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Organisation of this document

The format of this report is as follows:

PART A: Background – sets the scene for the East Lake area and the context of the planning report. It explores broader policy objectives, analyses key issues and identifies local features relevant to the planning context.

PART B: Future Directions – develops principles and strategies to guide future planning and development in East Lake. Primary issues and proposals are explored and necessary further study identified.

PART C: Implementation – Sets out the planning intent and Government actions to contribute to achieving urban renewal in East Lake.
Preamble

The East Lake Draft Planning Report identifies potential outcomes for the future of the area. The document represents a summary of site investigations and studies carried out to date and a balance of expectations for the area that have been outlined in direct consultation with Government agencies and sectors of the local community. This draft report provides the basis for broader community consultation and further testing and analysis of the draft objectives.

In particular, the ACT Government is seeking to formalise a working partnership with the CSIRO under the Sustainable Communities Initiative, for the development of East Lake. This partnership will have the overarching objective to make the best use of local and national expertise to achieve an Australian showcase of sustainable development at East Lake. The partnership will provide greater experience, knowledge and systems approaches to test how the objectives and potential outcomes identified in the East Lake Draft Planning Report can be achieved.

Testing and analysis will focus on key themes relevant to the urban planning of East Lake through:

- Measures of sustainability performance and benchmarks for residential, commercial and public development. Sustainability of the urban precinct should be reflected in:
  - environmental factors protecting local ecology and also efficiency in energy, water, material use and waste
  - economic viability of local business and development projects and encouraging innovation
  - ensuring social equity through providing for affordable, adaptable and accessible development

The location and nature of key projects to demonstrate sustainable development and provide the initiative to lead private investment in sustainable practices and technologies.

- The interface between urban development and the Jerrabomberra Wetlands, to first and foremost enhance the ecological values of the wetland and manage the public recreation demands for the nature reserve, including establishing a transition of public spaces and access.

- Mobility of the local population considering various transport modes for local, commuting and interstate journeys. The review of existing public transport
infrastructure and establishment of new vehicle, cycle and pedestrian access opportunities is a key component of future planning.

☐ Exploration of local and regional education needs incorporating existing and new facilities integrated in the urban area. The opportunities and demand for facilities is to be considered as well as developing links between educational facilities and local industry.

☐ Enabling flexibility in commercial and ‘clean’ industrial uses while retaining opportunities for collocating and clustering associated activities. Explore the potential for improving the industrial ecology in the local setting by enhancing opportunities for process-system-based location of uses, and establishment and expansion of clean industrial uses suited to a mixed-use environment.

☐ Managing change in the local setting and the potential impacts on the local community, ensuring an integration and balance of local expectations and broader objectives.

Through the systems and resources available in the ACT Government-CSIRO partnership, the potential outcomes for East Lake can be evaluated against national best practice and encourage innovation in the planning for the area. The evaluation and analysis requires the inputs of broader consultation on the identified outcomes.

The East Lake Draft Planning Report is the basis for this broader consultation with the community. The goals and expectations of the Canberra community for East Lake, and how the potential outcomes align with those views, will provide a key contribution to the development of sustainability measures and further outline planning for the area, leading to the development of a final East Lake Planning Report.
Executive Summary

The Canberra Spatial Plan identifies East Lake as an area to be investigated for urban revitalisation. Although East Lake is currently predominantly an industrial area, it is strategically located within Canberra’s inner urban areas and ideally placed to meet the goals of the Spatial Plan, being close to central employment nodes and major transport routes. It also has a strong sense of history and connection to Canberra’s past.

Importantly, East Lake offers something different for the residents of the ACT, possessing a unique character representative of its industrial use and role in the development of the city. In recognising these characteristics the East Lake Draft Planning Report (this report) outlines principles, policies and initiatives for the future planning and development of the area that are consistent with the Spatial Plan. This provides for a range of new and innovative residential, commercial, retail and clean industrial uses that reflect the characteristics of the immediate and surrounding environment and builds on the existing diverse character.

The vision for East Lake is become a lively, high-density urban community providing an Australian showcase of sustainable development. It is expected to provide a mix of housing choice in an environment of high quality open space and public realm, well connected to existing and new shops, schools and other facilities. It is anticipated that approximately 9000 people, with access to a range of cultural, education and recreation opportunities will eventually call this area home. These residents will live in a close knit urban community, with an emphasis on sustainable living, high quality design and public interaction with natural characteristics and surrounds that has a unique sense of place.

Integral to this is ensuring that development recognises the environmental importance of the Jerrabomberra Wetlands, protects existing land uses and reflects the cultural and historical significance of the area. By providing opportunities for education and interpretation of the wetland and implementing elements of the Griffin Legacy, East Lake will link Canberra’s past with its future. Achieving this in a manner that showcases innovative thought and new ideas is a key objective of the proposal with opportunities for implementing sustainability demonstration projects being explored.

The development of East Lake is an exciting opportunity for the residents of the ACT. The following document outlines an innovative approach to urban intensification, reflecting the latest thinking in sustainable development and provides a summary of investigations and expectations for the area. Importantly, this approach reflects the natural, cultural and historical values of East Lake, incorporating measures that protect and enhance these features whilst enabling the full potential of the area to be realised.
**Introduction**

From Canberra’s early development East Lake has grown and changed along with the city, providing areas for major transport, residential accommodation, industrial and commercial development and environmental conservation. It has strong connections to the history of the capital and a key role in the city’s future.

_The Canberra Spatial Plan_ (ACT Government, 2004) identifies East Lake as a potential area for urban intensification. The desirability of this location is enhanced by its closeness to Civic, employment centres, established residential areas and major transport routes.

This document, the East Lake Draft Planning Report:
- sets out ways to implement _The Canberra Spatial Plan_ for this area;
- outlines the key planning issues for East Lake, including existing site opportunities and constraints; and
- identifies specific strategies and intentions for the long-term development of this area.

This East Lake Draft Planning Report provides a summary of investigations and expectations for the area. This provides the base for broader community consultation and further testing and analysis of the draft outcomes.

The Final Planning Report will provide a framework for urban renewal of the area over the long term by encouraging actions by Government, the private sector and community. The implementation timeframe is similar in length to _The Canberra Spatial Plan_, which sets the direction for development over the next 30 years and beyond. The Final Planning Report will inform the preparation of, a Variation to the Territory Plan, future land release strategies, capital works programs and further detailed planning to be undertaken.

**Study Area**

The East Lake study area is within the Inner South of Canberra. It includes parts of the suburbs of Griffith, Kingston and Fyshwick. There is a total area of 471 hectares, 221 hectares of which are in the Jerrabomberra Wetlands Nature Reserve. The developed areas of the site are predominantly mixed industrial and commercial uses, the railyards and small areas of residential development and other uses.

The Monaro Highway, Canberra Avenue, Wentworth Avenue, the Jerrabomberra Wetlands and the Kingston Foreshore
Figure 2
EAST LAKE STUDY AREA
Development from the edges to East Lake. The area is within the 7.5km residential intensification line adopted in The Canberra Spatial Plan and is close to the Central National Area, the proposed Majura/Symonston employment corridor, the Majura/Monaro transit corridor, Canberra International Airport, the East Fyshwick commercial and industrial area, and the group centres of Kingston and Manuka.

Figure 1 illustrates the context of East Lake in relation to the city and central area, and Figure 2 identifies the study area.

Statutory and policy framework
National Capital Plan

Figure 3 shows East Lake identified in the National Capital Plan (NCP) as an urban area, with the Jerrabomberra Wetlands being part of the National Capital Open Space system associated with Lake Burley Griffin and River Corridors.

The ecological importance of the Jerrabomberra Wetlands is further recognised in the NCP as a Nature Conservation Area and site of significance. The wetlands are to be protected as a wildlife refuge with facilities designed to realise the area’s potential as a significant conservation and education resource for Canberra residents, tourists and international visitors. There are smaller areas of Open Space (park) adjacent to the existing Causeway residential development and in the north-east corner of the Jerrabomberra Wetlands.

The two major roads that form the edge to East Lake (Monaro Highway and Canberra Avenue) are Main Avenues and Approach Routes that mark the entrance to the city and the Central National Area. Any development along these roads needs to be of a type and form that reflects the importance of these roads, which are subject to the Special Requirements of the NCP including high quality landscaping and urban design features. These areas of Special Requirement require a DCP approved by the National Capital Authority.

The Jerrabomberra Wetlands is a Designated Area under the National Capital Plan. Most of this area has a public land (Pc) overlay that recognises the conservation values of the wetlands and the need to manage to protect these values. Apart from the administration of leases, the National Capital Authority has planning responsibility over this area, including development approvals.

The Griffin Legacy

The Griffin Legacy, released by the National Capital Authority (NCA) in 2004, sets a policy framework for a strategic vision for Canberra through reinforcing the features that express the city’s primary role as Australia’s National Capital – its symbolism, beauty and vitality as a place that has meaning and relevance for ordinary Australians. It represents a renewed vision to unlock the Central National Area, its landscape setting and approaches.
Figure 3

NATIONAL CAPITAL PLAN
The Griffin Legacy directs future public and private investment in core areas of the capital where opportunities are created for vibrant, mixed use precincts alongside cultural institutions, government buildings and major national attractions. It restores the intended urbanity and vitality of the original Griffin vision for Canberra as a cosmopolitan lakeside city. The following four points set out the key aims of this project:

- to appraise the Griffin Plan and its relevance to the planning and development of Canberra, the nation’s capital in the 21st century;
- to extend the Griffin Legacy through a series of strategic initiatives that restore, where possible, the spirit and intent of the Griffin Plan;
- to provide an integrated framework (between the Commonwealth and ACT Governments) for planning initiatives in the central areas and approach routes of the National Capital; and
- to protect the integrity of the Griffin Plan, recognising its stature as a work of national and international significance.

The planned axes and the relationship of The Causeway Axis and the Water Axis to East Lake are identified on Figure 4. The
principal improvement areas of The Griffin Legacy project are shown on Figure 5 including East Lake (identified as the East Basin Urban Extension).

In implementing the above four aims for East Lake the Griffin Legacy Project identifies a number of planning initiatives as follows:

**Causeway/Hume Circle/Kingston Foreshore Extension.** Extend Kingston Foreshore over the adjoining degraded land and industrial land to provide non-polluting land uses adjacent to the Jerrabomberra Wetlands. Associate this urban extension with enhancement and extension to the wetlands environment along Jerrabomberra Creek to form a major wetlands park – an ecoeducation and recreation resource for the city.

**Business Centres - 21st Century Opportunities.** Integrated transport, land use and urban form and gateway functions. Consolidation and enhancement of City Hill, Hume Circle, Russell and Northbourne/Wakefield Avenues

**Restore the Vistas.** Restore and extend significant vistas of the Griffin Plan such as The Causeway by reinforcing architectural form and street corridors.

**Linear parks and cycleway extensions.** Upgrade Jerrabomberra Creek as an integrated linear park, serving an important recreation corridor to Lake Burley Griffin, and as a recreation frontage for adjoining future development.

**Jerrabomberra Wetlands Park.** Develop a wetlands recreation park and eco-tourism destination in the location of Griffin’s (unbuilt) East Lake – of metropolitan scale (similar to Millennium and Centennial Parks in Sydney) – in the degraded areas of Jerrabomberra Wetlands (Dairy Road). Enhance wetlands habitat, and include interpretation, boardwalks and a picnic ground.

Achieving these objectives is a key requirement for the planning of East Lake, however it is worth noting that as part of this process the NCA has undertaken some preliminary investigations regarding Hume Circle. This work explores the idea of recognising the formal design intent of the circle and encouraging higher density development through taller buildings that would create a more intimate and cosmopolitan area. It is envisaged that development would consist of residential and commercial also providing a landmark entrance to Canberra consistent with Griffin’s objectives.

In addition to these specific measures, the table below identifies a number of elements of The Griffin Legacy (National Capital Authority 2004) that are relevant to East Lake, and opportunities for implementing them in future development.
Figure 5
Griffin Legacy
PRINCIPAL IMPROVEMENT AREAS
To provide for the implementation of The Griffin Legacy, National Capital Plan Amendment No.56, The Griffin Legacy Principles and Policies, was approved on 30 November 2006. The purpose of Amendment 56 is to form a basis for making planning and urban design decisions for the Central National Area, its landscape setting and approaches. The development is East Lake is consistent with, and supports the implementation of, these principles and policies.
Territory Plan

The Territory Plan Map in Figure 6 Shows that East Lake contains a mix of land use policies, reflective of the existing development. Most of the urban area has an Industrial Land Use Policy with Precinct ‘c’ overlay. The primary purpose of Precinct ‘c’ is to encourage Canberra’s regional role for food processing, wholesaling, distribution and marketing and to cluster complementary facilities of this nature. The actual uses also include offices, produce markets and educational facilities.

There is also a small area of Industrial Land Use Policy with Precinct ‘a’ overlay along the Monaro Highway, at Blocks 11 and 9 Section 30 Fyshwick. The purpose of this precinct is to promote general industry and provide for manufacturing, processing, warehouse, storage and transport uses that require large areas accessible to main interstate road and rail connections.

In addition, there are other areas of: Residential Land Use Policy covering The Causeway; Municipal Services Land Use Policy providing for the Kingston Railway and associated infrastructure; two Community Facilities sites; and some Commercial ‘E’ Land Use Policy sites adjacent to Hume Circle. There is also Urban Open Space associated with Jerrabomberra Creek and River Corridor Land Use Policy adjacent to the Molonglo River.

Canberra Spatial Plan

The Canberra Spatial Plan provides a strategic direction for the growth of Canberra over the next 30 years. A key principle of the Spatial Plan is to encourage residential intensification within a 7.5 kilometre radius of the city centre over the next 15 years as shown on Figure 7. This is to ensure that up to 50 per cent of the predicted future urban growth is located close to existing major employment areas, services and facilities. Planning in this way will help to ensure that the city is contained, where possible, within the natural setting of rolling hills and green spaces, thereby reducing the impact of urban spread across areas of high conservation value and locating people close to where they work and recreate, and in locations that use existing infrastructure.

East Lake is identified in the Spatial Plan as a high priority area for residential intensification.

Place names

The name of East Lake is adopted for the area as an unofficial locality name (like Manuka, Jamison, Southlands, etc). The name is based on the 1918 Walter Burley Griffin design for the national capital, which identified the ‘East Lake’ in the area that is currently Jerrabomberra Wetlands. The land will officially remain in the divisions of Griffith, Kingston and Fyshwick.

The existing division boundaries reflect block boundaries within the railyards and Hume Circle area. These block boundaries may
Figure 6
EXISTING TERRITORY PLAN
Figure 7
THE CANBERRA SPATIAL PLAN
change as a result of redevelopment, and the location of the suburb boundaries may need to be reviewed as part of future planning, particularly the location of the Kingston/Fyshwick suburb boundary.

The development of East Lake will create a number of new public roads, predominantly within the division of Fyshwick where the current street name theme is ‘Industrial Towns’. A different street name theme for East Lake should be considered as it would contribute to the individual character of East Lake. Future street naming could continue the theme of ‘native plants’ established by the existing streets of The Causeway settlement. Alternatively, it could refer specifically to industrial towns that contributed significantly to the history of rail in Australia, reflecting the history of the predominant uses in East Lake.

**Sustainability approach**

The Canberra Spatial Plan recognises sustainability and healthy communities as key goals for the future development of the ACT. The proposed redevelopment of East Lake represents an opportunity to implement practices and principles to achieve these goals. The following points emphasise the proposed approaches to achieving the sustainable development of East Lake:

- capitalising on the closeness of East Lake to the central area of Canberra, including major employment and commercial nodes;
- integration of development with major transport corridors, public transport and trunkcycling routes;
- use of existing built infrastructure, servicing and community facilities;
- opportunities for the development of demonstration project sites showcasing sustainability principles;
- opportunities to apply sustainability principles across the whole of East Lake;
- recognition of the importance of the Jerrabomberra Wetlands and incorporation of design and education measures to ensure its protection;
- provision of high quality mixed use commercial and residential development that is integrated with the surrounding suburbs and builds on the existing sense of community and social infrastructure; and
- incorporation of a high quality public realm that connects urban development with the surrounding land uses, in particular the Jerrabomberra Wetlands.
The redevelopment of East Lake is particularly relevant to achieving a number of the guiding principles of the *People Places Prosperity* (2003) policy on sustainability in the ACT. The increased density and nature of development in East Lake responds to creating a more compact, sustainable city while valuing and protecting ecological integrity and biodiversity.

**Planning context**

**City relationship**

East Lake contains a wide variety of industrial, educational, commercial and residential uses, in a prominent location. It plays a key role in the distribution of fresh, dry and cold foods (part of the predominant industrial use of the site) throughout the city and region. It is also well situated in terms of the north-south employment corridor identified in *The Canberra Spatial Plan* and the commercial and residential areas of Kingston, Manuka, Narrabundah and Fyshwick.

The development of East Lake presents an opportunity to strengthen Canberra Avenue and Monaro Highway as major entry avenues to the city and also to enhance and strengthen the area’s connection to the central national area, both as a major employment location and as a tourism attractor.

**Residential development**

There are currently three distinct residential areas within the East Lake study area - The Causeway, Cooinda Court and Hume Circle.

Established in the 1920s, The Causeway Camp settlement is one of the two remaining original temporary suburbs that provided housing for local workers and their families. The original dwellings (approximately 120) were replaced in the 1970s with a discrete low-rise predominantly public housing precinct, although that redevelopment was not fully completed because of flooding constraints at the northern end. Today there are about fifty dwellings, mostly owned by the Commissioner for Housing and managed by Housing ACT with a small number privately owned. The Causeway Hall and street structure is all that remains of the original Causeway Camp. The Causeway is influenced by several neighbouring activities: the train tourism attractions to the east, The Causeway Switching Station and the Kingston Foreshore development to the west, and the passenger and disused freight rail facilities to the south. To the north are the old Causeway playing fields and Jerrabomberra Wetlands Nature Reserve. The heritage listed Causeway Hall and neighbouring preschool are valued community facilities.

Six attached dwellings form Cooinda Court in the eastern corner of the railway station land on Mildura Street. Originally associated
with the railway these are now owned by ACT Government and managed by Department of Territory and Municipal Services.

At Hume Circle is an area of existing residential development on Section 84 Griffith of three-storey apartments with basement parking. There are about 150 apartments (one, two and three bedroom) in three separate complexes, constructed around 1990, with access off McMillan Crescent. The dwellings are privately owned.

The area surrounding East Lake comprises a mix of residential development in the suburbs of Kingston, Griffith and Narrabundah. Development to the south of Canberra Avenue is predominantly original housing on individual blocks in the character of much of the Inner South suburbs, with some areas of medium density development. To the west of East Lake and south of Wentworth Avenue, there is a higher density of housing, being mainly apartment development around the Kingston Group Centre. On the northern side of Wentworth Avenue is the Kingston Foreshore development area, which has a higher density of housing in a number of apartment developments, and further sites proposed for redevelopment for a similar scale of housing.

To the north, across Molonglo Reach, are the Royal Military College Duntroon grounds, which provide semi-permanent accommodation for Defence personnel.

East Lake has an opportunity to provide for a higher density of residential development complementary to development at Kingston Foreshore (see Figure 8). The area also has the potential to provide a different style and market of residential accommodation, contributing to the diversity of housing available. This includes opportunities for affordable housing, intensified development around Hume Circle that reflects its importance as a gateway and elegant rond-point, and the demonstration of environmentally responsible and sustainable housing associated with the Jerrabomberra Wetlands.

*Mixed-use development precinct streetscape*
Figure 8
KINGSTON FORESHORE CONTEXT
A large proportion of the ACT population lives to the west of the Northbourne/Commonwealth Avenue axis, while employment opportunities are predominantly east of that axis. Development of new housing in East Lake can provide an opportunity for people to live in the east of the city with a shorter journey to work without increasing traffic pressures on the west to east routes.

**Retail and commercial**

The industrial uses in East Lake are dominated by businesses handling fresh, dry and cold foods, providing for regional distribution centres to direct sellers. Other uses are generally independent of this distribution function, either providing direct retail to consumers or business to business.

The major types of commercial enterprises in the suburbs surrounding East Lake are retail, real estate, administrative and support, and accommodation and food services. These enterprises are predominantly located in the group centres of Kingston and Manuka, the local centres of Narrabundah and Griffith and the industrial suburb of Fyshwick. The retailing services provided include apparel, dry goods, groceries, house wares or home furnishings. The supply of accommodation and food services is concentrated in the suburbs of Kingston and Griffith, making these a destination for residents throughout Canberra as well as visitors to the ACT.

Forecasts indicate that the needs of the East Lake population will be initially supplied by the surrounding local and group centres. As the population grows in the medium to long term, East Lake will require one or two local centres and/or integrated small-scale retailing to meet local convenience needs.

The existing Fyshwick Markets provide for fresh food retailing to the community. The markets are a key feature of the Mildura Street industrial area and an attractor for the general public to the area, providing flow-on effects to other businesses in the area. Future development in East Lake can allow for the markets to remain in their current form or to adapt to changing demands and the nature of development in the area. There is a potential for the markets to provide for some of the local retailing needs of increased residential development in East Lake. Opportunities also exist for increased diversity of traders and products to collocate, providing a community focus and activity node. The possible release of a supermarket site within the Kingston Group Centre would supplement local food retailing.

Office development is intended within town centres, and along major transport routes. It is anticipated that there will be a need for some 110,000m² of additional office space in Canberra over the next five years. The strategic planning focus is to promote office development in Civic and the town centres, although Canberra Avenue, Wentworth Avenues and Monaro Highway,
being major transport routes and connected to the Majura-Symonston employment corridor identified in The Spatial Plan, could potentially supply a proportion of the expected increase in employment demand for office space over the next 30 years.

**Community facilities and services**

An important community facility within East Lake is The Causeway Hall, which is located centrally to The Causeway residential development area. This heritage-listed building provides hall space and meeting areas and includes a kitchen and toilets. The hall should be retained as an important community asset.

Within the surrounding area, near to the Kingston and Narrabundah Local Centres, there are a number of community facilities, including churches, schools, health facilities and community resources centres as shown in Figure 9.

There are pre-schools (including the Causeway Preschool), childcare centres and public and private schools in the East Lake region that can potentially provide for the future demands of development as indicated on Figure 9. In particular, East Lake is within the Primary Enrolment Area for the public schools of Narrabundah Primary (K-6), Telopea Park School (K-10) and Narrabundah College (11-12). The ACT Government’s *Towards 2020: Renewing our Schools* policy proposes changes to the management and structure of the schools in the South Canberra area. Further analysis of the capacity and catchments of these services will be required closer to future residential development in East Lake.

While The Causeway preschool closed at the end of 2006 under the Towards 2020 policy, the facility is proposed to be retained. This facility may reopen as a pre-school or for another community use in response to community demand as the area develops.

In addition, the Birrigai facility on Dairy Road provides educational programs for students from preschool to year 12, and professional development for staff and team-building/training programs for corporate groups. The facility provides an important function because of its relationship to the wetlands. There are prospects for enhancing the wetlands education from this location.

The Kingston Foreshore development includes provision for community facilities. “The Common” has been developed as a central formal parkland as identified in the masterplan. Adjacent to this open space, a site is identified for *Recreation and Community Use*. This site is located in the precinct in the east of the site, near The Causeway, and can provide for part of the future demand for community facilities in the area, integrated with the surrounding development.
Figure 9
SOCIAL INFRASTRUCTURE
Road network

With two major arterial roads bordering East Lake (the Monaro Highway along the eastern boundary and Canberra Avenue/ Wentworth Avenue to the south), it has connections to the whole city with good access to the City, Barton, Canberra International Airport and Queanbeyan, and to the regional routes to Sydney, the South Coast and south-eastern NSW, including the Snowy Mountains. This network also connects East Lake with the remainder of Canberra with links to Gungahlin and Tuggeranong and importantly the central employment areas of the ACT.

The Monaro Highway is a major arterial that forms the eastern leg of Canberra’s parkway system. Gazetted as a National Approach route, it connects Gungahlin and Tuggeranong, and is also a major transit route to the Monaro region and ski fields in the NSW Alps. Ease of access and thoroughfare to the highway will be enhanced with the upgrade of Majura Road, as outlined in the Spatial Plan. East Lake does not have direct access to the highway but connects via existing streets. The Monaro Highway crosses over Molonglo Reach, providing a connection to the northern lake foreshore.

Canberra Avenue is a major east-west arterial that links Queanbeyan with Canberra and is gazetted as a National Approach route. It connects east to Fyshwick and Queanbeyan, and west to Manuka Group Centre, the Central National Area, and beyond to Woden Town Centre and Civic.

Wentworth Avenue connects East Lake to Kingston Foreshore and Kingston Local Centre, the Parliamentary Triangle and Kings Avenue Bridge crossing the lake.

Hume Circle is a major intersection between Canberra Avenue, Sturt Avenue and Wentworth Avenue. The intersection includes a large roundabout and a number of smaller slip lanes and side streets. It is a main entry to Canberra and a key feature of Griffin’s planning.

Individual areas of East Lake are accessed on local streets that do not carry through traffic as shown on Figure 10. The Causeway settlement has a single access/egress point through Cunningham Street off Wentworth Avenue in the west of the site. The commercial area in the south of East Lake is accessed on Mildura Street, connecting between Wentworth Avenue and Canberra Avenue, predominantly parallel to Canberra Avenue. Minor connections of Leeton, Dalby and Nyrang Streets link between Canberra Avenue and Mildura Street. Blocks fronting Canberra Avenue west of Dalby Street are accessed from a two-way service road off the main arterial.

Development in the east of the site is accessed via Dairy Road, which forms an extension to Newcastle Street in Fyshwick. The gazetted road reserve of Newcastle Street extends a connection from the Monaro Highway to The Causeway, however a crossing
Figure 10
EXISTING STREET LAYOUT

- Study area boundary
- Road
- Cyclepath (on road)
- Cyclepath (off road)

0 100 200 300 400 500 metres
over Jerrabomberra Creek was never constructed. Dairy Road once connected Fyshwick and Morshed Drive but today terminates at Molonglo Reach.

**Public transport**

East Lake is serviced well with buses for the current patronage requirements, with existing services shown at Figure 11. The current ACTION timetable provides five bus routes to the general area, accessing the East Lake site along Mildura Street, terminating at the railway station or through The Causeway. Dean’s Busline operates regular daily services along Canberra Avenue, connecting to Queanbeyan. ACTION bus services can be extended to service future redevelopment and expansion in East Lake, and extensions to existing roads can provide more efficient bus services with improved connections through the site. Intensified commercial and residential uses in East Lake as envisaged by the Spatial Plan would improve the patronage of public transport services servicing the area, particularly commuter services.

Connections with Wentworth Avenue, Canberra Avenue and Hume Circle provide an opportunity for a public transport hub or terminus at East Lake. The potential for an integrated transit facility linking to an East-West transitway at this location should be considered further as part of long-term transport planning for the ACT.

**Railway**

A significant feature of East Lake is the railway precinct, including Canberra Railway Station. The railway corridor extends from Queanbeyan into the ACT, through Fyshwick to the railyards at Kingston connecting Canberra to Goulburn and Sydney.

**Canberra Region**

Rail services from Sydney to the Canberra region extend from a main line south-west from Sydney through to Goulburn. The distance from Canberra to the junction of the main south line at Goulburn (Joppa Junction) is 100kms. Canberra is 330kms from Sydney by rail. At Goulburn the main line continues west to Yass before turning south to Melbourne. The Bombala Line extends from Goulburn to stations at Tarago, Bungendore and Queanbeyan then services continue on the Canberra Branch line through to Canberra Railway Station at Kingston. The Bombala Line continues from Queanbeyan along the ACT/NSW border to Hume and further south to Michelago, Cooma and Bombala, but is in various stages of repair and operation. Figure 12 shows the regional rail context.

**Passenger Services:** CountryLink operates two services daily between Canberra and Sydney. Passengers can connect to Melbourne (at Goulburn) and Brisbane (at Sydney). An extensive network of coaches extends the rail service to the south coast.
of NSW and other regional centres. CountryLink maintains a train servicing and storage facility at Canberra Station.

**Freight services:** One freight service is currently operating to the ACT. Pacific National operates a fuel train into the Shell sidings at Fyshwick, generally three times a week and at times of peak demand, four times a week. The main freight service on the Sydney-Canberra line is from Sydney to the Woodlawn Waste Management Facility at Tarago, which operates 5 days a week and deposits rubbish into the Tarago Mine as landfill.

**Historical:** The Australian Railway Historical Society (ARHS) runs tourist trains on weekends and public holidays, with one-off special event runs to destinations throughout NSW. The society also maintains the Bombala Line south of Queanbeyan and regularly operates tourist trains to Michelago.

**Kingston Railyards**
The rail corridor within the ACT extends west from Queanbeyan, through Fyshwick and terminates at the railyards at Kingston. Within Fyshwick there are two tracks parallel to the main line
that service sidings in blocks adjacent to the rail corridor. The northern track is unused and most sidings on adjacent blocks have been removed. The southern track is used only by the Pacific National fuel trains to the Shell siding. The three tracks continue within the rail corridor under the Monaro Highway and cross Jerrabomberra Creek into the railyards at Kingston. The railyards are bounded by Cunningham Street, Wentworth Avenue and Mildura Street and have a number of existing users.

The site is poorly utilised because of the spread of railway lines in the corridor dating back to the original uses. The early 1920s saw the corridor support the operation of a Power Station and provide access to Government Printers, the Main Roads Board, dairy farmers and passenger services. All services were steam hauled at the time, and the shape of the space available and the location of the facilities to be serviced by rail determined the layout that is in place today. These current arrangements are an inefficient use of space, catering for significant yard workings associated with the previous industrial sidings and the use of steam locomotives that ceased operation in the 1960’s in NSW. It means there is more space than is required to provide the services that currently serve the ACT.

The Canberra Railway Station is located at the western end of the railyards and is accessed off Wentworth Avenue. The station first opened in 1924 and the original station building was replaced in the 1960s with the current station building. Also constructed at that time were “barracks” on the site to provide accommodation for railway staff. These buildings all remain today.

The yard operations of CountryLink are confined to the main track and the platform, the adjacent track and also the storage and fuelling facility, providing secure storage for the service that stables overnight. This is a fairly efficient use of space, however if the storage facility were to be located directly off the end of the platform track, a single line only would be required for the Country Link services.

Sidings in the yard are used by the fuel freight train to release the locomotive from the front of the train to allow it to connect to the other end. This positions the train to place the tankers into the Shell siding and then enables the shunting locomotive to depart with the empty tankers. The sidings are also used to stable the locomotive. There is the potential to improve these operations by recommissioning existing facing points on the rail corridor that would allow fuel trains to access the Shell siding without accessing the existing yard.

A former freight handling facility (Trackfast) is also located on the site. It includes a carpark, a platform and siding that is closed and unused. There are also larger open areas of the site that are unused or under-utilised, including a large area in the north east of the rail yards.
The ARHS operation is located on sidings in the north of the yard and has about 100 vehicles on the site that form operating trains and future restoration projects. The carriages vary from stainless steel sleeping cars to old timber sit-up carriages, freight wagons and locomotives. Sidings connect the tourist trains at the ARHS facility to the CountryLink passenger platform, with ARHS being located in the north of the railyards off Geijera Place (at the end of Cunningham Street). Included is the Canberra Railway Museum and the ARHS (ACT) workshops and rolling stock. The museum is an educational resource, through which the wider community explores railway history.

Nearby is the Kingston Miniature Railway. The railway offers miniature train rides and displays and opportunities for enthusiasts to meet and operate their own trains. It is generally open once a month, running both steam and petrol/electric engines each capable of seating around six to ten people. It has a main line run of over 900 metres including part of the track that runs through the ARHS facility.

A private siding (the Edmunds siding) at the north of the railyards contains a number of privately owned locomotives and carriages in various stages of restoration. This siding operates from a single building that also operates as the administration centre of a plumbing business and provides storage and maintenance for three locomotives, eight railway passenger cars and two freight vehicles.

Planning for East Lake should consider the long-term of rail operations in the ACT, particularly in relation to land requirements, patronage, operations and the quality of heavy rail services.

A key planning consideration for East Lake is to rationalise this infrastructure into an integrated precinct that provides for the most efficient use of land while retaining the operational requirements for railway in the ACT. A Rail Masterplan for the ACT is to be prepared that reflects user requirements, engineering needs and design outcomes to establish an arrangement that best serves current and future rail operational needs for the ACT.

**Future high speed rail**

A long-term prospect for rail connections from Canberra to Sydney and Melbourne is for high-speed rail connecting to the Canberra Airport. The Canberra Airport Masterplan identifies that the airport may become a transport hub integrating a greater diversity of transport modes. The Canberra Spatial Plan and The Sustainable Transport Plan make similar statements, identifying the potential of the airport as a regional transport hub. A specific development objective of the Airport Masterplan is to integrate high-speed rail and airport terminal facilities to maximise the benefits of aircraft, Very High Speed train (VHST), bus and coach services.
Possible rail alignments to the airport include a rail corridor connecting to the western side of the airport precinct for passenger, freight or both service types. All alignments identify a need for the service to connect from Sydney with a continuation, as a through run or a future extension, to Melbourne. There is an identified north-south alignment for future high-speed rail link to the ACT, along the Majura Valley corridor as shown on Figure 13. A Sydney line enters via the north to an airport stop, then connecting to Melbourne by continuing south through Hume or returning north and connecting via the Yass district. Both alignments are identified to avoid crossing Molonglo Gorge and steeper slopes on the approach to Canberra.

Canberra has the potential to accommodate national and trans-Tasman freight and provide for regional and national freight distribution. Freight rail services could be part of a multi-modal freight centre at the airport. However, the Airport Masterplan identifies that this would not include heavy-rail freight services as a transport mode. Fast Freight Train services could be incorporated where it can operate on the passenger line or on a separate freight train line within the same corridor.

**Pedestrian and cycling Connections**

There are cycling lanes along most of Canberra Avenue and Wentworth Avenue as shown on Figure 10. The lanes are well used, particularly for commuting. On-road cycling is also provided on Monaro Highway and there is a cycle path along Dairy Road, reconnecting with Monaro Highway at the Molonglo Reach crossing and continuing along Morshead Road. These trunk routes connect to employment centres at Fyshwick and Queanbeyan to the east, and west to Kings Avenue, the Parliamentary Triangle and Civic.
Pedestrian facilities are limited within East Lake. There are limited opportunities for safe crossing of the major roads at the site periphery and pedestrian movement within the site is generally on the road network. Pedestrian access is provided on formed walking trails within the southern area of the wetlands. This includes a crossing of Jerrabombera Creek that is primarily for quiet enjoyment of the wetlands rather than providing connections to other areas.

Redevelopment and intensification in East Lake provides the opportunity to identify and enhance pedestrian and cycle networks in the area. This includes opportunities associated with the enhancement of the Jerrabombera Creek and provision of connectivity with existing trunk cycle routes, which is important given the location near existing employment destinations and new commercial development.

Recreation

There is limited existing open space within East Lake, with the exception of the park providing for the Causeway residents, containing The Causeway Hall, playground and basketball half-court. Future planning for East Lake can identify an open space network within the urban area that meets the recreation needs of the community and connects it to the surrounding area. Adjoining Narrabundah has a well-connected open space system that links through the grid-network of the suburb. However, Canberra Avenue restricts pedestrian connections between Narrabundah to East Lake. A similar open space network extends from Hume Circle into Griffith and Kingston, reflecting the established character of the older Canberra areas. There are also a number of playgrounds in Narrabundah and Griffith, generally 500m from the East Lake boundary.

There are no wider ‘kick-around’ open spaces within East Lake that can provide for larger active games and play. However, the formal and informal spaces within the surrounding area can provide for this active recreation. The lake foreshore provides for cycling and jogging/walking along a network of formed and dedicated paths. Within East Lake itself, access to the foreshore is restricted because it is within the Jerrabombera wetlands but there is access to the lake at the Kingston Foreshore development area, along the southern foreshore and at Bowen Park.

The existing Manuka Swimming Pool is about 1.2km from East Lake. Swimming in the natural water bodies within the East Lake area is not permitted as they are within the Jerrabombera Wetlands Nature Reserve (swimming is not consistent with conservation objectives). In recent years, swimming in East Basin has been discouraged due to concerns over water quality.

The Jerrabombera Wetlands Nature Reserve is one of the most important sites for waterbird habitat in the ACT, and provides
passive recreation opportunities. Diverse bird life uses the shallow swamps and adjacent willow and reed communities of the Molonglo River. The reserve’s current management plan identifies a number of areas with differing levels of public access. The most accessible area is in the south eastern portion of the reserve.

**Jerrabomberra Wetlands and Jerrabomberra Creek**

The Jerrabomberra Wetlands Nature Reserve makes up more than 45 per cent of the East Lake study area. With it being one of the most important waterbird habitats within the ACT, the relationship of developed areas with the wetlands is an important aspect of East Lake.

The wetlands came into being when the filling of Lake Burley Griffin flooded several old river courses connected by an artificial drainage channel. This created a series of habitats that today support a rich and diverse bird fauna. Also associated with the wetlands are the Fyshwick sewage treatment ponds, which vary in depth, nutrient and zooplankton composition, and provide a variety of feeding habitat for some waterbirds, particularly ducks.

The ecological value of the Jerrabomberra Wetlands became appreciated during the 1970s, leading to a series of government initiatives to conserve the wetlands as a nature reserve and enhance the value of selected areas for public appreciation. The draft revised Jerrabomberra Wetlands Management Plan outlines management measures for the reserve. A key feature of this plan is a system of access zoning: some areas are intended to actively encourage public access and appreciation, while others are subject to varying levels of access restriction to limit the risk of disturbance to waterbirds.

While the Jerrabomberra Wetlands Management Plan is concerned primarily with management issues within Canberra Nature Park, it also acknowledges the potential for impact on the wetlands from surrounding land uses. These include the:

- impacts on water quality as a result of urban and rural runoff;
- impacts of increased intensity of public use;
- increased spread of public use within the wetlands area;
- peripheral impacts such as noise, light, shading or littering on waterbirds or on public enjoyment of the wetlands;
- potential for vegetation changes within the wetlands as a result of weed invasion from nearby urban areas; and
- risks of harm to waterbirds and other wildlife as a result of predation or disturbance by domestic pets, particularly cats and dogs.

Those areas of the wetlands with restricted access are intended to provide refuges for nesting and breeding, and include habitat...
suitable for a range of migratory birds. A number of these species are subject to international habitat protection treaties with Japan and China, and are listed migratory species under the Commonwealth Environment Protection and Biodiversity Conservation Act (EPBC Act). The Management Plan excludes dogs, even on a leash, from the reserve, one of the few areas of Canberra Nature Park where such a restriction applies. The types of recreational uses encouraged in the reserve are generally those of a passive or educational nature, reflecting the strong conservation emphasis for the area and the fact that its natural attributes do not lend the area to many of the active recreational activities that are permitted in other parts of Canberra Nature Park.

**Heritage**

There are five places and objects listed on relevant heritage registers as occurring in the study area, identified on Figure 14.

**Jerrabomberra Wetlands, Fyshwick.** An area significant for its bird habitat, of scientific, educational and recreational importance. It is a significant site for observing and learning about birds and is substantially used and valued for this purpose by the community. Its location, its easy view of the national capital and the hills that form the central Canberra primary landscape all add to the significance of the wetlands.

**Goldenholm Dairy, Fyshwick.** Goldenholm was the first of the four dairies offered for lease by the Federal Government in 1928. It has potential as an educational resource, both in heritage value of its buildings and mature, exotic landscape and as an enduring example of Canberra’s agricultural history. It is noted that this area is currently leased to Canturf and operates as part of a turf farming operation.

**Dairy Farmers Cooperative, Griffith.** The original Dairy Farmers Dairy, built in 1938, is an example of industrial architecture in the Inter-War Functionalist style. The adjoining manager’s cottage, built in 1940, and the factory and office building, built in 1952, reflect past practices and demonstrate a continuity of use through advances in milk treatment and handling.

**Causeway Hall, Kingston.** The Causeway Hall was built by voluntary labour in 1925 and has undergone few modifications since. It was the first and largest project undertaken by the Canberra Social Service Association, which was initiated by the Federal Capital Commission. The hall demonstrates the Federal Capital Commission’s ideal of cooperation by a whole community for its own advantage. The building is in very good condition and retains its landscape setting and much of its original fabric and form, including the entrance vestibule, high windows, ticket room and the projection room with stairway access. It fulfils an important social function as a meeting and function venue for the local community.
Figure 14

HERITAGE SITES

Study area boundary
Open water
Goldenholm Dairy: ACT Heritage Register
Causeway Hall: ACT Heritage Register
Locomotive No. 1210: ACT Heritage Register
Dairy Farmers Co-op: ACT Heritage Register
Jerrabomberra Wetlands:
  ACT Heritage Register
  Commonwealth Register of the National Estate
  National Trust (ACT) heritage Register
Steam Locomotive Number 1210 (Steam Train), Kingston. The steam locomotive 1210, built in 1878 by Beyer, Peacock and Co. of Manchester, England, is the Railway Historical Society’s flagship and central to Canberra railway history. On 25 May 1914, it hauled Canberra’s first revenue-earning train, a coal train to serve the then main electricity generation station of Canberra. Number 1210 is now used by ARHS(ACT) to haul vintage trains to Royalla, Bungendore and further in NSW for historic rail events and tours.

There are no Aboriginal places or objects listed on relevant heritage registers as occurring in East Lake. There are two potential archaeological deposits (PADs) that may contain Aboriginal heritage, however these are yet to be investigated and are not considered to be sites of significance. Further heritage assessment of the entire site would be required to investigate all cultural heritage issues for East Lake.

Any development at East Lake that may affect the heritage significance of any heritage listings will need to consider the provisions of the Heritage Act 2004.

A possible remnant of a railway bridge on The Causeway Axis is identified on the northern bank of Molonglo Reach. This feature and other possible remains of the railway line could be incorporated into an interpretation of the axis and should be explored as part of developing East Lake.

Land tenure

The land within East Lake is held by a number of tenure types to a range of lessees. The largest land holder by area is the ACT Government. Territory-owned (or unleased) land includes Jerrabomberra Wetland and blocks along Dairy Road, railway land including the railyards and rail corridor, residential sites including Cooinda Court and the majority of land in The Causeway; undeveloped blocks near Jerrabomberra Creek and also adjacent to Hume Circle; CIT Fyshwick Campus; and some municipal services sites including Cityscape Depot and Fyshwick Fire Station.

These ACT Government sites present opportunities for future development within East Lake. The development of this land is reliant on future capital works projects and will form part of the Land Supply Program.

The majority of the industrial land around Mildura Street is owned by private leaseholders. These long-term commercial leases generally permit a range of industrial uses suited to the Fyshwick area. There are a number of larger blocks (greater than 20,000m²) in this area that have significant development opportunities. There are a number of owners that have multiple land holdings in East Lake, which can contribute to achieving an integrated and coordinated process of urban renewal.
The Wetlands Foreshore Business Park on Dairy Road is contained within a single lease area which presents significant opportunity for a coordinated development approach. The master planning already undertaken for this site is supported by the implementation of the planning for East Lake.

**Landscape**

Although East Lake has a largely informal landscape, there is general planting associated with current development and the vegetated areas of the Jerrabomberra Wetlands and creek corridor. Native and exotic street tree plantings reinforce the rectilinear character of The Causeway residential development along east-west streets. Large eucalypts form an important landscape element between The Causeway and the Jerrabomberra Wetlands. Beyond this, there is limited tree planting and landscaping to formally mark the streetscape and planting tends to be haphazard, particularly within the existing industrial area.

The undeveloped areas of East Lake are essentially informal and the area adjacent to Jerrabomberra Creek is degraded, with areas of open woodland and grassland containing a variety of native tree species. These areas interface with the Jerrabomberra Wetlands, which provides a focal point for the landscape character of East Lake. It contains a variety of habitat and vegetation types that reflect its status as a nature reserve.

There are a wide variety of existing native and exotic trees within East Lake that could be retained within future development subject to detailed master planning. A review of the existing landscape has not identified any vegetation in the urban areas (ie outside the wetlands) of particular significance that should be retained, however a detailed survey of existing trees has not been undertaken. Future redevelopment and detailed planning for the area will need to consider the existing vegetation in the context of legislation applicable at the time.

**Infrastructure and servicing**

The existing and required infrastructure that is to service future development of East Lake is considered by a number of separate studies. The details of these are summarised as follows.

**Electricity**

The Causeway Switching Station is a visually dominant and operationally critical piece of electrical infrastructure in East Lake, connecting three underground 132 kV sub transmission cables and three 132kV aerial sub-transmission lines. The underground cables link to Telopea Park Zone Substation at Kingston. Two of the aerial sub-transmission lines link to the City and Bruce Zone Substations, and the third line links with Gilmore Zone Substation to the south. The Causeway Switching Station is a key asset of the ActewAGL network, sited on an important location within
the urban area. The Authority and ActewAGL and other stakeholders are considering options for its relocation because of the visual, land use and property value impacts of these major facilities on existing and future development in the local area and the reduction of impacts on the Jerrabomberra Wetlands from relocation of overhead lines outside of the refuge area. The general location of these options are shown on Figure15. Broadly, these possible relocation sites are within East Lake, adjacent to Jerrabomberra Creek, on Dairy Road collocated with the sewer works, and a site outside of East Lake further south near Narrabundah.

In addition, a new zone substation is required in the local area to replace an existing temporary zone substation located within Fyshwick, that could potentially be co-located with The Causeway Switching Station.

The Switching Station and its 132kV overhead transmission lines present constraints to achieving optimal use of adjacent land at Kingston Foreshore and East Lake. Relocation of this infrastructure would result in considerable improvement in the amenity of these sites. In particular the existing overhead infrastructure constrains development of the northern area of The Causeway settlement.

Independent of the planning for East Lake, a feasibility study is to be undertaken to investigate a preferred option for electrical infrastructure relocation. This study will address planning, environmental, visual and technical issues and would include a detailed economic assessment of the options.

Initial preference is for a site east of Dairy Road near the existing sewerage works. The feasibility study would provide information necessary for further environmental assessment and provide the basis for the detailed design for the major infrastructure relocation and augmentation.

**Stormwater**

Analysis of the stormwater system and flood extents for East Lake indicates that areas adjacent to Jerrabomberra Creek including the undeveloped northern section of The Causeway would be partly inundated in a 1-in-100-year storm. A small area south of the railway line near Jerrabomberra Creek would be affected as frequently as a 1-in-5-year storm event. Some filling and flood mitigation works would be required in these areas to enable development. Particularly, works are required to raise the level of Newcastle Street and Sections 30, 31 and 32 in The Causeway above the 100-year storm level.

Within Jerrabomberra Creek at East Lake, there is a major silt trap to treat water flows before it enters the wetlands. There is also a major Gross Pollutant Trap adjacent to Monaro Highway to treat stormwater flows from the western Fyshwick area.

Initial analysis of flow paths indicates a number of problem areas where overland flow paths will require an upgrade and where existing stormwater systems will need to be augmented, including
Figure 15
ELECTRICAL INFRASTRUCTURE RELOCATION OPTIONS
upstream of East Lake. Major overland flow paths draining to Jerrabomberra Creek must be maintained in any new development. Further detailed assessment will be required as part of detailed planning for urban development.

**Sewer**

The major existing sewerage infrastructure does not form a constraint, other than to establish clearances from or relocation of trunk sewer mains. The existing system can be augmented to allow for future development if required, including the use of pump stations and rising mains. There is also an existing pump station on Mildura Street near Jerrabomberra Creek that will need to be considered in detailed planning proposals.

Odours from the Fyshwick Sewerage Treatment Plant constrains certain uses close to the plant (e.g. residential). A 500 metre buffer around the operating plant in which there is no residential development is recommended. It is also recommended that a detailed odour study be undertaken as part of the detailed planning process and that any significant change in land use should be preceded by a detailed odour assessment.

**Water**

East Lake is within the South Canberra ‘low’ ActewAGL water pressure zone. There are no constraints on development in terms of water supply, unless the development was to have a very high fire demand. Local networks will need to be upgraded to cater for development as required. ActewAGL is presently reviewing the area’s water and sewerage capacity.

**Telecommunications**

The Kingston and Fyshwick areas are serviced from the Fyshwick Telephone Exchange and the exchange in Griffith. There may need to be a new exchange or upgrades to service development at East Lake. Future development should make provision for high-speed telecommunications infrastructure including access for commercial and residential development.

**Gas**

A primary high-pressure steel gas main runs along the Monaro Highway at the eastern edge of the study area. Safe clearances from this main must be considered in the planning and design process.

A Primary Regulating Station (PRS) is required in Fyshwick to augment gas supply to Queanbeyan and Jerrabomberra, connecting to the primary high-pressure steel gas main that runs along the Monaro Highway. A possible location is identified within East Lake near the intersection of Canberra Avenue and Monaro Highway. There is also a possibility of collocating the PRS with relocation of the major electrical infrastructure.
Figure 16
POTENTIAL CONTAMINATION
Geotechnical conditions and potential contamination

There are two main geotechnical terrain types within East Lake. The general lower areas, containing the wetlands and Jerrabomberra Creek corridor, are alluvial lowlands with deep alluvial soils and waterlogged areas that would require detailed investigation and careful engineering design for any development. The higher area of the site consists of colluvial soils on sedimentary rock, which generally does not pose a constraint to development. Site specific investigation of ground conditions should be carried out for developments in this area as part of the design stage.

There are a number of specific geotechnical constraints within the study area, including former landfills and spoil dumps. An initial investigation of potential contamination within the site has identified ten Areas of Environmental Concern (AECs) as identified on Figure 16. Preliminary investigations indicate that the sites can be remediated and do not pose a major constraint to the development. These areas will require detailed investigation and probably remedial works such as removal of contaminated fill and re-compaction of uncontrolled fill before residential or commercial development. Alternative treatments such as “leave as is” or providing capping layers (for contamination purposes) may be feasible if the areas are to be developed for recreational use.

A development requirement for East Lake will be that a detailed Contamination Assessment and Remediation Action Plan will need to be prepared for the developable area of the site, continuing from the initial assessment prepared to date. This will allow further examination of identified potential contamination to clearly identify the extent of contamination and measures to remediate land for development.

As part of further contamination studies, a Spoil Management Plan for East Lake should be prepared that not only determines requirements for existing spoil dumps on the site, but also excavated material created by new development in East Lake.

Context summary

The East Lake study area features a complex mix of commercial development, residential housing, community facilities and infrastructure. The site presents a variety of opportunities for future development and a number of constraints to be considered, as explored in this section of the document. Figure 17 identifies a number of these key aspects of the site. An important aspect to be recognised is that what may be seen as a constraint to some, is also seen as an opportunity to others. This planning context forms the basis for outlining the future directions for East Lake.
Urban structure can guide future development

Waterway zone to protect and enhance as wildlife corridor

Hume Circle Study by NCA to guide urban outcome

Conservation Zone requiring protection

Establish interface and connection to urban development

Major infrastructure - establish clearances and buffers

Major transport

Railway infrastructure and main line

Existing heritage

Establish wetland - urban edge interface (500 m odour buffer to sewage works)

Local attractor (Fyshwick Markets)

Figure 17

LOCAL CONTEXT
**Vision**

The vision for East Lake is to become a lively, high-density urban community providing an Australian showcase of sustainable development.

**Potential for East Lake**

East Lake is envisaged to be an urban village incorporating a diverse mix of uses that contributes to the sustainability and liveability of the local area and the city. It is anticipated that East Lake will contain a population of about 9000 people with an employment base of 3000 jobs and an associated 16 000m² of retail space. This includes approximately 5000 residential units within a mixed-use environment of multi-storey development and is a unique opportunity to provide new development sites and redevelopment opportunities close to central Canberra.

Opportunities also exist to develop clean industrial uses and a range of retail and office functions that support the residential intensification of this area. In achieving this, the importance of existing stakeholders is recognised. The planning approach enables existing operations to continue and acknowledges that further negotiation and liaison is required to implement the planning for East Lake. This includes specific elements of the Griffin Legacy and opportunities for increased development rights, implementation of conservation and sustainability measures and infrastructure initiatives.
**ACT Government policy**

The Canberra Plan and People Place Prosperity underpin the vision for East Lake. This planning study aims to implement specific objectives from The Spatial Plan and the Sustainable Transport Plan.

**Goals**

For East Lake, the planning is focused on the three interrelated goals to:

1. **Achieve excellence in urban form and design**
2. **Embed sustainability throughout East Lake**
3. **Capture ‘leading edge’ innovation in sustainable urban development**

For each of the goals, there are a number of key issues specific to East Lake that are informed by ACT Government policy.

1. **Achieve excellence in urban form and design**

   The aim of this goal is to provide the conditions for a flourishing economic life, sensible use of natural resources and the connections between people and places to guide the form of the urban environment.

**Strategies**

**Mixed use development**

Contributing to achieving a sustainable urban form, mixed-use development in East Lake can provide opportunities for retail activities associated with the development of the area and include commercial development fronting Canberra and Wentworth Avenues and mixed use development interfacing with a transit corridor.

The anticipated nature of development in the mixed use area is for:

- ground floor areas with frontage to a public street or pedestrian area are to be for commercial development including retail, offices, restaurant / cafes and similar uses;
- first floor levels and above are for residential or commercial or a combination;
- carparking is generally to be provided on-site and designed to minimise visibility from public frontages (it may be located at basement level or as above ground multi-storey parking structures behind buildings); and
- on-street short-stay carparking is to be provided to supplement on-site provision.
Opportunities for development diversity
The predominantly mixed use character of development over much of the area should be reflected in local architecture and building construction. Developments are to meet the changing needs of the community over time. New development should respect existing uses should they wish to remain within the area while promoting the integration of residential development in these areas. This is demonstrated in the areas identified for mixed use buildings, incorporating commercial frontage on the ground floor with commercial and/or residential above.

Built form
The built type and form should reflect the characteristics of each general precinct. Broadly across East Lake, commercial land uses dominate on Canberra Avenue/Wentworth Avenue and on the eastern side of Jerrabomberra Creek. Mixed use development dominates throughout the southern site area (including Hume Circle) combining commercial and residential. The neighbourhood in the north of the urban area is to be predominantly residential development.

Community facilities
The existing Causeway Hall and adjacent open space should be retained in the redevelopment of the East Lake area. It is envisaged that this focal point for The Causeway residential area will continue its role as an important community asset within future higher density development.

The mixed use nature of the proposed development provides an opportunity to include new community facilities, including meeting spaces, function rooms, childcare centres and supported office spaces for community groups. In addition to the future community uses provided for in the planning for Kingston Foreshore, it is also expected that detailed planning process will identify appropriate future community land use sites to meet community needs within East Lake. The integration of emergency services into the redevelopment of East Lake will be an important part of this process.

Birrigai at Jerrabomberra Wetlands facility is to be retained within the development of East Lake and can further develop its

Proposed view along Jerrabomberra Creek Corridor looking northwards
connection to the wetlands as a resource for environmental education and as a possible eco-tourism destination. Further expansion of development on Dairy Road is identified between the Wetlands Foreshore Business Park and Birrigai. This site can provide expanded environmental education functions associated with the wetlands, eco-tourism development, or other special uses that do not negatively impact on the wetlands.

While it is located within the Hume Circle precinct, no changes are recommended for St Clares College.

*Potential development along central transitway corridor*

**Commercial**

The commercial area around Mildura Street is currently within precinct ‘c’ of the Industrial Land Use Policy under the Territory Plan. A key aspect of these controls is a restriction on the size for any shop, including supermarket, to a maximum of 200m². Under proposed changes to the policies for East Lake, this restriction on shops can be retained to maintain the diversity of commercial uses within the area. Exceptions to this control are to be provided for particular locations, particularly to allow for a local supermarket to meet the convenience retailing needs of the local community. These include a location in the residential precinct and potentially a site associated with the Fyshwick Markets to provide focal points for the local community. It is proposed, subject to the outcomes of detailed planning that size restrictions in these locations will be increased to in the order of 2000m² to provide these opportunities.

The Fyshwick Markets can retain its role as a fresh food retail complex within the redevelopment of East Lake. This facility is an important community asset and the intention of the planning for East Lake is to permit the markets to continue their current or expanded operations for as long as the markets remain viable. Opportunities to facilitate pedestrian and cycling access to the markets from surrounding development will be incorporated in
the detailed planning to support new residential development and enhance the community role of this precinct.

The former DAS Fleet site on Dairy Road, known as the Wetlands Foreshore Business Park, is an area of low-density commercial development with opportunities for increased density. Due to the proximity to the sewerage works and associated odour impacts, development should be restricted to non-residential uses and should not include restaurants/cafes or similar uses for general access to the public. Redevelopment within this site should respond to its relationship to Monaro Highway and the Majura-Symonston employment corridor, and the proximity to Fyshwick, providing opportunities for technology related industries, research and development and other commercial/clean industrial related activities. It should connect through to the other areas of East Lake across Jerrabomberra Creek. This includes opportunities for soft edge treatments that integrate the development with the wetlands in accordance with sustainability principles to enhance this relationship.

The opportunity exists to retain existing or develop additional clean industrial uses at East Lake. In considering these types of commercial/industrial activities the planning for East Lake recognises that there are a number of existing lessees and that it is important to protect these operations as redevelopment occurs. This includes retaining access and incorporating appropriate measures such as noise mitigation within adjacent residential development.

**Design principles**

The Canberra Spatial Plan recognises the opportunity to establish a new community for the remaining undeveloped waterfront at East Lake. The redevelopment of Kingston Foreshore has led the way in urban renewal of brownfield land on the Lake Burley Griffin foreshore. The scale of new development has largely set the context for the redevelopment in East Lake.

East Lake will provide a transition between the industrial and commercial development of Fyshwick, the established residential areas of Narrabundah and Griffith, and the new higher density development at Kingston Foreshore. This will be reflected in new development at East Lake, the predominant land uses and the streetscape character.

**Character**

Development in East Lake will display a high quality in the public spaces and buildings. It will recognise existing urban features such as the established structure of Kingston Foreshore, the linear railway corridor, and existing access points to the precinct. The street patterns will reflect those of the surrounding Griffin-planned suburbs and the established street pattern of The Causeway settlement.

Thus subdivision and road pattern should maintain a strong developed character within the precinct.
rectilinear form, establishing strong view opportunities and corridors. It should use existing landscape features to establish way finding landmarks and focal points and establish clear and easily navigable routes, connecting discernible precincts, recreational open spaces and public gathering places.

The future urban character of the proposed development should build on the existing industrial character of East Lake, responding to the area’s working history. Building character should reflect the industrial and commercial mixed-use nature of the land use establishing a unique character and development typology in the new development that helps to create a sense of community based on the past and the present. Buildings should be constructed using a material and building element palette reflecting an industrial based character for the precinct, with large windows and door openings and industrial finishes but ensuring design energy efficiency principles are not compromised by large use of glass. This design approach should extend into all forms of development, both residential and commercial. In particular, there is an opportunity to reflect the historical, utilitarian railway use forms. East Lake should also harness the heritage character of sites such as The Causeway Hall and Dairy Farmers Co-op as connections to the history of the area.

The Draft Planning Report identifies a number of future developments, framing a corridor that corresponds with an underlying structure parallel to the existing main railway line. Edge roads to this corridor can incorporate an interface consisting of a transitway, pedestrian corridor, a public road and development frontage. The road and open space character is designed to engage this corridor and industrial uses as an important element of the urban fabric and to celebrate the railway heritage within East Lake’s future development.

Structure
The East Lake Structure Plan (Figure 18) sets out an approach
for developing the area, according to guiding principles. The plan identifies key roads and movement corridors, interfaces, development types, building form and scale. Key features of the proposed plan include:

- stronger identification and recognition of Griffin’s Causeway Axis from Hume Circle through to the lake;
- increased permissible building heights across the site generally, with taller buildings encouraged at key locations on Hume Circle and Monaro Highway;
- expansion of the range of uses and density of development in the existing industrial commercial areas around Mildura Street;
- intensified residential development in The Causeway, retaining the existing community facilities as a central focus of the precinct;
- a new residential precinct on vacant land and former rail yards, sensitively connected to the Jerrabomberra Wetlands;
- higher density mixed use development between Jerrabomberra Creek and Monaro Highway;
- the Jerrabomberra Creek environment improved through naturalising the existing corridor and reshaping the existing silt pond to improve water quality and provide additional waterbird habitat with an urban edge to any adjoining development;
- a site for an exemplary sustainable development demonstration project.
- enhance facilities for education, conservation and sustainability on Dairy Road;

The East Lake Structure Plan provides the opportunity to explore the relocation of the railway at Kingston to a rationalised rail precinct on the existing rail corridor. This precinct, which is the subject of a detailed Railway Masterplan, could include a new passenger station and historic rail facility collocated on a number of parallel tracks. This could be located within East Lake or on a site identified in Fyshwick adjacent to the EpiCentre development. This would enable the development of the large parcel of land currently occupied by the existing railyards to be integrated within the urban fabric of East Lake. A corridor to provide for future transitway options is to be retained, associated with an open space interface and increased development densities to support this.

**Building heights**

An increased building height is anticipated for new development in East Lake, as development is intensified. Buildings should generally have a two-storey scale at the interface to Jerrabomberra Creek, rising to a generally four-storey scale across much of the site and higher at key sites. Taller buildings are
Figure 18
EAST LAKE
DRAFT STRUCTURE PLAN

- Study area boundary
- Urban structure
- Mixed use
- Residential
- Commercial
- Open Space
- Education
- Sustainability demonstration project
- Proposed electrical substation site
- Rail line
- Public transport route
- Indicative trunk cycle route (additional paths to be determined subject to detailed planning)
The building heights are intended as a guide only. Increases in height may be permissible subject to detailed planning, and consideration of impacts.

Figure 19
BUILDING HEIGHTS
particularlly encouraged at strategic locations including: Canberra
and Wentworth Avenue frontages generally four-storeys;
development within the Hume Circle precinct in the order of eight
storeys; two landmark sites south of Cunningham Street framing
the Causeway Axis of six-storey scale; and heights in the order
of eight storeys adjacent to Monaro Highway. These building
heights are shown on Figure 19, however they are only indicative
of the scale of development in East Lake.

The proposed building heights reinforce the key natural features
of the site and its relationship to the surrounding suburbs. This
provides a transition from residential to industrial across the
site and also characterises the change in development form from
Kingston to East Lake, whilst highlighting the importance of
natural and visual corridors, Hume Circle and The Causeway Axis.

Higher building heights may be considered in key locations where
it can be demonstrated to have no significant adverse effect on
overshadowing, microclimate or wind turbulence in the adjoining
streets and open spaces.

**Public realm design**

Urban development of East Lake should recognise the interface
to Jerrabomberra Creek that creates a useable open space
corridor and protects the natural values of the Creek and the
downstream wetlands environment. Where planning for Kingston
Foreshore has identified a more formal water edge on the lake,
East Lake might have a more informal relationship with
Jerrabomberra Creek and wetlands. The type and form of housing
should be influenced by the relationship with views of water and
public access creating a feature of the interface. The use of
open space fingers ‘meshing’ into the urban area should provide
connectivity with the wetlands from the housing, with the
potential for development within parkland settings.
**Landscape character**

East Lake provides the opportunity to establish and formalise a landscape character throughout the area. A Landscape Master Plan will be prepared to reinforce these characteristics. Key elements to be considered in this process include:

- reinforcement of Hume Circle and The Causeway axis as important landscape elements;
- the naturalisation of the Jerrabomberra Creek corridor through the planting of native species, realignment of the waterway to involve meanders and pools and use of Water Sensitive Urban Design practices;
- providing multi use landscape corridors that also act as movement corridors and wildlife habitat. These should be an integral mechanism within East Lake for connecting urban areas to public open space;
- appropriate use of exotic and native vegetation in public streets and open spaces;
- integrating sustainable stormwater design into public open spaces;
- providing opportunities for local facilities to be established including meeting spaces and community gardens.;
- integrating the wetlands and open space corridors with urban development to provide a transition. Planting in the transition areas should be of native endemic plantings that blends with existing plantings; and
- the transition of uses across the site and how the landscape character can be used to reinforce this aspect of East Lake with landscape corridors becoming progressively more formalised within the urban area and around major development nodes.
Public art
Public art can increase the value of areas and helps create a sense of community. The potential cultural, economic, social and environmental benefits of public art are now widely accepted. Public art is recognised as:

- adding to the built environment and urban design;
- helping develop an environment that is attractive to existing and new businesses;
- adding value to developer’s schemes and product;
- providing additional attractions to residents and visitors;
- helping to develop a locally distinctive sense of place;
- providing employment opportunities for artists and creative industries;
- potentially increasing community ownership of public spaces through involvement in design and evolution of artworks;
- a tool of urban regeneration;
- adding value to existing commitments eg interpretation, street furniture, lighting;
- introducing new heritage for future generations;
- a mainstream way of stimulating debate about the built environment and urban spaces; and
- connecting spaces, including conservation to urban.

The public art objectives for East Lake are:

- to promote opportunities for marketing, interpretation and education links within public art projects;
- to provide additional opportunities for local and regional artists and a greater profile and recognition of the added value public art can bring for public benefit;
- to enhance the structure of the precinct through the creation of landmark features; and
- to allow for the development and expression of the unique character and heritage of East Lake through including high quality public art.

Responsive to climate change
Sustainable urban development at East Lake responds to climate change in a number of ways that fall into two main categories: abatement and adaptation.

Abatement
These are measures designed to reduce the quantity of greenhouse gases emitted and include:

- promotion of the compact city as proposed by The Canberra Spatial Plan;
- provision of walkable neighbourhoods;
subdivision and building design that promote energy efficiency;
provision of efficient public transport, cycling and walking networks; and
retention/planting of trees and vegetation for carbon sequestration.

**Adaptation**

On the assumption that climate change is inevitable, adaptation to those changes should be considered when planning for urban development. In East Lake the design of urban development should consider:

- the consequences for flooding levels and urban stormwater management through more severe storm events; and
- the likelihood of higher frequency of bushfires.

Climate change is also likely to affect ecological communities, but information specific to East Lake and Jerrabomberra Wetlands is not yet available. However, protection measures are to be employed as a precautionary measure (the “precautionary principle”). Further studies may identify specific impacts that are not currently capable of being identified. Suitable measures can then be applied to minimise any impact.

**Heritage**

There are five registered places and items of heritage significance in East Lake. These are considered as follows.

- **Jerrabomberra Wetlands** – protecting and enhancing the wetlands is a primary objective of development in East Lake. The wetlands are to be retained and opportunities for public interaction and education expanded in conjunction with the development.

- **Goldenholm Dairy** – the block adjacent to the entrance to Dairy Road within East Lake is identified as part of area for further investigation for the relocation of existing infrastructure. This site is located adjacent to the existing sewerage treatment works and is isolated from the remaining dairy buildings and infrastructure. It does not operate as part of the existing Canturf operation due to its landform and size and is not considered critical for retaining the heritage significance of the dairy.

- **Dairy Farmers Cooperative** – the buildings of heritage significance are within a site adjacent to the Causeway axis and are not proposed for redevelopment. The eastern-wing extensions to the Factory and Office Building are also not proposed for redevelopment, but are not recognised as being of heritage significance. This site is identified for mixed-use which could allow for alternative uses on the site that would not affect the heritage significance of the place.
- Causeway Hall – an important feature of The Causeway settlement development is the central open space that includes the Causeway Hall. This space is to be retained and will continue its role as a focal point for local community.

- Steam Locomotive Number 1210 – the locomotive is part of the ARHS restored stock stored at the current Kingston site. A future historic rail facility is intended to include covered and secure storage for restored historic rail pieces.

**Griffin Legacy**

A key objective of the planning for East Lake is to progress the intent of the Griffin Legacy Project as outlined by *The Griffin Legacy* (NCA 2004). In addition to the urban renewal of East Lake, this is primarily achieved by:

- reinforcing Hume Circle and the circular arrangement of roads, by providing for increased building height, density and landscaping that identify this as a gateway to the city of Canberra;

- recognising The Causeway axis in the physical environment through structures and/or landscaping on part or all of the axis. This could include historical aspects or landmarks, a pedestrian boardwalk, public art, tree planting or variations in vegetation. Recognising this axis could also include the intersection with Griffin’s Water Axis. Detailed design and assessment will be required to consider any environmental issues;

- encouraging access, education and interpretation of the Jerrabomberra Wetlands, including enhancing the existing public areas and establishing additional habitat.

In addition to these specific measures, the table over identifies a number of elements of the Griffin Legacy that are relevant to East Lake, and how the planning for future development can assist in achieving these.
<table>
<thead>
<tr>
<th>Element</th>
<th>Achieved in East Lake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape Framework</td>
<td>Landscape Master Plan to recognise key vistas and structure of the new development.</td>
</tr>
<tr>
<td>Lake and Parklands</td>
<td>Maintain and enhance Jerrabomberra Wetlands and local natural waterways.</td>
</tr>
<tr>
<td>Water Axis</td>
<td>Future planning toward recognising The Causeway Axis within Jerrabomberra Wetlands to consider the intersection of the Water Axis and The Causeway Axis.</td>
</tr>
<tr>
<td>Main Avenues</td>
<td>Avenues bounding the south of the site identified for a higher density of development and public frontage, and Hume Circle recognised to include higher building heights and a mix of uses and landscaping to reinforce importance</td>
</tr>
<tr>
<td>Gateways and Approach Routes to Central National Area</td>
<td>Mixed use development encouraged throughout much of the urban area. Urban character to reflect the industrial and mixed use nature of the precinct.</td>
</tr>
<tr>
<td>Urban Form and Activity</td>
<td>Mixed use development encouraged throughout much of the urban area. Urban character to reflect the industrial and mixed use nature of the precinct.</td>
</tr>
<tr>
<td>Business Centres</td>
<td>Hume Circle as a higher density centre reflecting connections with major transport corridors.</td>
</tr>
<tr>
<td>Neighbourhoods</td>
<td>Structure allows for a number of smaller communities and neighbourhoods grouped throughout East Lake.</td>
</tr>
</tbody>
</table>

These elements of the Griffin Legacy have the potential to be realised, in part or in whole, through the redevelopment of East Lake. Future development projects and detailed planning should give special consideration to the elements and recommendations of the Griffin Legacy.

2. Embed sustainability throughout East Lake

The aim is to connect people to their place of employment, their goods and services, transport and each other. A sustainable urban environment optimises use of resources, and making efficient use of urban systems, services and processes.

**Strategies**

**Sustainable development**

A commitment to Ecologically Sustainable Development is an important aspect of the future urban intentions for East Lake. Development in East Lake for residential and commercial buildings will be required to adhere to particular sustainability principles.

**Water Sensitive Urban Design**

Redevelopment of East Lake will involve intensified uses and use of existing undeveloped land. It can be expected that the urban development will modify the existing water flow patterns increasing stormwater runoff and associated pollutants. This has the potential to impact on local waterways, particularly Jerrabomberra Creek, the wetlands and the lake. It is essential, therefore, that there is a suitable approach to water management issues at East Lake.

The objectives of this goal are:

- reduce reliance on motor cars
- support the implementation of the Sustainable Transport Plan for the ACT by:
  - creating a mix of uses and higher density development
  - locating services within walking, cycling and public transport distance
  - providing high level telecommunications connections to enable electronic access to shopping, working from home
  - encouraging high levels of bicycle usage
  - exploring options for car clubs using hybrid/electric cars
Implementation of Water Sensitive Urban Design (WSUD) across East Lake can provide a more sustainable approach to the management of the total water cycle within the urban environment. This should integrate measures in public land and private development, ensuring that the volume and quality of water discharged from the development does not detrimentally affect natural systems.

Future detail design within East Lake must consider implementing WSUD measures in accordance with the Territory’s policies and appropriate guidelines in force at the time. East Lake is expected to implement a number of measures including:

- minimising disruption to natural drainage pathways (eg. retaining vegetated or mulched pervious areas, dispersed overland flow paths, vegetated natural waterways, wetlands and floodplains);
- minimising impervious areas on blocks and enhancing the permeability of remaining pervious areas (eg. mulching, protection from vehicle compaction);
- minimising the hydraulic connectivity of the stormwater reticulation system by using swales, vegetated waterways, wetlands and ponds rather than pipes and lined channels;
- offsetting the impacts of development by incorporating retention capacity (eg. infiltration, rainwater tanks, swales, wetlands, ponds and retarding basins);
- adopting landscaping strategies (eg. mulching, reduced lawn areas, water efficient gardens and ponds) that minimise watering requirements and reduce stormwater runoff;
- conserving water by installing water efficient fixtures and appliances;
- harvesting rainwater with storage in rainwater tanks (or other storage devices) for internal (eg. toilet flushing, washing machines) and external (garden irrigation) use;
- exploring the recycling of greywater and treated effluent for non-potable purposes; and
- integrating hydraulic infrastructure (water, sewerage and stormwater).

In particular, enhancing Jerrabomberra Creek could provide a more natural environment including pools and meanders and native vegetation. This also includes the reshaping of the existing silt trap to achieve approximately its original volume and opportunities for incorporating wetland zones in appropriate locations to improve stormwater treatment capacity.

**Conservation**

A primary objective of the planning for East Lake is to protect and enhance the Jerrabomberra Wetlands. The development of the urban area will need to provide an appropriate interface and transition into the nature reserve, and support the...
Educational and management practices outlined in the Jerrabomberra Wetlands Plan of Management. The protection of refuge and breeding areas is given special attention with the planning process incorporating measures that recognise the importance of these areas.

A transition will occur through a series of public spaces with different uses that link the urban areas and the conservation areas. Essentially, the aim will be to protect the wildlife refuge area and primary conservation and preservation areas by restricting public access, while facilitating opportunities for access and interaction with other parts of the nature reserve. This includes using open space immediately adjacent to development edge roads providing for more active recreation uses, including seating, picnic and barbeque areas as community focal points. The edge of the reserve, any necessary buffer spaces or treatments and the limit of development will be defined around the southern side of Jerrabomberra Creek and on Dairy Road as part of detailed planning and design processes associated with developing East Lake.

New formal public areas will provide a defined entry to the reserve with a transition to the active public area of the wetlands that incorporates educational walks and signage. This allows for the general public to access the wetlands whilst also promoting the environmental significance of the wetlands as envisaged in the Plan of Management. The opportunity of separating active recreation and education within the wetlands is also explored, with the option of providing an additional path primarily for cyclists and joggers, outlined in the Plan of Management.

Bringing new development closer to Jerrabomberra Creek will create a defined urban edge to the public space. The silt trap is to be reformed as part of creating new spaces and interaction around the southern area of the reserve. The silt pond could have a constructed urban edge adjacent to the development with deeper water and public interaction with the waters edge. As the pond transitions into the wetland, shallower waters, muddy flats and native vegetation could dominate, providing additional habitat and refuge areas.

By enhancing the public experience of these areas, it is expected that pressures will be reduced on the areas with key conservation values. In these key conservation areas, access is restricted to informal trails and should primarily be for ornithology enthusiasts with opportunities for providing discrete hides and sheltered viewing areas.

The transition of these public spaces and the urban development of East Lake may require adjustments to the current public land (Jerrabomberra Wetlands Nature Reserve) boundaries. These changes would be primarily along the southern boundaries in areas of lower ecological value or land degraded due to previous use. Notwithstanding, it is recognised that the treatment of the
Developing East Lake should:

- Demonstrate exemplary energy efficiency for residential and commercial buildings to exceed the base standards set for the ACT;
- Provide for the design and construction of healthy buildings delivering a high level of comfort;
- Investigate opportunities to achieve zero carbon dioxide emissions by 2020;
- Investigate measures to exceed the 40% reduction target of the Water Sensitive Urban Design Guidelines by reducing total water demand, harvesting rainwater, recycling wastewater, and demonstrating new technologies that achieve significant reductions;
- Provide infrastructure to include active and passive recreation and community facilities;
- Create opportunities to incorporate food producing planting suitable to an urban environment including community gardens;
- Include local reference sites for interpretation of history and heritage;
- Optimise biodiversity through managing and enhancing the Jerrabomberra Wetlands;
- Deliver against the outcomes of the Sustainable Transport Plan.

Urban interface and the protection of wetland habitats through sustainable use of the nature reserve and appropriate buffer zones is a critical element of the planning of East Lake. Consequently, as part of the detailed planning process a study is to be undertaken to identify appropriate edge treatments, access points, hydrologic characteristics, recreational use and other management requirements associated with this interface.

The study will generally consider the Jerrabomberra Creek corridor within East Lake from Canberra Avenue to the Kingston Foreshore. Options for edge road design, additional stormwater ponds, wetlands and creek rehabilitation and design principles associated with built form, lighting and noise are to be investigated as part of this process.

These outcomes are to be consistent with the intent of the planning for East Lake and the Management Plan objectives for the Jerrabomberra Wetlands, emphasising the protection of the wetland environment, whilst recognising opportunities for integration with urban development. This is to include consideration of appropriate access points, recreational use and amenity, built and open space design that provides a transition between urban and conservation ensuring the protection of the wetlands, whilst providing an active and safe living environment.

In addition to implementing these measures, East Lake provides opportunities to expand the conservation and recreation values of the wetlands throughout the development precinct. This includes reshaping and landscaping the existing silt-trap on Jerrabomberra Creek and the creek corridor further south to provide a more natural waterway and create additional refuge and public areas. Opportunities also exist to expand the open space into the urban area by ‘meshing’ fingers into the built form that connect with the wetlands and direct residents to interact with key features of the surrounds. Again, this is designed to reinforce the educational role of the wetlands and direct people away from the core conservation areas. The interface of urban development, as shown on the Structure Plan, will be either an edge road or a block boundary with frontage to the open space.

The Plan of Management recognises the damage that domestic animals can cause to the wetland habitat and threatened bird species. Bringing development closer to the reserve and an increase in residential density could increase the risk of damage. Measures to control domestic pets in East Lake should be further explored, possibly including cat containment policies.

Management of the wetlands and the interface will also need to consider issues associated with litter, possible increases in undesirable human activity (e.g., trail bikes, pilfering of rocks, illegal vehicular access), bush fire protection measures and effective pest animal control. Opportunities also exist to actively engage future residents as part of community groups involved in the implementation and management of issues associated with...
rehabilitation of the creek environment and the protection of the wetlands.

The Griffin Legacy Project includes the wetlands and a number of surrounding areas. The implementation of this work has the potential to impact on the wetlands. Any works under the Griffin Legacy Project should prevent impact on areas of high conservation value in the wetlands.

**Transport**

*Future heavy rail operations*

The inefficient arrangement of the rail infrastructure at Kingston and development pressures on the area necessitate a rationalisation of rail facilities. Preliminary investigations have highlighted that there are a number of options for locating the railway station as shown on Figure 20. Of these options, the *Kingston* (rationalised precinct on existing railyards) and *Newcastle Street West* (adjacent to the EpiCentre development in Fyshwick) sites are considered feasible and should be investigated further.

Both options would provide for passenger and historic rail facilities to be co-located within a new rail precinct. The sites have the opportunity for good access, visibility and efficiency of operation for developing and retaining a rail precinct in the Kingston/Fyshwick area that achieves the goals of the Canberra Spatial Plan and broader transport and regional objectives. User accessibility, proximity of bus routes and stops, public safety and visibility and design requirements will be considered as part of this process to ensure an outcome that is consistent with overall public transport objectives.

The preparation of a Rail Masterplan for the ACT will consider the role of associated users, the integration of the precinct with adjacent land uses and the regional context of rail in the ACT (including passenger and freight requirements). It is noted that
the Australian Government’s Auslink program is designed to provide a National Transport Strategy and includes extensive improvements to the National Freight network. All of the planned new railways and railway improvement plans associated with the Auslink program exclude any consideration of improvement of the existing corridor or construction of new railways into the ACT. The Rail Masterplan will be prepared to establish the most appropriate approach in consultation with relevant stakeholders.

**Future transitway**

The planning for East Lake includes provision for a future transitway. An alignment is identified using the existing rail corridor parallel to the heavy-rail line through Fyshwick and into Kingston, then continuing to Wentworth Avenue. The reservation required for the infrastructure should be retained as a landscaped open space corridor or wider road reserve in the interim to ensure that the service can be provided in the future.

**Road network**

East Lake is to build on the existing road network to provide connections through the site that create a legible and permeable local street system. Monaro Highway and Canberra Avenue, major arterial roads at the south and east of the site, are to remain the highest order roads in the local hierarchy. Cunningham Street, Mildura Street and Dairy Road/Newcastle Street provide main road connections that can be extended and inter-connected to provide for new development. A main public transport route carrying a higher volume of vehicular traffic than the surrounding streets should be connected through the East Lake area and reflected in the design of adjacent development, encouraging access to and use of public transport. A main entrance to East Lake could be from Canberra Avenue at an existing intersection of either Mildura Street (east) or Nyrang Street.

The road network can extend the rectilinear pattern established by Kingston Foreshore, the existing development of The Causeway and the commercial area around Mildura Street.

A minor road connection from East Lake to Ipswich Street in Fyshwick should be explored using the existing rail corridor. A road connecting from the eastern development precinct near
Monaro Highway, to the existing streets in Fyshwick would improve access to new development sites and link commercial development on each side of Monaro Highway. This road under Monaro Highway could be achieved through the existing rail underpass by removing the existing southern track. This should be further investigated as part of detailed planning for the precinct.

**Transport modelling**

Preliminary land use / transport modelling has been carried out, based on the network identified on the Structure Plan and Road Hierarchy Plan. The modelling tests scenarios for a new resident population ranging from 6600 to 8600 persons with a local workforce of 3000 people and 10,000 square metres of retail commercial space. A scenario for a high population without a connection to Monaro Highway at Newcastle Street is also tested to determine the impact of that road connection.

The model includes a number of assumptions for future development. Planned works on major arterial roads are assumed to proceed, including the Majura Parkway, completion of Horse Park Drive and Gungahlin Drive Extension. The model also assumes overall population increase for the Canberra region as identified by the Canberra Spatial Plan.

The following table summarises the traffic flow conditions during morning peak in vehicles per hour (vph), estimated on the arterials abutting the development for different scenarios.

The table is only a snap shot of traffic volume changes in the vicinity of East Lake at key locations, and the traffic flow does vary along various sections of the roads. The modelling is based

<table>
<thead>
<tr>
<th>Road</th>
<th>Existing Traffic Volume (vph)</th>
<th>Scenario 1 6600 pop’n.</th>
<th>Scenario 2 8600 pop’n.</th>
<th>Scenario 3 8600 pop’n. without connection to Monaro Highway</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traffic flow (vph)</td>
<td>Change (%)</td>
<td>Traffic flow (vph)</td>
<td>Change (%)</td>
</tr>
<tr>
<td>Canberra Avenue - eastbound</td>
<td>1500</td>
<td>2111</td>
<td>41%</td>
<td>2262</td>
</tr>
<tr>
<td>Canberra Avenue - westbound</td>
<td>1900</td>
<td>2175</td>
<td>14%</td>
<td>2188</td>
</tr>
<tr>
<td>Monaro Highway - northbound</td>
<td>2400</td>
<td>3805</td>
<td>59%</td>
<td>3928</td>
</tr>
<tr>
<td>Monaro Highway - southbound</td>
<td>1900</td>
<td>2754</td>
<td>45%</td>
<td>2743</td>
</tr>
<tr>
<td>Wentworth Avenue - northbound</td>
<td>1850</td>
<td>2120</td>
<td>15%</td>
<td>2130</td>
</tr>
<tr>
<td>Wentworth Avenue - southbound</td>
<td>850</td>
<td>998</td>
<td>17%</td>
<td>999</td>
</tr>
</tbody>
</table>
on East Lake developing and creating new traffic pressures, and in conjunction with the predicted growth of the city over some 25 years.

The traffic estimates show that Canberra Avenue, Monaro Highway and Wentworth Avenue will operate at near capacity levels. The connection to Monaro Highway provides better access and permeability to East Lake and reduces some pressures on the other arterial roads to the south.

The model predicts traffic volumes on Cunningham Street, developed as a sub-arterial, in the range of 1000 to 2000 vph in the morning peak. The design of this street and the adjacent developments will need to consider the relationship to the transit-way and these traffic volumes, but is considered appropriate for the intended urban environment.

There are potentially further traffic implications for the roads into the Kingston Foreshore development and surrounding suburbs. A detailed traffic management study can assist to identify any impacts and develop suitable traffic management measures. This study should be carried out in conjunction with more detailed planning for East Lake.

3. Capture ‘leading edge’ innovation in sustainable urban development

Market demand for sustainable developments and housing is growing in both domestic and global markets. The planning for East Lake provides an outstanding opportunity to create sufficient demand for sustainable buildings and urban form to attract new technology services and industries that could improve economic prosperity for Canberra overall.

The development should provide opportunities for businesses that strategically contribute to the growth of Canberra, reflecting the relationship with the commercial area of Fyshwick and the proposed Majura/Symonston employment corridor.

Strategies

Pilot project

The redevelopment of East Lake provides an opportunity to incorporate projects that demonstrate sustainable development beyond conventional development practices. A site for a sustainable development pilot project is identified as shown on Figure 18 (Structure Plan). This prominent site on The Causeway has an interface to a future mixed-use residential precinct of Kingston Foreshore and a connection to the Jerrabomberra Wetlands. A pilot project could involve a number of bodies that have already expressed an interest in developing at East Lake or another private development firm with commitment to sustainable development. This development should provide a
leading example of sustainability for new development in East Lake and other urban development projects.

Specific Involvement
The ACT Government has identified the East Lake project as a potential national example of best practice in sustainable urban development. This requires the use of leading edge science, innovative thinking and partnership with nationally recognised organisations with credible track records in sustainability. A number of bodies and organisations with a focus on sustainable development have expressed an interest in establishing a pilot project and/or contributing to the planning and development of East Lake.

CSIRO Sustainable Communities Initiative
The development of sustainability initiatives in Australia have benefited from projects undertaken by CSIRO. A significant project in the planning stages is the Sustainable Communities Initiative (SCI). The project proposes a partnership between public and private sector organisations, as well as professional bodies and interested groups to advance sustainability technologies and to create a demonstration project in Australia that exhibits exemplary sustainable urban development.

The ACT Government and CSIRO seek to formalise a working partnership on East Lake with the overarching objective to make the best use of national and local expertise to achieve an Australian showcase sustainability project at East Lake of “brownfield” redevelopment embracing social, economic and environmental sustainability principles, technologies, and practices. The partnership can assist to identify sustainability targets and testing current standards and processes against benchmarks, while maintaining probity, equity and transparency.

Further sustainability outcomes would be achieved through the delivery and implementation stages of the development. This requires the setting of principles in terms of process innovation, identifying how best to engage and influence industry and identifying the barriers (and incentives to overcome those barriers).

Australian National Sustainability Initiative (ANSI)
The Australian National Sustainability Initiative (ANSI) project aims to offer a national sustainability resource that continually introduces new perspectives, facilitates partnerships and promotes diverse approaches in working towards sustainability. The knowledge base and partnerships developed within ANSI can contribute to developing benchmarks for East Lake and demonstrating the achievement sustainable development.

The project also plans to establish a National Complex for Sustainability in Canberra, incorporating sustainability demonstrations and development types. ANSI envisage that the

Developing East Lake should:
- integrate social, economic and environmental sustainability
- meet increasing demand for sustainable urban living
- create opportunities to showcase leading edge sustainability technologies
- attract new industries to participate in the development
- create value through branding and marketing
- use public private partnerships for best value.
proposal will accommodate many activities, such as an education centre, conference space, work-spaces for organisations, exhibitions of innovative technologies and displays from various regions. The complex is intended to demonstrate an advanced standard of ecologically sustainable architecture, and provide an opportunity to showcase emerging sustainable technologies. The focus will be on integrating the arts, sciences and humanities in the service of sustainability, with areas for family recreation, education and nature walks; with structures that generate their own power, catch and treat their own water and sewerage, and contribute to biodiversity and ecosystem services.

One Planet Living

One Planet Living (OPL) is a joint initiative between BioRegional, an environmental development organisation based in the UK, and the World Wildlife Fund for Nature (WWF), which intends to demonstrate how communities can reduce negative ecological impact through sustainability practices. The original intent of the partnership was to establish five OPL communities, once each in Europe, USA, China, South Africa and Australia, where it is easy for people to live sustainably without sacrificing a modern, urban and mobile lifestyle.

BioRegional were engaged by the ACT Planning and Land Authority in March 2005 to utilise the intellectual property and experience of One Planet Living and to investigate and recommend a site for an internationally recognised environmentally sustainable development in the ACT. A number of possible development sites were evaluated and BioRegional identified that East Lake provided the best scope for development of such a community.

BioRegional has more recently moved away from the concept of only one ‘flagship’ community in Australia to establishing multiple Australian developments including a project in Canberra at East Lake. BioRegional could also be involved through contribution to a partnership project in East Lake aimed at encouraging sustainable development. Further discussion between the ACT Government and BioRegional is expected to develop the concept further.

Precincts

There are a number of distinct precincts identified within East Lake that have an individual character. The precincts each contribute to achieving the detail strategies in this section and also have specific development intentions and key features, as follows.

Precinct a - Dairy Road

- Intensified uses on the Wetlands Foreshore Business Park for commercial and industrial business activities that take advantage of the strategic location close to Fyshwick and the Monaro Highway.
- Expanded education development on Dairy Road to enhance community use and appreciation of the environmental values of the Jerrabomberra Wetlands.
- Increased tourism and recreation uses with access to the walking trails and bird hides within the wetlands.
- Opportunities for the reuse of wastewater and effluent from the Fyshwick Sewerage Treatment works within East Lake.
- Development to exclude residential and restaurant/café uses due to odour impacts

Precinct b - Jerrabomberra Wetlands and Creek Corridor

- Creating a buffer and transition from urban to conservation that protects the key environmental values of the Jerrabomberra Wetlands. A future study will be undertaken to identify the nature of the transition and buffer spaces reflecting ecological values in the precinct.
- Creating a useable open space corridor that recognises the natural values of Jerrabomberra Creek and protects the downstream wetlands environment.
- Enhancing the landscape along Jerrabomberra Creek and reforming the existing silt pond to create an urban edge to development while creating a more natural riparian environment in areas adjacent to the wetland.
- Creating pedestrian access opportunities that interface with the creek, including boardwalks and pedestrian bridges.
- Opportunities for educational interpretation of the wetlands and greater access to this area to enable community appreciation of these values.
- Provide an important community and educational asset by enhancing the open space values and appreciation.
- Provide protection to the primary conservation area.
Precinct c - Jerrabomberra Wetlands preservation and conservation area

☐ Increase the understanding and appreciation of the wetlands environment by enhancing adjacent areas and educational opportunities throughout East Lake to ensure the preservation and conservation of this precinct.

☐ Protect important ecological values of the Jerrabomberra Wetlands in accordance with the Plan of Management of this area and through incorporating sustainability principles in the planning for East Lake.

Precinct d - Monaro Highway Mixed Use

☐ To provide opportunities for commercial development expressing that this precinct is a gateway to Canberra and the prominent location adjacent to two major roads.

☐ Encourage opportunities for location of businesses that contribute to the growth of Canberra as part of the proposed Majura/Symonston employment corridor.

☐ Integrate new development with the wider community by providing pedestrian and cycling connections to Fyshwick and Narrabundah as part of the open space network and connection from the development to cycle/ pedestrian networks.

Precinct e - Hume Circle–Mildura Street Mixed Use

☐ Progress the intent of the Griffin Legacy Project by reinforcing the intent of Hume Circle and the circular arrangement of roads intended in the Griffin Plan, and recognising The Causeway axis.

☐ Allow for the retention and celebration of the heritage listed Dairy Farmers Cooperative.

☐ Provide for an integrated mix of commercial and residential uses that recognises the relationship with Canberra Avenue/Wentworth Avenue and the proximity to the Central National Area.

☐ Incorporate a finer grain network of minor streets and laneways within development of larger blocks.

☐ Continue the commercial functions of the area through requirements for only commercial development to be located at the ground floor with commercial and/or residential above.

☐ Encourage the ongoing role and use of the Fyshwick Food Markets as a focus for community activity

Precinct f – Transit Way Corridor

☐ Retain the functionality of a transit corridor and facilities that best serves the population of the ACT and future transport needs

☐ Explore the rationalisation of rail facilities to improve the efficiency of land requirements, potentially co-locating passenger services and historic rail facilities.
- Physically and visually link the corridor and associated facilities with the surrounding area and engaging it within the urban development.
- Explore the potential for crossings to prevent the corridor isolating development.

**Precinct g - The Causeway**
- Incorporate elements of the existing built form and type that reflect the character and historical role of the area such as the existing street pattern. Develop a higher density of residential development with taller buildings in an urban setting.
- Encourage interaction with Causeway Hall and open space as a focal point for the community with design and built form.
- Provide an interface between open space and development including visual and physical linkages and appropriate landscape buffers that reinforce the role of the Jerrabomberra Wetlands and link it with the broader area.
- Recognise relevant aspects of the Griffin Legacy.
- Allow for the relocation of existing electrical infrastructure.
- Develop an interface with the transit corridor incorporating mixed use development where appropriate.

**Precinct h – Goldenholm Dairy Heritage**
- Support the protection of the Goldenholm Dairy curtilage and continuation of agricultural practices on the land.

**Precinct i – Major Infrastructure**
- Provide sites for the location of major utility infrastructure serving the development of East Lake and the broader Canberra region including sewer, electricity and gas.
- Incorporate landscaping into the precinct to screen visually obtrusive plant and equipment where operationally appropriate.

**Conclusion**

East Lake is envisaged to become a lively, high density urban community. East Lake should integrate principles of economic, socio-cultural and environmental sustainability within an exceptional residential, commercial, industrial, leisure and community development. New development should incorporate existing communities and uses. It should lead to the comprehensive revitalisation of the area as a desirable place to live, work and recreate.

It is important to recognise that the process of urban renewal is made up of a large number of independent actions. These must be coordinated amongst a range of stakeholders with the
process occurring over a long-term time period – it is not necessarily a linear series of actions. A number of implementation measures are proposed to help achieve the long-term outcomes recommended by the East Lake Structure Plan.

This draft Planning Report provides a summary of site investigations, direct consultation with sectors of the local community, input from ACT Government agencies and the expectations for the future of the East Lake site at this time. The draft Report represents a potential outcome and direction for the site that is the base for broader public consultation and further analysis and testing of the urban structure, capital investment and sustainability outcomes that form the next stages of planning for East Lake. The results of further analysis and testing will inform and influence future direction for the area.

Further studies will need to be undertaken to facilitate the development of East Lake beyond the scope of the planning report. These studies will review in greater detail issues facing urban development including urban structure, environmental issues, transport accessibility, site contamination and infrastructure development, in order to further refine the planning for the area.
PART C Implementation

Part C details potential variations to current policies, new capital works projects and other infrastructure requirements, and opportunities for release or redevelopment of Territory owned land that will assist in achieving these outcomes. These are based on the potential outcome outlined by the draft Report, which represents a direction for the site that is the base for broader public consultation and further analysis and testing of the urban structure, capital investment and sustainability outcomes that form the next stages of planning for East Lake. The results of further analysis and testing will inform and influence future policy variations and ACT Government investment.

Implementation strategies

A number of coordinated strategies can assist achieving urban renewal. The private sector will have a major role in creating the future East Lake. The Government will ‘seed’ development through modest public works, the timing of land release and policy variations to create opportunities for private investment to respond. Key strategies proposed for the ACT Government include that it:

- Allow for greater redevelopment opportunities in line with the desired outcomes by preparing Territory Plan Variations and supporting an Amendment to the National Capital Plan.
- Provide strategic release of vacant land for new development through the inclusion of East Lake in the ACT Government Land Release Program.
- Confirm the long-term future of the railway through preparing a Rail Masterplan for the ACT considering the future of Kingston and Fyshwick railway precinct. It will be prepared in partnership with the rail precinct users and stakeholders who will help identify the most efficient provision of rail services and activities for Canberra.
- Prepare further detailed implementation planning (such as Precinct Concept Plans) for areas within East Lake where (re)development pressures exist. This planning is to support the structure planning by considering outcomes in further detail and achieving an integrated development.
- Include capital works projects for East Lake in future Government Capital Works Programs.
- Analyse and clean-up existing site contamination by preparing detailed contamination studies for East Lake, including a Remediation Action Plan for identified contamination sources.
- Support National Capital Authority to achieve the directions of the Griffin Legacy in developing East Lake, and in enhancing the role of Canberra as the nation’s capital.
- Support the upgrade of public access to the Jerrabomberra Wetlands and the development of appropriate educational recreation facilities in the wetlands. This strategy is to complement a review of the Jerrabomberra Wetlands Plan of Management, enhancing the role of the wetlands as an important public asset.
## Land use intentions

The current Territory Plan land use policies and National Capital Plan provisions within parts of East Lake do not provide the most appropriate land use policies for the area to achieve the desired development outcomes. Variations to these existing policies are recommended to reflect the intent of this planning report.

The Authority’s Planning System Reform Project proposes a restructure of the Territory Plan including changes to the Land Use Policies. The detail of this restructure will be refined through consultation and development of the current Planning System Reform program. Planning Policies for East Lake will be refined to reflect this new structure in line with the land use intentions outlined in the table below and as indicated on Figure 21.

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Land use intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a Dairy Road</td>
<td>Commercial Development</td>
</tr>
<tr>
<td></td>
<td>- Higher building heights to Monaro Highway, up to four storey scale</td>
</tr>
<tr>
<td></td>
<td>- Lower scale development at interface with pond and open space, generally two storey</td>
</tr>
<tr>
<td></td>
<td>- Restricted to commercial development due to impact of major sewer infrastructure (no residential or restaurant-type uses)</td>
</tr>
<tr>
<td></td>
<td>Road Network</td>
</tr>
<tr>
<td></td>
<td>- Provide ease of road connection to Newcastle Street and Monaro Highway</td>
</tr>
<tr>
<td></td>
<td>Education</td>
</tr>
<tr>
<td></td>
<td>- Retaining existing Birrigai facility and like uses on Dairy Road</td>
</tr>
<tr>
<td></td>
<td>- Enhancing/expanding educational function associated with Jerrabomberra Wetlands</td>
</tr>
<tr>
<td></td>
<td>- Structures to be generally 1-2 storey</td>
</tr>
<tr>
<td></td>
<td>Eco-tourism</td>
</tr>
<tr>
<td></td>
<td>- Opportunities for new low-scale development compatible with the conservation objectives of the wetlands</td>
</tr>
<tr>
<td></td>
<td>- Uses may include eco-tourism facilities, demonstration sustainability projects, conservation education, ornithological resource</td>
</tr>
</tbody>
</table>

| b Jerrabomberra Wetlands and Creek Corridor | |
|  | Series of green spaces integrated with adjacent development and providing opportunity for recreation and reflection – riparian corridor, reshaped pond, recreation spaces, picnic areas and wetland educational features |
|  | Accessible public open space with pedestrian access opportunities that interface with the creek, including boardwalks and pedestrian bridges |

| c Jerrabomberra Wetlands preservation and conservation area | |
|  | Protect important ecological values of the Jerrabomberra Wetlands in accordance with the Plan of Management of this area |

| d Monaro Highway Mixed Use | Mixed-Use |
|  | - Higher density development for a broad range of uses |
|  | - Higher building heights to Monaro Highway – gradation of heights from low-scale (two-storey) interface to Jerrabomberra Creek up to tall buildings up to six storeys to Monaro Highway |
|  | - New mixed use development with ground floor retail, restaurant, shop-front services – first floor and above for office, commercial services and/or residential |
|  | - Encourage a mix of land uses which contribute to a diverse and active character and provide multiple opportunities for living and working |
|  | - Existing light industrial uses can remain in current allocation – allow broader land use opportunities and clean industries |

| e Hume Circle–Mildura Street Mixed-Use | Mildura Street Mixed-Use |
|  | - Medium to High density development for a broad range of uses |
|  | - New mixed use development with ground floor retail, restaurant, shop-front services – first floor and above for office, commercial services and/or residential |
|  | - Development generally four storey scale, with some higher building heights at key locations |
|  | - Encourage a mix of land uses which contribute to a diverse and active character and provide multiple opportunities for living and working |

- Existing light industrial uses can remain in current allocation – allow broader land use opportunities and ‘clean’ industries
- Canberra Avenue frontage to feature larger scale buildings for predominantly commercial uses
- Fyshwick markets retained central to urban area in current or expanded form
- CIT Fyshwick Campus retained with flexibility to change functions and uses over time

Wentworth Avenue and Cunningham Street
- Mixed use zone between The Causeway Axis and Wentworth Avenue
- Extension of Kingston Foreshore development
- Predominantly commercial uses fronting Wentworth Avenue – shopfront and office at ground and first floor level – office and/or residential at second floor and above
- Development generally four storey scale, with some higher building heights at key locations
- Residential precinct away from Wentworth Avenue frontage extending into site

Hume Circle
- Higher density commercial hub
- Taller development reinforcing Hume Circle as a landmark precinct – generally six to eight storeys
- New residential development integrated with existing apartment developments

Transit Way Corridor
- Retain the functionality of a transit corridor and facilities that best serves the population of the ACT and future transport needs
- Allow for the reservation of the land for transport uses in the long-term by retaining the land as a landscape corridor facilitating pedestrian movement

The Causeway
- Retain existing street structure and central community space
- Increase building height and density of residential development graduating from the wetland interface
- Development generally four storey scale, with some higher building heights at key locations
- Each section to contain a number of residential complexes integrated with surrounding development
- Section 38 on The Causeway to accommodate some commercial retail development at ground floor, providing for local convenience needs of the community

Railway land
- Higher density residential zone north of existing main rail line alignment
- Development generally four storey scale, with some higher building heights at key locations
- Provide new development sites maximising housing opportunities close to employment opportunities and transport
- Landmark sites at eastern end of precinct fronting pond to accommodate some commercial development at ground floor, providing for local convenience needs of community

Goldenholm Dairy Heritage
- Land use to be consistent with heritage requirements for Goldenholm Dairy and protection of the curtilage
- Support and continuation of agricultural practices on the land

Major Infrastructure
- Provide sites for the location of major utility infrastructure serving the development of East Lake and the broader Canberra region including sewer, electricity and gas

Planning policy changes

<table>
<thead>
<tr>
<th>Variation to the Territory Plan</th>
<th>Required for areas of urban urban development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning policies to be prepared consistent with Land Use Intentions outlined above</td>
<td></td>
</tr>
<tr>
<td>Land Use Policies/Zones to reflect new Territory Plan Land Use Zones</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amendment to the National Capital plan</th>
<th>Required for BI 20 Sec 6 Kingston and part BI 13 Sec 38 Fyshwick (on Dairy Road)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precinct for sustainability demonstration project to change from Open Space to Urban with Development Control Plan prepared consistent with East Lake Final Planning Report intent</td>
<td></td>
</tr>
<tr>
<td>Land areas on Dairy Road and the southern side of Jerrabomberra Creek within East Lake identified for development to change from Open Space to Urban with Development Control Plan prepared consistent with East Lake Final Planning Report intent</td>
<td></td>
</tr>
</tbody>
</table>
LAND USE INTENTIONS

Figure 21

Study area boundary
Urban structure
Precincts
Mixed use
Residential
Commercial
Open Space
Education
**Vacant land and potential redevelopment sites**

A number of sites within East Lake are controlled by the ACT Government that can accommodate new development as identified on Figure 22 and in the following tables.

### Potential land release sites

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Block &amp; Section</th>
<th>Current Devt.</th>
<th>Recommended Uses</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Dairy Road</td>
<td>Part Blk 13 Sec 38 Fyshwick</td>
<td>Undeveloped</td>
<td>□ Small parcel of land between wetlands reserve and Business Park site (approx 3.0ha) □ Expansion of educational uses, ecotourism devt. or special uses that minimise impact on the wetlands</td>
<td>□ Requires Variation to the Territory Plan and possible Amendment to National Capital Plan □ Phase 2 Contamination Investigation to be completed □ Odour study to be completed □ Part of wetlands enhancement works could include site preparation</td>
</tr>
<tr>
<td>D Jerrabomberra Creek</td>
<td>Blk 11 Sec 30 Fyshwick</td>
<td>Undeveloped</td>
<td>□ Mixed Use (commercial/residential) □ Education facility</td>
<td>□ Variation to the Territory Plan □ Access road construction required</td>
</tr>
<tr>
<td>E Hume Circle &amp; mixed use</td>
<td>Blk 8 Sec 84 Griffith</td>
<td>Undeveloped</td>
<td>□ Higher density residential</td>
<td>□ Part of Hume Circle Review Study (by NCA)</td>
</tr>
<tr>
<td></td>
<td>Blk 14 Sec 25 Griffith</td>
<td>Temporary carpark</td>
<td>□ Commercial □ Higher density residential</td>
<td>□ Part of Hume Circle Review Study (by NCA)</td>
</tr>
<tr>
<td>G The Causeway residential</td>
<td>Sec 30, 31, 32 &amp; 33 Kingston</td>
<td>Undeveloped</td>
<td>□ Higher density residential</td>
<td>□ Requires Variation to the Territory Plan □ Earthworks over flood prone land □ Realising full development of The Causeway</td>
</tr>
<tr>
<td></td>
<td>Blk 20 Sec 6 Kingston</td>
<td>Jerrabomberra Creek corridor open space</td>
<td>□ Landmark sustainability development</td>
<td>□ Requires Variation to the Territory Plan □ Amendment to National Capital Plan □ Phase 2 Contamination Investigation (spoil)</td>
</tr>
</tbody>
</table>
## Potential ACT Government owned redevelopment sites

<table>
<thead>
<tr>
<th>Precinct</th>
<th>Block &amp; Section</th>
<th>Current Development</th>
<th>Recommended Uses</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>E Hume Circle &amp; mixed-use</td>
<td>Blk 6 Sec 6</td>
<td>Fire station</td>
<td>Mixed-use development generally 4 storeys</td>
<td>Requires Variation to the Territory Plan</td>
</tr>
<tr>
<td></td>
<td>Fyshwick</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blk 26 Sec 6</td>
<td>Parks Depot</td>
<td>Mixed-use development generally 4 storeys</td>
<td>Part of Hume Circle Review Study (by NCA)</td>
</tr>
<tr>
<td></td>
<td>Fyshwick (depot)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Blk 12 &amp; 13</td>
<td>Sewer pump station</td>
<td>Mixed-use development generally 4 storeys</td>
<td>Requires sewer pump station rationalisation/relocation and development of surrounding roads</td>
</tr>
<tr>
<td></td>
<td>Sec 30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fyshwick</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>F Transitway Corridor</td>
<td>Part Blk 5</td>
<td>Railway station</td>
<td>Mixed-use development generally 4 storeys</td>
<td>Requires Variation to the Territory Plan</td>
</tr>
<tr>
<td></td>
<td>Sec 11</td>
<td>and yards</td>
<td>Residential generally 4 storeys</td>
<td>Phase 2 Contamination Investigation to be completed</td>
</tr>
<tr>
<td></td>
<td>Kingston</td>
<td></td>
<td>Open Space on Causeway Axis</td>
<td>Rail precinct master plan to be prepared adjacent to Section 48 Fyshwick</td>
</tr>
<tr>
<td></td>
<td>Blks 2&amp;3</td>
<td></td>
<td>Development of new rail precinct and transport hub</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sec 39</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Kingston</td>
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<td></td>
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<tr>
<td></td>
<td>Part Blk 3</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>Blks 2&amp;3</td>
<td></td>
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<tr>
<td></td>
<td>Sec 38</td>
<td></td>
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<tr>
<td></td>
<td>Fyshwick</td>
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<tr>
<td></td>
<td>Part Blk 5</td>
<td></td>
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<td>Sec 11</td>
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<td>Kingston</td>
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<tr>
<td></td>
<td>Kingston</td>
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</tr>
<tr>
<td></td>
<td>The Causeway</td>
<td>Low density</td>
<td>Redevelopment to high density residential of generally 4 to 6 storeys</td>
<td>Requires Variation to the Territory Plan</td>
</tr>
<tr>
<td></td>
<td>Sec 34, 36, 37&amp;38</td>
<td>residential</td>
<td></td>
<td>Detailed precinct planning to be carried out</td>
</tr>
<tr>
<td></td>
<td>Kingston</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Part Blk 3</td>
<td></td>
<td>ARHS operations, miniature railway and rail yards</td>
<td>Requires Variation to the Territory Plan</td>
</tr>
<tr>
<td></td>
<td>Sec 47</td>
<td></td>
<td>Residential generally 4 storeys</td>
<td>Access road construction</td>
</tr>
<tr>
<td></td>
<td>Fyshwick</td>
<td></td>
<td></td>
<td>Dependent on railway master plan for new rail precinct, relocating existing uses</td>
</tr>
</tbody>
</table>
Specific sustainable development

Study area boundary
Government owned assets
Unleased Territory land
Urban capable land for sustainable development purposes
Potential developable land for educational/specific sustainable development

Figure 22
VACANT LAND and
GOVERNMENT OWNED ASSETS
Proposed capital works

A number of Capital Works projects are identified that are considered necessary to facilitate the indicated development outcomes for East Lake as outlined in the table below and indicated on Figure 23. It is noted that future infrastructure works are subject to further consideration on a case-by-case basis and are dependent on: the Government’s capacity to manage the costs within its overall financial resources; and detailed cost-benefit assessments to determine whether the costs of undertaking individual works would generate sufficient benefits to justify the investment.

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Details</th>
<th>Rationale</th>
<th>Funding</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edge Road</td>
<td>Construction of a new edge road parallel to the existing rail line near Section 47 Fyshwick, connecting to Jerrabomberra Creek Edge Road</td>
<td>To provide access and frontage to land adjacent to future transit corridor. This land may be new sites for mixed use or residential development</td>
<td>Off-site works</td>
<td>short/medium term</td>
</tr>
<tr>
<td>2</td>
<td>Jerrabomberra Creek Edge Road</td>
<td>Construction of a new edge road between Newcastle Street (The Causeway) to Mildura Street, generally along the development boundaries</td>
<td>Provide a defined edge to Jerrabomberra Creek and access to new development area north of existing rail line</td>
<td>Off-site works</td>
<td>short/medium term</td>
</tr>
<tr>
<td>3a</td>
<td>Hume Circle – intersection</td>
<td>Realignment of Canberra Ave/Wentworth Ave/Sturt Ave intersection and associated Hume Circle landscaping</td>
<td>A component of the Hume Circle Study, comprising modifications to traffic management and access</td>
<td>Capital Works</td>
<td>long term</td>
</tr>
<tr>
<td>3b</td>
<td>Hume Circle – perimeter roads</td>
<td>Realignment of pt. Mildura Street/Leeton Street to complete McMillan Crescent loop</td>
<td>A component of the Griffin Legacy implementation, the connection reinforces Hume Circle structure, expressed as a vehicle and/or pedestrian link. This is proposed as part of overall redevelopment in Section 6 Fyshwick and is subject to negotiations with existing lessees</td>
<td>Redevelopment component</td>
<td>long term</td>
</tr>
<tr>
<td>4a</td>
<td>Nyrang Street and Dalby Street extensions</td>
<td>Potential extensions to Nyrang and Dalby Streets from Mildura Street</td>
<td>Extensions to Nyrang and/or Dalby Street as part of a redevelopment of large blocks in Section 30. A road would connect from Mildura Street through to a new road adjacent to Section 47. These public roads would provide additional frontage to redevelopments on these blocks including greater exposure to ground floor commercial areas, and allow access through Section 30 between Mildura Street and the northern residential precinct. Implementation is subject to negotiations with existing lessees</td>
<td>Redevelopment component</td>
<td>medium term</td>
</tr>
<tr>
<td>5</td>
<td>Cunningham Street Extension</td>
<td>Extension to Cunningham Street from Geijera Place to new Jerrabomberra Creek edge road</td>
<td>Collector road through development providing bus route and access to new blocks on former railway land</td>
<td>Off-site works</td>
<td>medium term</td>
</tr>
<tr>
<td>6</td>
<td>Reshape Silt Trap</td>
<td>Reshaping of silt trap on Jerrabomberra Creek to create</td>
<td>Provides improved sediment control upstream of Wetlands,</td>
<td>Capital Works</td>
<td>medium term</td>
</tr>
<tr>
<td>No.</td>
<td>Area</td>
<td>Description</td>
<td>Capital Works</td>
<td>Timeframe</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Jerramomberra Creek works</td>
<td>Works on Jerramomberra Creek upstream of the wetlands to provide a series of ponds and interception measures.</td>
<td>Capital works</td>
<td>medium term</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Mildura Street Bridge</td>
<td>A new traffic and pedestrian bridge across Jerramomberra Creek from the Mildura Street corner to connect to new sites near Monaro Highway and Wetlands Foreshore Business Park.</td>
<td>Capital Works</td>
<td>long term</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Electrical Infrastructure</td>
<td>Relocation of The Causeway Switching Station and associated overhead electrical lines to new combined switching- and zone-substation site</td>
<td>Capital Works</td>
<td>short term</td>
<td></td>
</tr>
<tr>
<td>10a</td>
<td>Causeway Axis – Wetlands</td>
<td>Recognise The Causeway axis within the Jerramomberra Wetlands and on the northern foreshore of Lake Burley Griffin, possibly through visual structures, pedestrian boardwalk and/or landscaping.</td>
<td>Capital Works</td>
<td>medium term</td>
<td></td>
</tr>
<tr>
<td>10b</td>
<td>Causeway Axis – Hume Circle</td>
<td>Development of a vehicular or pedestrian connection between Hume Circle precinct The Causeway.</td>
<td>Redevelopment component</td>
<td>long term</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>North Causeway residential road works / earth works</td>
<td>Roadworks and earthworks for northern, undeveloped area of The Causeway residential area that has not been realised due to flooding concerns.</td>
<td>Redevelopment component</td>
<td>short term</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Jerramomberra Wetlands Minor Works</td>
<td>Minor works associated with the Jerramomberra Wetlands including new paths, signage, access upgrades etc.</td>
<td>Capital Works or development contribution</td>
<td>medium term</td>
<td></td>
</tr>
</tbody>
</table>
Figure 23
PROPOSED
CAPITAL WORKS ITEMS

Study area boundary
Edge road to railway
Edge road to Wetland/Jerrabomberra Creek
Hume Circle
Nyrang Street extension
Cunningham Street extension
Reshape silt trap
Creek works to Canberra Avenue
Bridge crossing
Switching station/electrical infrastructure
Causeway access (a)boardwalk (b)cyclway
North Causeway roadworks/earthworks
Jerrabomberra Wetlands minor works
Railway Infrastructure
Timing and indicative sequence of development

The redevelopment of East Lake is intended to occur incrementally over the next 30 years responding to market requirements and consistent with the objectives of the Spatial Plan. The possible orderly sequence for land release and development is identified on Figure 24. Generally, development in the short to medium term is planned for the area around the existing Causeway settlement and Hume Circle. Medium to long term development is dependent on redevelopment of private leases, rationalisation of the railway corridor and yards, and the completion of capital works projects that provides access within the site and across Jerrabomberra Creek.

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Figure 24
EASTLAKE DEVELOPMENT SEQUENCING