from liability under s733 of the Local Government Act 1993.

The recommendations in this Study need to support and complement strategies and programs being developed and implemented by State Government. They also need to link with and complement approaches being developed and implemented by the other units/groups in the City of Ryde and/or external agencies, stakeholders and community groups.

Some of the recommendations in this section relate to the recommendations in other sections of this Study, in particular Biodiversity, Bushfire Management, Stormwater and ESD.

The approaches recommended in this Study focus on issues associated with rising sea levels and the impact this will have on the City’s foreshore, existing development and the demand for future development activity.
Figure 5.26  Predicated sea level rise areas in Ryde
Recommendations

**LEP**

1. A clause is required in the new LEP requiring development within the Foreshore Building Line (clause 6.3) to address level rise projected by the NSW State Government.

**Other**

1. Develop strategic and land use planning guidelines for landowners and developers to manage and reduce risks and impacts of rising sea level on people, property and the environment within the foreshore building line.

2. Using the “Draft Coastal Risk Management Guide” published by DECCW in 2009, identify and confirm the “coastal risk areas” within the City of Ryde and develop appropriate controls and guidelines to (a) reduce intensification of land uses within coastal risk areas, (b) achieve “appropriate” land uses which are compatible with coastal risk areas (c) appropriately manage risks to people, property and the environment arising from any intensification of land uses within coastal areas.
5.4.11  ACID SULPHATE SOILS

Acid sulphate soil is the common name given to naturally occurring pyritic sediments and soils. There are well documented and predictable impacts on soil, groundwater and receiving waters if acid sulphate soils are exposed. Unless managed properly, these impacts can include:

- damage and destruction of vegetation;
- reduction in soil fertility and increased salinity;
- failed soil structure with consequent erosion problems;
- pollution of local ground water and surface water bodies;
- death or disease of fish and destruction of aquatic ecosystems; and
- corrosion of structures, particularly concrete, ferroconcrete, iron, steel and aluminium eg underground pipes, car park structures etc.

The attached map (Fig 29) illustrates the relatively small area of Ryde which is potentially at high risk from acid sulphate soils. It demonstrates that most of the LGA is at low risk of acid sulphate soils. Some areas close to Parramatta and Lane Cove River could however be vulnerable if certain categories of development were to occur, as this could potentially alter groundwater regimes in adjacent lands with greater acid sulphate soil potential.

There are appropriate Acid Sulphate soil provisions in LEP 2010 which reflect State Government Guidelines.
Environment & Open Space

Figure 5.28 Potential high risk acid sulphate soil affected areas in Ryde
Environment & Open Space

Recommendations

LEP

No action recommended.

DCP

No action recommended.

5.4.12 LAND STABILITY

The topography of Ryde is mainly undulating. There are some areas that contain steeply inclined slopes, including a significant ridgeline that extends from Brush Farm Park at Eastwood generally East and South-East to Meadowbank and the Parramatta River.

The geology of Ryde generally consists of eroding Ashfield Shale and in some distinct areas underlying Hawkesbury Sandstone is found eg bordering Lane Cove National Park. The original landform is often overlain with alluvial soils above and adjacent to old and existing creeks and rivers. Numerous geological zones or features of weakness eg shale lenses, exist within the bedrock, contributing to steepness and the potential for slope instability in certain situations/areas.

As a result of the physical conditions described above, slope instability and associated risks to land and property are a concern in certain parts of the Ryde LGA. It is possible that the risk may be exacerbated as a result of the anticipated increase in extreme weather events (eg peak rainfall, flooding, prolonged drought) associated with climate change.

Over the years, various geotechnical investigations have been commissioned by Ryde Council to assess potentially unstable land in the LGA and strategic and statutory planning measures have been developed to manage and mitigate the risk of damage to people and property as a result of unstable land.

The results of these surveys have been summarised in the attached map which shows approximately the area of land in Ryde which could be subject to slope instability under various conditions. This map is to be reviewed in light of additional survey data becoming available eg from geotechnical surveys undertaken for particular development and infrastructure projects.

In summary the literature identifies and defines three broad categories of risk.

1. Low risk zones – natural areas typically sloping at less than 10° or where the surface is underlain by material which is considered to have sufficient strength to have a risk of slope failure that is very low to low. Current studies suggest that geotechnical investigation of developments within these areas are not recommended unless development includes major, down slope modifications.

2. Moderate risk zones – split into three (more specifically defined) moderate risk zones:-
   - M1 – where slopes angles are in excess of 10° and there is evidence of possible slope instability. Current studies suggest that geotechnical assessment of development within this zone is recommended.
   - M2 – where slope angles are in the range of 5° to 10° in areas underlain by shale. Current studies recommend that assessment be undertaken (initially by Council) to determine whether further geotechnical assessment is required.
   - M3 – steep slopes and cliff lines in Hawkesbury Sandstone. Current studies recommend that assessment be undertaken (initially by Council) to determine whether further geotechnical assessment is required. As most of these areas are, however, within the Lane Cover River National Park, it is very unlikely that such assessments will be required.
3. **High Risk zones** – areas of steep slopes and low strength materials, where a higher risk of instability exists. Current studies recommend that geotechnical investigation, including subsurface investigation, be undertaken for development within these zones.

Within the Ryde City Council LGA, land that is at risk of slope instability includes:

- Natural ground where the geological profile is unable to withstand movement due to gravity and other loads that are superimposed upon it.
- Areas within the zone of influence of excavations that are not appropriately retained, battered or supported.
- Filled areas that are not appropriately compacted, retained or battered.

To address the ongoing issue of land stability, the following recommendations are proposed.

**Recommendations**

**LEP**

*No Action recommended*

**DCP**

*No action recommended*

**Other recommendations**

1. **Preparation of fact sheets or similar education materials providing guidance on:**

   - unstable land risk management planning, using the current AGS guidelines (2007) as they apply to the circumstances at Ryde, with a particular focus on Moderate Risk zones M1 and M2.
   - geotechnical assessment requirements for proposed developments, which could include:
     a. Identification of where geotechnical assessment is required, drawing on available data and mapping re: unstable lands in Ryde
     b. A classification system of hazard categories for land which is potentially unstable, with guidelines about the necessary level of geotechnical assessment of risk for various hazard categories
     c. Guidance for the various geotechnical, structural and civil engineering consultants who will be involved in the assessment and management of risk associated with potentially unstable land (including provisions for peer review where appropriate)
   - ongoing maintenance of development associated with potentially unstable land.

2. **Where practicable, undertake further study on land stability in the City of Ryde. This will involve a review of the existing slope instability areas and mapping of risk areas using available geotechnical data and current AGS guidelines.**
Environment & Open Space

Figure 5.29 Potentially unstable land in Ryde
5.4.13 WASTE

The waste management services provided by the City of Ryde include:-

- Collecting, sorting, processing and disposal of putrescible waste, recyclable material (eg cans, cardboard), green and organic waste (eg garden clippings).
- Community education programs about waste management and minimisation
- Control and management of litter and illegal dumping

Each week the City of Ryde collects waste from 38,000 properties in Ryde.

Full cost accounting of all materials is an over-arching principle of ESD in many parts of the world. Policies and practices relating to waste management are an important expression of this over-arching principle and the obligations of the State of NSW in this regard are set out clearly in the Protection of the Environment Operations Act 2003.

It follows that the generation, management and reduction of waste is a key sustainability issue for a highly developed inner city LGA such as the City of Ryde. This is because the impacts of waste generation and management on the community and environment in Ryde can be wide-ranging and long term. Examples include high levels of energy consumption and air pollution (including CO2 emissions) associated with the collection, transport, processing and disposal of waste generated by 100,000 residents in Ryde. Similarly, groundwater and receiving water quality in a highly developed area such as Ryde is vulnerable to impacts from putrescible waste tips, sewer overflows and gross pollutants such as beverage containers and cigarette butts.

The City of Ryde has made significant progress in managing the community’s waste. It achieved the State Government’s target of diverting 44% of waste from landfill by 2008 and the City is on track to achieve the State Government’s stated target of a 66% reduction by 2014 of waste requiring disposal.

The City of Ryde’s Waste Management Strategy (2008) identifies the following key areas to focus on the short to medium term:-

- on-going reduction of waste being disposed to landfill
- improved recovery of recyclable waste, green waste and other resources which can be recovered from the waste stream
- continued promotion of waste minimisation in the community
- continued waste regulation enforcement and policing.

A City of Ryde “waste management operational guideline” has been developed recently which provides a detailed overview of the various new or improved waste management services which are (or will be) developed to achieve results in the key focus areas identified above.
This Environment Study proposes recommendations that will assist in the delivery of the targets set out in the CoR Waste Management Strategy and its supporting documents, in particular section 7.2 of the CoR DCP (2010) “Waste Minimisation and Management.

**Recommendations**

**LEP**

*No action recommended.*

**DCP**

1. **Review section 7.2 of the CoR DCP (2008) - waste management and minimisation, in accordance with DECC’s new “Model Waste Not DCP Chapter 2008”, with a particular focus on:**
   - new guidelines for managing demolition and construction waste.
   - Incorporating the necessary controls and guidelines to foster best practice waste storage, transport and disposal.
   - ensuring that dry recycling systems and services are incorporated in all new multi-unit dwelling developments.

**Other activities**

*Support the continuation of education and promotion work being undertaken across the City of Ryde (eg Waste Unit, Environment Unit, Maintenance Services) to enhance community understanding and implementation of best practice waste minimisation and waste management.*
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OPEN SPACE
5.5 EXISTING SITUATION

This section includes a discussion of demographics for Ryde from 2001 to 2026, and how the evolution of the Ryde population will affect open space use. Existing open space types and amount in the City are described, and there is a comparison with other councils in the Inner North sub-region regarding key needs and directions in open space. Finally there is an overview of the City’s recent strategic open space planning, planning for new open space in centres, parkland planning, and other recent open space upgrades.

5.5.1 DEMOGRAPHICS

Analysing demographic statistics over several years highlights trends that can be useful in open space planning. Statistics such as rate of population increase per suburb, and age and country of birth of residents, help in planning for appropriate locations and types of open space to cater for different types of desired recreation.

Years 2001 to 2006

According to census data comparing the years 2001 and 2006, the total Ryde population is increasing. The percentage of Australian born residents is decreasing and the percentage of overseas born residents is increasing. The number of residents aged 0-4 years is slightly decreasing, those 5-17 years slightly decreasing, 18-64 years increasing, and 65-84 years slightly increasing.

In 2006 nearly 7% of Ryde’s population was born in China (up from 3.9% in 2001). This is the highest proportion of the total overseas born population in the LGA. Nearly one-third (31.6%) of Ryde residents were from non-English speaking backgrounds (up from 28.8% in 2001).

Analysis of the country of birth of the Ryde population in 2006 compared to the Sydney Statistical Division shows that there was a larger proportion of people born overseas, as well as a larger proportion of people from a non-English speaking background. Overall, 37.7% of the population was born overseas, and 31.6% were from a non-English speaking background, compared with 31.8% and 24.0% respectively for the Sydney Statistical Division.

The major differences between Ryde and the Sydney Statistical Division were:

- A larger percentage of people born in China (6.9% compared to 2.7%);
- A larger percentage of people born in Hong Kong (2.7% compared to 0.9%), and;
- A larger percentage of people born in the Republic of South Korea (2.6% compared to 0.8%).

The largest changes in birthplace countries of the population in Ryde between 2001 and 2006 were for those born in:

- China (+ 2,988 persons);
- The Republic of South Korea (+ 469 persons);
- India (+ 437 persons), and;
- United Kingdom (- 401 persons).

Regarding Australian born residents, there were marked differences within the City of Ryde in 2006: Macquarie Park had 40.4%, Top Ryde 46.2%, Eastwood 46.8%, Meadowbank 49.1%, West Ryde 49.5%, Gladesville 66.7% and Putney 72%. It can be seen that Putney and Gladesville are the only areas where the majority of residents are Australian born (ID Solutions, CoR website).

The ethnic mix in Ryde is gradually changing as the numbers of people from China, Hong Kong and South Korea increase. The Ryde population is also ageing. These two issues impact on open space demand and use.

The Leisure and Recreation Needs Community Consultation Report (City of Ryde, April 2009) surveyed Ryde residents and concluded that Culturally and
Linguistically Diverse (CALD) respondents use halls and meeting rooms more, and use leisure and recreation facilities/settings less, than others. They also prefer golf and indoor sport facilities. It should be noted that people from China, Hong Kong and South Korea are only part of the CALD population.

English speakers use natural areas and bike paths more than CALD. CALD residents stated they would like more community centres, halls and meeting rooms, while all residents would like more bike paths, swimming venues, parks and gardens, sportsfields/sports facilities, and libraries.

The CALD respondents ranked dancing and ‘dance socials’ as their top priority. They also gave greater importance to indoor sports facilities, golf, social and recreation support services, and seniors’ activities/centres.

The older respondents stated that a critical issue for them was transport and access constraints. They would like venues to be located on public transport routes with designated seniors parking.

Statistics show that between 1996 and 2006 there was a steady increase in the percentage of semi-detached, terrace and townhouses, with a corresponding steady decrease in separate houses. The percentage of flats and units has also steadily increased over this same period. It is anticipated that by 2031 there will be a sharp decrease in the percentage of separate houses and a sharp increase in the percentage of flats and units (ref Housing Strategy).

The greater number of smaller dwellings with small or absent private open space will result in a greater demand on public open space such as parks and playgrounds in all parts of the LGA, particularly the town centres.

See Section 5 for more discussion.

Years 2006 to 2026

Projections by the Department of Planning based on ABS data show that the Ryde population will grow consistently by 0.2 - 0.5% pa between 2001 and 2026. It is assumed that this significant increase in population will result in increased demand for open space.

The key changes forecast for 2006 to 2026 are:

- 0 -19 years: will increase, then decrease, then by 2026 will be the same as 2006
- 50 – 69 years: increase by 39.4%
- 70+ years: increase by 36.2%

However by 2026, there will still be 19.6% of the population aged 0-19 years, and the highest proportion of residents will be 30-39 years (Parks on Track, p12/13).

If the age structure continues to evolve in the same way it has in recent years, then it is reasonable to assume that:

- Meadowbank will see an increased number of people aged 20 – 44 years;
- Macquarie Park will see an increased number of people aged 20 – 34 years; and
- Ryde, West Ryde and Eastwood are likely to retain the highest proportion of people aged 0 – 19 years.

Implications

These projections have a number of implications for the provision of open space in the City of Ryde. An increased number of people aged 20 – 44 years in the suburb of Meadowbank is likely to result in an increase in demand for formal sporting facilities.

There will be an increased demand for linked, informal open space to provide cycling and walking trails to meet the needs of residents aged 30 years and over, including the need to establish “destinations” such as shops and parks. Given the prevalence of people
aged 0 – 19 years in the suburbs of Ryde, West Ryde and Eastwood, there is likely to be continued demand for playgrounds and formal sporting opportunities in these suburbs.

By 2026, statistics show that 50% of the population will be 40 years or over. To meet the need for physical activity for this age group, opportunities for establishing walking trails with established destinations in either parks or significant civic locations is required (Parks on Track, p15).

**Summary**

In summary, the population of the City Of Ryde is increasing at a relatively stable rate; however the proposed redevelopment of town centres under the Metropolitan Strategy has the potential to increase the population significantly. The population is ageing, with numbers in the under 19 category remaining static while there will be significant increases in the over 50 category.

There is a trend towards higher density dwelling types such as apartments and multiple occupancies. Education and employment statistics for Ryde are higher than the rest of Sydney with ABS indicators confirming this relative advantage. Mobility is moderately high with car ownership and public transport more available than the rest of Sydney. The population is culturally diverse, and increasingly the trends show this will increase (Parks on Track, p21).

An increased number of higher density dwelling types with small or absent private open space will result in a greater demand on public open space such as parks and playgrounds in all parts of the LGA, particularly the town centres. Ryde’s income is slightly higher than Sydney in general, as a result of the higher education and employment statistics. Generally, the higher the income the greater the uptake of recreation services (Parks on Track, p20). High mobility by car and public transport means residents can take advantage of open space in both Ryde and adjoining LGAs. It is known that people use the most accessible and appropriate open space facilities, regardless of which LGA the space is located.

### 5.5.2 OPEN SPACE TYPES AND AMOUNT

The City Of Ryde has 355ha of parkland divided into 207 parks, with an average size of 1.72ha. This does not include Lane Cove National Park.

The Field of Mars Reserve is the largest park, being 51ha. Thirty-seven parks are all or partially Crown land, with City Of Ryde being the other owner. These include Ryde Park, Anzac Park, Magdala Park, Brush Farm Park, Ryde Riverside Reserve and Putney Park. There are 98 playground areas containing at least one item of play equipment (Parks on Track p5).

The reserves in Ryde are generally quite small:

- 21% are less than 0.1 ha (many in poor condition, with limited amenities and leisure opportunities and not linked to each other in any way)
- over half of the total number of parks are less than 0.5ha
- 70, or 33%, of all parks are between 0.1 and 0.5 hectares. This means that over half of the City’s parks are less than 0.5 of a hectare, suggesting that there is a strong reliance on small parks to provide outdoor recreation opportunities for the community. Parks between 0.1 and 0.5 hectares are of sufficient size to be useful for reasonable formal or informal play opportunities which may include picnic, barbecue, linear linkage (dependent on proximity to other sites) and social gathering areas
- only 2 are between 10 and 20ha (Pembroke Park and ELS Hall Park), and
- only 2 are over 20ha (Field of Mars Reserve and Ryde Riverside Reserve) (Parks on Track p33).

The map below shows the City’s open space including the location of the 4 largest parks in Ryde.
Environment & Open Space

Figure 5.31 Open space in Ryde including the location of the 4 largest parks.
There are various drainage reserves and riparian areas which have a dual use as public parkland. Many of these are linkages, for example Darvall Park links Eastwood town centre with West Ryde town centre. Buffalo Creek flows through four bushland parks as it links Ryde Park to Lane Cove National Park. The Shrimpton’s Creek trail runs from the Macquarie Centre to Bridge Road through the parks Wilga, Booth, ELS Hall, Tindarra, Flinders and Santa Rosa.

The City has 7.85 km of cycleway and 1.58 km of walking tracks, however this is expanding at a rapid rate with Council funding the development of regional and local cycle/walkways (Parks on Track p5).

Ryde has 15 foreshore reserves along the Parramatta River. Meadowbank Park, Morrison Bay Park and Bill Mitchell Park have sporting fields and the remainder cater for passive recreation (P on T p41).

**Standards for open space provision**

There are no Australian standards for open space provision so Australian planners follow English standards to estimate open space requirements based on population. These National Playing Fields Association (NPFA) standards stipulate 2.4 ha per 1000 people. This figure ideally comprises 1.6 ha for outdoor sport (1.2 ha of playing fields and 0.4 ha of other facilities) and 0.8 ha for children’s play.

It can be seen from the table below that the City of Ryde has approximately half the English standard of space for outdoor sport, and significantly less than the standard for children’s play.

<table>
<thead>
<tr>
<th>PER 1,000 MEMBERS OF THE COMMUNITY</th>
<th>NPFA STANDARD</th>
<th>CITY OF RYDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total outdoor sports area</td>
<td>1.6 ha</td>
<td>0.64 ha</td>
</tr>
<tr>
<td>As playing fields</td>
<td>1.2 ha</td>
<td>0.62 ha</td>
</tr>
<tr>
<td>Area for children’s play</td>
<td>0.8 ha</td>
<td>0.51 ha</td>
</tr>
</tbody>
</table>

Ryde is significantly lower in **active open space** than the NPFA standards, and there is limited opportunity to acquire land to meet the need for active or organised physical activity due to the high cost of land and the large size of the land required to be useful. The quantity of playing fields in Ryde is only half of the English standard (P on T p9).

The area of **passive open space** is also below this accepted standard, mainly because a great deal of it is inaccessible natural area. Ryde’s passive open space is characterised by a large number of small sites which have very limited capacity for use. There are also protected wetlands and drainage reserves which have limited value for recreation because they have steep gradients or other constraints (P on T p32).

**The Draft Subregional Strategy – Inner North Subregion**

This document states that within the Inner North subregion there are 1,854 ha of open space, being 19% of the total area. Of the total open space, 64% is regional open space and 36% is local open space. This balance reflects the regional importance of the foreshore parks within the subregion. Of this open space there is 52% bushland, 23% passive parklands, 13% active sports parks, and 12% golf courses/other.

Compared to the Sydney average, the Inner North has a higher number of active parks, and a slightly higher number of local parks. Most active parks are in Mosman LGA, which has the highest provision of sports parks in Sydney. Other active parks include St Leonard’s Park, Meadowbank Park, Boronia Park, Morrison Bay Park, Blackman Park and ELS Hall Park (parks in italics are located in Ryde LGA).

The Inner North also has a high level of provision of regional passive parks in comparison with the Sydney average and a large amount of bushland compared with other inner Sydney subregions. Bushland is well distributed throughout the 6 local government areas, ranging from 4.4% (North Sydney) to 14.2% (Mosman). Key sites include Field of Mars Wildlife Refuge and areas along the Lane Cove and Parramatta River foreshores. Thus City Of Ryde contains a number of high value sites, with a corresponding responsibility to ensure appropriate use (Draft Subregional Strategy – Inner North Subregion, p102).
Other issues noted in the Draft strategy are:

- The Inner North is generally well serviced by open space – within a 10 minute walk of most areas.
- Active parks and bushland areas are well distributed, providing good access for residents.
- Bushland is concentrated along creeklines and river foreshores.
- Access to bushland open space is limited in some parts by topography.
- There is increasing demand to develop regional sport facility hubs.
- There is a shortage of facilities to meet demands of some age groups for some sports.
- There is a need for more informal, family orientated areas.

(Draft Subregional Strategy – Inner North Subregion, p103)

The NSROC region

The NSROC (Northern Sydney Region of Councils) region comprises the local government areas of Hornsby, Hunters Hill, Ku-ring-gai, Lane Cove, North Sydney, Ryde and Willoughby. The region offers a wide range of recreation and leisure facilities including indoor and outdoor sports complexes, golf courses, tennis courts, playgrounds, public parks and recreation areas. There are a number of sporting and leisure facilities of regional standing. These include North Sydney Oval, Ryde Aquatic Leisure Centre, Willoughby Leisure Centre, North Sydney Pool and Luna Park. There are also extensive natural areas within the Lane Cove, Ku-ring-gai Chase, Garrigal and Marramarra National Parks.

Outdoor sporting facilities within the NSROC region tend to be multi-purpose and cater for more than one sport. This will become increasingly important in future - by being multi-purpose, use of the limited open space is being maximised. These facilities contribute to the network of open space, provide relief from the urban environment and cater for passive recreational opportunities.

Current demand for outdoor sporting facilities in most parts of the NSROC region exceeds supply during peak playing periods such as Saturdays. Women’s sports are particularly disadvantaged by the historical patterns of use of existing facilities predominately by male sporting clubs. Some of the schools in the area have no or limited sporting fields and rely on public facilities.

The incoming population is expected to exacerbate current supply problems by increasing the overall numbers in the population wishing to access sporting facilities. The reliance on public sporting facilities by schools is also expected to increase as school populations grow.

There is limited opportunity for future development of new outdoor sporting facilities within the NSROC region. This is due to existing urban development, prohibitive costs of purchasing new sites, topography, adjacent bushland and natural areas. Ongoing requirements for sports ground rectification, upgrading and maintenance, as well as water restrictions, put other pressures on the ability of sports fields to carry additional utilisation.

There is potential for NSROC Councils to develop a region-wide response to shortages of sports fields, recognising that sporting clubs do not differentiate between LGA boundaries. Such an approach would allow for the redevelopment of existing facilities or development of new facilities to take into account regional issues such as existing facilities within the region and the need for such facilities within the region. City Of Ryde’s document ‘Parks on Track’ suggests such an association with adjoining councils to provide sporting facilities on a regional basis.

Regarding indoor sporting facilities, local surveys suggest that the main demands are for better quality existing facilities and for new or upgraded pool facilities (in combination with other facilities such as gyms and sports halls). Ryde Council’s research has also discovered that more pools are desired by residents.

(NSROC Regional Social Report, June 2005)
Centres

The following table compares the town centres in Ryde on the basis of area of public parks, the features of the parks, and important pedestrian/cycle linkages.

<table>
<thead>
<tr>
<th>CENTRE</th>
<th>PUBLIC PARKS/PLAZA SPACE (M²)</th>
<th>MAIN PARKS &amp; THEIR FEATURES</th>
<th>OTHER/ LINKAGES</th>
</tr>
</thead>
</table>
| Top Ryde     | 48,800                        | *Ryde Park*: active sports fields, passive recreation areas, basketball court, play equipment, kiosk.  
Top Ryde plaza: outdoor dining, water feature, extensive planting, space for public events. | Link to Field of Mars Reserve via Burrows Park/Buffalo Creek.                                      |
| West Ryde    | 11,700                        | *Anzac Park*: barbeques, play equipment, seats and shade.                                     | Link to Miriam Park poorly defined. Darvall Park link difficult because of steam train in southern part of park. |
| Eastwood     | 48,500                        | *Eastwood Park*: main park, sports fields and passive recreation. Croquet field, library and play equipment.  
*Glen Reserve*: passive recreation, poor links to the centre.  
*Eastwood Plaza*: hard paved, outdoor dining, public seating, shade, water feature. | Darvall Park links Eastwood with West Ryde                                                        |
| Gladesville  | 700                            | *Trim Place (Victoria Rd)*: passive recreation.  
*Ryde Aquatic Leisure Centre (Victoria Rd)*: high quality swimming facility.  
Parks near the Parramatta River: active and passive recreation. | Parks near the Parramatta River: Glades Bay Park  
Looking Glass Bay Park                                                                                       |
| Macquarie Park |                               | *Elouera Reserve (Waterloo Rd)*: passive recreation.  
*Shrimpton’s Creek parklands*: active and passive recreation.  
*Macquarie University grounds*: active and passive recreation | Links to Lane Cove National Park, and the active sports fields at  
Christie, Fontenoy, and Tuckwell Parks. Shrimpton’s Creek Parklands is an important wildlife corridor with passive and active recreation. |
The figures above are from the *Centres and Corridors Study*. It can be seen that Ryde Town Centre and Eastwood have the largest amounts of public park/plaza space. Meadowbank has about half the amount in those centres, while West Ryde has about one quarter. Gladesville has the least amount of public park/plaza space by a large margin.

### 5.5.3 OTHER COUNCILS IN THE INNER NORTH SUB-REGION

Other councils in the sub-region are in a similar situation to Ryde regarding pressure on existing open space. The following table compares areas of open space and key needs and directions in the Mosman, Willoughby, North Sydney and Ku-ring-gai local government areas.

The area of open space should be analysed in light of the NPFA standard discussed in 4.2 above.

<table>
<thead>
<tr>
<th>COUNCIL (POPULATION AT JUNE 2008)</th>
<th>OPEN SPACE (HA/1000 PERSONS)</th>
<th>KEY NEEDS &amp; DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RYDE</strong> (104,000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.64 ha/1000 persons</td>
<td><strong>Outlined in this strategy.</strong></td>
</tr>
<tr>
<td></td>
<td>(active open space)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.51 ha/1000 persons</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(play open space)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL: 1.15 ha/1000 persons for all open space.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MOSMAN</strong> (28,400)</td>
<td></td>
<td>General:</td>
</tr>
<tr>
<td></td>
<td>0.68 ha/1000 persons</td>
<td>▪ Provision of active open space is less than the standard, being 0.68ha/1000 persons rather</td>
</tr>
<tr>
<td></td>
<td>(active open space <strong>ONLY</strong>)</td>
<td>▪ than 1.6 ha.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Some areas have a significant lack of open space.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Growth in cricket, soccer, rugby and netball, putting more pressure on sportgrounds.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Schools are seeking access to ovals because of limited facilities on site.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Key needs:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Additional sportgrounds, because current use of grounds is at capacity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Better quality sportgrounds, ie through improved drainage, lighting, amenities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Upgrade of passive parks – more shade trees, seats, picnic areas, and so on.</td>
</tr>
</tbody>
</table>
### Environment & Open Space

<table>
<thead>
<tr>
<th>COUNCIL (POPULATION AT JUNE 2008)</th>
<th>OPEN SPACE (HA/1000 PERSONS)</th>
<th>KEY NEEDS &amp; DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Upgrade of playgrounds, including junior bike tracks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Indoor courts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Indoor pool (closest is North Sydney, 3kms away).</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Key directions:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Embellish existing pocket and neighbourhood parks, especially in areas with a lack of useable open space.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Improve facilities like drainage and lighting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Upgrade playgrounds and other informal recreation areas.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Establish linkages and corridors of open space through land negotiation and pedestrian/cycle links to National Parks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Form financial partnerships with sporting groups in the development and upgrade of facilities.</td>
</tr>
<tr>
<td>WILLOUGHBY (68,000)</td>
<td>6.24 ha/1000 persons (all types of open space)</td>
<td><strong>General:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- High amount of open space compared to nearby LGAs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Licence holders are contributing to the cost of maintenance and facilities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Key needs:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Parkland in the CBD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Sportsgrounds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Playgrounds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Informal recreation</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Key directions:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Provide additional parkland in the CBD by:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Forming a continuous parkland circuit walk near the edges of the CBD using existing parks, open space provided by business development and GreenWays along the street.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Promoting ground level landscaped areas open to the public around new buildings.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Maximise open space by multi-use of parks, eg use of Chatswood Oval as a local park in non-playing times.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Provide high quality open space which is visually attractive and physically comfortable.</td>
</tr>
</tbody>
</table>

(Mosman Recreation Needs Assessment Study, Suter and Associates, 2000)
## Environment & Open Space

<table>
<thead>
<tr>
<th>COUNCIL (POPULATION AT JUNE 2008)</th>
<th>OPEN SPACE (HA/1000 PERSONS)</th>
<th>KEY NEEDS &amp; DIRECTIONS</th>
</tr>
</thead>
</table>
| NORTH SYDNEY (62,700)             | 2.31 ha/1000 persons          | ▪ Provide environmental areas of vegetation and natural ground surfaces to reduce wind tunnelling, heat and dirty air, and to assist water infiltration to the soil/stormwater control.  
▪ Identify suitable land for the specialised open space needs of the CBD such as lunch time/central parks, green pedestrian routes, active recreational areas, and environment amelioration spaces.  
▪ Make suitable land available for public use by retention of existing council owned land, agreement with building managers for areas within commercial development and sale/acquisition of land.  
▪ Develop the open space with gardens, lawns and trees, pathways, furniture and facilities where appropriate.  
▪ Investigate provision of open space on private property as alternative to creating new public parks in the CBD.  
▪ Investigate guidelines for property development establishing public access rights to ground level open space as a condition of approval. Could co-ordinate this privately owned open space to create a continuous circuit of parkland through the CBD.  
▪ (Plan of Management, Chatswood Parks Central Business District, 1997) |

**General:**  
▪ The municipality covers a total area of 10.5km2.  
▪ 173 open space areas covering almost 145 hectares (includes foreshore, natural bushland, park and garden settings, street closures and road reserves).  
▪ 47 hectares of bushland, with 43 hectares contained within public reservations.  
▪ Increase in participation rates has led to facility over-utilisation at some sites.  
▪ Shortage of available land is a significant constraint on the provision of new sport and recreation sites to meet future community demands, coinciding with strong population growth.  

**Key needs:**  
▪ Informal recreation settings.  
▪ Enhancements to local parks (shade, seating, picnic and barbeque facilities)
### Environment & Open Space

<table>
<thead>
<tr>
<th>COUNCIL (POPULATION AT JUNE 2008)</th>
<th>OPEN SPACE (HA/1000 PERSONS)</th>
<th>KEY NEEDS &amp; DIRECTIONS</th>
</tr>
</thead>
</table>

- Integration of continuous walking trails, particularly in foreshore precincts.
- Upgraded support facilities at major sportsgrounds, such as public toilets, changing rooms, clubhouses and spectator facilities.
- Improved access for people with a disability.
- Youth recreation settings such as skate facility, basketball half-courts, more shade cover for playgrounds.
- Regional network of continuous short and long distance walking trails, interpretive facilities and greenspace corridors.
- Bike paths.
- Additional playing fields to cater for growth sports (e.g. soccer, hockey, Aussie Rules Football, touch football, cricket).
- Additional courts for netball, basketball and tennis.
- Additional cricket practice nets.
- An all-weather hockey venue with synthetic surface.
- A second indoor sports centre to support the existing facility at Crows Nest.
- Residents and workers are demanding greater flexibility in sport and recreation, particularly at night (after work) and in non-structured, social activities (e.g. going for walk or jog, impromptu touch football games).

(North Sydney Recreation Needs Study, 2005)

**Key directions:**

- Enhance the standard, diversity and protection of parkland settings for informal recreation, through improved maintenance, installation of more support facilities (e.g. seating, picnic and barbeque facilities) and shade.
- Investigate opportunities for the ongoing acquisition of strategic land parcels to provide continuous open space corridors and walking trails within and beyond North Sydney.
- Lighting at key sites for night use.
- Investigate the capacity for multi-use or sharing between different groups through activity scheduling and modification / reconfiguration of playing areas.
- Increase public use of school sporting facilities.
## Environment & Open Space

<table>
<thead>
<tr>
<th>COUNCIL (POPULATION AT JUNE 2008)</th>
<th>OPEN SPACE (HA/1000 PERSONS)</th>
<th>KEY NEEDS &amp; DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KU-RING-GAI (108,135)</td>
<td>1.65 ha/1000 persons for all open space.</td>
<td>General:</td>
</tr>
<tr>
<td></td>
<td>1.16 ha/1000 persons (sportgrounds). Close to NPFA standard of 1.2.</td>
<td>• 53 ha of parkland</td>
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<tr>
<td></td>
<td>0.49 ha/1000 persons (non-sport parks).</td>
<td>• 334 park and open space areas</td>
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<tr>
<td></td>
<td><strong>TOTAL:</strong> 1.65 ha/1000 persons for all open space.</td>
<td>• 97 playgrounds</td>
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<tr>
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<td></td>
<td>• 125 ha of sportground</td>
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<tr>
<td></td>
<td></td>
<td>• 4,000 ha of bushland - with 2,800 ha in the 3 national parks and 1,200 ha in 120 Council-managed reserves.</td>
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<tr>
<td></td>
<td></td>
<td>• Generous supply of environmentally significant open space, but relatively low provision of both local and district level open space.</td>
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<tr>
<td></td>
<td></td>
<td>• Insufficient facilities to meet present and anticipated future needs.</td>
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<td></td>
<td></td>
<td>• 30% of local parks are less than 0.2 hectares.</td>
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<td></td>
<td>• Unreasonable walking distances (over 500 metres) to local parks for more than 30% of residences.</td>
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<tr>
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<td></td>
<td>• 35% not adequately serviced by high quality neighbourhood open space.</td>
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<tr>
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<td></td>
<td><strong>Key needs:</strong></td>
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<tr>
<td></td>
<td></td>
<td>• Wider diversity of playgrounds.</td>
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<tr>
<td></td>
<td></td>
<td>• Large group/family picnic opportunities.</td>
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<tr>
<td></td>
<td></td>
<td>• Extended linkages (via linear parks, drainage reserves and local links and the development of ‘parkstreets’)</td>
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<tr>
<td></td>
<td></td>
<td>• District and local cycle and walking routes.</td>
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<tr>
<td></td>
<td></td>
<td>• Youth opportunities - skate facilities etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• More neighbourhood parks in some precincts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Development of many parks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Increased diversity of recreation activities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• More district sports facilities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Linkages, connections and environments supportive of incidental physical activity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Key directions:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Strategic enlargement of some parks</td>
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<td></td>
<td></td>
<td>• Embellishment of both neighbourhood and district parks</td>
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<tr>
<td></td>
<td></td>
<td>• Additional and higher quality sports facilities (indoor and outdoor),</td>
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<tr>
<td></td>
<td></td>
<td>• Greater diversification of ‘unstructured’ recreation opportunities within parks.</td>
</tr>
</tbody>
</table>
COMMENT AND COMPARISON WITH RYDE

It can be seen from the above information that all councils in the Inner North sub-region have very similar issues with which to contend. All councils are struggling to accommodate the demand for open space, especially for active recreation such as soccer and cricket. All are looking to acquire more land for open space wherever possible, and increase the quality of the spaces they have. This increase in quality will eventuate by making open space increasingly multi-purpose, installing more equipment and amenities, increasing useful planting, linking open spaces with paths and vegetation, and accommodating extended hours of use.

Regarding area of open space per thousand persons, Ryde has the lowest figure of all councils in the table. Ryde and Ku-ring-gai have similar populations and similar amounts of play open space, but Ryde has only approximately half the amount of active open space. Ryde has half the total open space of North Sydney. Willoughby has substantially more open space than any other council on the table.

5.5.4 RECENT STRATEGIC OPEN SPACE PLANNING

Various master plans, plans of management and development control plans (DCPs) have been prepared by the City Of Ryde in the last few years that relate to open space issues.

Parks on Track for People 2025

This study was adopted by Council in December 2006. It discusses the worth of the existing investment in recreation facilities in the City of Ryde and attempts to project this into the future through the examination of trends in physical activity and anticipated demographic change.

Parks on Track gives direction to management of Ryde’s parks and reserves over the next twenty years and is the principle document addressing this issue.

The study identifies Council open space in specific categories:

- Natural areas
- Passive Parks
- Playgrounds
- Lineal parks, waterway and drainage reserves
- Ornamental Gardens and grounds
- Visual parks
- Foreshore reserves
- Playing fields

Parks on Track provides detailed analysis of Ryde’s current position with respect to open space and also contains a demographic analysis of Ryde now and into the future. It looks at the need for open space, management issues, usage of open space areas, safety, resourcing and identifies major issues for the City of Ryde with respect to open space for the next twenty years.

A number of documents and internal studies have been prepared to address issues raised in Parks on Track. Recent park upgrades have taken into account the information in this document.

City of Ryde Leisure and Recreation Needs Community Consultation Report April 2009

This document outlines the results from 377 completed individual surveys of local Ryde residents. Although this is a small sample, the results are useful:

- 13.7% use parks and gardens (once a month or more)
- 7.9% use walking tracks
- 7.4% use bike paths
- 5.7% use sportsfields
- 5.6% use playgrounds
Other important results are that:

- Culturally and Linguistically Diverse (CALD) respondents use halls and meeting rooms more than non-CALD.
- English speakers use natural areas and bike paths more than CALD.
- CALD use leisure and recreation facilities/settings much less than others.
- Over 9% of respondents use no Council provided facilities/services.
- 25% said they had no unmet leisure and recreation facility needs.
- 6% said there were no undersupplied facilities.

When respondents were asked to nominate the top 10 lacking or inadequate facilities in order, the results were:

- Bike paths
- Off-leash dog areas
- Swimming venues
- Parks and gardens
- Playgrounds
- Walking paths/tracks
- Sportsfields and sports facilities
- Improved transport/accessibility/parking (esp seniors)
- Libraries
- Picnic facilities and BBQs

**English speaking respondents** would like more playgrounds, walking paths/tracks, skateparks and BMX facilities, and arts/craft facilities. **CALD** would like community centres, halls and meeting rooms, golf, and indoor sport facilities.

**All respondents** would like more bikepaths, swimming venues, parks and gardens, sportsfields/sports facilities, and libraries. Improved transport, access and parking were also issues.

When asked what future activities they expected to participate in, survey respondents replied:

- Walking
- Outdoor organised sport
- Cycling
- Visiting parks and gardens
- Libraries
- Swimming

The most frequently identified leisure and recreation needs for the next 5-10yrs (20% of all responses) were:

- Parks and open space
- Bike paths and BMX facilities

The next ten priorities were stated as:

- Swimming pools
- Walking paths/tracks
- Libraries
- Playgrounds
- Sportsfields
- Off-leash dog areas
- Improved transport/parking and access
- Youth activities/facilities, including skateparks
- Dance venues
- Urban open spaces and landscape improvements

These top 12 items comprise 70% of future services perceived as important.

The **CALD** respondents were supportive of the above but ranked dancing and ‘dance socials’ as their top priority. They also gave greater importance to indoor sports facilities, golf, social and recreation support services, and seniors’ activities/centres.

The **older respondents** stated that a critical issue for them was transport and access constraints. They would like venues to be located on public transport routes with designated seniors parking.

**City Of Ryde** has been responding to these survey results in recent upgrades. There have been new
parks created such as Ryde Wharf Park, park upgrades such as Ryde Park and Kissing Point Park, walking track upgrades at Field Of Mars, new walking tracks along the Parramatta River, new play equipment installed at Ryde Park, Eastwood Park, Anderson Park and other locations; bicycle paths planned along the Parramatta River and in Macquarie Park, off-leash dog areas at Blenheim Park and planned for ELS Hall Park, BBQs at Ryde Park, Anzac Park and other locations; indoor sports (basketball/ netball/ volleyball/ badminton) at the Ryde Community Sports Centre currently under construction, a new community centre at Meadowbank (can be rented for classes such as yoga), and a new basketball court for youth at Ryde Park.

These recent upgrades have both increased the range of activities available in open space, and improved the quality of the open space. Facilities have been provided for the entire Ryde community – CALD and non-CALD, both genders, all ages and all levels of ability.

5.5.5 PLANNING FOR NEW OPEN SPACE IN CENTRES

The City Of Ryde has a continuing program of urban planning for its centres. This planning includes the preparation of LEPs and DCPs, master plans, traffic plans, public domain plans and detailed design plans.

These plans facilitate the aim of ensuring the satisfactory provision of open space to service the population of the City of Ryde to the year 2031. Provision comprises both amount (area) and type (variety) of open space.

This section describes recent examples of this planning for centres.

### Ryde Town Centre

In 2006 the Local Environmental Plan (LEP) and Development Control Plan (DCP) to guide the revitalisation of Ryde Town Centre became effective. When publicly exhibited, the sustainable planning controls met with broad approval and are now the basis for the redevelopment of the $1.2 billion Top Ryde shopping centre.

The redevelopment of the Top Ryde shopping centre will be the catalyst for the revitalisation of the entire town centre. The Ryde Town Centre LEP includes a childcare centre, bus amenities, pedestrian footbridges over Devlin Street and almost 3000m² of community facilities. The new shopping centre will also incorporate a 1500m² public plaza and 10m wide pedestrian street, library and civic space, cinemas, supermarkets, boutique retail space and outdoor dining.

The civic space in the shopping centre redevelopment will incorporate a modern public library, Ryde Council’s Customer Service Centre, as well as a multi-purpose area that will be used for a variety of key civic and business activities. The aim is to develop civic space with a shop-front character that will be easily accessed, have the latest technology, and better serve residents.

Plans for Ryde Town Centre’s future electricity and transport infrastructure are well advanced. A traffic plan will improve performance at major intersections and remove traffic from nearby residential streets. A site for a major new electricity substation has been identified and acquired.

Council adopted a Ryde Town Centre public domain plan together with the new LEP and DCP. Improvements such as granite paving in accordance with this plan are being implemented by Council, the RTA and private sector partners.

The redevelopment of the Top Ryde shopping centre is well advanced and due for completion in 2011.
Macquarie Park DCP 2008

This DCP proposes 6 new open spaces, as well as the paved squares associated with the 3 new railway stations. The size, location, objectives and selected controls for each of these areas are shown in the map and table below:

Figure 5.32  Open Space Network Structure Plan (From Macquarie Park DCP 2008).
### OPEN SPACE

<table>
<thead>
<tr>
<th>OPEN SPACE</th>
<th>SIZE</th>
<th>LOCATION</th>
<th>OBJECTIVES</th>
<th>CONTROLS</th>
</tr>
</thead>
</table>
| **1) CENTRAL PARK**         | 1.1ha min  | Waterloo Road, between roads 8 & 9 | - To provide a centrally located public park surrounded by public streets.  
- To provide a multi-functional park that provides passive recreational space with substantial parkland trees, shaded seating areas and paved areas.  
- To provide a variety of facilities including children’s play areas.  
- To provide a park structure that can accommodate community events and occasional night time use. | The controls ensure that there will be pedestrian pathways and cycleways to adjoining public open spaces. The park will have a range of informal seating areas, and a mix of paved and open lawn areas. It will be a flexible park that will accommodate occasional community events and performances.  
A community space of not less than 500sqm will be constructed within the Primary Active Frontage facing Central Park. This may include a community meeting space and associated amenities. Infrastructure (such as gas, power and water supply) and appropriately scaled built forms (such as kiosks, vendor stalls, cafes and restaurants) will enhance Central Park as a meeting place and support activities such as markets, community events, leisure and recreation. |
| **2) INDUSTRIAL CREEK**     | 1.8 ha min width 14m. | Adjacent to Road 9, from Waterloo Road to Epping Road | - To provide a series of linear parks connecting to the northern and southern edges of Central Park.  
- To incorporate linear parks adjacent to new and existing roads and with continuous pedestrian connections.  
- To incorporate a swale system in these linear parks that provides overland flow and filtration for small storm water events.  
- To provide a range of informal parkland spaces. | The controls ensure that there will be pedestrian pathways and cycleways to adjoining public open spaces. The entire area will be a deep soil zone to accommodate large street trees and parkland trees. The parks will have a range of informal seating areas and small gathering places. |
| **3) SHRIMPON'S CREEK: south** | 3.8 ha | | - To rehabilitate and consolidate existing pockets of remnant vegetation.  
- To improve creek health including water quality.  
- To upgrade existing passive recreational facilities including seating, lighting. | The controls provide for pedestrian pathways and cycleway connections in the creek corridor and enhance the natural creek qualities. The riparian zone of the creek is to provide additional filtration for stormwater prior to discharge into the creek system. Stormwater quality is to be improved by incorporating planted swales. |
# Environment & Open Space

<table>
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<tr>
<th>OPEN SPACE</th>
<th>SIZE</th>
<th>LOCATION</th>
<th>OBJECTIVES</th>
<th>CONTROLS</th>
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</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td>and circulation paths.</td>
<td>and filtration systems into the park.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• To ensure all new developments adjacent to Shrimpton’s Creek address the creek corridor.</td>
<td></td>
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<tr>
<td>5) DELHI ROAD SQUARE</td>
<td>0.35 ha</td>
<td></td>
<td>• To provide a public plaza of minimum size 0.35ha adjacent to public transport.</td>
<td>5) DELHI ROAD SQUARE 0.35 ha • To provide a public plaza of minimum size 0.35ha adjacent to public transport. • To provide streets to all edges of the plaza that provides easy drop off for train users. • To provide a simple plaza layout that allows for flexible use with multiple pedestrian access points and routes.  The controls ensure active frontages on all sides of the park, and roads and footpaths along all sides of the plaza. A minimum of 60% of the consolidated area of the open space is to be deep soil zone to accommodate large trees.</td>
</tr>
<tr>
<td>6) THOMAS HOLT DRIVE</td>
<td>0.4  ha</td>
<td></td>
<td>• To provide a public park of minimum 0.4 ha adjacent to public transport interchange and station square.</td>
<td>6) THOMAS HOLT DRIVE 0.4 ha • To provide a public park of minimum 0.4 ha adjacent to public transport interchange and station square. • To provide streets to three edges of the public park. • To protect existing trees and establish passive recreational landscape spaces including new tree planting and areas of lawn. The controls provide for a minimum 0.4ha of publicly owned open space with minimum dimensions 100m x 40m. They provide vehicular roads and footpath along three sides of the park and address stormwater quality. Water retention for irrigation is to be investigated. A minimum of 60% of the consolidated area of the open space area will be deep soil zone to accommodate large trees.</td>
</tr>
<tr>
<td>7) TALAVERA ROAD</td>
<td>0.56 ha</td>
<td></td>
<td>• To provide a public park of minimum 0.56 ha with street frontages to all edges.</td>
<td>7) TALAVERA ROAD 0.56 ha • To provide a public park of minimum 0.56 ha with street frontages to all edges. • To provide a multifunctional park that provides passive recreational space with substantial parkland trees, shaded seating areas and paved areas. • To protect existing trees and establish passive recreational landscape spaces including new tree planting and areas of lawn. The controls provide for a minimum 0.56ha of publicly owned open space with minimum dimensions 75m x 75m. Roads and footpaths are to be located at all park edges, and a minimum of 60% of the consolidated area of the open space will be deep soil zone to accommodate large trees.</td>
</tr>
</tbody>
</table>
These objectives and controls conform to the principles of this Open Space Study (see Section 7). Central Park is to be a multi-functional park, in a centre, and with good pedestrian/cycle links. Industrial Creek is to be an open space link for passive recreation incorporating a swale system for environmental protection and enhancement. Shrimpton's Creek south is to be a multi-purpose open space link incorporating a swale system for environmental protection and passive open space. Delhi Road Square is to be a multi-functional park, in a centre, adjacent to a railway station, and with good pedestrian/cycle links. Thomas Holt Drive is to be a multi-functional park, in a centre, with good pedestrian/cycle links and WSUD elements. Talavera Road is to be a multi-functional park, in a centre, with good pedestrian/cycle links.

These new open spaces in Macquarie Park will also fulfil one of the important principles of this document - that all centres have publicly owned green space, independent of any retail outlet.

**Meadowbank Employment Area DCP 2007**

In the Meadowbank Employment Area (MEA), all the open space is on the Parramatta River.

The DCP proposes 6m wide landscape buffer setbacks along Constitution Road (from Bowden Street to Belmore Street) and along Church Street (from Junction Street to the Parramatta River).

In Precinct 3 (the waterfront) the DCP proposes:

- Provide a new pocket park to the southern part of the precinct to ensure tree retention and enable passive activity with views to Parramatta River (bottom of Porter Street). Ryde Wharf Park is now established in this location.
- Provide a landscaped connection between Railway Road and the cycleway to the Meadowbank-Rhodes railway bridge.
- Provide a 20m foreshore landscape setback with a high quality solution knitting with the Shepherd’s Bay foreshore upgrade.

(Meadowbank DCP p52)

The Masterplan review states that because all parts of the MEA are within 400m of the foreshore open spaces there is no need for additional open spaces to serve future residents.

‘The new public domain should therefore create more linkages and connections from all parts of the site to the foreshore. These are primarily north/south links. …east/west links will create better connections to transport such as the rail station. In addition wider street verges and street trees will form ‘green’ links from the water north to Constitution Road’ (p15).

The proposals in this DCP comply with the principles of this Open Space Study (see Section 7). It emphasises the importance of linkages to open space and public transport nodes, and suggests wider verges for street trees to increase the environmental value of these narrow but valuable open spaces. A new pocket park, combined with 6m wide landscape buffer setbacks and a 20m foreshore landscape setback will all help to maximise the available open space for both residents and visitors.
There have been many improvements to public open space in Meadowbank over the last few years, including the creation of two new parks. Helene Park is between the ferry wharf and the Shepherd’s Bay Village development on Bowden Street. Ryde Wharf Park is now on the old council depot site at the end of Belmore Street. The Shepherd’s Bay Community Centre has opened on Bay Drive. There is public space within the Shepherd’s Bay Village development that includes raised lawns and substantial planting.

There is a new paved plaza with dining terraces at Meadowbank shops, on the eastern side of the railway station on Constitution Road. Anderson Park has been upgraded with new play equipment, seating and shade.

Proposed open space:

1. 7 Coulter Street - when Coulter Street carpark gets redeveloped, a small public park will be created on street level with Victoria Road, accessed by an arcade and a footbridge.
2. Enlargement of the John Wilson carpark (off Pittwater Road) – this will result in a civic open space of at least 250m2 with seating, shade and lighting.
3. Primrose Hill – this will have a pedestrian connection, minimum 10m wide, between Farm Street and Victoria Road, as a series of accessible landscape terraces.
4. Wharf Road (near old clock) – to be upgraded with a new square for outdoor dining.

Existing open space (to be retained and upgraded):

5. Trim Place, adjacent to Gladesville Public School.
6. Corner of Victoria Road and Jordan Street (site of existing coffee shop).

The plan below shows the location of these open spaces.
Generally, public open spaces will be enhanced to better meet the needs of the local community.

The DCP proposes streetscape improvements, tree planting, widened footpaths, new plazas and public squares. Pedestrian links will be created or enhanced to improve access to shops, community facilities and public spaces. The DCP proposes to create a number of laneways and pathways that will provide new links between residential and retail precincts away from Victoria Road.

In such a built-up area links between open spaces are important, for example from Victoria Road to the open space behind the Ryde Aquatic Leisure Centre (RALC) and to Monash Park. Obvious links are important because it can be difficult for pedestrians to navigate between areas, especially when visiting for the first time. Good links also encourage increased ad-hoc use of open space.

The open space proposals in the Gladesville DCP fulfil the principles in this study (See Section 7). Open space is being maximised and pedestrian links improved.

Figure 5.34 Trim Place, Gladesville
Environment &
Open Space

Eastwood Master Plan Review 2006

The Draft Eastwood Master Plan Review encapsulates a 20 year vision to revitalise the town centre. It sets guidelines for future planning and development of the town centre, providing opportunity for growth and change as well as economic, social and environmental sustainability.

This Master Plan may provide Council with opportunities to redevelop existing sites or work with developers to gain community buildings and open space through Voluntary Planning Agreements. The Eastwood Flood Study and Traffic Study will also be considered in the Master Planning process and may impact on development potential and use of areas in the future.

The Master Plan includes landscape improvements to Glen Reserve including detention (subject to the flood study). The poor link from Glen Reserve to the carpark and centre could be improved.

Generally however the proposals fulfil the principles in this study.

A Plan of Management has been prepared for Eastwood Park and it has recently had an upgrade that includes planting, play equipment, barbecues and pathways.

West Ryde DCP (from DCP 2008)

This DCP proposes the construction of a small village square of 1500m² adjacent to West Ryde Marketplace. The objectives of this square are:

- To enhance the image of the West Ryde centre as a pedestrian-orientated place.
- To provide a central place within the retail core for people to meet and gather.
- To provide a focus for community activity.

The village square will:

- be a flat area located at or around ground level;
- be a multi purpose space, capable of supporting civic and market activities;
- be defined by buildings and uses which would integrate with the use of the square (for example, open-air eating areas adjacent to cafe/restaurant uses within buildings);
- include features such as street furniture, street trees, water features, public art, children’s playground, and so on to create a busy place.

These objectives and features comply with the principles of this open space study (see Section 7). The square will be a true multi-function space which will help to unite the public domain on the west side of the railway line. It will be part of a major re-development that will include a community building, retail / residential development, and public car parking.

A small part of this square has already been built as part of the West Ryde Marketplace development, forming an entry area to the mall, see photos below:

Figure 5.35 View from entry to West Ryde Marketplace, showing entry area with small stage.
The square will reach 1500m$^2$ and be finalised through the development of the Betts Road carpark with mixed use development.

The draft master plan for West Ryde emphasises the importance of ‘green links’ between open space, both public and private. The plan proposes that these be developed within West Ryde to connect the edges of the centre to the central retail areas. It also proposes improving existing open spaces and integrating these with existing and new street tree planting and public domain/streetscape improvements, so the corridors offer amenity to the surrounding residential areas and pedestrian routes.

5.5.6 PARKLAND PLANNING

The City Of Ryde has a continuing program of planning for its many parks and other open spaces. This planning includes the acquisition of land to enlarge or link spaces, the preparation of master plans, plans of management, landscape plans and detailed design plans. This section describes some recent examples of this planning.

Charity Creek Cascades link

In 1993, a series of properties was identified for acquisition from Section 94 funds to assist in providing a pedestrian link between Top Ryde and West Ryde. The route of acquisition follows the overland drainage route between the centres. It is known as the Charity Creek overland flow. Some additional properties still need to be acquired to complete the link. When completed it will form a network from the Great North Walk, along Buffalo Creek to Ryde, then West Ryde and the north along Shrimpton’s Creek (P on T p41).
A concept plan has recently been completed for the Charity Creek Cascades. It includes a 2.5m wide concrete pedestrian/cycle path, planting to open space boundaries, mass planted beds and a playground. See plan below:

Figure 5.37  Charity Creek Cascades link

Ryde River Walk Master Plan Report 2007

The Ryde River Walk outlines strategies to improve access to the Parramatta River, which is a regional open space. The aim is to connect existing foreshore parks and provide a link in a regional system of recreation trails.

The report discusses existing and proposed cycleways and pedestrian paths, signage, public art possibilities, and so on. Orientation signage has been installed along the river in response to this master plan.

This document fulfils one of the principles of this study ‘provide good pedestrian/cycle access to open space from centres’ (see Section 7).
Shrimpton’s Creek Parklands Plan of Management 2009

This Plan of Management outlines strategies to improve access to Shrimpton’s Creek and adjoining open spaces and other destinations. This complies with the Metropolitan Strategy’s objective ‘To increase access to quality parks and public places’ (F1).

The Parklands comprise Flinders Park, Tindarra Reserve, Greenwood Park, ELS Hall Park, Booth Reserve and Wilga Park. The name Shrimpton’s Creek Parklands has been used to describe these parks in a holistic manner. The size of Shrimptons Creek Parklands is 24.51 hectares (245 average sized building blocks).

There are 3 nearby parks that could form linkages to Shrimpton’s Creek Parklands. These are Elouera Reserve on Waterloo Road and Quandong Reserve on Cottonwood Crescent (both adjacent to Wilga Park), and Santa Rosa Park (immediately south of Flinders Park).

The parks along Shrimptons Creek are Council owned and are managed under the Local Government Act 1993. From the Macquarie Centre northwards until the Lane Cove National Park, Shrimptons Creek is on privately owned land.

Included in the parklands are the well utilised sporting fields and facilities at ELS Hall Park that cater for soccer, cricket, baseball, Australian Rules Football and rugby league. Santa Rosa Park is the other park in this group that caters for organised sporting use - mainly soccer and cricket.

Local residents are major users of these parks, particularly with a shared use pathway that leads from Santa Rosa Park through to Wilga Park, located in the suburb of Macquarie Park. This well used pathway provides recreation for walkers and bicycle riders and allows residents to commute to bus stops and the Macquarie Park Corridor.

The environment and landscape character of Shrimptons Creek Parklands is tightly linked with the Creek. Apart from the open areas of sports fields, these parks contain a heavily treed canopy that is closely aligned with the creek environment creating an overall bushland character.

Two ecologically endangered communities are represented along Shrimptons Creek Parklands: Sydney Turpentine Ironbark Forest, and Sydney Turpentine Ironbark Forest Margin.

The configuration and inclusion of the pedestrian and cycle access way within the Parklands lends these parks to also be managed as a regional park. Whilst there should be active recreational opportunities, these parks should continue to provide a natural environment for passive recreational needs and enjoyment. The parks should also continue to be a wildlife corridor, providing and improving the stands of urban forest located there.

Proposed actions include:
- inclusion of a 20 metre core riparian zone to either side of Shrimptons Creek;
- providing path connections from the main access way to other sections of the park, such as the upper levels of ELS Hall Park;
- revegetation along the parks to be sourced from remnant stands of the ecologically endangered communities located there;
- viewing opportunities and interpretation of the creek line; and
- playground upgrades to have a natural character to them.

The Action Plan includes:
- upgrading multi-use playing fields;
- stormwater management options;
- lighting of the pedestrian and cycle access way;
- clearing of vegetation obstructing sightlines close to the shared used pathway
- water recycling options;
- construction of a community facility building in ELS Hall Park; and
- implementing a fenced dog leash-free area in ELS Hall Park.
Environment &
Open Space

The proposed actions all fulfil principles in this document (See Section 7). The parklands are multi-purpose (active recreation, passive recreation and a wildlife corridor), WSUD elements are proposed (water recycling), environmental protection is a priority (revegetation to be sourced from remnant stands, 20 metre riparian zone to be included), pedestrian paths are to be extended, and a leash-free dog area provided (diversifying current uses, and implementing a desire of the community).

Field of Mars Reserve Plan of Management 2009

The Field of Mars is the largest reserve under the care, control and management of the City Of Ryde. The reserve is used for low impact “environmental recreation”, involving walking and appreciation of the natural environment. It is proposed to maintain this use in the future.

The reserve is significant because it contains a:

- Viable remnant of natural bushland which is rare in the region, and
- Unique area of biodiversity for both flora and fauna.

The Plan of Management for the Field of Mars aims to protect these values and reflects the principles of land management as expressed in the Crown Lands Act and the Local Government Act.

The Plan of Management complies with the principle ‘Ensure the protection of the environmental values of the City’s open space’ (see Section 7).
Eastwood Park Plan of Management March 2008

Currently, records indicate that the Park is owned by the Crown. Council has owned this land since a government gazettal in 1978 and needs to request an amendment of the land title certificate to rectify this issue.

Eastwood Park was dedicated as a public reserve owned by the Crown on the 8th October, 1920. Ryde Municipal Council was appointed as trustees. The park was eventually vested in city of Ryde in 1978.

Eastwood Park is classified as community land in accordance with the Local Government Act (1993). Under this Act, the land that makes up community land can be classified as:

- Sportgrounds,
- Parks
- Bushland
- General Community Use

Eastwood Park consists of sportsgrounds, parks, and community and civic use classifications.

No significant change to the park usage is proposed. Eastwood Park shall continue to be used primarily for organised sport, informal recreation, passive recreation and for social and cultural festivals, events and activities.

The objectives of this document are:

- To provide management direction that will enhance the quantity and quality of the urban trees across the City of Ryde.
- To develop a comprehensive City wide approach to the planting, maintenance and management of the trees.
- To educate the community on, and increase community awareness of, the value of trees in the urban landscape.
- To assess the current urban tree landscape and develop guidelines and strategies for its sustainable management.
- To provide recommendations towards the protection, preservation and contribution to the urban tree landscape.
- To provide a street tree masterplan that will guide and prioritise all future street tree planting across the City.

This strategy will aid in the management of trees in open space in Ryde. Trees are important in the principle ‘Ensure the protection of the environmental values of the City’s open space’ (See Section 7). Street trees are vital in all open spaces and in providing green links between open space, centres and other destinations.

5.5.7 OTHER RECENT OPEN SPACE UPGRADES

The City Of Ryde has been improving the quality of local open space extensively over the last few years. Examples are Ryde Park, Blenheim Park, Eastwood Park, Anzac Park, Yamble Reserve, Anderson Park, North Ryde Park and parks along the Parramatta River such as Kissing Point Park. These have all entailed extensive new planting and the installation of paths, play equipment and park furniture. A new boardwalk has been installed at the Field of Mars Reserve, along with an upgrade of the pedestrian pathways. Recent shopping centre upgrades have included the upgrade of adjoining small parks, such as Rotary Park adjacent to Five Ways shopping centre (see photo below).

Two new public parks have been provided on the Parramatta River. These are Ryde Wharf Park on Parsonage Street and Helene Reserve at the end of Bowden Street associated with the Faraday Park waterside development.

The Ryde Community Sports Centre is currently under construction on Kent Road. It is located next to sporting fields that accommodate soccer and baseball. The new hall will provide an extra 2300 m2 of indoor basketball/netball/volleyball/badminton courts and includes a 128 m2 meeting room (which will be the domain of the local sporting clubs associated with the hall and sport fields), and the usual amenities. This centre is due for completion in Jan - Feb 2011 at a cost of around $6 million.

Small increases in public open space in centres include Graf Ave at West Ryde shopping centre (widened footpath for future outdoor dining), Charles Street at Putney shopping centre (widened footpath for outdoor dining) and Meadowbank shopping centre on the eastern side of the railway station (new paved public area including terraces for outdoor dining). A widened footpath for outdoor dining terraces will be constructed in Church Street, Ryde Town Centre in the near future.

All these upgrades have increased the range of activities for all age groups by including features such as off-leash dog areas, kiosks, water features, play equipment, sport facilities for youth, boardwalks and so on. As discussed in
Section 6.1, Council must enhance existing spaces through improved facilities to cater for the future increased population.

The new public space at Meadowbank shopping centre includes 5 rain gardens, and there have been bio-retention basins installed at Meadowbank Park and Looking Glass Bay. Rain gardens and bio-retention basins are WSUD features.

The following photos illustrate three recently upgraded parks and one new park. These four parks are of differing sizes and fulfil different functions.

Figure 5.40 Rotary Park, Five Ways shopping centre, Eastwood
This small upgraded park provides a green resting place in close proximity to the shopping centre.
Environment & Open Space

Figure 5.41   Blenheim Park, Blenheim Road, North Ryde.
This large upgraded park has extensive play areas, BBQs and an off-leash dog area.

Figure 5.42   Ryde Park, Blaxland Road, Ryde.
Ryde’s premier park has extensive playing fields, play equipment, BBQs, and a café.
5.6 ISSUES

This section will discuss the major issues of retaining and enhancing open space, access and linkages to open space, and the provision of open space in centres. The final part of this section will discuss planning provisions and the protection of environmental values of open space.

5.6.1 RETAINING AND ENHANCING OPEN SPACE

Introduction

As stated in Section 4.1, the population of Ryde is currently increasing at a relatively stable rate. The population is ageing, with numbers in the under 19 category remaining static while there will be significant increases in the over 50 category. By 2026, 19.6% of the population will be aged 0-19 years, 50% will be 40 years or over, and the highest proportion of residents will be 30-39 years (Parks on Track, p 12/13).

According to the Metropolitan Strategy the City Of Ryde is planning for 25,000 extra residents. This will result in an increase in residential development, most of which will be in Ryde’s centres. Top Ryde and Macquarie Park will be the main centres affected, with Gladesville, Eastwood, West Ryde and Meadowbank also having substantial increases.

This increased population will need open space for organised sport, informal recreation, playgrounds, barbecues, dog walking, festivals, performances, and so on.

The difficulty of obtaining more open space means Council must enhance existing spaces through improved facilities (such as play equipment,
barbeques and lighting) and increased vegetation for shade, aesthetics and wildlife habitat. In future, open spaces will need to become more multi-purpose if they are to serve the increased population.

This issue is focussed on the following areas:
- Importance of open space
- Increasing densities and open space
- Demographics and demands
- Maximising the use of open space
- What the community are saying about open space
- Land uses in open space

**Importance of open space**

Open space is important for the physical and psychological well-being of people. It provides space for active recreation as well as relief from the hard city environment and a meeting place. It is also important as animal habitat and to retain plant species, especially bushland.

Open space can act as a link, for example Darvall Park links Eastwood and West Ryde. It protects riparian areas such as Shrimpton’s Creek and Buffalo Creek, and can act as a wildlife corridor. Waterside open space allows public access to water, which is an extremely important role.

Open space lowers city temperature, captures water, and helps control high winds. It can also be a repository of history, such as the Field of Mars Reserve and Brush Farm Park and House.

**Increasing densities and open space**

It is known that people living in units and apartments are more reliant on public open space for walking/cycling, social gatherings with family and friends, and children’s play spaces than those with accessible private open space. The provision of a sufficient amount, variety, and quality of open space becomes increasingly important where medium to high-density housing developments occur (Parks on Track, p19). The anticipated increase of units and apartments to 2031 will increase this demand.

The Housing Study and the Transport Study discuss the importance of open space near centres, particularly because of the proximity of medium to high-density housing and public transport. Easy access to open space is an important component of residential amenity. The Centres and Corridors Study also emphasises the importance of providing for additional parks within the vicinity of centres.

**Demographics and Demands**

*Parks on Track for People 2025* (2006) discusses open space demand at length.

**Increasing Demand**

Demand is increasing for sports fields, as verified by the statistics kept by sporting clubs. Numbers have increased for all sports between 2003 and 2005. The City will experience an increased demand for sporting facilities over the next twenty years. A declining rate of involvement by the City’s ageing population is being offset by higher rates of involvement across all ages (P on T pp44/45).

There is a high demand for walking trails and paths through parks and to link home/shops/school and other destinations. This demand will increase because Ryde’s population is ageing, and walking is the physical activity with the highest participation rate in Australia. There is a need to make paths more attractive, accessible and safe (P on T p39).

Given the prevalence of people aged 0 – 19 years in the suburbs of Ryde, West Ryde and Eastwood, there is likely to be continued demand for playgrounds and formal sporting facilities in these suburbs. An increased number of people aged 20 – 44 years in the suburb of Meadowbank is likely to see increased demand for formal sporting facilities to meet the needs of residents aged between 20 – 30 years.
Environment & Open Space

Ageing Population

There is a growing need for passive recreation, especially because the population is ageing (P on T p24). Even though the population is ageing data shows increased demand for sporting facilities, because there are higher rates of participation across all ages.

There are significant declines in participation rates for sport as people age.

Open space and leisure needs by age:

- 0-19yrs: playgrounds and junior sporting facilities.
- 30-39yrs: sports grounds (people retain some interest in active sport).
- 50+: walking and cycling trails, and informal passive open space (P on T p13).

Other

People are willing to travel to the bigger and better playgrounds such as Putney Park. A variety of playspaces is lacking in Meadowbank and Ryde (P on T p26). This is a particular issue for Ryde, as it is one of the areas likely to retain the highest proportion of people aged 0 – 19 years.

There is a need for diversity of experience in parklands, such as formal gardens for older people (P on T p40).

At the 2001 Census, income levels for the City of Ryde were slightly higher than metropolitan Sydney. In general terms, the greater the household income the greater the uptake of recreation services and programs (P on T p20).

The number of players registered with teams in Ryde utilising Ryde’s playing fields, but residing outside the Local Government Area, are well above 50% in some sports. It would be appropriate for a contribution to this funding gap by sporting clubs based upon the percentage of non-Ryde residents (P on T p43).

Maximising the use of open space

There is limited opportunity for Council to acquire additional land for open space due to the value of land in Sydney, so existing open space must be used more effectively without detriment to the environment or nearby residents.

The Integrated Open Space Strategy will investigate opportunities to intensify use of some existing open space including sports fields. However consideration of any intensification or change of use will have to be done with comprehensive community consultation.

The Integrated Open Space Strategy will also address the rationalisation and expansion of open space in order to fulfil the future needs of the City.

Demand for outdoor sporting facilities in most parts of Northern Sydney exceeds supply during peak playing periods, and it is expected that the population increase will exacerbate this problem. To meet the needs of the current and incoming population, Councils will need to better plan and design parks and open spaces as social venues and meeting places. The main opportunities are to:

- enhance existing facilities to improve the general amenity including toilet facilities, seating, shade and playground equipment;
- improve safety and utilisation of parks and sporting facilities with upgraded lighting;
- provide more picnic and barbecue facilities to suit couples and families living in apartments, and increasing numbers of residents from Culturally and Linguistically Diverse backgrounds;
- provide non-traditional sporting facilities such as skate board ramps, off-road cycle tracks and BMX tracks for children and young people;
- improve access for people with disabilities to and within outdoor recreational areas, and
- improve safety of cycle and pedestrian links between housing areas and parks.

There is potential for Northern Sydney councils to develop a region-wide response to the shortage of sports fields, recognising that sporting clubs do not differentiate between LGA boundaries. Such an approach would allow for the redevelopment of
existing facilities or development of new facilities to take into account regional issues such as existing facilities within the region and the need for such facilities within the region. This issue will be comprehensively addressed in the Integrated Open Space Strategy.

**What the community are saying about open space**

The Ryde 2030 Community Strategic Plan will be an overarching visionary plan for the Ryde Local Government Area. It will be used by government and community organisations to plan for the services and programs to meet the needs of the Ryde community.

As part of the formulation of this Plan a survey was conducted in 2009 of local residents, and open space was included as an issue. The results of the survey concluded that the community wants:

- More parks and children’s activity areas
- An integrated network of high quality bike paths that are safe and connected. Paths should not be squeezed onto busy arterial roads but should connect along parklands, riverfront and bushland areas where possible
- No further loss of parks and bushland
- Improved management / maintenance and park facilities
- More gardens and community gardens
- Parks and open space preserved and maintained to relieve the pressure of population increases
- Planting more trees - by far the most frequently suggested initiative regarding climate change and natural resources
- Greater funding for bush regeneration programs and continued access to these natural areas
- Completion of the track along Buffalo Creek to the Lane Cove River
- Re-establishment of the foreshore from the car bridge to rail bridge so the great tradition of trees is reinstated
- Cafés in parks or near community facilities
- Improved park and sporting facilities
- Mini native Botanical Gardens and displays of local fauna to give greater public education of the environment
- Displays of Aboriginal and Australian settlement history in public places such as parks, shopping centres and places of significance
- Street art/sculptures/statues/features in public places

**Young adults 12-18 yrs**

- More community parks and gardens, better sporting facilities and cover for wet weather games
- More skate parks (important issue for them)

These survey results echo those from the Leisure and Recreation Needs survey (2009), and there are additional requests such as mini botanical gardens and cafes in parks. All these ideas will be taken into account in future planning of open space.

**Land uses in open space**

Open space is under pressure due to the demands of an increasingly active and growing population. As the survey results illustrate, the community has high expectations regarding the amount and quality of open space. There are heavy demands for both active and passive recreation as detailed earlier in this document.

**Actions for Retaining and Enhancing Open Space**

- It is important that Council does not allow the incremental loss of open space because once lost, it is very difficult and expensive to regain. The Integrated Open Space Strategy being prepared during 2010/11 will develop a comprehensive program for both the rationalisation and expansion of open space. This strategy will investigate the possible sale of underused small parks and the purchasing of appropriate land to increase the size of larger parks for active sports. It will also examine connections between open spaces.
It is also important that open space within or near centres is retained or increased – due to the increased densities that will occur in centres over time.

It is imperative to retain the RE1 and E2 zones as outlined in LEP 2010 so as to provide adequate open space areas to meet the existing and future needs of the residents of Ryde. Land uses in the RE1 zone need to cater for the diverse uses desired by an increasing population. Uses such as cafes and parking must remain ancillary, and the location of ancillary uses requires careful consideration so as not to reduce the active and passive uses within open space.

The E2 zone requires an added objective to allow suitable passive use of those areas adjacent, or associated with, parkland. This would recognise that with so much of Ryde's bushland now covered by the E2 zone adjacent to RE1 zones, passive recreation is inevitable.

These actions are based on a land use approach.

5.6.2 ACCESS AND LINKAGES TO OPEN SPACE

There are two main ways of analysing access to open space:

- Physical access – distance from homes to open space, appropriate pedestrian/cycle links, pedestrian crossings, public transport, car parking, and so on.
- Perceived access by various age groups/ethnic groups, ie do all people feel welcome, feel that they have access?

**Physical access**

City Of Ryde's goal is for 95% of the community to be within 400m of a park (P on T p20). Unfortunately, access to good quality spaces for children and young adults is limited. The recent installation of a basketball court at Ryde Park is a step towards rectifying this situation.

Ryde has been divided into 11 neighbourhoods; the proposal is that each be self-sufficient with regard to basic play and leisure opportunities (P on T p37). There is also a hierarchy of spaces for play (local, neighbourhood, and district), each with certain facilities such as play equipment, picnic tables, barbeques, and so on (P on T p38).

Open spaces can be more readily accessed if they are served by car parking, bike paths and public transport. Disabled car spaces and accessible design are important for people with disabilities to use open spaces. Parks on busy roads require pedestrian crossings near entrances for safety reasons. In 2006, 79.1% of households in Ryde owned at least one car, so vehicular access to open space is high.

Another aspect pertaining to access is the high number of people using Ryde's sporting fields who live outside Ryde. This figure is well above 50% in some sports.

**Access achieved by linkages**

There is high demand for walking trails and bike paths in parks and open space, and between people’s homes, work, shops, schools and open space. In Ryde there are many opportunities to improve links to open space from shopping centres and other destinations. Attractive and safe pedestrian/cycle links with shade and signage encourage use, and help to lower the number of trips taken by car.

The map below shows the location of 7 linkages identified by City Of Ryde’s Parks Department. The map also shows new, shorter potential links between shopping centres (of various sizes) and parks in close proximity to these centres. The 7 links on the City Links map and the further 7 potential city-wide links (in Appendix C) will be reviewed within the Integrated Open Space Strategy.
Environment & Open Space

Figure 5.44 City Links map
Environment & Open Space

Both the *Ryde Bicycle Strategy and Master Plan (2007)* and the draft *Urban Tree Management Strategy (2009)* relate to these City-wide potential linkages. The Bicycle Strategy outlines existing and potential regional and local on-road and off-road bicycle routes, with destinations including parks and sportsfields. This document is currently taken into account in all planning documents, public domain upgrades and in assessing development applications. The Tree Strategy emphasises the importance of street trees for shade and aesthetic values along these links.

This study discusses the 7 potential links between centres and adjoining parks.

Generally the aim is to provide improved linkages from centres to open space, and increase access to open space and waterways. These linkages are the first stage in a larger program of improving linkages and connections across the city.

This table explains the new shopping centre – parks links shown in yellow on the map above and shown in closer detail on the 5 maps following.

<table>
<thead>
<tr>
<th>CENTRE</th>
<th>ADJACENT OPEN SPACE</th>
<th>NATURE OF LINK</th>
<th>LAND ACQUISITION REQUIRED?</th>
<th>MAP TITLE (REF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Ryde</td>
<td>Ryde Park, leading to Burrows Park</td>
<td>Footpath link from centre to parks is obvious.</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Eastwood</td>
<td>Eastwood Park</td>
<td>Footpath link from centre to parks is obvious.</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>West Ryde</td>
<td>Anzac Park</td>
<td>Upgrade existing footpaths.</td>
<td>No</td>
<td>West Ryde link map</td>
</tr>
<tr>
<td></td>
<td>Darvall Park</td>
<td>New path from re-located Betts Street into Darvall Park.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Miriam Park</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gladesville</td>
<td>Glades Bay Park</td>
<td>Linsley Street - upgrade existing footpaths.</td>
<td>No</td>
<td>Gladesville link map</td>
</tr>
<tr>
<td>Putney</td>
<td>Parry Park and public school</td>
<td>Upgrade existing footpaths.</td>
<td>No</td>
<td>Putney link map</td>
</tr>
<tr>
<td>Blenheim</td>
<td>Blenheim Park</td>
<td>Upgrade existing footpaths.</td>
<td>No</td>
<td>Blenheim link map</td>
</tr>
<tr>
<td>Cox’s Road</td>
<td>North Ryde Common</td>
<td>Desired new path through hospital grounds.</td>
<td>No, but location of new path to be negotiated with Macquarie Hospital</td>
<td>Cox’s Road link map</td>
</tr>
</tbody>
</table>

There are many ways that these links can be reinforced and made attractive to pedestrians and cyclists. Footpaths can be upgraded by widening and/or using high quality materials such as granite. Other treatments include planting street trees for shade, and installing seats, pedestrian lighting, bubblers, bike racks, public art and so on. Signage or footpath graphics can direct pedestrians and cyclists to parks, shops and other destinations.
Environment & Open Space

Figure 5.45 West Ryde link map

Figure 5.46 Gladesville link map
Figure 5.47 Putney link map
Environment & Open Space

Figure 5.48 Blenheim link map
Environment & Open Space

Figure 5.49  Cox’s Road link map
Environment & Open Space

Lane Cove National Park link

The proximity of Lane Cove National Park to Ryde is a major open space asset – it links to other bushland in Ryde such as Shrimpton's Creek parklands and the Field of Mars/Buffalo Creek. This proximity is important for various reasons such as wildlife corridors, recreation and aesthetics (P on T p9). Delhi Road in Macquarie Park links Riverside Corporate Park to Chatswood West, via Lane Cove National Park.

These links will be further developed as part of the Integrated Open Space Strategy.

Perceived access

There are few facilities for unorganised leisure activities for teenagers and young adults. Some young women in particular feel that the open space is not catering to their needs (P on T p6).

The Leisure and Recreation needs Community Consultation Report found that CALD residents use leisure and recreation facilities/settings much less than others. This could be because certain members of the community feel unwelcome or intimidated to use open space. Planning for open space needs to investigate this issue to ensure that the City is catering for the entire Ryde community regardless of ethnicity, gender, age, or level of ability.

This matter will be addressed in the Integrated Open Space Strategy.

Actions for Access and Linkages to Open Space

- The 7 shopping centre – parks links described in the table and maps above will in future be examined in detail, as part of a detailed Linkage Strategy and public domain upgrade programs.
- The Linkage Strategy will include the detailed routes and the actions required to reinforce these links and make them attractive to pedestrians and cyclists. For example footpaths can be upgraded by widening and/or using high quality materials such as granite. Other treatments include planting street trees for shade, and installing seats, pedestrian lighting, bubblers, bike racks, public graphics and so on. Signage or footpath graphics can direct pedestrians and cyclists to parks, shops and other destinations.
- The Linkage Strategy for the City will be further developed to incorporate the links identified in the Ryde Bicycle Strategy and Master Plan (2007), the Urban Tree Management Strategy, by Council’s Parks Department, and the city - wide links in Appendix B.

5.6.3 OPEN SPACE IN CENTRES

All centres, regardless of size, should include an area of publicly owned open space as a meeting place, lunch spot, and relief from buildings. It should have shade and seating, and be independent of any retail food outlet, to enable anyone to sit and relax without having to purchase anything. A good example of this is the small park at the Five Ways shopping centre in Eastwood. It is a pleasant grassed area with seats and shade.

Generally large centres have large parks, such as Ryde Park at Ryde Town Centre and Eastwood Park at Eastwood Town Centre. Small centres have smaller parks, such as Rotary Park at Five Ways shopping centre. Park location in centres is important to facilitate access and allow easy use by residents, workers and visitors.

The City is anticipating 25,000 extra residents, most of whom will be located in dense developments in Ryde’s centres. This increased working and residential population will be reliant on a range of types of public open space for activities such as organised sport, informal recreation, playgrounds, barbeques and dog walking.
Actions for Open Space in Centres

Master planning being carried out in Centres should fully understand the open space needs of the users, workers and residents of the centres. Master plans, Development Control Plans (DCPs) and public domain plans should clearly articulate the open space outcomes required in each centre. These requirements will include size, location, design and facilities. Development incentives should be explored for the provision of public open space. Such incentives should be included in the LEP. Master planning should also inform reviews of Council’s Section 94 Plan.

5.6.4 PLANNING PROVISIONS AND THE PROTECTION OF ENVIRONMENTAL VALUES OF OPEN SPACE

Threats to open space

The main threats to open space (particularly urban bushland) are weed invasion, urban development pressures, arson, vandalism, and feral and uncontrolled domestic animals. Most of these threats can be dealt with through education and appropriate zoning of land (Parks on Track p 28).

The planning mechanisms used to protect the environmental values of the City’s open space are:

State Environmental Planning Policy No 19 – Bushland in Urban Areas (SEPP 19)

The general aim of this Policy is to protect and preserve bushland within the urban areas of Ryde and other Council areas because of:

- Its value to the community as part of natural heritage
- Its aesthetic value and
- Its value as a recreational, educational and scientific resource.

Some of the specific aims of the policy are to:

- Protect habitats of native flora and fauna
- Protect wildlife corridors and vegetation links with nearby bushland
- Retain bushland in parcels of a size and configuration which will enable the existing plant and animal communities to survive in the long term
- Protect the recreational and educational potential of bushland
- Maintain bushland in locations which are readily accessible to the community.

The SEPP states that special conditions apply to sites adjacent to bushland.

Some of the specific requirements are:

- All natural drainage lines are to be maintained,
- Stormwater and site run-off for new developments is not to be discharged into
- adjoining bushland areas unless it has passed through a nutrient and sediment filter structure,
- All materials must be visually compatible with adjoining areas,
- All natural features such as rock outcrops and escarpments are to be retained,
- All natural bushland or indigenous species are to be retained and protected,
- Screening of all structures from adjoining bushland is to be provided,
- Natural features such as dead trees with hollows, fallen logs, rock outcrops and leaf litter should be retained to preserve wildlife habitat, except where this would cause a safety hazard.

Plans of Management

A Plan of Management is a formal document that provides guidance for the future planning and management of public open space. It achieves this by identifying issues affecting public open space and outlines how that open space can be improved, used, managed and maintained in the future.
Environment & Open Space

Plans of Management aim to address matters such as:

- provide a practical approach to the planning and management of open space;
- ensure that the public use and enjoyment of open space is encouraged;
- respond to current needs and opportunities as well as providing future directions;
- reflect proposed planning and implementation of improvements to the surrounding area; and
- support the conservation and interpretation of the natural and cultural heritage values of the open space.

Plans of Management cover both Crown Land (owned by the State) and Community Land (Public Land owned by the City of Ryde). The City Of Ryde currently has 5 Plans of Management and a generic Plan of Management. However a program is in place to have a Plan of Management for all major parkland/open space areas by 2017.

Local Environmental Plan - RE1 and E2 ZONING

Under LEP 2010 land which is used as parkland and owned or controlled by Council has been zoned RE1 Public Recreation or E2 Environmental Conservation.

Objectives for the RE1 Public Recreation zone under LEP 2010 are as follows:

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.
- To enable related uses that will encourage the enjoyment of the land for recreational purposes.
- To enhance, restore and protect the natural environment for recreational purposes.
- To provide adequate open space areas to meet the existing and future needs of the residents of Ryde.
- Land uses permitted in the zone under LEP 2008 are as follows:
  - Business identification signs;
  - Community facilities;
  - Environmental facilities;
  - Jetties;
  - Kiosks;
  - Recreation areas;
  - Recreation facilities (indoor);
  - Recreation facilities (outdoor);
  - Restaurants;
  - Roads;
  - Water recycling facilities;
  - Water treatment facilities.

Bushland

In May 2009 City of Ryde Council resolved that the Draft Ryde LEP 2008 be amended to apply E2 zoning (Environmental Conservation) to all of the land categorised as bushland under Section 36 of the Local Government Act 1993. This has resulted in a portion of over 81 parks being zoned E2. These areas of E2 may be modified in future when more accurate mapping is done for land categorised as bushland.

This E2 zoning was based on the Assessment of Bushland Reserves E2 and E3 Conservation Areas (White, 2009).

The objectives of the E2 zone are:

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.

Land uses permitted in the zone under LEP 2008 are as follows:

- Environmental Protection Works

  without consent

  Drainage; earthworks; environmental facilities; utility installations.

  with consent

  The objectives and land uses within these zones will be reviewed as part of the Comprehensive LEP to ensure that the environmental values are protected.
This review will be done in accordance with the State Government’s planning guidelines.

The Integrated Open Space Strategy will undertake further research and analysis of the bushland areas/open space areas in the City to establish the need for additional lands to be zoned RE1 and E2.

**Actions for Planning Provisions and the Protection of Environmental Values of Open Space**

- Environmental values within open space will be protected through the planning provisions of the SEPP and through appropriate zoning (E1, E2 and RE1) and land uses in LEP 2010.
- The objectives and land uses within the RE1 and E2 zone be reviewed in accordance with Department of Planning guidelines.
- Retain the E2 zone for bushland, however the Integrated Open Space Strategy will examine the E2 zone in light of the boundaries of bushland on which the zone was based. The bushland categorisation, which was used to determine the zones, was undertaken in the 1980s.
- It is recommended that additional areas for RE1 and E2 be examined in future, through strategies such as the Integrated Open Space Strategy.
## 5.7 STRATEGY

The strategy to guide the future of open space in the City of Ryde is described in a series of principles, directions and actions.

### 5.7.1 PRINCIPLES, DIRECTIONS AND ACTIONS

<table>
<thead>
<tr>
<th>PRINCIPLE</th>
<th>ACTIONS</th>
</tr>
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</table>
| P1 Retain the total area of open space. | - Develop a program for the rationalisation of open space – as part of the Integrated Open Space Strategy.  
- Retain the RE1 zone for open space. |

<table>
<thead>
<tr>
<th>DIRECTIONS</th>
<th>RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>The area of existing open space within the City of Ryde is not to be reduced in size.</td>
<td></td>
</tr>
</tbody>
</table>
- The Integrated Open Space Strategy undertake a program that investigates the possible sale of underused small parks and the purchasing of appropriate land to increase the size of larger parks for active sports.  
- Uses such as cafes and parking must remain ancillary, and the location of these ancillary uses requires careful consideration so as not to reduce the active and passive uses within open space. |

<table>
<thead>
<tr>
<th>PRINCIPLE</th>
<th>ACTIONS</th>
</tr>
</thead>
</table>
| P2 Provide good pedestrian/cycle access to open space from centres. | - Development of a Linkage Program within the Integrated Open Space Strategy to improve linkages between open space and key destinations.  
- As part of this Linkage Program examine improving the links between centres and open space.  
- Development of a Linkage Program within the Integrated Open Space Strategy to improve linkages between open space and key destinations.  
- As part of this Linkage Program examine improving the links between centres and open space. |

<table>
<thead>
<tr>
<th>DIRECTIONS</th>
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</tbody>
</table>
- Establish links between open space, centres and other destinations such as schools and community centres.  
- Maximise access via active transport (walking and cycling). |
### Environment & Open Space

#### RECOMMENDATIONS

- Prepare a City Wide Linkage Strategy that would include:
  - the 7 shopping centre – parks links.
  - the links identified by Council’s Parks Department
  - the city- wide links in Appendix C
  - the links identified in the Ryde Bicycle Strategy and Master Plan (2007) and the Urban Tree Management Strategy.
- To commence the Strategy - prepare a detailed program that comprises the 7 shopping centre – parks links. The linkages be identified by tree planting, public domain works and signage
- Works associated with the Linkage Strategy are included on Council’s various public domain upgrade programs.

#### PRINCIPLE

**P3** Promote well designed and publicly owned open space (urban parks) in all town and small centres.

#### DIRECTIONS

- Centres are to have an urban park (paved, grassed, or a combination), where appropriate, based on elements such as size, function and location of the centre.

#### ACTIONS

- Master plans and public domain upgrades for centres are to have an urban park as part of the overall design.
- Ensure the park is independent of any retail outlet.
- Ensure the park has safe, convenient access.

#### RECOMMENDATIONS

- Planning instruments are to reflect the requirements for urban parks within centres.

#### PRINCIPLE

**P4** Ensure the protection of the environmental values of the City’s open space.

#### DIRECTIONS

- The RE1 and E2 zoned land within the City is retained.

#### ACTIONS

- The objectives and land uses of the RE1 and E2 zones are reviewed.
- Allow the Integrated Open Space Strategy to examine the E2 zone in light of the boundaries of bushland on which the zone was based.

#### RECOMMENDATIONS

- The Planning Instrument be amended in relation to the RE1 and E2 zones.
## 5.8 RECOMMENDATIONS

### 5.8.1 LEP RECOMMENDATIONS

<table>
<thead>
<tr>
<th>NO.</th>
<th>RECOMMENDATION</th>
</tr>
</thead>
</table>
| 1   | **ECOLOGICALLY SUSTAINABLE DEVELOPMENT**  
(a) The “aims” section of the new LEP to include a new clause that addresses the need for ecologically sustainable development.  
(b) A local provision to be included in the new LEP stating that 4 green stars (GBCA star rating) is a minimum standard for development for all types of buildings which can be assessed using the relevant GBCA assessment tool and have a floor space of 1,500 m² or greater. |
| 2   | **BIODIVERSITY**  
Continue to support the E1 zoning for land owned or managed by NPWS in the LGA e.g. Lane Cove National Park and Wallumatta Reserve. |
| 3   | **AIR QUALITY**  
As per LEP recommendations for ESD |
| 4   | **RECEIVING WATER QUALITY**  
The new LEP to include a clause relating to stormwater quality and water sensitive urban design. The objective of the clause is to ensure that stormwater is managed in a way which “minimises stormwater quality impacts on receiving waters, riparian areas and areas of high biodiversity value and helps contribute to the maintenance and restoration of environmental qualities and waterways health”.  
The clause is to apply to all development above a certain size (ie) 6 or more townhouses/villas, other development of four storeys or more, and/or development with a floor space of more 2,000 sqm. |
| 5   | **FLOODING AND STORMWATER QUALITY**  
Incorporate the Eastwood/Terry’s Creek flood planning model clause into LEP 2011.  
Note: This new clause would replace the clause 6.4 LEP 2010 “Eastwood Urban Village – Development Intensification”. |
| 5   | **CLIMATE CHANGE**  
A clause is required in the new LEP requiring development within the Foreshore Building Line (clause 6.3) to address sea level rise projected by the NSW State Government. |
| 6   | **RE1 ZONE**  
A following additional objective is included in the zone:  
- To protect and enhance natural areas in such a manner that  
- enhances the quality of the areas and facilitates public enjoyment of  
- the areas compatible with its conservation. |
5.8.2 DCP RECOMMENDATIONS

<table>
<thead>
<tr>
<th>NO.</th>
<th>RECOMMENDATION</th>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>ECOLOGICALLY SUSTAINABLE DEVELOPMENT</td>
</tr>
<tr>
<td></td>
<td>• Review Energy Smart section of the City of Ryde DCP (section 7.1) to ensure adoption of best practice controls and design standards to mitigate generation of green house gases and other sources of air pollution from all building types.</td>
</tr>
<tr>
<td></td>
<td>• The DCP Part 4 relating to town centres to be reviewed and amended to include controls that support the LEP clause for 4 green star (GBCA star rating) and provide guidance on the use of the incentive provisions.</td>
</tr>
<tr>
<td></td>
<td>• The DCP Part 4 for the town centres and corridors to be reviewed and amended to include controls that support transit orientated development and pedestrian-friendly precincts to facilitate a reduction in car dependency and increased active transport and public transport use.</td>
</tr>
<tr>
<td>8</td>
<td>BIODIVERSITY</td>
</tr>
<tr>
<td></td>
<td>Review and amend sections of DCP 2010 (e.g. Section 9.6 Tree Preservation, Section 4.5 Macquarie Park) to strengthen the controls relating to biodiversity e.g. deep soil-planting and landscaping on private and public land.</td>
</tr>
<tr>
<td>9</td>
<td>AIR QUALITY</td>
</tr>
<tr>
<td></td>
<td>As per DCP recommendations in ESD section</td>
</tr>
<tr>
<td>10</td>
<td>RECEIVING WATER QUALITY</td>
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<tr>
<td></td>
<td>• Introduce a section in DCP 2010 on Water Sensitive Urban Design</td>
</tr>
<tr>
<td></td>
<td>• Update and/or revise other relevant sections of the DCP 2010, where necessary to encourage water sensitive urban design solutions for storm water management e.g. Section 4.5 Macquarie Park</td>
</tr>
<tr>
<td></td>
<td>- Section 8.2 Stormwater management</td>
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<td></td>
<td>- Section 8.3 Floodplain management</td>
</tr>
<tr>
<td>11</td>
<td>FLOODING AND STORM WATER QUANTITY</td>
</tr>
<tr>
<td></td>
<td>• Introduce a section in DCP 2010 (Ryde Draft DCP section 8.3), relating to development activity and flood plain management. The provisions in the DCP would be based on the proposed DCP within the “Eastwood and Terry’s Creek- Flood Plain Risk Management Study and Plan”.</td>
</tr>
<tr>
<td></td>
<td>• Based on the provisions of the Flood Plain Management DCP, revise other relevant sections DCP 2010 to ensure compliance with the flood plain planning.</td>
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<tr>
<td>12</td>
<td>WASTE</td>
</tr>
<tr>
<td></td>
<td>Review section 7.2 DCP 2010 - Waste Management and Minimisation, in accordance with Department Environment and Climate Change’s new “Model Waste Not DCP Chapter 2008”</td>
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</table>
## Environment & Open Space

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<thead>
<tr>
<th>NO.</th>
<th>RECOMMENDATION</th>
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<tbody>
<tr>
<td>13</td>
<td>OPEN SPACE</td>
</tr>
<tr>
<td></td>
<td>Development Control Plans and public domain plans, when been developed or amended are to clearly articulate the open space outcomes required in each centre. These requirements will include size, location, design and facilities.</td>
</tr>
</tbody>
</table>

### 5.8.3 OTHER RECOMMENDATIONS

<table>
<thead>
<tr>
<th>NO.</th>
<th>RECOMMENDATION</th>
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<tbody>
<tr>
<td>13</td>
<td>ECOLOGICALLY SUSTAINABLE DEVELOPMENT</td>
</tr>
<tr>
<td></td>
<td>▪ Partner with development stakeholders, land owners and land user groups to achieve measurable ESD outcomes through development in Ryde.</td>
</tr>
<tr>
<td></td>
<td>▪ Work with the Green Building Council of Australia (GBCA) and other key stakeholder groups on the viability of establishing “green precincts” in Ryde.</td>
</tr>
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<td></td>
<td>▪ Provide information, training, advice and support to assist building owners and occupants to understand the challenge of living sustainably and to actively pursue ways of reducing their ecological footprint, with a particular focus on youth.</td>
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<tr>
<td></td>
<td>▪ Seek funding to support the development and implementation of ESD programs and initiatives involving target groups (eg major landowners) throughout Ryde.</td>
</tr>
<tr>
<td>14</td>
<td>BIODIVERSITY</td>
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<tr>
<td></td>
<td>▪ Encourage the establishment and/or consolidation of linkage programs.</td>
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<td></td>
<td>▪ Develop and/or continue to support strategies to enhance and manage vegetation communities in other parts of Ryde (outside of E1 and E2 zoned areas) which are recognised in appropriate studies and reports as being of value to the community.</td>
</tr>
<tr>
<td>15</td>
<td>RIPARIAN AREAS</td>
</tr>
<tr>
<td></td>
<td>▪ Undertake analysis of all riparian areas in Ryde to inform creek management and the protection and management of riparian areas. Such analysis should acknowledge the multi-purpose value of riparian areas, including pedestrian and cycleway connections.</td>
</tr>
<tr>
<td></td>
<td>▪ Develop Riparian Area Guidelines for incorporation in the DCP to deliver development outcomes to protect and enhance riparian areas in Ryde through the implementation of WSUD and other approaches.</td>
</tr>
<tr>
<td>16</td>
<td>RECEIVING WATER QUALITY</td>
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<td></td>
<td>▪ Revise CoR public domain manuals, strategy documents, work practice manuals, design specifications and guidelines to incorporate WSUD objectives and practices.</td>
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<td></td>
<td>▪ Provide training for CoR planning and operations staff on WSUD.</td>
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<td></td>
<td>▪ Develop education and community programs and Information Sheets on stormwater quantity WSUD and other water quality Programs</td>
</tr>
<tr>
<td>NO.</td>
<td>RECOMMENDATION</td>
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<tr>
<td>18</td>
<td>BUSHFIRE</td>
</tr>
<tr>
<td></td>
<td>Review the CoR “bushfire prone lands map” in accordance with Rural Fire Service Guidelines.</td>
</tr>
<tr>
<td>19</td>
<td>CLIMATE CHANGE</td>
</tr>
<tr>
<td></td>
<td> Develop strategic and land use planning guidelines for landowners and developers to manage and reduce risks and impacts of rising sea level on people, property and the environment within the foreshore building line.</td>
</tr>
<tr>
<td></td>
<td> Using the “Draft Coastal Risk Management Guide” published by DECCW in 2009, identify and confirm the “coastal risk areas” within the City of Ryde and develop appropriate controls and guidelines to (a) reduce intensification of land uses within coastal risk areas, (b) achieve “appropriate” land uses which are compatible with coastal risk areas (c) appropriately manage risks to people, property and the environment arising from any intensification of land uses within coastal areas.</td>
</tr>
<tr>
<td>20</td>
<td>LAND STABILITY</td>
</tr>
<tr>
<td></td>
<td>Prepare fact sheets or similar education materials providing guidance on:-</td>
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<tr>
<td></td>
<td> unstable land risk management planning, using the current AGS guidelines (2007).</td>
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<td></td>
<td> geotechnical assessment requirements for proposed developments.</td>
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<td></td>
<td> ongoing maintenance of development associated with potentially unstable land.</td>
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<tr>
<td></td>
<td>Where practicable, undertake further study on land stability in the City of Ryde. This will involve a review of the existing slope instability areas and mapping of risk areas using available geotechnical data and current AGS guidelines.</td>
</tr>
<tr>
<td>21</td>
<td>WASTE</td>
</tr>
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<td></td>
<td>Continuation of education and promotional work to enhance community understanding and implementation of best practice waste minimisation and waste management.</td>
</tr>
<tr>
<td>22</td>
<td>OPEN SPACE</td>
</tr>
<tr>
<td></td>
<td> Investigate opportunities for additional areas of RE1 and E2 land to satisfy the continued demand for open space, playgrounds and formal sporting opportunities in the City Of Ryde.</td>
</tr>
<tr>
<td></td>
<td> Enhance existing spaces through improved facilities (such as walking trails, bike paths, play equipment, barbeques and lighting) and increased vegetation.</td>
</tr>
<tr>
<td></td>
<td> Develop a program of co-ordinating linkages connecting people’s homes, work, shops, schools and open space.</td>
</tr>
<tr>
<td>23</td>
<td>FUTURE MASTER PLAN REQUIREMENTS</td>
</tr>
<tr>
<td></td>
<td>Examine incorporation of a public park into all Master Plans for centres.</td>
</tr>
</tbody>
</table>
5.9 REFERENCES

City of Ryde (2001) Generic Plan of Management for Community Land’


City of Ryde (2006) City of Ryde Management Plan’

City of Ryde (2006) City Vision’

City of Ryde (2006) Parks on Track for People 2025’

City of Ryde (2006) Eastwood Master Plan review”

City of Ryde (2007) Meadowbank Employment Area Development Control Plan’

City of Ryde (2007) Section 94 Development Contributions Plan


City of Ryde (2007) Ryde Bicycle Strategy and Master Plan

City of Ryde (2007) Integrated Transport and Land use Strategy

City of Ryde (2007) West Ryde Development Control Plan’

City of Ryde (2008) Eastwood Park Plan of Management’

City of Ryde (2008). Macquarie Park Corridor Development Control Plan’

City of Ryde (2008) Gladesville Town Centre and Victoria Road Corridor Development Control Plan’


City Of Ryde (2009) Leisure and Recreation Needs’

City Of Ryde (2009) Assessment of Bushland Reserves’

City of Ryde (2009) Field of Mars Reserve draft Plan of Management’.

City of Ryde (2009) Shrimpton’s Creek Parklands Draft Plan of Management’.

City of Ryde (2009) Brush Farm Plan of Management’
City of Ryde (2009) Ryde 2030 survey results
City of Ryde (2009) City Of Ryde Community Facilities Plan
Biosphere (2006) various Flora and Fauna Studies, City of Ryde
Bewsher Consulting (2009) Eastwood and Terrys Creek Floodplain Risk Management Study and Plan, City of Ryde
EcoLogical (2008) Environmental Planning Strategy, City of Ryde
EcoLogical (2008) Biodiversity Issues Paper, City of Ryde
EcoLogical (2008) Riparian Lands Issues Paper, City of Ryde
EcoLogical (2008) Land Stability Issues Paper, City of Ryde
EcoLogical (2008) Bushfire Issues Paper City of Ryde,
EcoLogical (2008) Acid Sulphate Soils Issues Paper, City of Ryde
EcoLogical (2008) Air Quality Issues Paper, City of Ryde
EcoLogical (2008) Noise Issues Paper, City of Ryde
EcoLogical (2008) Ryde Pilot Creek Assessment Buffalo and Shrimptons Creeks
Environment & Open Space


Minister for Planning (various) – S117 Directions for councils

NSW Department of Planning (2005) Metropolitan Strategy

NSW Department of Planning (2005) Draft Inner North Subregional Strategy

NSW Department of Planning (2009) Draft NSW Coastal Planning Guideline – Adapting to Sea Level Rise

Oculus (2001) Urban Bushland in the City of Ryde, City of Ryde


Appendix A

OPEN SPACE PROVISIONS FOR COMPREHENSIVE LEP
RYDE LEP 2008

Zones – Objectives and land uses under LEP 2008

The current controls have been analysed in light of the issues identified in this strategy. Suggested changes are outlined below.

The land use table for the two zones that apply to land under Council’s care, control and management and used for open space is set out below (RE1 and E2). The E2 zoning applies to land that under a Plan of Management is categorised as bushland. The E2 zoning applies to 81 parks in whole or part within the City of Ryde.

The zoning table for land which is gazetted National Park has also been provided (E1).

The black text is mandated by the State Government so cannot be changed. Any use or objective in red is a local provision so can be amended.

ZONE RE1 PUBLIC RECREATION

1 Objectives of zone
   • To enable land to be used for public open space or recreational purposes.
   • To provide a range of recreational settings and activities and compatible land uses.
   • To protect and enhance the natural environment for recreational purposes.
   • To provide adequate open space areas to meet the existing and future needs of the residents of Ryde.

2 Permitted without consent

Environmental protection works.

3 Permitted with consent

Business identification signs; Community facilities; Environmental facilities; Kiosks; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Restaurants; Roads.

4 Prohibited

Any development not specified in item 2 or 3.

It is important to note that the Department of Planning has assured Council that typical park works are permitted without consent under the SEPP (Infrastructure) 2007. These works include sporting structures such as goal posts, landscaping, playground equipment, park furniture, barbeques, footpaths and so on.
ZONE E2 ENVIRONMENTAL CONSERVATION

1 Objectives of zone
• To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
• To prevent development that could destroy, damage or otherwise have an adverse effect on those values.

2 Permitted without consent
Environmental Protection Works.

3 Permitted with consent
Drainage; earthworks; environmental facilities; utility installations.

4 Prohibited
Any development not specified in item 2 or 3.

ZONE E1 NATIONAL PARKS AND NATURE RESERVES

1 Objectives of zone
• To enable the management and appropriate use of land that is reserved under the National Parks and Wildlife Act 1974 or that is acquired under Part 11 of that Act.

• To enable uses authorised under the National Parks and Wildlife Act 1974.

• To identify land that is to be reserved under the National Parks and Wildlife Act 1974 and to protect the environmental significance of that land.

2 Permitted without consent
Uses authorised under the National Parks and Wildlife Act 1974.

3 Permitted with consent
Nil.

4 Prohibited
Any development not specified in item 2 or 3.
SUGGESTIONS FOR CHANGES TO OBJECTIVES AND LAND USES

After consultation with appropriate City Of Ryde staff members, the following changes are suggested:

RE1 ZONE

Objectives

Add:

• To protect and enhance natural areas in such a manner that enhances the quality of the areas and facilitates public enjoyment of the areas compatible with its conservation.

The phrase ‘natural areas’ is used instead of ‘bushland’ in order to include natural areas such as creek lines and mangroves.

Permitted with consent

Add ‘public art’

All over the world public art is becoming increasingly important in open spaces, as a means for people to engage with the environment in a different way. Public art can help give a ‘sense of place’ and encourages community identity and cultural life. This should be encouraged.

E2 ZONE

Objectives

Add:

• To protect and enhance the natural environment while allowing suitable passive use of those areas adjacent, or associated with, parkland.

The two mandated objectives only cover the issues of protection and restoration of the land, and prevention of development that could damage it. By adding an objective allowing passive recreation, it is recognised that with so much of Ryde’s bushland now covered by the E2 zone adjacent to RE1 zones, passive recreation is inevitable.
Appendix B

RESPONSE TO THE METROPOLITAN STRATEGY
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## E ENVIRONMENT AND RESOURCES

<table>
<thead>
<tr>
<th>NO.</th>
<th>DIRECTIONS AND ACTIONS</th>
<th>CITY OF RYDE RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>ENVIRONMENT HERITAGE AND RESOURCES</td>
<td></td>
</tr>
<tr>
<td>E1</td>
<td>ESTABLISH TARGETS FOR SUSTAINABLE GROWTH</td>
<td></td>
</tr>
<tr>
<td>E1.1</td>
<td>ESTABLISH ENVIRONMENTAL TARGETS</td>
<td>Targets have been established in various CoR strategies and actions plans eg Ryde Greenhouse Gas Reduction Action Plan 2007-10, City of Ryde Environment Strategy 2007-10 and in the Environment and Open Space Study Section eg stormwater quality section (stormwater quality targets) and sustainability section (Green Building Council of Australia) Green Star Targets for new commercial buildings</td>
</tr>
<tr>
<td>E1.2</td>
<td>INTERGRATE TARGETS INTO DECISION MAKING</td>
<td>The Strategies and Action Plans referred to above are being used by City of Ryde to inform decisions being made about CoR programs and activities eg Ryde Aquatic and Leisure Centre water conservation targets. The targets will also be employed in development control assessments and decisions eg assessment of Green Star targets for new buildings</td>
</tr>
<tr>
<td>E2</td>
<td>PROTECT SYDNEY’S NATURAL ENVIRONMENT</td>
<td></td>
</tr>
<tr>
<td>E2.1</td>
<td>IMPROVE HEALTH OF WATERWAYS, COASTS AND ESTUARIES</td>
<td>City of Ryde is enhancing waterways health through a variety of strategies and actions eg Environment Strategy 2007-10, various DCP controls for stormwater management on development sites etc</td>
</tr>
<tr>
<td>E2.1.1</td>
<td></td>
<td>The Department of Planning and the Department of Environment and Climate Change to prepare a Section 117 Direction and supporting material on how stormwater is to be considered in the development of draft LEPs and associated planning controls such as Development Control Plans. City of Ryde has been implementing the State Government’s Flood Plain Risk Management Planning protocol. DCP guidelines have been developed for Eastwood/Terry’s Creek and will be implemented across Ryde via the new draft LEP, as additional flood plain risk management plans are finalised for the major catchments in Ryde. See E2.1.5 below re: water sensitive urban design.</td>
</tr>
<tr>
<td>IN</td>
<td>E2.1.2</td>
<td>Sydney Metropolitan Catchment Management Authority to work with agencies and Inner North councils to ensure that the aims and objectives of Catchment Action Plans are considered in the future management and planning of local council areas</td>
</tr>
<tr>
<td>NO.</td>
<td>DIRECTIONS AND ACTIONS</td>
<td>CITY OF RYDE RESPONSE</td>
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<tr>
<td>IN E2.1.3</td>
<td>Sydney Metropolitan Catchment Management Authority to work with State agencies and Inner North councils to coordinate a regional approach to riverine values and wetlands, including identifying priority areas for management.</td>
<td>City of Ryde is developing strategies and actions to protect and enhance regionally and locally significant riverine, riparian and wetland areas, in partnership with groups such as NPWS (Lane Cove National Park). The Environment and Open Space Study (Riparian Areas Section) contains recommendations for conserving and enhancing riparian areas.</td>
</tr>
<tr>
<td>IN E2.1.4</td>
<td>Councils to seek advice from the Department of Primary Industries (DPI) on the use of waterway zonings of the standard LEP Instrument</td>
<td>In progress.</td>
</tr>
<tr>
<td>IN E2.1.5</td>
<td>Inner North Councils should continue to promote water sensitive urban design</td>
<td>The City of Ryde has commissioned a comprehensive Water Sensitive Urban Design Strategy to be implemented appropriately on public and private land throughout the LGA. It includes draft planning controls, MUSIC modelling guidelines, case study approaches and a WSUD manual. Relevant sections of the WSUD strategy have formed the basis for a series of recommendations in the Environment and Open Space Study section of the Local Study (receiving water quality section) to implement WSUD through planning controls, case study approaches and guidelines for public and private landowners to use to achieve best practise WSUD.</td>
</tr>
<tr>
<td>IN E2.1.7</td>
<td>The Sydney Metropolitan Catchment Management Authority will, with the assistance of councils, progressively undertake stream mapping to enable councils to develop planning controls to protect regionally significant riparian corridors.</td>
<td>The Environment and Open Space Study section of the Local Study (riparian areas section) recommends the continuation of detailed mapping and analysis of all of Ryde’s riparian areas to inform development of appropriate planning controls and guidelines. Once completed, this will provide an additional layer of detail so that the City of Ryde can fine tune the application of DWE riparian area guidelines in the LGA.</td>
</tr>
<tr>
<td>E2.2</td>
<td>PROTECT SYDNEY’S UNIQUE DIVERSITY OF PLANTS AND ANIMALS</td>
<td>City of Ryde is protecting its unique plants and animals through the development and implementation of a range of strategies, plans, programs and activities eg “Parks on Track” Strategy, City of Ryde Management Plan 2010-14, Bushcare, Plans of Management for Community Lands (eg Shrimptons Creek), parks and bush maintenance programs, weed and feral animal control etc.</td>
</tr>
</tbody>
</table>
### DIRECTIONS AND ACTIONS

**State Government and councils to consider regional biodiversity matters to inform principal LEP’s.**

The City of Ryde LGA contains a number of regionally significant habitats and ecological communities, particularly in those areas abutting the Lane Cove National Park and Parramatta River Foreshore. The Environment and Open Space Study section of the Local Study (biodiversity and open space sections) makes a number of recommendations to protect, support and/or enhance E1 and E2 zoned areas as well as additional areas outside these zones recognised in appropriate studies as being of significance to the community. This compliments a suite of other City of Ryde policies and programs designed to protect and enhance regionally significant ecological areas eg Environment Strategy (2007 – 2010), Integrated Open Space Strategy (in progress), catchment connections, bush care etc.

**Councils to seek advice from the Department of Environment and Climate Change on relevant existing information and mapping relating to biodiversity.**

City of Ryde is working with NPWS (Lane Cove National Park) on a number of projects to enhance existing data about the characteristics and qualities of ecologically significant communities in Ryde, particularly in the vicinity of lane Cove National Park, Field of Mars Reserve and Parramatta River Foreshores. The data is informing various plans of management being prepared by NPWS and City of Ryde for ecologically significant areas within or adjacent to the LGA.

**PROTECT SYDNEY’S AIR QUALITY**

City of Ryde is developing and implementing a number of policies, strategies and programs to improve air quality, particularly in relation to the mitigation of air pollution from vehicles. This includes (i) Integrated Transport and Land Use Study (2008), (ii) City of Ryde Management Plan (2010 – 2014), (iii) Ryde Greenhouse Gas Reduction Action Plan (2007 – 2010) etc. The Local Study contains a number of complimentary measures to reduce air pollution and promote public transport and active transport eg establish 4 green star (GBCA) as a minimum design standard for large buildings, controls to promote transit orientated development and strategies to improve active transport eg pedestrian and cycle links, open space corridors etc.

**PROTECT ABORIGINAL CULTURAL HERITAGE**

The CoR is currently undertaking a heritage study of the Parramatta River foreshore which will identify Aboriginal cultural values. A heritage study for remaining area in the CoR is being considered.
<table>
<thead>
<tr>
<th>NO.</th>
<th>DIRECTIONS AND ACTIONS</th>
<th>CITY OF RYDE RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>E2.5</td>
<td>MINIMISE HOUSEHOLD EXPOSURE TO UNACCEPTABLE NOISE LEVELS</td>
<td>Sources of major noise have been identified as roads with an annual average daily traffic volume of more than 40,000 vehicles. In Ryde this includes sections of the following major arterial roads – Epping Rd., Lane Cove Rd., M2, Victoria Rd. City of Ryde is proposing in its draft Local Study to use Clause 102 of the State Government’s Infrastructure SEPP as the basis for appropriate strategic and statutory planning controls for sensitive and/or noise affected development and lands next to major roads and rail lines in the LGA.</td>
</tr>
<tr>
<td>E3</td>
<td>ACHIEVE SUSTAINABLE USE OF NATURAL RESOURCES</td>
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<tr>
<td>E3.1</td>
<td>CONTAIN SYDNEY’S URBAN FOOTPRINT</td>
<td>The draft Local Study contains a number of recommendations which will help contain and reduce Ryde’s urban footprint. This includes sections on Transport, Centres and Corridors, Environment and Open Space. The recommendations consist of a suite of planning controls to encourage and support best practise urban design, sustainable building design/operation (ie Green Buildings), transit orientated development, public transport and active transport and a series of inter-linking pedestrian, cycle paths and open spaces. Implementation of these recommendations will contain and ultimately reduce the urban footprint in Ryde.</td>
</tr>
<tr>
<td>E3.2</td>
<td>ACHIEVE SUSTAINABLE USE OF WATER</td>
<td>The City of Ryde has achieved significant reductions in use of potable water in many of its buildings and operations eg Ryde Aquatic Centre. City of Ryde is also actively working with stakeholders such as Sydney Water and Macquarie University to investigate the feasibility of a reticulated recycled water scheme for Macquarie Park. The WSUD Strategy contains a number of recommendations to reduce water consumption, encourage rain water and stormwater harvesting and investigate sewer mining and other mechanisms to enhance wastewater re-use. All of these initiatives will help reduce potable water consumption in Ryde and enhance more sustainable use of water resources in the LGA.</td>
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</table>
### F1 INCREASE ACCESS TO QUALITY PARKS AND PUBLIC PLACES

<table>
<thead>
<tr>
<th>F 1</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F 1.1</strong></td>
<td>Provide access to regional open space in Western Sydney</td>
</tr>
<tr>
<td><strong>F 1.2</strong></td>
<td>Improve the quality of regional open space</td>
</tr>
<tr>
<td><strong>F 1.2.1</strong></td>
<td>Inner North councils and State Government to focus on enhancing the capacity and quality of existing open space</td>
</tr>
<tr>
<td><strong>F 1.3</strong></td>
<td>Improve access to waterways and links between bushland, parks and centres</td>
</tr>
</tbody>
</table>

#### F 1.1
Council has gradually been improving the quality of regional open space, such as the parks along the Parramatta River. This has been done with a combination of council funds and Metropolitan Greenspace grants and work will continue into the future.

#### F 1.2.1
City of Ryde has an on-going program of enhancing the capacity and quality of open space. Recent park upgrades include Kissing Point Park, Blenheim Park, Ryde Park and Eastwood Park.

#### F 1.3
Examples include upgraded bicycle paths along Shrimpton’s Creek and new paths along the Parramatta River. Orientation signage has been installed at these locations to illustrate links and encourage access. Works to improve access and links will continue into the future – such as the Charity Creek Cascades in 2010/11 (Section 4.6). The Linkage Strategy recommended in this document is a long term plan to improve access.

#### F 1.3.1
As an example, the large bushland park called Field of Mars (which contains Buffalo Creek) has recently gained a new boardwalk and upgrade of pedestrian paths. These paths are part of a larger system of paths that lead directly to the Lane Cove River. Council will work with the RTA where appropriate to install the City-wide cycle/pedestrian links shown in Appendix B.

### F2 PROVIDE A DIVERSE MIX OF PARKS AND PUBLIC PLACES

<table>
<thead>
<tr>
<th>F 2</th>
<th>RESPONSE</th>
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<tbody>
<tr>
<td><strong>F 2.1</strong></td>
<td>Improve the quality of local open space</td>
</tr>
<tr>
<td><strong>F 2.1.1</strong></td>
<td>Councils should continue to maintain or enhance the provision of local open space particularly in centres and along transport corridors where urban</td>
</tr>
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</table>

#### F 2.1
City of Ryde has an on-going program of enhancing the capacity and quality of local open space. Examples include Anderson Park and North Ryde Park.

The Integrated Open Space Strategy being prepared in 2010/11 will address quality in various ways. These will include appropriateness for users and diversity of recreational experiences catered for.

#### F 2.1.1
Examples include Trim Place (on Victoria Road, Gladesville shopping centre), Anzac Park (West Ryde shopping centre), and Eastwood Park (Eastwood shopping centre). All of these have been upgraded in the last few years.
<table>
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<tr>
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<th>INCREASE ACCESS TO QUALITY PARKS AND PUBLIC PLACES</th>
<th>RESPONSE</th>
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<tbody>
<tr>
<td></td>
<td>and particularly residential growth is being located.</td>
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<tr>
<td>F 2.1.2</td>
<td>Where there is local open space, councils should consider an open space embellishment program that improves facilities to encourage use.</td>
<td>City of Ryde has had a long standing open space embellishment program that is regularly reviewed and updated to cater for changing recreational needs. Where appropriate and affordable, facilities are improved to encourage use.</td>
</tr>
<tr>
<td>F 2.1.3</td>
<td>Councils should consider the mechanisms to increase the capacity of local sports fields to district level.</td>
<td>This is being considered as part of the Integrated Open Space Strategy currently being prepared, with community consultation scheduled for 2010/11.</td>
</tr>
<tr>
<td>F 2.1.4</td>
<td>State Government and local councils to develop links between smaller reserves to create diversity and broader user experience.</td>
<td>City Of Ryde has developed links between the parks along the Parramatta River, the parks along Shrimpton’s Creek, and the parks between Ryde Town Centre and Lane Cove National Park. The Linkage Strategy recommended in this document includes links between smaller reserves.</td>
</tr>
<tr>
<td>F2.1.5</td>
<td>Local councils to consider modifying under-utilised open space for informal activities such as skating, basketball, netball and the establishment of cafes.</td>
<td>The vision for Council’s main park management document Parks on Track for People 2025 (City Of Ryde 2006) states that parks and open space will be multi-purpose facilities. A recent example of this philosophy is the basketball court and kiosk installed at Ryde Park to increase the range of activities. Other parks are being examined with a view to increasing informal activities. The Integrated Open Space Strategy being prepared in 2010/11 will also address under utilisation of open space and suggest modifications.</td>
</tr>
<tr>
<td>F 2.3</td>
<td>PROVIDE FOR URBAN CIVIC SPACE IN PLANNING FOR CENTRES</td>
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<td>F2.3.1</td>
<td>In planning for future growth of centres, local councils to consider the need for civic space. Councils should identify opportunities to enhance existing civic space and provide new civic spaces.</td>
<td>One of the principles of the Environment and Open Space section of the Local Study is to ‘promote well designed and publicly owned open space (urban parks) in all town and small centres’. Recent examples in Ryde are the new paved plaza constructed on the east side of the Meadowbank railway station and the upgrade of Rotary Park at the Five Ways shopping centre. A new civic plaza has opened at Top Ryde shopping centre, and one is planned for West Ryde shopping centre.</td>
</tr>
<tr>
<td>F1</td>
<td>INCREASE ACCESS TO QUALITY PARKS AND PUBLIC PLACES</td>
<td>RESPONSE</td>
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<tr>
<td>F3</td>
<td>IMPROVE SYDNEY’S MAJOR SPORTING AND CULTURAL EVENT FACILITIES</td>
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<tr>
<td>F3.1.1</td>
<td>Inner North Councils to investigate the provision of additional multipurpose indoor sports facilities to meet future needs.</td>
<td>City of Ryde is currently constructing a multipurpose indoor sports facility in Kent Road. It is located next to sporting fields that accommodate soccer and baseball. The new facility will provide an extra 2300 m² of indoor basketball/netball/volleyball/badminton courts and includes a 128 m² meeting room (which will be the domain of the local sporting clubs associated with the hall and sport fields), and the usual amenities. Completion is due Jan - Feb 2011 at a cost of around $6 million.</td>
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</table>
REFER TO SECTION 5.6.2 – ACCESS AND LINKAGES TO OPEN SPACE.

Seven city-wide links have been examined. The routes are:

1) West Ryde centre to the Parramatta River and Meadowbank Park. Meadowbank shops to the Parramatta River.

2) Five Ways shops to Eastwood Heights Public School, Forrester Park, Terry’s Creek, Pembroke Park, and T.G. Milner Field.

3) Macquarie Park centre to Christie Park, Fontenoy Park, and Tuckwell Park.

4) Shrimpton’s Creek Parklands to Cox’s Road shops, Blenheim Road shops, Blenheim Park, North Ryde Park, Magdala Park, and Lane Cove National Park.

5) Shrimpton’s Creek Parklands to North Ryde Common, Wallumatta Reserve, Gannan Park, and Pidding Park.

6) Putney shops to Kissing Point Park, Parry Park, Cudal Reserve, Tyagarah Park, Mallee Reserve, the RALC, Bremner Park, and Morrison Bay Park (Parramatta River).

7) Gladesville Centre to Glades Bay Park and Looking Glass Bay.
West Ryde centre to the Parramatta River and Meadowbank Park. Meadowbank shops to the Parramatta River.
Five Ways shops to Eastwood Heights Public School, Forrester Park, Terry's Creek, Pembroke Park, and T.G. Milner Field.
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Shrimpton’s Creek Parklands to North Ryde Common, Wallumatta Reserve, Gannan Park, and Pidding Park.
Putney shops to Kissing Point Park, Parry Park, Cudal Reserve, Tyagarah Park, Mallee Reserve, the RALC, Bremner Park, and Morrison Bay Park (Parramatta River).
City-wide link 7 - Gladesville Centre to Glades Bay Park and Looking Glass Bay.