

THE CITY OF COCKBURN - LOCAL PLANNING STRATEGY

1.0 INTRODUCTION

1.1 REQUIREMENT

This Local Planning Strategy is in support of the Council's proposed Town Planning Scheme No. 3 and is to be read in conjunction with the Scheme.

1.2 PURPOSE OF THE STRATEGY

1.2.1 Approach

At the Core of the Local Planning Policy Framework of Model Scheme Text is the Local Planning Strategy which sets out the long-term planning directions for the municipality and provides the rationale for the zones and other provisions of the scheme. In addition to the Local Planning Strategy, the Scheme provides for Local Planning Policies which set out the general policies of the Council on matters relevant to the scheme.

1.2.2 Local Planning Strategy

The Local Planning Strategy is intended to become a central feature of the scheme setting out the Council's general aims and intentions for future long-term growth and change. Whereas the scheme has a 5 year timescale, the strategy will look ahead 10 to 15 years into the future.

The Local Planning Strategy includes the basic structure in terms of future population and employment; the broad strategies for housing, employment, shopping and business activities; and proposals for transport, parks, regional open space and other public uses, reflected in the Scheme Map. Refer to Figure 30.

The Council has adopted a Local Planning Strategy which most suits the needs of its district and local issues and includes, but is not limited to the following matters:-

- a description of the key characteristics of the municipality, its regional context and major planning issues;
- a Statement of Aims explaining the strategic land use directions which the Council is seeking to pursue;
- land use or development opportunities and constraints which provide a context for local planning decisions;
- the links between strategic planning in the municipality, and the State and regional planning context;
- strategic policy statements about key issues such as housing, industry and business, open space and recreation, transport, infrastructure, environment, townsites and rural land;

- more detailed policies and proposals for particular areas or specific issues contained in the strategy;
- an outline of how the strategy will be implemented including reference to any Local Planning Policies and guidelines which may be required, planning scheme measures and proposals of the State and local government to facilitate development including capital works.

The Local Planning Strategy is particularly pertinent for:-

- setting out the framework of State and regional policies and interpreting these for the local area;
- providing the planning context for the zones, reservations and statutory provisions contained in the town planning scheme.

The Local Planning Strategy does not form part of the scheme. It also means that any changes to the Local Planning Strategy do not require a formal amendment. The Council may have regard the Local Planning Strategy when making planning decisions, and could carry significant weight in planning appeals.

The Local Planning Strategy, as opposed to the scheme, is not subject to environmental assessment but the scheme provisions which implement the strategy may be subject to assessment and the inclusion of conditions in the scheme.

The Local Planning Strategy provides an opportunity for an integrated approach to planning across all areas of a municipality including consideration of social, environmental and economic aspects with linkages to the Council's Corporate Plan. It also provides a very real opportunity for involving the community in charting the future course for the planning and development of the district.

1.2.3 Relevant Considerations

In the preparation of the Local Planning Strategy, it is necessary to provide a context based on relevant considerations, such as:-

- The Metropolitan Region Scheme as it applies to the City of Cockburn
- The State Planning Strategy
- The State Planning Framework
- State Planning Policies
- The Council's Corporate Strategic Plan
- The Council's Planning and Development Policies

These considerations, together with the interpretation of the physical and natural attributes of the district, the land use pattern and an understanding of the constraints and opportunities that could impact on future planning and development, form the basis to the formulation of a strategy for the district over the next 15 years.

The Local Planning Strategy once adopted, is translated into an action plan through the adoption and implementation of Town Planning Scheme No. 3.

One of the primary purposes of the Local Planning Strategy is to require a local government to assess where it currently stands in respect to the planning and development of the district, determine where it wants to be in the future and to devise a statutory planning scheme that will, over time, achieve its vision for the community.

2.0 STATE AND REGIONAL PLANNING CONTEXT

2.1 STATE PLANNING STRATEGY

2.1.1 Purpose

The primary purpose of the Strategy is to assist government both State and local in long-term land use planning. It will also assist State agencies, local government and the private sector, to achieve a co-ordinated response to the challenges of the future.

The Strategy articulates a "vision" and the means by which the vision can be achieved.

The Strategy provides an overview of future challenges facing the State over the next 30 years and provides a comprehensive list of strategies and actions, policies and plans to guide the development of regional and local communities.

2.1.2 Application

The State Planning Strategy contains 5 Guiding Principles and to each is attached a range of actions. Actions considered relevant to the City of Cockburn are identified below.

(a) Environmental Principle:

To protect and enhance the key natural and cultural assets of the State and deliver to all Western Australians a high quality of life which is based on sound environmentally sustainable principles - The City of Cockburn is currently preparing a local 'State of the Environment' report and 'Agenda 21' strategy.

(b) Community Principle:

To respond to social changes and facilitate the creation of vibrant, accessible, safe and self-reliant communities.

- *Develop Liveable Neighbourhoods: Community Design Code firstly for outer and middle suburbs and subsequently for inner suburbs and regional towns - The City of Cockburn has already adopted a Policy supporting the Community Design Codes.*
- *Prepare commercial centres strategies for key regional centres to be incorporated into a district scheme - The City of Cockburn is not a key regional centre and in relation to the Commercial Centres Policy has been allocated one Regional Centre (Stage 1 constructed) and one District Centre (completed).*
- *Give greater encouragement to the provision of aged accommodation within communities - The City of Cockburn operates under the R-Codes and also has a Policy relating to the location and design of aged persons accommodation.*

(c) Economic Principle:

To actively assist in the creation of regional wealth, support the development of new industries and encourage economic activity in accordance with sustainable development principles.

- *Review means of incorporating home, cottage and locally based industries within residential areas* - The City of Cockburn currently provides for home occupations and cottage industries in 5 of the 9 zones in its current scheme. The proposed scheme will include the provisions of the current scheme.
- *Develop policies for home-based business* - The City of Cockburn's proposed Town Planning Scheme No. 3 will include provision for home-based business.

(d) Infrastructure Principle:

To facilitate strategic development by ensuring land use, transport and public utilities are mutually supportive.

- There are no actions under this Principle which include metropolitan local governments.

(e) Regional Principle:

To assist the development of regional Western Australia by taking account of the region's special assets and accommodating the individual requirements of each region.

- *Progress the extension of the rapid transit system to Thomsons Lake* - The City of Cockburn supports the proposed transit system and will undertake the necessary planning within the local scheme to provide for the stations and associated land uses.
- *Promote mixed development in district and neighbourhood centres* - The City of Cockburn will encourage mixed use development in its commercial and business zones.
- *Prepare model town planning scheme text to enable local government town planning schemes to focus on provisions relating to the shaping of future land uses, and the identification of strategic infrastructure and facilities* - The City of Cockburn has resolved to adopt the draft Model Scheme Text as the basis to the preparation of Town Planning Scheme No. 3.
- *Review the extent of delegating statutory planning responsibilities to local governments* - The City of Cockburn would seriously consider the opportunity to gain greater decision making responsibility, subject to being adequately resourced.
- *Prepare a series of strategic guidance notes which summarise policy issues and regional plans to give direction to State Government agencies and local government in the preparation of their plans* - The City of Cockburn has used the guidelines provided with the draft Model Scheme Text together with a format provided by the Ministry for Planning in the preparation of its Local Planning Strategy.

2.1.3 Strategies and Actions

The following general Strategies and Actions are set out in the State Planning Strategy. The Actions identified are only those considered relevant to the City of Cockburn.

- (a)
- **Strategy** - *Increasingly use energy sources which have minimal impact on the environment.*
 - **Actions** -
 - (1) *Ensuring that town planning schemes help minimise energy use by:
 - *maximising development near public transport routes;*
 - *providing work places and diversity of employment opportunities within the residential community;*
 - *including a range of housing densities;*
 - *encouraging energy efficient and water sensitive subdivision and building design.**
 - (2) *Developing and promoting Liveable Neighbourhoods: Community Design Code, which governs residential density and urban design, to encourage environmentally sensitive house design, including solar design.*
 - (3) *Promoting the use of alternative energy sources from wind, solar and tidal sources.*
 - (4) *Ensure that housing lots are orientated to maximise the benefits of solar radiation.*
 - **TPS** - (1) will form part of **TPS No. 3**, (2) is already a Council Policy, (3) and (4) will be applied under the Community Design Code and the R-Code.
- (b)
- **Strategy** - *Prevent further loss in biodiversity.*
 - **Actions** -
 - (1) *Promote the preparation of local conservation strategies by local government.*
 - (2) *Protect wetlands, coastal and river foreshores and provide special protection to areas of World or National Heritage significance.*
 - (3) *The retaining and managing of urban bushland in the planning process and making provision for a representative reserve system in strategic plans.*
 - (4) *Protecting and restoring remnant vegetation in the rural landscape.*

- **TPS** - (1) wetland and conservation plans have been prepared separately, (2) EPP wetlands are protected under EPA Policies, (3) recognises Bushplan, (4) controls on the clearing of remnant vegetation will form part of **TPS No. 3**.

- (c)
 - **Strategy** - *Ensure that air quality is protected.*
 - **Action** - (1) *Promote higher density and mixed land use developments to reduce car use and promote cycling, walking and public transport.*
 - **TPS** - (1) forms part of **TPS No. 3** in accordance with the Community Design Code and WAPC Policy DC 1.6, DC 2.1, and the Local Planning Strategy Guidelines.

- (d)
 - **Strategy** - *Ensure that water resources are conserved and their quality protected.*
 - **Action** - (1) *Promoting water sensitive design in urban subdivisions and local structure plans.*
 (2) *Phase out unlined landfill sites on the Swan Coastal Plain.*
 (3) *No new landfill sites to be located up-gradient of any environmentally sensitive groundwater or surface water body.*
 - **TPS** - (1) in accordance with the Community Design Code, (2) the Henderson Landfill site will be provided for in **TPS No. 3** (approved by EPA) and (3) the Henderson Landfill site is within the Brownman Swamp Catchment but is protected by a liner and bore extraction. There are no current proposals to establish any other landfill site in Cockburn.

- (e)
 - **Strategy** - *Ensure that land and soil is safeguarded and that degradation does not occur.*
 - **Actions** - (1) *Encourage the preparation of coastal management plans to protect fragile and unstable coastal areas.*
 (2) *Ensuring that town planning schemes secure compatible land uses in and adjacent to agricultural, horticultural and forestry industry areas.*
 (3) *Ensure that in areas of land degradation, rehabilitation measures are included as conditions of subdivision or development approval.*

- (4) *Develop consistent vegetation/tree protection controls.*
- **TPS** - (1) the Council has recently completed an Integrated Coastal Management Plan, (2) land use compatibility is the fundamental purpose of **TPS No. 3**, (3) rehabilitation of rural land and quarry sites form part of Council Policy and will form part of **TPS No. 3**, and (4) tree/vegetation protection will form part of **TPS No. 3**.
- (f) • **Strategy** - *Reduce consumption of materials and promote recycling.*
- **Actions** - (1) *Ensuring that sufficient land is allocated for composting and recycling centres.*
- (2) *Ensuring that green waste is composted and not disposed of at metropolitan landfill sites or burnt.*
- (3) *Increasing education and awareness programs on recycling and waste minimisation.*
- (4) *Encouraging local governments to provide recycling bins at suitable locations.*
- **TPS** - (1) Council composts and recycles, (2) Council composts green waste, (3) Council has implemented public awareness programs and operates a comprehensive recycling collection system, and (4) the Council is pursuing alternative co-operative regional strategies.
- (g) • **Strategy** - *Promote planning, management and protection of resources.*
- **Actions** - (1) *Protect mineral resources and basic raw materials in statutory planning schemes.*
- **TPS** - (1) in respect to basic raw materials, Council will have regard for the draft 1999 5AA Policy for Basic Raw Materials, published by the WAPC.
- (h) • **Strategy** - *Protect landscape, open space and public access.*
- **Actions** - (1) *Ensure neighbourhoods include appropriate local open space.*
- (2) *Consider landscape values when assessing proposed developments near national parks and other scenic areas.*

- **TPS** - (1) local open space provided as 10% of subdivision or cash-in-lieu in accordance with Council Policy and (2) forms part of the subdivision and development application assessment.

- (i)
 - **Strategy** - *Enhance the quality of life for all Western Australians.*
 - **Actions** -
 - (1) *In planning for new communities, particularly in fire risk and hazard areas, provision be made for emergency management.*
 - (2) *Encourage urban design and townscape programs on a statewide basis.*
 - (3) *Ensure that the impacts from traffic and other noise generating activities and odour generating activity are considered in the planning process.*
 - (4) *Ensuring that a long-term view prevails relating to the location of land uses to ensure that those likely to have a detrimental impact on the local amenity are carefully sited.*
 - **TPS** - (1) Council follows WAPC Guideline Planning for Better Bushfire Protection and operates a Bushfire Brigade, (2) the Community Design Code applies, (3) environmental factors form part of the development assessment process and (4) the long-term land use pattern complies with the MRS, and the State Buffers Policy 5AA No. 4.

- (j)
 - **Strategy** - *Protect the State's cultural heritage.*
 - **Actions** -
 - (1) *Ensure that future town planning schemes and strategic plans protect existing and potential indigenous and non-indigenous heritage areas and buildings.*
 - (2) *Supporting urban design initiatives that promote the development of the heritage of the future.*
 - **TPS** - (1) Council has completed its Municipal Inventory in accordance with the Heritage WA Act and will be included in **TPS No. 3**, and (2) is considered as part of the development approval process.

- (k)
 - **Strategy** - *Respond to the changing needs of the population.*
 - **Actions** -
 - (1) *Incorporate in town planning schemes, where appropriate, the location of aged accommodation, child care and health facilities next to main transport routes.*

- (2) *Ensuring that there is an appropriate housing and density mix to fulfil existing and potential demand from aged people, Aboriginal people, people with disabilities, non-traditional families and different ethnic groups.*
- (3) *Undertake a review to assess how best to incorporate home, cottage and locally based industries within residential areas through town planning scheme provisions. This project should also include a review of local government home occupation approvals.*
- **TPS** - (1) the location of facilities will be located, where possible near public transport routes, (2) the Council applies the R-Codes and supports the Community Design Code, and (3) **TPS No. 3** will contain provisions which provide for home occupations, cottage industries and home businesses in all residential areas.
- (l) • **Strategy** - *Improve the linkage between land use planning and the provision of human services.*
- **Actions** -
 - (1) *Identify in local structure plans and town planning schemes, sufficient land to accommodate a full range of necessary community facilities.*
 - (2) *Consider the social facilities and service requirements of a proposed development at the structure planning and subdivision stage.*
 - (3) *Determine the required land for community facilities in district structure plans for greenfield developments where there is more than one developer.*
 - (4) *Encouraging local governments to enter into joint arrangements with other agencies and interest groups to develop land set aside for community purposes.*
 - (5) *Encouraging partnerships between community groups when applying for grants to build facilities.*
 - (6) *Facilitating through the MDP, in conjunction with local government and the Essential Services Co-location Standing Committee, the co-location of services where appropriate.*
 - (7) *Providing land at the neighbourhood level for the construction of multi-purpose community centres (with access to telecommunications) able to meet the needs of locally required services.*

(8) *Providing, at the district level, enough land to accommodate those services requiring a larger catchment area (eg medical, recreational, arts and culture facilities, a hall, library and churches).*

(9) *Provide services to the Aboriginal and ethnic communities in a culturally sensitive way. Specifically, the provision of multi-purpose sporting and community facilities should take into account the needs of these groups.*

(10) *Contributions for social infrastructure by developers be based on the principles set out in WAPC Planning Bulletin No. 18, 1997.*

- **TPS** - (1) Council has a Community Facilities Plan for all new residential areas, (2) structure planning is utilised to support and determine land use patterns, (3) is an integral part of the Council's Structure planning process, (4) opportunities could exist, (5) currently Council practice, (6) applies to Cockburn, (7) Council has a Community Facilities Plan, (8) as for (1) and (7), (9) as for (1), (7) and (8), and (10) Council follows the principles set out in the Bulletin and Owner Contributions provisions will form part of **TPS No. 3**.

(m) • **Strategy** - *Provide a range of housing opportunities.*

- **Actions** - (1) *Encourage the provision of a range of lots and housing types in large comprehensively planned development projects or smaller redevelopments to reflect the diverse needs of the community.*

- **TPS** - (1) the provisions of the Community Design Code and the R-Code applies.

(n) • **Strategy** - *Build a sense of community through the design of accessible settlements and public facilities.*

- **Actions** - (1) *Ensuring that urban design considerations in the Liveable Neighbourhoods: Community Design Code for residential land maximises the potential to foster a strong sense of community, and an accessible safe built environment.*

(2) *Promoting mixed uses of land in communities, especially through the location of housing in commercial centres.*

- **TPS** - (1) the Council has adopted a Policy in support of the Community Design Code and (2) **TPS No. 3** will contain a mixed business zone and provide a greater range of compatible uses in the residential and commercial zones.

- (o)
 - **Strategy** - *Incorporate opportunities for consultation and include the views and concerns of local communities and groups with specific needs in local and regional plans.*
 - **Action** - (1) *Undertake a review of the planning approval process to explore further delegation of responsibility to local government in recognition of the localisation of many political, business and social issues.*
 - **TPS** - (1) *the Council administration already has extensive delegated authority and subject to cost and resources may be prepared to accept further town planning delegations from the State if it represents greater autonomy and a legitimate function of local government.*

- (p)
 - **Strategy** - *Provide flexibility in the planning system to meet the needs of small business.*
 - **Actions** -
 - (1) *Ensuring that town planning schemes allow for the development of small businesses in close proximity to residential areas.*
 - (2) *Ensuring that town planning schemes contain flexible provisions so that land can be used for a variety of compatible purposes.*
 - (3) *Incorporate in town planning schemes the location of Business Parks (with access to high quality telecommunications and good public transport) close to residential areas for the use of small businesses and local residents.*
 - (4) *Provide for mixed-use areas.*
 - **TPS** - (1) **TPS No. 3** *provides for a mixed use zone, a greater range of uses in the residential and commercial zones and facilitates home occupation, cottage industries, home office and home business in residential areas, (2) flexibility will be balanced against the need for certainty, (3) Business Parks will be accommodated within appropriate zones and (4) as for (1).*

- (q)
 - **Strategy** - *Provide for the likely growth of downstream processing and value adding industries.*
 - **Actions** - (1) *Ensuring that regional plans and statutory schemes protect access corridors to industrial sites, buffer zones and transport infrastructure and identify essential infrastructure such as waste management.*

- **TPS** - (1) the MRS and the State Buffers Policy apply.
- (r)
 - **Strategy** - *Facilitate land use planning for the growth of the tourism industry which is sensitive to environmental constraints.*
 - **Actions** - (1) *Include in town planning schemes, provision for tourist accommodation and other facilities in areas with tourism potential*
 - **TPS** - (1) tourist accommodation will be provided for in **TPS No. 3.**
- (s)
 - **Strategy** - *Make allowance for the needs of new industries and technologies.*
 - **Actions** - (1) *Encouraging local governments to prepare town planning schemes which adopt a merits-based approach for considering manufacturing and industrial development.*
 - **TPS** - (1) is not clear at this stage and will not be included in **TPS No. 3**, particularly given that such determinations are made by DOCAT and Landcorp rather than the local government. Only 54% of land zoned industry in Cockburn under the MRS has been developed.
- (t)
 - **Strategy** - *Integrate land use and transport planning.*
 - **Action** - (1) *Undertake a statewide feasibility study of aviation training requirements, including the need to develop regional airfields and install navigation aids.*
 - **TPS** - (1) Jandakot Airport is located within the City of Cockburn and training requirements are determined by the airport owner/operator.
- (u)
 - **Strategy** - *Provide efficient freight transport routes and hubs.*
 - **Actions** - (1) *Protecting land for key transport hubs at Perth and elsewhere where air, road and rail transport is integrated.*
(2) *Identifying land to be reserved next to key transport hubs, including ports and small boat harbours.*
 - **TPS** - (1) protection is provided by the MRS and sites determined by DOT and (2) as for (1).
- (v)
 - **Strategy** - *Plan for balanced travel.*

- **Actions** - (1) *Ensure that the planning codes (through the Community Code) and building codes encourage cycling and walking.*
 - (2) *Ensure that public facilities are designed to accommodate the needs of the people with disabilities.*
 - (3) *Define, protect and implement regional cycle networks.*
 - (4) *Prepare cycle and pedestrian strategies for regional centres.*
 - **TPS** - (1) the Council has adopted a policy supporting the Community Design Code and the cycle path plans and walking trail plans (Building Codes cannot apply), (2) a requirement of the BCA, (3) as for (1) and (4).
- (w) • **Strategy** - *Ensure the efficient, progressive development and servicing of urban land.*
- **Actions** - (1) *Developing a stronger role in land assembly through the use of guided development schemes.*
- (2) *Encourage the consolidation of services (including transport, power, water, sewerage and telecommunications) into single, integrated corridors.*
- (3) *Reactivate the Public Utilities Infrastructure Committee to address a range of outstanding and emerging infrastructure issues.*
- (4) *Promote provision of underground and carefully designed telecommunications infrastructure.*
- (5) *Ensure that a consistent approach is applied to the imposition of developer contributions to the development of physical infrastructure as set out in Planning Bulletin No. 18, 1997.*
- **TPS** - (1) the Council does not favour the use of guided development schemes but instead private owners schemes. **TPS No. 3** will provide for private owner schemes, (2) Council is only responsible for stormwater drainage, (3) participation by WAMA on behalf of local government is important in relation to a co-ordinated approach to infrastructure installation, (4) is beyond Council control and (5) the Council uses Bulletin 18 as a reference and will include owner contribution provisions in **TPS No. 3**.
- (x) • **Strategy** - *Promote public facilities as a means of assisting the creation of wealth and providing cultural benefits.*

- **Actions** - (1) *Ensure that strategic land allocations for tertiary education are provided in regional locations to facilitate the development of campuses as needs develop.*
- **TPS** - (1) the MRS identifies sites for high schools and tertiary education.

2.1.4 Principles and Actions in the Perth Region

The Principles and Actions for Local Government in the Perth Region are identified as follows:-

- (a)
 - **Principle** - *Environment and Resources*
 - **Actions** -
 - (1) *Manage areas designated as regional parks.*
 - (2) *Protect culturally significant places through town planning schemes.*
 - (3) *Ensure that the main market gardening (such as Wanneroo-Carabooda), orcharding (such as Kalamunda), dairying in Serpentine and viticultural (such as the Swan Valley) areas are identified and protected.*
 - **TPS** - (1) the Council does manage some Regional Parks on behalf of WAPC, but the Beeliar Regional Park is managed by CALM, (2) the Council has completed its Municipal Inventory and has heritage provisions in **TPS No. 3** and (3) the primary market gardening areas in Cockburn have been zoned urban under the MRS or are within the Kwinana Air Quality Buffer on small allotments.
- (b)
 - **Principle** - *Community*
 - **Actions** - (1) *Ensure that land close to facilities is intensively utilised.*
 - **TPS** - (1) the Council supports the principles contained in the Community Design Code.
- (c)
 - **Principle** - *Economy*
 - **Action** - (1) *Promote the development of high tech buildings in the CBD and regional centres.*
 - **TPS** - (1) within the City of Cockburn there is one designated Regional Centre at Thomsons Lake. The designation of the Centre by the WAPC was based on an appeal upheld to construct a traditional shopping centre up to a maximum of 50,000m² nla.

- (d)
 - **Principle** - *Infrastructure*
 - **Actions** -
 - (1) *Ensure that public facilities are clustered in regional and district centres.*
 - (2) *Promote medium and high density housing in and near regional and district centres and near public transport stations.*
 - (3) *Promote good pedestrian and cycling facilities in urban areas.*
 - (4) *Ensure that both residential and commercial activity is concentrated near public transport.*
 - (5) *Extend the strategic bicycle network.*
 - **TPS** -
 - (1) Council supports the principles in the Commercial Centres Policy and the Community Design Code. The Council has one regional centre and one district centre designated under the Centres Policy, (2) as for (1) and WAPC DC 1.6, (3) pedestrian and cycling forms part of structure and subdivision planning and the provision of bicycle parking facilities will form part of **TPS No. 3**, (4) as for (1) and (2), and (5) the Council has a bicycle network plan.

2.2 STATE PLANNING FRAMEWORK

2.2.1 Purpose

The State Planning Framework was gazetted as a Section 5AA Policy in December 1998.

The purpose of the Framework is:-

- To identify the key principles relating to environment, community, economy, infrastructure and regional development which should guide the way in which future planning decisions are made.
- To unite existing State and regional policies, strategies and guidelines within a central framework which provides a context for decision-making on land use and development in Western Australia. It informs the Commission, local government and others involved in the planning process on those aspects of State level planning policy which are to be taken into account, and given effect to, in order to ensure integrated decision-making across all spheres of planning.
- To nominate the primary policies and strategies used by the Commission and the Ministry in making decisions.
- To assess local government town planning schemes to ensure consistency with State and regional policies.

2.2.2 Application

Those parts of the State Planning Framework which apply to the City of Cockburn are:-

(a) Statements of Planning Policy

The Council is the subject of a variety of WAPC Statement of Planning Policies and General Policies.

The Statements of Planning Policy (SPP) prepared and adopted under Section 5AA of the Town Planning and Development Act relevant to the City of Cockburn are:-

- SPP No. 1 - Residential Planning Codes
- SPP No. 2 - Peel Harvey Coastal Plain Catchment Policy
- SPP No. 4 - State Industrial Buffer Policy
- SPP No. 5 - Poultry Farms Policy
- SPP No. 6 - Jandakot Groundwater Protection Policy
- SPP No. 8 - State Planning Framework Policy

Due regard must be had for these Policies when considering development applications in the district.

• Residential Planning Codes

These apply to the whole of the district and control the design and development of all housing. The R-Codes were adopted by the State in 1985. A local government recommends the distribution of densities within its district in accordance with its vision for the district and any State Policies that may apply. Variations to the R-Codes are approved by the State, following consultation with various industry stakeholders including local government.

• Peel Harvey Coastal Plain Catchment Policy

This Policy was adopted by the State in 1992 and applies to 770 ha (5%) of the south-east sector of the district. The Policy sets down the land use and development controls as determined by the State. Local government administers the Policy, on behalf of the State in relation to land use and development applications.

• State Industrial Buffer Policy

This Policy applies to all industrial development in the district since its adoption in 1997. The Policy sets out how buffers are to be determined in relation to different industries, their management and the types of land uses that may be permitted within them.

• Poultry Farms Policy

This Policy was adopted in 1997 and seeks to set down an approach to the relocation and the land use planning around poultry farms. The City of Cockburn, has a number of poultry farms in the district to which the Policy applies.

- **Jandakot Groundwater Protection Policy**

This Policy was adopted in 1998, and applies to 2349 ha (15.8%) of the district and stipulates the land use and development controls together with management and monitoring requirements required to protect the Jandakot underground water mound from pollution. Under the Policy almost all development applications must first receive the advice of the Water and Rivers Commission, prior to any decision being issued by the local government.

(b) Regional Policies

WAPC endorsed Regional Strategies which could apply in the City of Cockburn are:-

- Metroplan 1990
- Kwinana Regional Strategy 1994
- Fremantle Regional Strategy 1994
- Jandakot Land Use and Water Management Strategy 1995

WAPC endorsed sub-Regional Structure Plans which could impact on the City of Cockburn are:-

- South West Corridor Plan (1993)
- South Jandakot - Mandogalup District Planning Study (1993)
- Beeliar Regional Park (1993)

(c) Strategic Policies

Strategic policies endorsed by the WAPC which impact on the City of Cockburn are:-

- Urban Expansion Policy: Metroplan (1990)
- Metropolitan Centres Policy (1991)
- Basic Raw Materials Policy: Metropolitan (1992)
- Regional Residential Density Guidelines for the Perth Metropolitan Region (1994)
- Metropolitan Rural Policy (1995)
- Government Sewerage Policy: Perth Metropolitan Region (1995)
- Urban Bushland Policy (1995)
- Metropolitan Centres Policy - Draft Review (1997)
- Kwinana Industrial Area Protection Policy (1995)
- Statement of Policy on the Use and Development of Land at Perth Airport surplus to Aviation Requirements (1996)
- Rural Small Holdings Policy (1980)
- Service Stations Policy - Draft (1994)
- Coastal Planning and Development Policy - Draft (1996)
- Liveable Neighbourhoods: Community Design Code - Draft (1997)

(d) Operational Policies and Guidelines

The WAPC Policies and Guidelines that apply to the planning of the district are:-

DC 1.1	Subdivision of Land - General Principles
DC 1.2	Development Control - General principles
DC 1.3	Strata Titles
DC 1.4	Functional Road Classification for Planning
DC 1.5	Bicycle Planning
DC 1.6	Development Near Metropolitan Railway Stations
DC 1.7	General Road Planning
DC 1.8	Procedures for approval of Artificial Waterways and Canal Estates
DC 1.9	Amendments to the Metropolitan Region Scheme
DC 2.1	Residential Planning Codes
DC 2.2	Residential Subdivision
DC 2.3	Public Open Space in Residential Areas
DC 2.4	School Sites
DC 2.6	Residential Road Planning
Guidelines	The Design and Geometric Layout of Residential Roads
Guidelines	The Preparation of Local Structure Plans for urban Release Areas
Guidelines	The Preparation, Form and Content of Local Housing Strategies
DC 3.4	Rural Land Use Planning
DC 3.5	Poultry Farms
Guidelines	Preparation of a Local Rural Strategy
Guidelines	Land Capability Assessment for a Local Rural Strategy
Guidelines	Planning for Better Bushfire Protection
Guidelines	Rural-Residential Development in the Perth Metropolitan Region.
DC 4.1	Industrial Subdivision
DC 4.2	Planning for Hazards and Safety
Guidelines	Preparation, Form and Content of Local Commercial Strategies
DC 5.1	Regional Roads (Vehicular Access)
DC 5.3	Use of Reserved Land by Sporting and Social Clubs
DC 5.4	Advertising on Reserved land
DC 6.1	Country Coastal Planning Policy
DC 6.3	Planning Considerations in the Metropolitan Region for Sources of Public Water Supply and Sensitive Water Resource Areas

Complementary to the WAPC Policies are a set of Bulletins, which have been published by the Commission or the Department since 1980. The Bulletins provide practice notes setting out the interpretation of Policies, procedural requirements and guidelines to assist local government in the planning and development of their districts.

2.2.3 Inclusions

The State Planning Framework provides for a local government to incorporate any provisions of the Framework by reference in a local scheme with the consent of the Minister, so that the selected provisions have the force of law under the scheme.

At this stage, given the format of the draft Model Scheme Text, there does not appear any necessity for the City of Cockburn to refer to any or all of the provisions of the State Planning Framework, particularly given the standing and application of the State Regional Provisions contained in Part B of the Framework.

Moreover, most of these regional framework matters form part of the implementation of the Metropolitan Region Scheme which applies to the district of the City of Cockburn. Therefore it is not intended to duplicate the provisions of the State Planning Framework in proposed Town Planning Scheme No. 3.

2.3 METROPOLITAN REGION SCHEME

2.3.1 Purpose

The purpose of the Metropolitan Region Scheme is to provide a generalised land use plan for the co-ordination of strategic initiatives across local government boundaries using a statutory planning framework.

The Metropolitan Region Scheme comprises region reserves and zones and within the City of Cockburn the following reserves and zones apply as depicted on Figure 1:-

The Reserves are:-

- Parks and Recreation
- Railways
- Water Catchment
- Waterways
- Roads
 - Primary Regional Roads Reservations
 - Other Regional Roads Reservations
- Public Purposes
 - H - Hospital
 - HS - High School
 - U - University
 - CG - Commonwealth Government
 - SEC - State Energy Commission
 - SU - Special Use
 - WSD - Water Authority of WA

Reserves and amendments to reserves are automatically included in local schemes.

The Zones are:-

- Urban
 - To provide for local scheme zones for residential, through commercial to service and light industry uses.
- Urban Deferred
 - Commonly retained as rural zone under a local scheme, although development zones may be acceptable.

- Industrial - To provide for local scheme zones for general industry.
- Rural - To provide for local scheme zones ranging from general rural through to rural-residential and other types of specialised rural zones.
- Private Recreation - The types of acceptable local scheme zones would be subject to the agreement of WAPC.
- Rural-Water Protection - To restrict rural land uses in accordance with Statement of Planning Policy No. 6 - Jandakot Groundwater Protection Policy gazetted in 1998, to protect the quality of the public underground water supplies.

The Metropolitan Region Scheme is subject to on-going review and amendment in response to population, economic growth and social and political circumstances. Changes to the Region Scheme require complementary changes to be made to the local scheme to ensure consistency in application and approach.

2.3.2 Relationship

The City of Cockburn is an inner local government in the context of the Metropolitan Region, but is unique in that it is an expanding district with a high potential for population and employment growth.

The City of Cockburn is one of the fastest developing sectors of the South-Western Urban Corridor with significant residential development to occur in the localities of Success, Atwell, Wattleup and Banjup, which are zoned urban deferred under the MRS.

The district is divided into two distinct parts. One being west of the central wetlands and the other to the east. In the western sector the northern half is urban and the balance to the south is industrial and rural. The industry is primarily confined to the Jervoise Bay Ship Building Area, and the rural is a mixture of market gardening, limestone quarries and rural living. In the eastern sector the western half is a combination of urban and urban deferred zoning with the urban deferred representing the future residential growth area of Cockburn. The balance to the east is Rural-Water Protection Zone. The Rural-Water Protection Zone is characterised by low intensive rural uses and hobby farms.

The City of Cockburn forms part of the South-West Urban Corridor and is at the leading edge of the urban expansion of the Metropolitan Area. Within the City of Cockburn land continues to be converted from rural to urban or urban deferred zones, and from urban deferred to the urban zone in order to facilitate population growth and its demand for housing, employment and services.

Currently, the City of Cockburn is developed to approximately half its population capacity. The population of the City is 64,200 (52%) and is expected to grow to 123,000.

Industrial zoned land within the district totals 1155 ha, of which only 627 ha (54%) has been developed to date. The total figure excludes the land to be reclaimed at the Jervoise Bay Southern Harbour project, the Cockburn Cement Agreement area and the potential industrial land designated under the revised Jandakot Airport Master Plan.

Regional Planning within the district is undertaken by the Western Australian Planning Commission through the Metropolitan Region Scheme. To ensure consistency between the regional and local planning the Commission under Section 35 of the Metropolitan Region Town Planning Scheme Act, require local governments to make their local planning scheme consistent with the Metropolitan Region Scheme. The basis for Council's "strategy", must therefore, reflect the land use pattern set out by the Metropolitan Region Scheme.

2.3.3 Application

The Metropolitan Region Scheme zones and reserves apply to the district in the following way.

**TABLE 1 - MRS AREAS WITHIN CITY OF COCKBURN
AS AT DECEMBER 1998**

		%	%	% of Total
RESERVED LANDS				
Parks & Recreation	2039 ha		40.6	13.8
Parks & Recreation (Restricted Public Access)	321 ha		6.4	2.2
Railways	153 ha		3.1	0.8
Water Catchments	746 ha		14.9	5.0
Primary Regional Roads Reservations	642 ha		12.8	4.3
Other Regional Roads Reservations	197 ha		3.9	1.3
Public Purposes:	(922 ha)	(18.3)		(6.2)
Hospital	4 ha		0.1	0.0
High School	27 ha		0.5	0.2
University	52 ha		1.0	0.4
Commonwealth Govt.	570 ha		11.4	3.9
State Energy Commission	74 ha		1.5	0.5
Special Uses	99 ha		1.9	0.7
Water Authority of WA	96 ha		1.9	0.7
RESERVED LANDS TOTAL	5020 ha	33.9	100.0	(33.9)
ZONED LANDS				
Urban	3742 ha		38.2	25.3
Urban Deferred	1169 ha		11.9	7.9
Industrial	1154 ha		11.7	7.8
Rural	1350 ha		13.8	9.2
Private Recreation	23 ha		0.2	0.2
Rural - Water Protection	2349 ha		24.0	15.8
ZONED LANDS TOTAL	9787 ha	66.1	100.0	(66.1)
TOTAL AREA OF CITY OF COCKBURN	14800 ha	100.0		100.0

From Table 1 it can be seen that approximately 33% of the district is reserved under the MRS and 66% of it is zoned.

The Parks and Recreation Reserve represents the largest reservation being 16% of the district and of the zones around 25% is urban.

Table 2 shows the allocation of regional zones and reserves, as they apply to the district.

TABLE 2 - REGIONAL ZONES AND RESERVES - 1997

Zone	Area						
	Metropolitan Region Scheme			Local Scheme			LS / MRS
	ha	%	%	ha	%	%	%
• Urban	78,812	11.2	27.1	3,742	25.3	38.2	4.7
• Urban Deferred	9,500	1.3	3.3	1,169	7.9	12.0	12.3
• Central City Area	2,268	0.3	0.8	0	0.0	0.0	0.0
• Industry	10,148	1.4	3.5	1,154	7.8	11.8	11.4
• Special Industry	111	0.0	0.0	0	0.0	0.0	0.0
• Rural	184,412	26.1	63.5	1,350	9.1	13.8	0.7
• Private Recreation	470	0.1	0.2	23	0.2	0.2	4.9
• Rural-Water Protection	4,826	0.8	1.6	2,349	15.8	24.0	48.7
TOTAL	290,547	41.2	100.0	9,787	66.1	100.0	3.4
Reserves	413,941	58.8		5,020	33.9		1.2
TOTAL MRS	704,488	100.0		14,800	100.0		2.1

It can be seen that the City of Cockburn is only 2.1% of the MRS, and yet has 3.4% of the total zoned land within its district.

Despite the relative small area of the district, the City of Cockburn has a high representation of industrial zoning, being 11.4% of the MRS, and a very high percentage of the Rural-Water Protection Zone being 48.7% of the MRS Zone.

Importantly, however, the district contains 4.7% of the total urban zone and 12.3% of the urban deferred zone, which underlines the importance of the City of Cockburn as a residential growth area, within the Region.

Significant is the fact that of the 9787 ha of zoned land within the City of Cockburn, 11.4% is zoned for industry. This is high for a local government area given that compared to the total zoned land within the MRS, only 3.5% is designated for industrial purposes.

The distribution of the regional industrial zones is set out in Table 3.

TABLE 3 - REGIONAL INDUSTRIAL ZONE

Location	Area	%
• North Coogee	138	12.0%
• Jervoise Bay	274	23.7%
• Bibra Lake	530	46.0%
• Jandakot West	76	6.5%
• Jandakot East	136	11.8%
TOTAL	1154	100.0%

The Metropolitan Region Scheme is fundamental to the orderly and proper planning of the district and provides the framework for the preparation of the Council's vision for the community.

2.3.4 Metropolitan Region Scheme Clause 32

Local government is delegated the power under the MRS to approve development applications on behalf of the Western Australian Planning Commission. However, certain applications, which because of their size, type and location are required to be referred to the Commission for consideration and approval under the provisions of Clause 32 of the Metropolitan Region Scheme.

Under Clause 32 the items to be determined by the Commission relevant to the City of Cockburn are:-

- land abutting land in an MRS Reserve (in certain circumstances)
- poultry farms (also extensions over 100m²)
- extractive industries
- uses inconsistent with the Rural Zone
- Regional Shopping Centres and net increases of 5000m² or more
- District Shopping Centres larger than 20000m²
- Neighbourhood or local centre over 5000m²
- applications for direct property access to Regional Roads
- North Coogee Industrial Area

2.3.5 Planning Control Areas

Pursuant to Section 35 of the Metropolitan Region Town Planning Scheme Act 1959, the Western Australian Planning Commission has declared Planning Control Areas in order to control development within the following areas, pending their reservation under the MRS:

1. Proposed future railway station / park n' ride facility at the corner of Berrigan Drive and Kwinana Freeway (P.C.A. No. 37);
2. Proposed alignment of Rowley Road to provide for road and freight rail access to the future Naval Base - Kwinana Port Development (P.C.A. No. 39)

2.3.6 Improvement Plans

The Western Australian Planning Commission has declared 2 Improvement Plans within the district pursuant to Section 37A of the Metropolitan Region Town Planning Scheme Act 1959.

Improvement Plan No. 26 - South Coogee was declared in 1994 to facilitate land acquisition and the removal of industries prior to the implementation of the proposed Port Catherine Residential Marina project.

Improvement Plan No. 31 covering Wattleup Townsite in the City of Cockburn and Hope Valley Townsite in the Town of Kwinana was recently declared. The stated purpose is to facilitate land acquisition within the Townsites, notwithstanding that the outcome of the Fremantle Rockingham Industrial Area Regional Strategy (FRIARS) has yet to be determined by the WAPC and the State Government.

The areas within the district directly affected by MRS Clause 32 Resolutions, Planning Control Areas and Improvement Plans are illustrated on Figure 2.

3.0 LOCAL GOVERNMENT CORPORATE POLICY

3.1 CORPORATE STRATEGIC PLAN

3.1.1 Mission

The Mission of the City of Cockburn is:-

"Our mission is to make the district of the City of Cockburn the most attractive place to live, work and visit in the Perth Metropolitan Area."

This should be achieved through the Council's Local Planning Strategy and Town Planning Scheme, in conjunction with a number of other Council initiatives.

3.1.2 Vision Statement

The Council has five Vision Statements, of which three relate to the planning of the district, namely:-

"Planning the development of the City to achieve high levels of convenience, amenity and a sense of community."

and in relation to the environment:-

"Conserving and influencing a balance between development and the natural and human environment."

and another concerns the provision of facilities:-

"Facilitating a range of services responsive to the community needs."

These Vision Statements should in the large part be achieved through the Council's Local Planning Strategy, Policies and Town Planning Scheme.

3.1.3 Corporate Objectives

The Council has the following planning objectives.

- *"To ensure that the planning of the City is based on an approach which has the potential to achieve high levels of convenience for its citizens."*
- *To ensure that development will enhance the levels of amenity currently enjoyed by the community.*
- *To foster a sense of community within the district generally and neighbourhoods in particular."*

The Council has the following environmental objectives:-

- *"To conserve the quality, extent and uniqueness of the natural environment that exists within the district."*
- *To conserve the character and historic value of the human and built environment.*

- *To ensure that the development of the district is undertaken in such a way that the balance between the natural and human environment is maintained."*

The Council has the following community objectives:-

- *"To facilitate and provide an optimum range of community services.*
- *To identify current community needs, aspirations, expectations and priorities of the services provided by the Council.*
- *To determine by best practice, the most appropriate range of sporting facilities and natural recreation areas are provided within the district to meet the needs of all age groups within the community."*

These objectives should be promoted through the implementation of the Local Planning Strategy and Town Planning Scheme.

3.1.4 The Statement of Purpose of the Planning and Development Division

The Planning and Development Division comprises two Departments, or Business Units which have the following Statements of Purpose:-

- | | |
|--|--|
| " • Development Services Department | <i>To ensure that development and land use activity within the district is planned, constructed and utilised in an orderly and proper way having regard for the best interests of the community.</i> |
| • Planning Services Department | <i>To produce plans, prepare projections, identify and anticipate development, land use and environmental issues, evaluate development proposals and environmental impacts affecting the district in the interests of achieving lifestyle benefits for the existing and future inhabitants of the district."</i> |

Within the Development Services Department there are three Services, namely Building, Health and Statutory Planning Services, where the Planning Functional Statement is:-

- | | |
|--|--|
| " • Statutory Planning Services | <i>To ensure that development and the use of land within the district complies with accepted standards and practices for public amenity and convenience, and to ensure that the future development and use of land within the district occurs in an orderly and proper way so that the quality of life enjoyed by the residents is not jeopardised by poor planning, unacceptable development and the incompatible use of land."</i> |
|--|--|

In the Planning Services Department there are two Services, namely, Strategic Planning Services and Environmental Management Service, and their respective Functional Statements are:-

- " • **Strategic Planning Services** *To prepare Structure Plans, formulate strategies and adopt policies which provide formal guidance and direction for the planning and development of the district.*
- **Environmental Management Services** *To prepare implement and monitor Management Plans, strategies and actions to protect and conserve areas of environmental importance."*

Through the operation of the Local Planning Strategy and the Town Planning Scheme, together with the Policies and strategies of other planning and development agencies, the Departments and Services of the Council's Planning and Development Division should be able to achieve their purpose and to carry out their functions.

3.2 PLANNING AND DEVELOPMENT POLICIES

3.2.1 Policies

The Council adopted 44 Planning Policies to assist it dealing with subdivision and development applications within the district, and to provide consistent advice to the public.

The Planning, Building and Health Policies current as at June 1999 are listed below:-

- PD1* COMPLIANCE WITH CONDITIONS OF PLANNING APPROVAL
- PD2* RURAL SETBACK POLICY
- PD3* JANDAKOT AIRPORT
- PD4 HEIGHT CONTROL ADJOINING THE RIDGELINE - HENDERSON INDUSTRIAL ESTATE
- PD5* RESIDENTIAL REZONING AND SUBDIVISION ADJOINING MIDGE INFESTED LAKES
- PD6 AGED PERSONS ACCOMMODATION - DEVELOPMENT GUIDELINES
- PD7* ACCESS FOR PEOPLE WITH DISABILITIES
- PD8* BUSHLAND CONSERVATION POLICY
- PD9* STRATA TITLES
- PD10* STRUCTURE PLANS FOR SUBDIVISIONS
- PD11* PACKHAM URBAN DEVELOPMENT AREA
- PD12* RURAL SUBDIVISION POLICY
- PD13* PUBLIC OPEN SPACE
- PD14* GUIDELINES FOR DEVELOPMENT APPLICATIONS FOR THE FILLING OF LAND
- PD15 ULTIMATE STRATEGIC DISTRICT PLAN
- PD16* STANDARD SUBDIVISION CONDITIONS AND REASONS FOR REFUSAL
- PD17* STANDARD DEVELOPMENT CONDITIONS AND FOOTNOTES
- PD18* ANCILLARY OUTBUILDINGS (SHEDS) IN SPECIAL RURAL AND RURAL ZONES
- PD19* LANDSCAPE STANDARDS FOR COMMERCIAL/INDUSTRIAL DEVELOPMENT
- PD20* SHOPPING CENTRES AND SERVICE STATIONS
- PD21* EXTRACTIVE INDUSTRIES
- PD22* CONTROL OF SMOKE AND DUST FROM DEVELOPMENT SITES
- PD23 BUFFER ZONES

PD24*	INDUSTRIAL SUBDIVISION POLICY
PD25*	LIVEABLE NEIGHBOURHOODS - COMMUNITY DESIGN CODES
PD26*	ADVERTISING OF METROPOLITAN REGION SCHEME AMENDMENTS
PD27*	INTERNALLY ILLUMINATED DIRECTIONAL SIGNS
PD28	AGED OR DEPENDANT PERSONS DWELLINGS AND ANCILLARY ACCOMMODATION ON RURAL AND SPECIAL RURAL LOTS
PD29*	COOGEE PRECINCT DEVELOPMENT GUIDELINES
PD30*	DOMESTIC SATELLITE DISHES POLICY
PD31*	TELECOMMUNICATIONS POLICY - HIGH IMPACT FACILITIES
PD32	LOCATION OF HIGH VOLTAGE OVERHEAD POWER LINES AND MICROWAVE TOWERS
PD33*	INSPECTION OF BUILDINGS UNDER CONSTRUCTION
PD34*	PROPOSED ALLOTMENT BOUNDARIES
PD35*	COPIES OF APPROVED BUILDING PLANS
PD36*	PUBLIC BUILDINGS
PD37*	DANGEROUS DRUGS
PD38*	STORAGE OF PRODUCE
PD39*	EATING HOUSE BY-LAWS - LICENSING EXEMPTIONS
PD40*	HENDERSON INDUSTRIAL AREA - DEVELOPMENT CONTROL
PD41*	SUBDIVISION REQUIREMENTS FOR THE THOMAS STREET RESIDENTIAL AREA SOUTH LAKE
PD42	NATIVE FAUNA PROTECTION POLICY
PD43	RURAL - WATER PROTECTION ZONE (MRS) POLICY
PD44	PLANNING APPROVAL - CONDITION RESPONSIBILITY
PD45	SMOKING IN ENCLOSED PUBLIC PLACES
PD46	UNAUTHORISED RETAINING WALLS
PD47	PUBLIC WORKS

NOTE: * The Policy is delegated.

3.2.2 Delegated Authority

Most of the Planning Policies are delegated to appropriate staff to administer on behalf of the Council.

A person may request that a delegated decision be reconsidered by the Council, and where this occurs and if the Council makes a decision inconsistent with the policy, then it is required to reconsider the relevance of the policy in respect to its purpose and outcome, in relation to the particular matter.

3.2.3 Implementation

It is intended that the existing Planning Policies be advertised and adopted in accordance with Part 2 of the Model Scheme Text, relating to the Local Planning Policy Framework, so that they relate to the operation of the proposed Town Planning Scheme No. 3.

4.0 PROFILE AND KEY ISSUES

4.1 GENERAL

4.1.1 Location

The City of Cockburn is an inner city metropolitan local government located on the coast south of the Port of Fremantle. It is a 10 minute drive from the Fremantle CBD and approximately 30 minutes from Perth CBD, via the regional road system. The City adjoins the Cities of Fremantle, Melville, Canning, Armadale and the Town of Kwinana. Refer to Figure 3.

4.1.2 District

The district of the City of Cockburn is 148 square kilometres (excluding Rottnest and Carnac Island) and is regular in shape. It comprises seventeen suburbs in five wards and is one of the largest local governments in the Metropolitan Area.

Including Rottnest and Carnac Islands, the area of the district is 167 square kilometres.

4.1.3 Historical Overview

The original inhabitants of the area were a tribe of the Swan River Aborigines and 16 historic Aboriginal campsites have been identified, most of them located on the fringes of North Lake and Bibra Lake.

Europeans settled in Cockburn in 1829 and the first settlement was named Clarence, in honour of the Duke of Clarence who was an heir to the British throne. The original boundaries of the Town of Clarence stretched from Mayor Road and Yangebup Road in the north, Stock Road in the east, Wattleup Road in the south and the natural coastline on the western side, taking in the current localities of Munster, Henderson and part of Wattleup.

The District was first served by the Fremantle District Roads Board until 1892 when the Jandakot District Roads Board was formed to serve a newly opened agricultural area and remained in existence until 1923 when it was re-included into the Fremantle Board.

A change of name to Cockburn District Roads Board occurred in 1955, following a referendum of local residents keen to see the area become independent from Fremantle. In 1961 the Board was proclaimed as the Shire of Cockburn and ten years later as a result of strong population growth, was made the Town of Cockburn. City status followed in 1979.

The evolution of the City from a rural settlement dominated by market gardening 150 years ago has gathered pace in the past 15 years and is now one of the fastest developing districts in the Metropolitan Area. The current population of 64,200 is expected to grow to 123,000 by the year 2015. Most of the growth is occurring in the southern part of the district east and west of the Kwinana Freeway as the urban front advances southwards towards the Town of Kwinana.

Parallel to this, is growth in the business sector with the proposed expansion of the Henderson Shipbuilding Estate, more intensive development in the Bibra Lake Industrial Area and the establishment of a Marine Industries Technology Park in Munster.

A new Regional Centre at Thomsons Lake is under construction and will include shopping, commercial, community and sporting facilities linked to a new public transport rail system from Perth to Mandurah.

4.1.4 Growth

In the 1940's the municipality of Cockburn was essentially a rural shire with most of its residential and industrial development confined to the north-western sector of the district which was the southerly extension of the adjoining Fremantle urban area. The residential area was mainly developed by the State Housing Commission and the industrial area was centred around a large state owned abattoir. Today the urban and industrial areas have been expanded to form part of the South West Metropolitan Urban Corridor, as provided for under the Metropolitan Region Scheme.

In 1961, the population of the municipality was only 7,000 people, and contained a high proportion of new immigrants from Yugoslavia and Italy. These people were mainly market gardeners. By 1981 the population had grown to 32,000 and currently it is in the order of 64,000. Over this time the population has changed from predominantly "blue collar" to "white collar" families, which are establishing in the new urban areas in the east of the district, separated from the original residential areas located in the north-west sector and on the coast. The character and composition of the municipality has changed markedly since the 1960's, which has brought new pressures on the Council's services and facilities.

4.1.5 Land Use

In general terms the land use types in the district range widely from residential through general industrial to rural activities. The district is divided into two distinct parts. One to the west of the central wetland chain adjoining the coast and the other to the east of it. The land to the west comprises of undulating limestone ridges, which are overlain with productive soils and dense vegetation, whereas the land to the east of the wetlands is flat, poorly drained and characterised by depleted soils and sparse low vegetation and scrub.

These physiographic conditions have influenced the pattern of land use in the district to the extent that:-

- To the west of the central wetlands, traditional low density housing areas established by Homeswest have been added to by new housing areas in Hamilton Hill and Coogee. Much of the new housing areas are also at low densities and have displaced an important area of market gardening in the Spearwood Valley. These are the coastal suburbs. Inland over the coastal ridge are the new housing areas in the areas of Bibra Lake, Yangebup and Beeliar. South of these areas the land is rural, due mainly to the impost of the Kwinana Air Quality (EPP) Buffer. Land in the rural area is used primarily for market gardening, flower growing, retreat living and limestone quarrying. On the coast at Henderson, is the Jervoise Bay shipbuilding area, which is recognised as one of the most important of its type in Australia.
- To the east of the wetland chain the South-West Urban Corridor is extending south following the Kwinana Freeway. The housing is again traditional low density and has developed in the suburbs of Leeming, Bibra Lake, South Lake, Success and Atwell. This area represents the fastest growing residential area in the district. Jandakot Airport noise buffers limits residential development around the airport to rural and industrial development, together with extensive sand

mining. The balance of the area has been designated for groundwater protection by the WAPC and this restricts land use to rural and rural living.

It is difficult to envisage any significant change to the general land use pattern of the district in the next 15 years, and therefore will be confirmed and reinforced in proposed Town Planning Scheme No. 3.

Moreover, there is a high correlation between the existing land use pattern and the zones in the MRS. The local scheme must be consistent with the MRS.

4.1.6 Topography

The district is located on the coast immediately south of Fremantle. The coastline, the adjoining Cockburn Sound and the limestone ridge which runs parallel to the coast are important features of the district.

The coast is characterised by sandy beaches accessible to the public north of Woodman Point and low limestone cliffs, and shipbuilding facilities south of Woodman Point with limited public access.

Immediately behind the coastal ridge is the Spearwood Valley which contains a chain of wetlands surrounded by fringing vegetation of fresh and salt water paperbark trees.

A second ridge separates these wetlands from the primary chain of lakes which bisect the district into its western and eastern sectors. This is probably one of the most significant set of wetlands in the metropolitan region and are associated with extensive areas of pristine woodlands and important fauna and avi-fauna habitats.

East of the Central wetland chain is the flat, low lying sandy plains of banksia woodlands which overlay the Jandakot groundwater mound.

4.1.7 Employment

According to the Australian Bureau of Statistics (ABS) in 1996 there were 57,300 people residing within the City of Cockburn. In 1998 it was estimated to be 64,200.

The total labour force was 27,500 or 48% of the population. Of this number 2,250 people were unemployed or 8.2%.

The industry of the employed persons was primarily in:-

1.	Manufacturing	16%	}	73%
2.	Retail trade	15%		
3.	Property Business and Services	9%		
4.	Health and Community Services	9%		
5.	Construction	8%		
6.	Transport and Storage	6%		
7.	Education	6%		
8.	Personal and Other Services	4%		
9.	Other	26%		
		100%		

Males represent 57% of the total labour force, however the ratio of males to females in the workforce is almost equal up to the age of 34 years, following which the percentage of females in the workforce declines markedly which is typical for the metropolitan area.

The primary method of travelling to work is by car as a driver - 66%, and as a car passenger - 8%.

In 1996 around 3% of the workforce worked from home.

Cockburn has employment characteristics typical of new suburbs in the Perth Metropolitan Area.

4.1.8 Environmental Matters

There are a number of environmental matters which impact on the district.

The most important of these are:-

- The buffers which apply to industry and other land use activities within the district. Currently around 61% of the district is affected by air quality, odour, noise or groundwater controls that impact on planning and development in both the short and long term.
- The water quality of Cockburn Sound, particularly in Jervoise Bay, because of its impact on the fisheries and the recreational use of the sound.
- Sand and limestone quarrying which have a significant affect on the amenity of the area over a long period of time with little or no rehabilitation.
- The retention of regionally and locally significant bushland and the fact that designated regional parks can be the subject of mining leases.
- The need to protect the extensive areas of wetlands and damplands within the district, which are a dominant characteristic of the municipality and important in the metropolitan region open space system.
- The operation of the Jandakot Airport in relation to both noise and flight paths as they affect the residential and rural living areas to its west and south.
- The cumulative affects of noxious and hazardous (Special) industries and activities on Cockburn Sound by both the Kwinana Industrial Area and the shipbuilding area on Jervoise Bay.
- The management of the coast and the environmental issues associated with continuing to develop industries on the coast instead of residential areas to take advantage of the prime coastal location offered by Owen Anchorage.
- Nutrient stripping of stormwater drainage in both existing and new residential and industrial areas.

Environmental matters are discussed in detail in Section 4.8 of this report.

4.1.9 Rottnest Island

The district of the City of Cockburn includes Rottnest Island, Carnac Island and other adjacent islands. In May 1966 the boundary of the municipality was amended to include Rottnest and Carnac Islands, and in November 1987 the Electoral Distribution (Rottnest Island) Amendment Act defined the Metropolitan Area as being the region described in the Metropolitan Region Town Planning Scheme Act and Rottnest Island. The Australian Bureau of Statistics defines the area of the City of Cockburn as 167.35 square kilometres, which is 19.35 square kilometres larger than the 148 square kilometres used the City to describe the area of its district in most of its publications.

Rottnest Island is under the Control and Management of the Rottnest Island Authority under the provisions of the Rottnest Island Authority Act, and Carnac Island (uninhabited), is vested in the Department of Conservation and Land Management. Although Rottnest Island and Carnac Island fall within the district of the City of Cockburn, the Council has no involvement in or responsibility for any functions relating to the control and management of the islands.

The Scheme Map will include Rottnest and Carnac Islands, in the interest of completeness. Rottnest Island will be left unzoned and unreserved (ie blank) on the Scheme Map as it is outside the Metropolitan Region Scheme, and noted "Controlled and Managed by the Rottnest Island Authority". In respect to Carnac Island, this will be shown as Waterways reserve, as it is under the MRS, and be notated "Under the Control of CALM".

4.2 POPULATION AND HOUSING

4.2.1 Estimated Population 1998

Based on the Australian Bureau of Statistics data for 1996, it was estimated that the resident population for the City of Cockburn was 57,300 people.

The estimated population has been refined, however by taking account of the issue of mobile garbage bins to newly occupied residences and the issue of demolition licences for residential premises, to 65,200 as at January 1998.

The distribution of the estimated population by locality is contained in Table 4.

TABLE 4 - ESTIMATED EXISTING POPULATION BY LOCALITY - JANUARY 1999

Locality	Estimated Population		
	June-96	Jan-99	% by Locality
Atwell	1896	3198	4.9
Banjup	1170	1245	1.9
Beeliam	1006	2091	3.2
Bibra Lake	4872	5387	8.2
Coogee	3315	3842	5.9
Coolbellup	5818	5824	8.9
Hamilton Hill	10296	10558	16.2
Henderson	101	98	0.2
Jandakot	1474	2019	3.1
Leeming	2441	2495	3.8
Munster	3286	3420	5.3
North Lake	920	941	1.4
South Lake	5495	5707	8.7
Spearwood	9215	9468	14.5
Success	1020	1139	1.8
Wattleup	1528	1543	2.4
Yangebup	6203	6242	9.6
Sub Totals:	60056	65,217	100.0
Total Estimated Population January 1999: 65200			

4.2.2 Population Projection

The population projection for the district has been based on the ultimate capacity as provided for under the Metropolitan Region Scheme and the Metropolitan Development Program 1993/94 to 1997/98 published by the Department of Planning and Urban Development in July 1993.

By comparison the Metropolitan Development Program estimated that the population of the City of Cockburn in 1993 was 50600 and that over 5 years it would grow by 36% to 69135.

The difference may be due to the low base population used for the Departmental estimate, whereas the ABS statistics show a population of 60,056 as at June 1996. In addition, some of the areas designated as potential lot production over the period were not developed within the time frame (if at all), namely:-

- Port Catherine Marina, Spearwood
- Briggs Street, South Lake
- Simper Road, Yangebup
- Fraser Road, Banjup

The estimated population as at January 1999 was 65,200, 7% less than the Metropolitan Development Program estimate.

In an endeavour to more accurately determine the most likely population estimate, the lot production potential within each locality of the district using recognised development cells, resulted in an ultimate population for the City of Cockburn of 123,000.

Between 1992 and 1998, on average, around 830 lots were created each year. Based on this it is expected that the ultimate population will be reached between the years 2023 and 2026, assuming a typical occupancy rate of 3.0 people per dwelling.

Table 5 provides the distribution of the estimated ultimate population by the year 2026, which is also shown on Figure 4.

TABLE 5 - ESTIMATED ULTIMATE POPULATION BY LOCALITY - 2026

Locality	Existing	Vacant	Urban Development Cells				Total Cells	Ultimate Population
Atwell	3198	867	Cell 26 717	Cell 28 3540			4257	8322
Banjup	1245		Cell 29 6675	Cell 30 6450			13125	14370
Beeliar	2091	1809	Cell 8 876	Cell 10 2130	Cell 11 2406		5412	9312
Bibra Lake (West)	1344	528	Cell 14 414	Cell 15 54			468	2340
Bibra Lake (East)	4043	24	Cell 16 180	Cell 32 330			510	4577
Coogee	3842	777	Cell 3 216				216	4835
Coolbellup	5824							5824
Hamilton Hill	10558	303	Cell 12 1200				1200	12061
Henderson	98							98
Jandakot	2019	774	Cell 20 1980	Cell 23 100	Cell 33 102	Cell 34 195	2377	5170
Leeming	2495	54					-	2549
Munster	3420	216	Cell 5 2385	Cell 18 400			2785	6421
North Lake	941	27	Cell 17 582				582	1550
South Lake	5707	216	Cell 21 1005				1005	6928
Spearwood	9468	696	Cell 1 2400	Cell 2 375	Cell 4 600		3375	13539
Success	1139	399	Cell 19 1500	Cell 22 1230	Cell 25 3784	Cell 27 3000	9514	11052
Wattleup	1543	6	Cell 31A 2595	Cell 31B 450			3045	4594
Yangebup	6242	12	Cell 6 1005	Cell 9 1782			2787	9041
Total	65217	6708	Cells Total				50658	122583

TABLE 7 - CHART OF ESTIMATED ULTIMATE CELL POPULATION BY LOCALITY - 2026

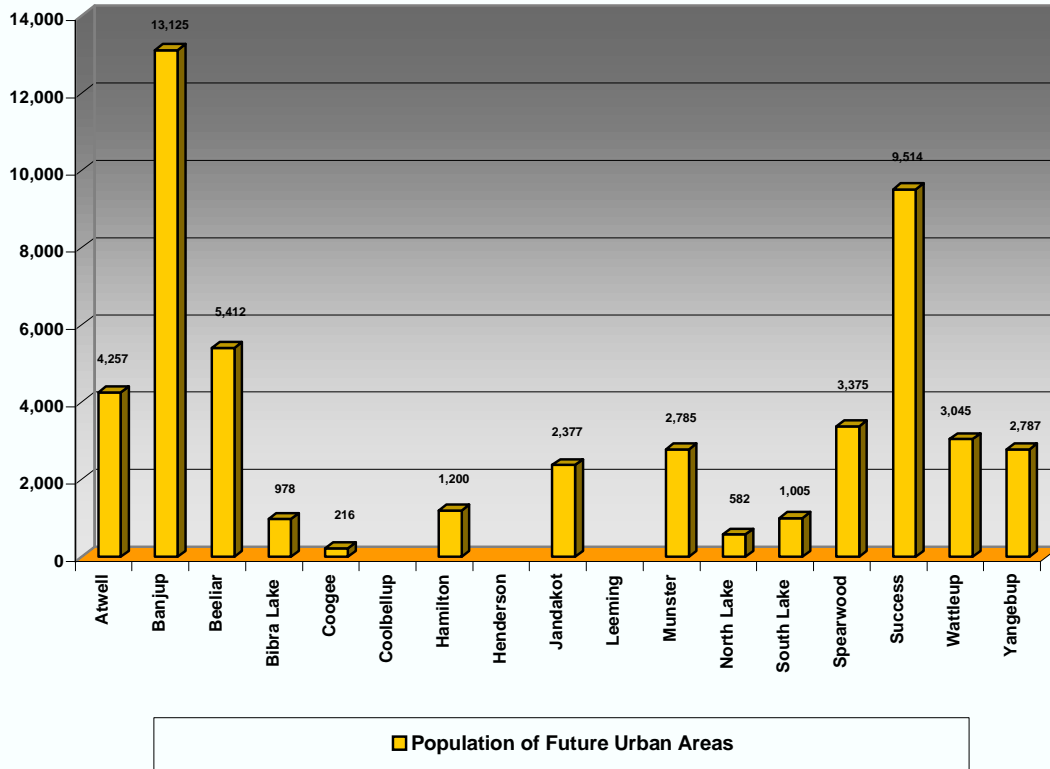


Table 8 shows the population capacity of each development cell.

TABLE 8 - POPULATION POTENTIAL FOR EACH DEVELOPMENT CELL - 2026

Cell No.	Population	Cell No.	Population
1	2400	19	1500
2	375	20	1980
3	216	21	1005
4	600	22	1230
5	2385	23	100
6	1005	25	3784
8	876	26	717
9	1782	27	3000
10	2130	28	3540
11	2406	29	6675
12	1200	30	6450
14	414	31A	2595
15	54	31B	450
16	180	32	330
17	582	33	102
18	400	34	195
Total		50658	

4.2.3 Age Structure

Age distribution has been based on the 1996 census data and is as follows:-

- 0 to 4 years - 8.2%
- 5 to 19 years - 23.7%
- 20 to 64 years - 60.3%
- 65 years and over - 7.8%

In terms of the school age population as a percentage of the total population, attendance is as follows:-

- Pre-school - 1.8%
 - Government primary School - 8.5%
 - Private Primary School - 2.8%
 - Government Secondary School - 4.5%
 - Private Secondary School - 1.8%
 - Tertiary Education Facility - 5.4%
 - Other - 0.9%
- } 11.3%
- } 6.3%

The percentage of the population studying in 1996 was 25.7%.

4.2.4 Household Structure

According to the ABS, in 1996 there were 19,870 households in Cockburn, made up as follows:-

Number of Persons per Household	Percentage of Total
1	18%
2	31%
3	18%
4	20%
5	9%
6 or more	4%
	100%

This represents an average household size of around 2.87 people.

Of interest is that 72% of all dwellings were either owned or being purchased, with the balance rented or leased.

Most family incomes (77%) were below \$1,000 per week, in 1996. The median individual weekly income was \$200 to \$299 and the median family weekly income was \$500 to \$699.

Of the total households, 9% do not have a vehicle at home, whereas more than 71% of households had between 1 and 2 vehicles.

The median age in Cockburn was 31 in 1996.

4.2.5 Existing Housing Type and Density

Cockburn had a housing stock of 20,300 dwelling units in 1996.

The existing housing type is predominantly single detached, being 81%, with 11% comprising single storey duplexes.

The older established areas such as Hamilton Hill and Coolbellup are subdivided in lots typically 900m² in area and represent a net developed density of 11 dwellings per hectare.

The density in the newer established areas of Spearwood, Yangebup and South Lake are subdivided in typical lot sizes of 700m² and represent a net developable density in the order of 14 dwellings per hectare.

In the recently developed subdivisions in the suburbs of Beeliar, Atwell and Success the lots are typically 500m². This produces a net developable density of around 20 dwellings per hectare.

4.2.6 Population Growth and Change to Housing Needs

Cockburn is one of the fastest growing local government districts in the Perth Metropolitan Area.

Between 1993 and 1998 most new allotments created within the Metropolitan Area were in the municipalities of:-

1.	Wanneroo (NW Corridor)	27%	} 74%
2.	Swan (NE Corridor)	13%	
3.	Rockingham (SW Corridor)	12%	
4.	Cockburn (SW Corridor)	10%	
5.	Gosnells (SE Corridor)	8%	
6.	Canning (SE Corridor)	4%	
7.	Remaining 23 LGA's	<u>26%</u>	
		100%	

Population growth and lot creation are highly correlated and over the past 6 years much of the increase in the metropolitan population has occurred in the 6 local government areas identified above, and Cockburn has typically been the fourth fastest growing urban area.

According to State publications such as Liveable Neighbourhoods and the State Planning Strategy, households size will decrease, single parent families and non-traditional families will increase and there will be a demand for alternative forms of housing. In addition, the population is ageing and therefore the needs of the resident population will change. The State expects to accommodate these changes through changes to the mix of housing types promoted by the Liveable Neighbourhoods Policy.

Between 1993 and 1998 the number of small lots created, as a percentage of all lots less than 1000m², increased significantly, based on information provided by the Ministry for Planning.

Lot Size	1992 / 93	1997 / 98
0 - 319m ²	1.2%	5.0%
320 - 499m ²	7.8%	25.1%
500 - 599m ²	27.5%	24.4%
600 - 799m ²	53.2%	40.0%
800 - 999m ²	10.3%	5.5%

In respect to small lots between 0 - 500m² it can be seen that of this range, lots between 320 - 449m² predominate:-

Lot Size	1992 / 93	1997 / 98
0 - 234m ²	5.0%	4.8%
235 - 319m ²	8.3%	11.9%
320 - 449m ²	43.7%	50.8%
450 - 499m ²	43.0%	32.5%

Of particular interest is the fact that of all the Metropolitan Councils producing lots between 0 - 500m² are not all located within the inner areas, namely:-

- The inner Councils in order of numbers of lots created are Belmont, Melville, South Perth, Stirling, Fremantle and Canning; and
- The outer Councils are Swan, Wanneroo, **Cockburn**, Rockingham and Gosnells.

It can be seen that Cockburn has recognised the demand for smaller lots and is already providing for them through the re-subdivision of existing lots in the older suburbs to the creation of new lots in developing urban areas.

4.2.7 Population Growth and Changes for Infrastructure and Facilities

With the exception of the original suburbs of Hamilton Hill and Coolbellup, the district is provided with the full range of infrastructure and public utilities. Hamilton Hill and Coolbellup were not sewered when developed in the 1940's and 50's but are included in the Water Corporation's Infill Sewer Programme for 1999 to 2002. All newly developed areas are required to be serviced with the full range of infrastructure and public utilities as a condition of subdivision or other planning or development approval.

In terms of facilities, some are either planned by State agencies such as the Education Department in relation to the provision of schools or provided on the basis of population based indices or catchments. This approach will not change as their provision is directly related to the size of population to be served not to the rate of growth.

The Council has prepared plans for the provision of community facilities in the existing and planned urban areas in relation to regional, district, neighbourhood, local and educational facilities. These are used as a guide to the planning and development of facilities to meet the needs of the community.

4.2.8 Housing

(a) Constraints

Constraints on housing development are either physical or cultural.

The physical constraints that limit housing location are the industrial buffers such as the Kwinana Air Quality (EPP) Buffer which affects the south-western sector of the district, the Jandakot Groundwater Protection Policy which prevents housing in the eastern sector of the district, the Jandakot Aircraft Noise Contours, and to a lesser extent drainage. These factors have defined the land use pattern in Cockburn.

The cultural constraints relate to zoning, density coding and public perceptions. Housing can only be developed in the Urban Zone under the MRS. The location and extent of the Urban Zone is determined by the State. The local scheme must be consistent with the MRS and residential zones can only be located within the Urban Zone. The local government, with the approval of the State can determine the range of densities that will apply to the residential zone as provided for under the R-Codes. The R-Codes, in association with the Community Design Code enable a range of densities and housing choices to be utilised in a local scheme.

The public perception about housing needs and housing choice is mainly driven by the building industry. Most housing is built for 're-sale' rather than family need and in the large part is designed and is constructed of materials to suit the needs of builders and suppliers. Moreover, the public is very concerned about protecting their property from devaluation and therefore tend to resist innovation and non-traditional housing densities and types. The land development and building industry is itself conservative.

There is evidence that there are changes on the 'edges' of the housing market mainly driven by 'example', created by those building companies that are prepared to take a risk.

Local government cannot determine housing density or housing type, it can only act as a facilitator so that the market has the flexibility to make housing choices. The distribution of residential densities throughout the district is shown on Figure 5.

(b) Opportunities

The opportunities for changes in the range and type of housing in Cockburn rests primarily with the development and home building industry. Local government should provide for the opportunity for housing to occur in suitable locations, circumstances and at a range of densities. The opportunities provided will hopefully be taken up by others.

4.2.9 Housing Development

(a) Infill

Infill development is occurring in the older established suburbs of Hamilton Hill and Coolbellup, and will accelerate following the completion of the backlog sewer program. Strata titled residential lots are being created, which provide for 'backyard' housing to be constructed. A common practice in the older inner suburbs of Perth.

The opportunity for infill development is limited in the other suburbs of the district due to the small original sizes of the lots. In the future these areas are likely to be re-developed on a lot by lot basis in response to increases in residential densities. For example in Hamilton Hill and Coolbellup on a typical 800 - 900m² lot, two additional dwellings can be erected under the R25 code. However in Atwell, on a lot of 500m² (R20) to erect a second dwelling, the density would need to be increased to R40.

Given the designation of densities is determined by planning and political considerations, it is unlikely that areas such as Atwell would be re-coded to R40. Therefore these areas are likely to remain the same, and not provide any infill opportunities in either the medium or long term.

(b) New Areas

In the City of Cockburn, new areas, which are in the large part confined to the eastern sector of the district on either side of the Kwinana Freeway, are being developed predominantly for single detached housing on lots of around 500m². These areas are generally coded R20, with some specific areas designated at say R30/R40 to provide for medium density housing sites near community facilities.

Experience has shown that where large areas of land have been coded R30 (Packham) or R30 (Murdoch Chase), the subdividers continue to produce lots equivalent to R15. Subdivision is driven by the preference in the market place, the requirements of the project home builders and high sales rates to minimise holding costs. These considerations are quite separate from planning and neighbourhood objectives.

Local government therefore, should adopt R-Code densities which do not preclude opportunities for subdividers and builders to provide alternative and innovative forms of housing.

4.2.10 Community Profile

A comprehensive demographic profile for the City of Cockburn can be obtained from the Australian Bureau of Statistics. The data is based on the 1996 Census of Population and Housing.

The publication is "Basic Community profile - Catalogue No. 2020.0 for Cockburn (C) (SLA) 167.347 square kilometres". This area includes Rottnest Island and accounts for the difference between the recognised area of the district 148 square kilometres used in this report.

The Basic Community Profile includes the following data.

- B01 SELECTED CHARACTERISTICS
All persons
- B02 STATE OF USUAL RESIDENCE ON CENSUS NIGHT BY SEX
All persons
- B03 AGE BY SEX
All persons
- B04 AGE BY REGISTERED MARITAL STATUS BY SEX
Persons aged 15 years and over
- B05 BIRTHPLACE (COUNTRIES) BY SEX
All persons
- B06 BIRTHPLACE (REGIONS) BY SEX
All persons
- B07 BIRTHPLACE OF MOTHER BY BIRTHPLACE OF FATHER
Australian born persons
- B08 LANGUAGE SPOKEN AT HOME BY SEX
Persons aged 5 years and over
- B09 PROFICIENCY IN ENGLISH BY YEAR OF ARRIVAL
Persons born overseas and aged 5 years and over
- B10 RELIGION BY SEX
All persons
- B11 TYPE OF EDUCATIONAL INSTITUTION ATTENDING (FULL-TIME/PART-TIME BY SEX
All persons
- B12 AGE LEFT SCHOOL BY SEX
Persons aged 15 years and over
- B13 WEEKLY INDIVIDUAL INCOME BY AGE BY SEX
Persons aged 15 years and over
- B14 DWELLING STRUCTURE BY TENURE TYPE
All private dwellings
- B15 DWELLING STRUCTURE
Persons in occupied private dwellings (excluding overseas visitors)
- B16 DWELLING STRUCTURE BY DWELLING LOCATION
Occupied private dwellings
- B17 QUALIFICATION (HIGHEST) FIELD BY QUALIFICATION (HIGHEST) LEVEL BY SEX
Persons aged 15 years and over with a qualification
- B18 AGE BY LABOUR FORCE STATUS (FULL-TIME/PART-TIME) BY SEX
Persons aged 15 years and over
- B19 INDUSTRY BY AGE BY SEX
Employed persons
- B20 OCCUPATION BY AGE BY SEX
Employed persons
- B21 METHOD OF TRAVEL TO WORK BY SEX
Employed persons
- B22 FAMILY TYPE AND RELATIONSHIP IN HOUSEHOLD BY AGE
All persons present in the household on Census night
- B23 HOUSEHOLD TYPE BY WEEKLY HOUSEHOLD INCOME
Occupied private dwellings
- B24 FAMILY TYPE BY WEEKLY FAMILY INCOME
Families in occupied private dwellings
- B25 HOUSEHOLD TYPE AND FAMILY TYPE BY TENURE TYPE AND LANDLORD TYPE
Occupied private dwellings containing family, group and lone person households
- B26 HOUSEHOLD TYPE AND FAMILY TYPE BY NUMBER OF PERSONS (USUALLY
RESIDENT)
Family, group and lone person households
- B27 DWELLING STRUCTURE BY HOUSEHOLD TYPE AND FAMILY TYPE
Occupied private dwellings
- B28 DWELLING STRUCTURE BY NUMBER OF PERSONS (USUALLY RESIDENT)
Occupied private dwelling
- B29 HOUSEHOLD TYPE AND FAMILY TYPE BY NUMBER OF MOTOR VEHICLES
Occupied private dwellings
- B30 WEEKLY HOUSEHOLD INCOME BY MONTHLY HOUSING LOAN REPAYMENT
Occupied private dwellings which are being purchased
- B31 WEEKLY HOUSEHOLD INCOME BY WEEKLY RENT
Rented occupied private dwellings
- B32 SELECTED MEDIANS

The Council holds this information separately and will be used in conjunction with this part of the Local Planning Strategy as appropriate in order to undertake structure and facility planning within the district.

4.2.11 Lot Production

Cockburn is one of the major urban growth areas within the Perth Metropolitan Area. Between 1987 and 1998, the district produced more than 7400 lots, which represented 7.7% of the total for Perth.

TABLE 9 - LOT PRODUCTION CHART COCKBURN AND METROPOLITAN REGION - 1993/94 - 1997/98

Year	Metro Area	City of Cockburn	% of Metro
87/88	9,294	936	10.1
88/89	13,659	479	3.5
89/90	9,193	415	4.5
90/91	5,003	329	6.6
92/93	8,311	679	8.2
93/94	12,381	1,092	8.8
94/95	12,664	1,751	13.8
95/96	5,435	715	13.2
96/97	7,274	245	3.4
97/98	5,990	459	7.7
Total:	95,646	7,412	7.7

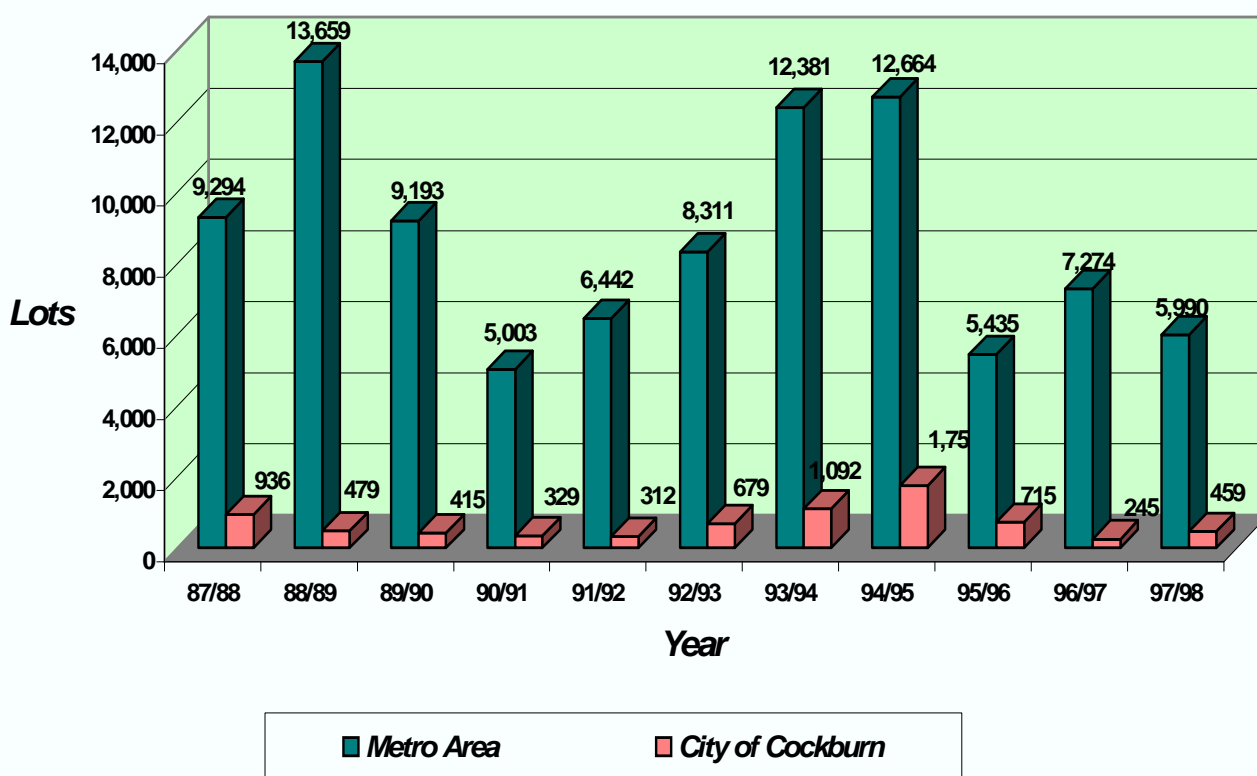
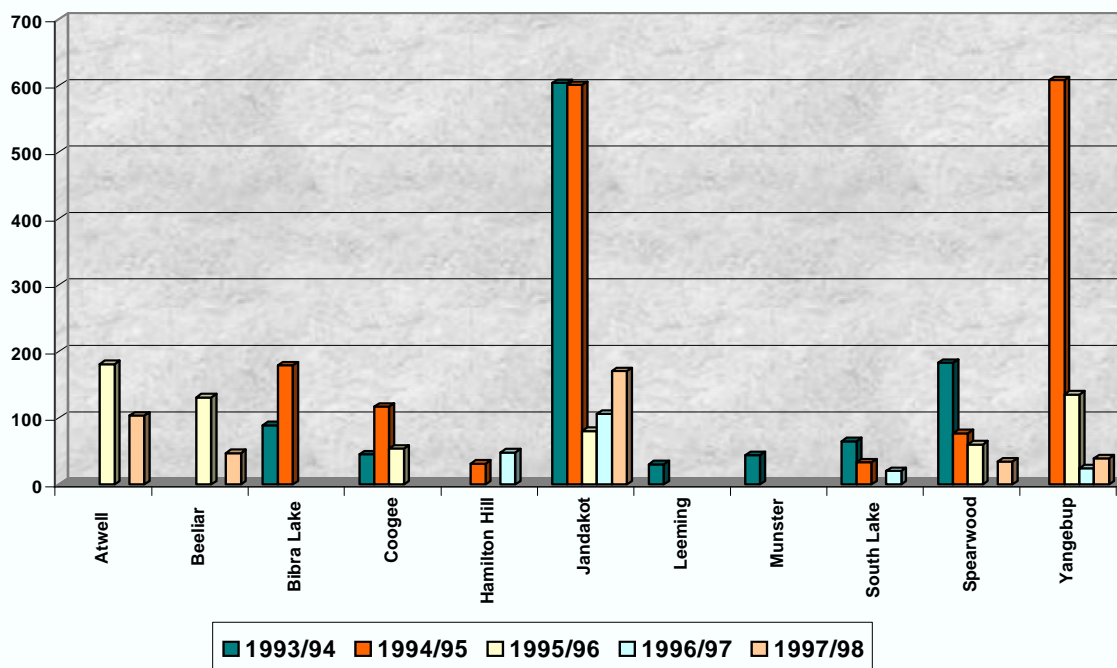


Table 10 gives an indication as to where the lots have been created by locality.

TABLE 10 - LOT PRODUCTION BY LOCALITY 1993-1998
Final approvals for subdivisions of more than 20 lots

	Locality	1993/94	1994/95	1995/96	1996/97	1997/98	Total
*1	Atwell			181		103	284
*2	Beeliar			131		47	178
	Bibra Lake	89	179				268
	Coogee	45	117	54			216
	Hamilton Hill		31		48		79
	Jandakot	604	601	80	106	170	1561
	Leeming	30					30
	Munster	44					44
	South Lake	65	33		20		118
	Spearwood	183	77	60		34	354
	Yangebup		608	135	24	39	806
	Total	1060	1646	641	198	393	3938

Note: *1 Previously part of Jandakot
 *2 Previously part of Yangebup



4.3 ECONOMY AND EMPLOYMENT

4.3.1 Workforce Participation

At the time of the 1996 Census the estimated resident population of the City of Cockburn was 60,055 persons of which 25,229 or 42% were employed. The Census also showed 2257 unemployed persons which represents 8.2%. This compared favourably to the Perth figure of 10.4 % and the sub-region of 13.2%.

4.3.2 Occupations

Table 11 gives the breakdown of occupations for residents of the City of Cockburn. The distribution between occupation sectors for the City of Cockburn is generally the same as for Perth as a whole with the largest level of employment in the manufacturing and retail sectors.

TABLE 11 - OCCUPATION OF COCKBURN RESIDENTS – 1996

Occupation	Persons	%
Agriculture, Forestry and Fishing	409	1.6
Mining	263	1.1
Manufacturing	3,944	15.6
Electricity, Gas and Water Supply	222	0.9
Construction	2,105	8.3
Wholesale Trade	1,807	7.2
Retail Trade	3,810	15.1
Accommodation, Cafes, and Restaurants	931	3.7
Transport and Storage	1,403	5.6
Communication Services	340	1.3
Finance and Insurance	725	2.9
Property and Business Services	2,177	8.6
Government Administration and Defence	834	3.3
Education	1,393	5.5
Health and Community Services	2,170	8.6
Personal and Other Services	512	2.1
Non Classifiable Economic Units	1,072	4.2
Not stated	480	1.9
	632	2.5
	25,229	100.0

Source: ABS Census 1996

4.3.3 Employment Trends

Research by Derek Kemp for the Western Australian Planning Commission in 1997 in a report titled Facilitating Employment Growth details international, national and state trends in employment and the implications for future planning of Perth and the suburbs. Since the late 60's early 70's there has been a significant change in industrial activity and employment which Kemp describes as the post industrial economy which saw the service sector become the principal driver for economic growth and the manufacturing sector shed jobs at an alarming rate. Manufacturing is no longer the major source of wealth creation or the major generator of employment.

In terms of employment, Western Australia has never been a strong manufacturing State and because manufacturing has been supported by the resources boom, major restructuring has not been as significant as interstate and overseas.

It is the service sector where most job growth has occurred in WA with 28% of all job growth being in business and personal services. Office based service sector employment accounted for at least 35% of all employment growth with a further 23% in retailing and personal services.

Significant elements of the post industrial economy are the increase in part time employment and the participation of females. Part time employment increased from 20% in 1987 to 27% in 1996 and accounted for 78% of all Western Australian employment growth. Most of the increase in jobs (69%) went to women whilst at a national level the figure was markedly higher at 83%. The percentage of women aged 20 to 64 in the workforce rose from 50% in 1981 to 55% in 1991 whilst 50% of Western Australian women with dependant children were working by 1991.

The small business sector is a major contributor to employment creating 54% of private sector jobs between 1988/9 and 1994/5. Almost 29% of non-agricultural small business employment in Western Australia consists of persons working on their own without any employees and 20% are home based.

Kemp is of the view that the current trends will continue with the decline of manufacturing jobs to perhaps 10%, increasing importance of the servicing sector and an increase in small businesses and advocates the implementation of a realistic Small Business and Tertiary Office Strategy which would offer better job self sufficiency within the metropolitan corridors and reduce long distance commuting to a manageable 40%.

Specific trends within the City of Cockburn are as follows:

- There is and will continue to be a decline in agricultural based employment associated with vegetable production, cut flowers and turf as further land in the Coogee, Munster and Spearwood localities is developed for residential and industrial uses. It proceeded with the implementation of the strategy recommended in the Fremantle Rockingham Industrial Regional Strategy (FRIARS) to industrialise land within the Kwinana Air Quality Buffer Area will all but eliminate agricultural based employment within the City.
- There are proposed increases in the provision of general industrial land within the municipality which are well in excess of those necessary to satisfy the needs of Cockburn residents and those of the South West corridor. The recommendations of the FRIARS Study need to be reviewed and justified, particularly in light of the research undertaken by Kemp.
- Early indications are that residents in the newly emerging suburbs along the Freeway including Atwell and Success have different occupations groupings to that of the coastal suburbs and that local planning should provide for these differences.
- Applications for the establishment of a home based business are the subject of increasing opposition from adjoining property owners. Most opposition is on the grounds of loss of amenity due to increased traffic and potential impact on property values. Therefore, such activities, should each be evaluated on their merits and not permitted as a 'as of right' in the residential zone.

Implications of the general trends identified by Kemp and issues specific to the City are as follows;

- Council does not support the establishment of a major new industrial area within the Kwinana Air Quality Buffer Area proposed by the FRIARS study on the basis that it is not justified, not environmentally sustainable and there are suitable alternative sites.
- The per capita provision of land for general industrial purposes should be reduced from historic levels to reflect employment trends and a range of other work based areas integrated into the suburbs to achieve a high level of self sufficiency.
- Planning of future urban areas, and in particular the areas of Atwell, Success and Banjup, should include provision for home based business in strategic locations as promoted by the Community Codes. Such areas should be identified on adopted structure plans and development of such uses encouraged and supported by Council.

4.3.4 Accessibility to Work Areas

Origin, destination analysis undertaken by Curtin Consultancy Services in 1997 for the South Metro Development Board concluded that in 1994 there was a large degree of intra regional commuting to work places. In the South West and South East sectors, the vast majority (in excess of 50%) of work place destinations were within the subregion where the worker resided, with movement between the two corridors accounting for a further 12%. Movement to the Perth central area, despite its traditional workplace domination within the broader metropolitan region, employs about 25% of the southern regions residents. More recent figures obtained from the Ministry for Planning show that the level of self sufficiency in the South West corridor is approximately 65% compared to 60% for the south East Corridor and less than 40% for the Northern corridor.

Detailed origin destination work carried out by the Australian Bureau of Census for the City of Cockburn showed that for 1996 22.6% of the resident workforce work within the City of Cockburn, 16% in the Fremantle area and 11.6% in Perth. The analysis also identified the following aspects;

- A significant proportion of workers in the coastal suburbs of Hamilton Hill, Coolbellup North Lake, Coogee, Spearwood and Munster worked in Cockburn (24.5%) and Fremantle (20.3%) with a lower level in Perth (9%).
- In the middle suburbs of Yangebup and Beeliar the split was more even between Fremantle (12%) and Perth (11%) whilst for Bibra Lake and South Lake there was a higher level for Perth (15.5%) to Fremantle (9.4%).
- In the developing suburbs of Atwell and Success the split was in reverse to the coastal suburbs with Perth (16.4%) being the primary work destination followed by Cockburn (16.2%) and then Fremantle (7.1%).
- Major industrial areas at Canning Vale (2.5%) and Kwinana (3.3%) provide very low levels of employment to residents within the City. Given that development of Canning Vale is almost complete and the participation rates in these areas is lowest in the newer suburbs, this situation is not expected to change.

The above has clear implications for the primary public transport network and supports the current proposals for the rail system through Atwell Success to Perth and the Fremantle to Rockingham transitway serving the coastal suburbs.

Journey to work data from the 1996 Census shows that the predominant method of going to work was by car with 79.5 % as the driver and a further 9.3% as a passenger. Bus travel accounted for 3.8%, walking 1.7% and riding 0.6%.

Transperth is working to improve the public transport network as highlighted in the Ten Year Better Transport Plan for Perth. The proposed System 21 bus service between Fremantle, Cockburn, Kwinana and Rockingham (Transitway) is due to commence service in the latter part of 1999, and will improve access to Fremantle for residents in the coastal suburbs. Stage 1 of the Perth to Mandurah Railway is proposed to reach Atwell no later than 2004. This will provide increased accessibility to Perth. Within the last 4 months an improved bus service has commenced between Perth and the a park 'n' ride facility within the Gateways shopping centre in Success and further improvements including increased services between Success and Fremantle are to be implemented late 1999.

The existing road network provides good access to places of employment within and outside the City of Cockburn.

4.3.5 Industrial Land Supply

Within the City of Cockburn there are 5 main industrial areas including Bibra Lake, Henderson, Robbs, Jandakot East and Jandakot West as shown on Figure 6. Council recently undertook an assessment of the industrial areas to determine the extent of developed industrial land.

Details of the analysis are shown in Table 12.

TABLE 12 - INDUSTRIAL LAND SUPPLY IN COCKBURN

	Occupied	Vacant	Total
Bibra	412	107	519
Henderson	148	109	257
Jandakot East	137	56	193
Jandakot West	60	11	71
Robbs	111	37	148
	868 ha	320 ha 26.9%	1188 ha

The assessment showed 320 ha or 26.9% of the industrial area was vacant. However within the South West Corridor the extent of vacant industrial land is 545 Ha or 38.2%, with significant areas of vacant land located at east Rockingham and Warnbro.

Within the City of Cockburn, approximately 387 ha of industrial land will be available within the next 5 years. These are identified in the following table.

TABLE 13 - POTENTIAL GENERAL INDUSTRIAL LAND IN COCKBURN

General Industrial	
Existing Vacant Land in excess of the desired 30% vacancy rate	100
Amcor land Bibra Lake recently sold (previously included in occupied category)	89
Jandakot Woolscours Jandakot West (relocating to IP 14 and land to be subdivided)	28
Additional land within Watsons Buffer zone (Spearwood south)	40
Jandakot Airport (as per Draft Airport Master Plan supported by the City of Cockburn)	130
	387

Based on the take up rates achieved at Canning Vale, the amount of industrial land available will satisfy demand for some 21 years which is exclusive of the desirable vacancy rate of 30% targeted by Landcorp. In total the amount of industrial land available within the City of Cockburn could take in excess of 30 years to be fully developed.

4.3.6 Industrial Development Opportunities

Both existing and potential industrial areas within the City of Cockburn provide for a diverse range of activities from specialised ship building in Henderson, proposed gas and marine related fabrication in the proposed southern harbour at Jervoise Bay, food processing at Robbs Jetty Estate Hamilton Hill, general and light industry at Bibra Lake and general industry in Jandakot.

Development at Henderson and Jervoise Bay has given rise to the opportunity to develop adjoining land as a Marine Industries Technology park. The Technology Park will be for research and development activities associated with the ship building, oil and gas industries and is proposed to include a Marine Skills and Research Centre. Development of the learning and employment facilities is proposed to be within a high quality landscaped environment. This is a regional facility which significantly broadens the range of employment opportunities available within the district.

The land use master plan for the north Coogee has been the subject of a review coordinated by the Ministry for Planning. Development of food processing activities within the Special Industrial area has proceeded at a very slow rate and council is of the view that there is an opportunity to develop some, if not all, of the remaining land as a mixed use urban village which contains a variety of land uses which includes residential with transitional uses at the interface with industry. The land is strategically located for such development and would be very much in keeping with the Fremantle vernacular. It could develop into an important local node for home based business.

Development of the Amcor land in the north east sector of the Bibra industrial area represents an opportunity to create a significant new industrial estate. Planning of the estate is to establish a new link road between North Lake Road and Sudlow Road which will provide improved access to the existing industrial area. Land Corp have advised that it is intended to create a model industrial estate on the land. Planning of this estate needs to give careful consideration to environmental and visual issues associated with Lakes of the Beelihar wetland chain which abut the site.

Development of the Thomsons Lake regional centre at the intersection of the Kwinana Freeway and Beeliar Drive and Armadale Road represents the most significant development opportunity within the Municipality. The proposal is to create an attractive multi functional centre which capitalises on the sites proximity to Perth, its accessibility and the public transport system which includes park 'n' ride and kiss 'n' ride facilities and bus interchange with the Perth to Mandurah rail system. The regional centre includes 50,000 square metres of retail floor space, and includes a mixture of cultural, entertainment, commercial, business and major sporting facilities. Once the new regional centre is established it is hoped that the East Jandakot Industrial Area will be transformed into a high quality business park.

On full development, the regional centre could provide up to 12,000 jobs representing a major employment node within the City. It would also constitute a major destination on the public transport system, maximising the value of this infrastructure.

The draft master plan for Jandakot Airport released for public comment in February 1999 proposes a range of activities be developed including aviation related activities, light and service industry, and mixed business. Council supports the development of these uses at the airport. As the Airport is outside of the control of the City of Cockburn, Council has recommended to Jandakot Airport Holdings Ltd that the zones, use classes and development requirements be consistent with Councils Town Planning Scheme and that a protocol be agreed for the adoption of a structure plan for the developable portion of the Airport land and that applications be referred to Council for comment.

In addition to the industrial areas, council has designated commercial and mixed business areas which provide for a range of goods and services which not only serve the local community but also provide small to medium sized companies with better business opportunities. These areas will accommodate businesses that are not appropriate within or can not conveniently or economically be accommodated within either shopping centres or industrial zones.

In recognising the importance of a strong economic base, the Council has been active in ensuring that new developments meet modern day standards in relation to landscaping, servicing, accessibility and appearance. Importance has also been placed on the quality of the public interface with quality entry statements and uniform estate fencing where industrial properties abut important regional roads an other public places.

4.4 RETAIL AND COMMERCIAL CENTRES

4.4.1 Regional Centre

Under the Metropolitan Centres Policy 1991, which is subject to review, no Regional Centres were nominated within the City of Cockburn. However, under the draft 1999, Centres Policy, Thomsons Lake is included as a "Regional Centre" with a maximum net lettable floor space of 50,000m². The centre is zoned urban under the MRS.

The Model Scheme Text (MST) Guidelines, provide for a Regional Centre Zone, but this is for "major" regional centres designated under the WAPC Centres Policy. This term, however, is not used in either the current policy 1991, or the proposed draft Policy 1999. Given this, it should be acceptable for a local scheme to use this zone for any regional centre designated under the Commercial Centres Policy. Nevertheless, in the event that the 1999 Centres Policy is adopted, the Council will

be required to refer development applications to the Commission, if the Council does not have an adopted Centres Plan for the district.

4.4.2 District Centre

Under the Metropolitan Centres Policy 1991, the Phoenix Park Shopping Centre in Spearwood is designated a "District Centre", with a maximum net lettable floor space of 19,600m². Given that the centre is built to the maximum floor space, any additions will need to be referred to the Commission for approval. Under the proposed draft MST, a District Centre Zone is provided in the Guidelines, which can be used by local governments in their local planning scheme.

4.4.3 Neighbourhood Centres

The district is well served by Neighbourhood Centres in the existing and newly developed suburbs. Centres have also been identified in the planned residential areas where structure planning is being undertaken. The Metropolitan Centres Policy of 1991 is used as a guide to the net lettable floor space required relative to the existing or estimated population catchment. Neighbourhood Centres are provided for in the proposed draft MST in the "Local Centre Zone". These can be applied by local governments in their local planning scheme.

Most of the established urban areas in the north and north-west of the district have a stable land use pattern and therefore it is unlikely that any additional Neighbourhood Centres will be required. The new urban areas to the south and south-east of the district are being or have been planned by using structure plans, and neighbourhood centres form an integral part of this process. The structure plans are adopted by both the Council and the Commission as the basis for subdivision and land use.

4.4.4 Existing Pattern of Development

The proposed Regional Centre at Thomsons Lake is located on the south-west corner of the intersection of the Kwinana Freeway and Beeliar Drive, and is referred to as the Gateways Shopping Centre. This will be the only designated Regional Centre in the district subject to the adoption of the draft Commercial Centres Policy 1999. The first stage of the centre has been completed and comprises around 15,000m² (nla). The ultimate floor space is proposed to be 50,000m² (nla) to be achieved by 2026.

The District Centre, Phoenix Shopping Centre, is located on Rockingham Road in Spearwood and is included in the Metropolitan Centres Policy (1991) as having an ultimate floor space of 19,600m² (nla).

As far as the lower order centres are concerned, namely, Neighbourhood, local centres and convenience stores, the pattern of development is typical for Perth at the respective times of development. Hamilton Hill, subdivided in the 1930's and 40's has a number of small shopping centres distributed along the residential collector roads. Coolbellup, which was planned and subdivided for Homeswest in the 1950's was based on a British New Town approach includes one central centre to provide for the whole neighbourhood. In the years to follow the subdivisions followed a similar pattern and provided one or two neighbourhood or local centres to serve the local community. The structure planning for the newer urban areas is now being based on the Community Design Code and this promotes main street shopping, to reflect the shopping patterns found in the suburbs of the 1920's and 1930's.

The pattern of retail and commercial centres in Cockburn is not based simply on planning principles, but has evolved through speculation, opportunity, developer status, competition, land ownership, the location and size of the land, the existence or absence of a Structure Plan and political lobbying at either the State or local level. These factors have, and will continue to affect the pattern of retail and commercial centres in most urban areas and are not peculiar to Cockburn.

The proposed draft Commercial Centres Strategy published by the Commission in March 1999, provides the basis for the location and designation and development of retail and commercial centres in the Perth Metropolitan Area to the year 2026.

The current and planned pattern of retail and commercial centres within the district is illustrated on Figure 7.

4.4.5 Centre Development

Opportunities for the development of Regional and District Centres within Cockburn are limited to those sites specified under the Metropolitan Centres Policy. There are no other opportunities, nor is there any apparent requirement for the establishment of any others in Cockburn.

As far as Neighbourhood Centres are concerned there is the need and the opportunity to create additional centres to support the population that will reside in the new urban areas in the south-east sector of the district. In recognition of this, the planning for these centres are being incorporated in the local structure plans.

4.5 RECREATION AND OPEN SPACE

4.5.1 Distribution

The distribution of local and regional open space is illustrated on Figure 8 The City of Cockburn has a total area of 3065 hectares of Region Open Space and 451 hectares of local open space, which represents 20.7 percent and 3.1 percent respectively of the total municipal area.

The Ward by Ward distribution of regional and local open space is illustrated in the following table.

TABLE 14 - DISTRIBUTION OF REGIONAL AND LOCAL RESERVES

Ward	Total Area (ha) (MRS)	Regional Reserves (ha)	Local Reserves (ha)	Total Regional & Local Res (ha)	% Regional Reserve	% Local Reserve
North	1762.0	450.8	62.6	513.4	25.6	3.5
South	3141.8	1177.7	97.8	1275.5	37.5	3.1
East	5833.0	452.7	154.5	607.2	7.8	2.6
West	1176.3	151.0	36.1	187.1	12.8	3.0
Coastal	2887.1	832.4	100.6	933.0	28.8	3.4
Total	14800.2	3064.6	451.6	3516.2		
	100%			23.7%		
		87.1%	12.9%	100%		

4.5.2 Beeliar Regional Park

The distribution of region open space provides significant green corridors within the urban landscape of Cockburn. These take the form of a linear strip of coastal open space running from South Beach to Woodman Point; a north - south coastal suite of wetlands consisting of Manning Lake, the Market Garden Swamps, Lake Coogee and the Brownman Swamps; and in the centre of the district a more extensive linear north - south suite of wetlands consisting of North Lake, Bibra Lake, South Lake, Little Rush Lake, Yangebup Lake, Lake Kogolup, Thomsons Lake and Banganup Lake. In the eastern rural margins of the district, is a collection of banksia woodland and wetland areas that comprise part of the Jandakot Botanic Park.

The majority of the City's region open space is encompassed in the Beeliar Regional Park which consists of the following elements.

1. North Lake
2. Murdoch Sports Complex
3. Bibra Lake
4. South Lake
5. Lake Yangebup/ Little Rush Lake
6. Kogolup Lake
7. Branch Circus Wetland
8. Thomsons Lake
9. Banganup Lake
10. Manning Lake
11. Lake Coogee
12. Henderson Open Space

The Beeliar Regional Park was established in 1992 by the then Department of Planning and Urban Development. Management responsibility for the park is CALM which assumed the primary management role in 1998. Management priorities were outlined in DPUD's 1992 report as follows:

BEELIAR REGIONAL PARK LAND USE AND MANAGEMENT GUIDELINES

Land Use	Location	Management Emphasis
Recreation Leisure and Sport	Cleared areas suitable for recreation leisure and sports <ul style="list-style-type: none"> • North Lake - Murdoch Sports Complex • Bibra Lake - west and south side • Henderson (part) • Yangebup Lake - south west 	Development of active recreation pursuits, eg ovals, car parking, buildings, reticulated and landscape areas. High use areas.
Recreation and Leisure	Areas that have some natural values, where passive and active recreation is compatible <ul style="list-style-type: none"> • Manning Lake • Western shore of North Lake • Market Garden Swamps No. 1 and 2 • Yangebup Lake (N, SW shores) • Bibra Lake - NE corner 	Predominantly passive pursuits, allowing for car parking and picnic facility development, rehabilitation and landscaping of areas, and lookout points.

Land Use	Location	Management Emphasis
Natural Environment uses (including education) and research	Areas displaying least modified landscape which are suitable for retention for natural uses <ul style="list-style-type: none"> • Banganup Lake • Brownman Lake • South Lake • Bibra Lake East • Little Rush Lake • Henderson (part) 	Natural environment uses, public access by walking trails and cycle trails. Rehabilitation of vegetation, some development of facilities associated with education and research necessary.
Conservation and Protection	Areas which are important for wildlife conservation <ul style="list-style-type: none"> • Thomsons Lake • Long Swamp • North Lake • Bibra Lake • Branch Circus • Market Garden Swamp No. 3 • Lake Coogee • Kogolup Lake • Yangebup Lake • Wattleup Lake • Banganup Lake • Bollard Bullrush 	Restricted vehicle access, except for management vehicles. Development of facilities restricted to minor nature trails, signs, cycle tracks, through access where necessary. Rehabilitation of vegetation. Habitat protection for bird species and fauna.
Special Management/ Pollution Control	Areas that are badly polluted and require special management emphasis <ul style="list-style-type: none"> • Yangebup Lake (E shore) • Bibra Lake/ SE corner) 	Controlling pollution source and examining current methods used to dispose of effluent. Continued monitoring of pollution from sources.

(Source: DPUD, 1992)

Other management plans for specific areas of the Beeliam Regional Park are currently being prepared by Consultants on behalf of CALM.

Areas within the Beeliam Regional Park which are managed by the City of Cockburn are:

- Manning Lake
- North Lake Sporting Complex
- Market Garden Swamps
- Lake Coogee
- Bibra Lake
- Yangebup Lake

The Council has current management plans in place for the Market Garden Swamps, Lake Coogee and Yangebup Lake.

4.5.3 Jandakot Botanic Park

The Jandakot Botanic Park extends beyond the district of the City of Cockburn, to include a total area of about 3800 hectares. Region Open Space within the district, included in the park, are: Reserves 1820, 8129 and 38912 on the corner of Armadale and Warton Roads, Banjup; the Denis De Young Reserve and Lots Pt 124, Pt 125 and Reserve 33291 in Jandakot. The Botanic Park was established to protect banksia woodland and wetlands of the Bassendean System and the underlying groundwater resource. (MFP, 1995)

The Council has a current management plan for the Denis De Young Reserve, whereas the other reserves in the Park are currently being mined for sand or are the subject of claims, or are still held in private ownership.

Other studies relevant to the future management of Regional Open Space undertaken by the Council are the 'Natural Reserves Management Study' (Semeniuk, 1997). This study covered local open space with conservation values and selected Region Open Space areas managed by the Council. A series of management recommendations were made in the Study for the Henderson Open Space, Lake Mount Brown, Brownman Swamps, Reserve 1820, Manning Lake, Coogee Beach and Bibra Lake.

4.5.4 Open Space Linkages

A Trails Study has examined the potential opportunities to provide further recreational linkages between Region and local open space areas. The study has recommended minor improvements to the existing Coastal dual use path and Davilak Heritage Trail near Manning Lake. Significant potential exists for the development of new recreational links in the form of walk and cycle paths and bridle trails, as illustrated on the Trails Master Plan prepared by Consultants (refer Figure 9). The extensive area of Region Open Space, supplemented by disused railway reserves and local open space creates a number of opportunities for open space links. There is a need to preserve such linkages and strategically locate local open space through the subdivision process to develop the proposed network of trails. The recommended future network will cost an estimated \$1.6 million and comprises the:

1. Armadale to Fremantle Disused Railway Reserve Trail;
2. Ridge and Lakes Trail;
3. Beeliar Lakes Trail;
4. Tramway Reserve Trail;
5. Kogolup Trail; and
6. Banjup Bridle Trail.

4.5.5 Coastal Management

Consultants for the Council recently prepared an 'Integrated Coastal Management Strategy' (Ecoscape / Coastwise, 1999). The strategy examined the coastal Region Open Space areas within the district and synthesised the impacts of a number of adjacent major residential, industrial and Main Roads planning proposals. Coastal processes and values are described and the report presents the constraints and opportunities relevant to the future recreational use of the coast.

The significant planning implications and issues are described as:

1. The changing land use character of much of the northern section of coastline from predominantly industrial to public recreational use;
2. A consequential need to provide more public recreational facilities;
3. Expansion of the Jervoise Bay marine industry area has the potential to cause conflict with existing recreational uses and major community concern regarding loss of public access;

4. Significant increase in the recreational demand on the coastal areas resulting from an estimated doubling over time of the primary population catchment. That is, the population of the municipalities of Fremantle, Cockburn and Kwinana is projected to increase from 104,000 to 204,000 over the next 30 or so years. The study identifies that there is currently an adequate supply of carparking to meet future recreational parking demand.

4.5.6 Adequacy of Open Space

The City of Cockburn is well endowed with Region Open Space by comparison with the rest of the Perth Metropolitan Area. The current supply of local open space exceeds the traditional Stephenson-Hepburn report standard of 33.6m² per person.

There is an average of 79 m² of local open space per person in the City of Cockburn. However, on a Ward basis there are vast differences. In the predominantly residential North and West Wards the average area per person is 47m² and 24 m² per person respectively whilst in the rural East Ward the figure rises to 147 m² per person. The projected local open space per person is based on a predicted maximum population of each Ward, however it does not take account of any additional local open space provision in future subdivisions. The following table outlines the amount of region and local open space per person in each Ward.

TABLE 15 - REGION AND LOCAL OPEN SPACE PROVIDED BY WARD

Ward	Pop'n	R.O.S. Per Person m ²	L.O.S. Per Person m ^s	Total Open Space Per Person m ^s	Projected Pop'n	Projected L.O.S. Per Person m ²	Projected R.O.S. Per Person m ²
North	13,275	339.6	47.2	386.8	16,556	37.8	272.3
South	7,492	1571.9	130.6	1702.5	29,766	32.9	395.6
East	10,477	432.1	147.5	579.6	40,308	38.3	112.3
West	14,826	101.8	24.4	126.2	12,375	29.2	122.0
Coastal	10,853	767.0	92.7	859.7	23,374	43.0	356.1
Total	56,923	538.4	79.4	617.7	122,379	36.9	250.4

(Source: ERM Mitchell McCotter, 1999)

The provision of Regional Open Space is currently 538m² per person and will ultimately be 250m² per person.

(a) Active Open Space Provision

The City of Cockburn currently has 21 active reserves located on local open space. The existing distribution of, and the future requirements for, active reserves is illustrated on the following table.

TABLE 16 - FUTURE REQUIREMENTS FOR ACTIVE OPEN SPACE

Ward	Existing No. of Active Reserves	Existing Population	Existing Ratio	Future Population	Future Ratio	Additional Active Reserves Required (2)
Coastal	6	10,853	1/1,809	23,374	1/3,896	Nil
South	2 (1)	7,492	1/3,746	29,766	1/14,883	5
East	4 (1)	10,477	1/2,095	40,308	1/8,062	6
North	4	13,275	1/3,319	16,556	1/4,139	Nil
West	5	14,826	1/2,965	12,375	1/2,475	Nil (-2)
Total	21	56,923				

- Notes:
1. Includes Reserves under construction
 2. Reserves could be allocated individually or amalgamated into larger reserves (eg - 2 x 4 ha. = 8 ha.)

The adopted quantitative standard for the provision of 'neighbourhood' level active reserves is one four hectare reserve to serve 4,000 persons (Thomsons Lake Urban Design Study, 1998). Table 16 outlines the future requirements of active reserves within the district using this standard. Based on the projected Ward population, the South and East Wards will require the provision of more active reserves in order to achieve the quantitative standard, whilst the current provision of active reserves in the Coastal, North and West Wards complies.

The Council has established an overall strategic plan for the provision of future active reserves in the East Ward. This identifies 6 new active reserves to be provided for in current structure plans, including facilities to be provided in the Thomsons Lake Regional Centre. (ERM Mitchell McCotter, 1999)

Structure planning for the East Ward is currently being progressed via the 'Southern Suburbs Districts Structure Plan'. This seeks to resolve a balance between active and passive recreation and conservation needs. Active reserves are generally co-located with Primary Schools, to facilitate joint use and management. Wetland and drainage requirements will need to be excluded from the standard 10% subdivisional requirement to ensure that an acceptable area of open space is provided.

(b) Passive Open Space Provision

Consultants for the Council recently completed an overall Open Space Strategy based on a qualitative survey of 170 local open space reserves (ERM Mitchell McCotter, 1999). This involved categorising the function of each reserve and assigning an amenity value, using criteria for 'landscape', 'conservation', 'active recreation' and 'passive recreation'.

The study recommended improvements to 45 of the reserves surveyed, identified as having a 'low value' for all of these criteria. The majority of these recommendations were directed toward improving the passive recreational value of smaller parks. This is particularly evident in West Ward, where there is a significant number of small, long established reserves. These are now in need of reticulation, improved landscaping and facilities to increase their value to the local community.

The overall balance of active to passive recreation reserves is considered adequate, particularly given the substantial areas within Region Open Space that have a passive recreation function.

4.6 COMMUNITY FACILITIES

Community Services are provided by a range of government and non-government service providers. An overview of community facilities within the district, with an emphasis on the 'fixed' infrastructure provided by State and local government is as follows.

4.6.1 Neighbourhood and Local Services

Local Community Centres typically provide the base for neighbourhood level services and activities such as:

- Local meeting facilities/Community Halls;
- Child Health Clinic/Immunisation Service;
- Aged and Youth Support Services.

Established Community Centres and Services include:

- Cockburn Senior Citizens Centre, Hamilton Hill
- Memorial Hall, Hamilton Hill
- Coogee Community Hall
- Civic Centre, Spearwood
- Ottey Family Centre, South Lake
- Southwell Community Centre, Hamilton Hill
- South Coogee Agricultural Hall, Munster
- Wattleup Community Hall
- Coolbellup Community Hall
- Community Hall, Bibra Lake
- Atwell Community Centre
- Banjup Community Hall
- Coolbellup Resource Centre
- Day Care Centre, South Lake
- Yangebup Family Centre
- Aged/Disabled Services Centre, Hamilton Hill
- Winterfold Child Care Centre, Coolbellup
- Aboriginal Youth Program Centre, Spearwood

The neighbourhood catchments and planned allocation of facilities are shown on Figures 10 and 11.

Undeveloped local community centre sites are located at the Lakes Shopping Centre, the Gateways Shopping Centre, and at The Grange, Beeliar. Planned community sites are to be located at the corner of Hammond and Bartram Roads, within the Council reserve on Hammond Road and in the vicinity of Gaebler Road, east and west of the Freeway.

Sites are generally ceded via the subdivision process as part of the 10% POS contribution. Community centre buildings are often provided through a combination of State and local government funding. They are usually designed to be multi-functional to accommodate a range of facilities and services and include the joint development of facilities between Council and the Department of Family and Children's Services.

Fundamental to the planning approach for community service provision is the development of community services infrastructure utilising urban design techniques to encourage and facilitate the development of community precincts which are pedestrian focused and which have a catchment threshold for the services and facilities provided.

For future planning, Council has adopted a 'model' for neighbourhood centres which proposes the development of multi-functional buildings. Such buildings contain 1000m² floorspace to house a range of local and neighbourhood services and require sites of between 4000m² and 5000m² in area. Suitable neighbourhood community sites are identified in the Atwell/Success locality as part of the Southern Suburbs District Structure Plan.

4.6.2 Regional and District Services

Examples of Regional and District level community facilities are:-

- District/Family Hospital
- TAFE College
- Police Station
- Regional Sports Complex
- Ambulance Station
- Centrelink Office
- Fire Station
- Crisis Accommodation Services
 - Women's Refuge
 - Youth Refuge

The distribution of existing and likely future Regional and District facilities is shown on Figures 12 and 13.

In the future, population estimates suggest a need for a family hospital to service the Atwell/Success/Beeliar localities.

In terms of existing services, Cockburn residents access regional hospital facilities in Fremantle and St John of God, Murdoch. The South Fremantle TAFE and North Lake TAFE are located just beyond the northern boundary of Cockburn.

A 'Marine Skills Training Centre' TAFE annexe is currently located in Henderson. Plans are being prepared for the development of a new TAFE facility adjacent to Lake Coogee which will be the corner stone of the proposed Marine Industries Technology Park.

There is an existing Police Station at Spearwood, with a new facility being planned as part of the Thomsons Lake Regional Centre. A Regional Sporting Complex is also planned to form part of this Centre. A 'Centrelink' office is established adjacent to the Phoenix Park District Shopping Centre in Spearwood.

The Spearwood Fire Station is due to be relocated to a new site at the corner of Hammond Road and Bartram Road. Youth refuge services are provided within the district.

For the planning of future district level facilities within the Thomsons Lake Regional Centre, the following planning criteria have been established:

Facilities	Floor Area	Site Area
Council Regional Precinct	6000m ²	2 ha
<ul style="list-style-type: none"> • Library (40m²/1000pop'n) • Administration • Community Hall • Office Space • Arts/Cultural Centre • Toy Library 		
State Government Precinct	2000m ²	1 ha
<ul style="list-style-type: none"> • Regional Community Health • District Family and Children's Services 		
HACC Facilities	1000m ²	3000m ²
Senior Citizens Centre	700m ²	2000m ²
Community Based Training Centre (eg Skillshare)	700m ²	3000m ²

4.6.3 Education Facilities

The City of Cockburn prepared an inventory of Education facilities in 1997. The existing provision of public and private primary and secondary schools is shown on Figure 14. Recent additions to the primary schools within the district are Atwell, Port Community School, Carrington Street and St Lukes, Beeliar. A new Catholic High School has commenced construction on Hammond Road, Success.

The proposed primary school catchments within the Atwell/ Success localities are illustrated on Figure 15. The Education Department is currently reviewing the need for a previously planned high school site in Gaebler Road and primary school sites in Packham and Yangebup.

4.7 RURAL AREAS

4.7.1 Distribution

Under the MRS, there are only two rural zones. One is confined to the north-western corner of the Jandakot Airport and the other is the south-west sector of the district in the localities of Munster and Wattleup.

The most extensive area of rural zoned land, was until 1998 located across the east of the district, but has been removed from the MRS and replaced with the Rural - Water Protection Zone. In this new zone, the only permitted (P) uses under the Jandakot Groundwater Protection Policy (SPP No. 6) are cattery, dwelling, fodder and pasture, hobby farm and public recreation. All other uses are not permitted without the support of the Water and Rivers Commission and Council approval.

The rural land adjacent to the Jandakot Airport is included in the draft Jandakot Airport Master Plan, and it shows all of this land for future industrial/commercial development. The land is owned by the Federal Government and is leased to the airport operator Jandakot Airport Holdings.

The rural land in the south-western sector is currently used for quarrying, horticulture, hobby farming and rural living. The area comprises in excess of 310 lots, of which 60% are less than 2 hectares in area.

4.7.2 Character and Use

The rural land north-west of Jandakot Airport is elevated undisturbed bushland. It falls outside the System Six boundary which applies to the Jandakot Airport land.

The rural land in the south-west sector of the district in Munster and Wattleup is used as follows:-

TABLE 17 - RURAL USES IN MUNSTER AND WATTLEUP

Use	No. Lots	Percentage
• Horticultural / rural	109	35%
• Rural Living	158	51%
• Quarrying	10	3%
• Vacant / uncleared	34	11%
Total	311 Lots	100%

The atlas of Western Australian Agricultural Statistics published by Agriculture Western Australia in June 1996 provides details of different agricultural activities and lists the top 10 local governments in the State for each activity. The City of Cockburn is within the top ten for the following activities:-

TABLE 18 - RURAL PRODUCTION IN COCKBURN

Activity in Cockburn	Ranking	Value
Poultry Meat	8	1,306,549
Eggs	8	1,590,340
Vegetables	8	6,418,699
Cut Flowers	7	933,734
Cultivated Turf	7	298,730
<i>(Agriculture WA June 1996)</i>		\$10,548,052

A major portion of the agricultural activities outlined above are located within the area of the City of Cockburn which is located in the south-western sector and inside the Kwinana Air Quality (EPP) Buffer. The importance and contribution of the agricultural industry in Cockburn should be recognised and protected in the same way as the Swan Valley Viticulture Area. The productive Spearwood soil complex is a limited resource and cannot be replaced elsewhere in the Metropolitan Area. There are also a large number of viable commercial agriculture businesses that make a significant contribution to the Perth market.

Under Clause 32 of the MRS, the Council must refer the following applications for land in the Rural Zone to the WAPC for a determination, namely:-

- poultry farms
- extractive industries
- rural uses inconsistent with the purpose of the rural zone
- development of regional or State significance

Therefore land use within the rural zone is controlled by both the State and the local government.

4.7.3 Subdivision

In 1977, the State Government produced a Rural Small-Holdings Policy Study, which showed the minimum rural lot size for Cockburn as 8 hectares.

The Metropolitan Rural Policy published in 1994 (draft) showed the Munster and Wattleup areas having high to fair capability for rural-residential development. The policy suggested that the minimum lot size to be 2 hectares and with reticulated water lots could be as small as 1 hectare. These recommendations were made in the full knowledge of the fact that most of this land is within the Kwinana Air Quality (EPP) Buffer.

Despite this, however, the scope for further subdivision in the area is severely limited, if the minimum lot size is 2 hectares.

TABLE 19 - RURAL LOT SIZES IN MUNSTER AND WATTLEUP

Lot Sizes	No. Lots	Percentage
Under 1 ha	32	10.2%
1 - 2 ha	156	50.1%
2 - 3 ha	97	31.3%
3 - 4 ha	15	4.5%
Over 4 ha	12	3.9%
Total	311	100%

} 96.1%

Subdivision in the rural zone is determined by the WAPC in accordance with its policies and guidelines.

4.7.4 Trends and Future

The trend is the growing demand for rural-residential lots for retreat living and hobby farming. To accommodate this in the past, rural land has been rezoned to special rural to enable subdivision to take place. Over time the small rural lots have become less viable for horticulture, and therefore are sold for alternative life styles.

There is a growing trend towards small rural lots being used for non-rural businesses, such as truck parking, storage and other commercial activities which require space or separation from adjoining residences. The small rural lot also allows the owners to live on the property with their business, without the high costs associated with having to own or rent a commercial property. Local government finds it difficult to combat this, due to a number of reasons not the least of which is the lack of staff to carry out the necessary inspections and the inadequacy of the laws to achieve successful prosecution. The trend of replacing productive horticulture land with rural-residential and non-rural businesses will probably continue.

The future of rural land for commercial production within the City of Cockburn is extremely poor.

In respect to the rural land in the north-western corner of Jandakot Airport, this undisturbed attractive bushland is likely to be cleared for industrial and commercial development as proposed by the draft Jandakot Airport Master Plan.

The existing rural activities located within the Rural - Water Protection Zone are severely constrained by the provisions of the Jandakot Groundwater Protection Policy (SPP No. 6), and in any event, are located on poor sandy soils which are not suited to rural production.

The rural land in the south-western sector of the district in Munster and Wattleup is currently being proposed under the Fremantle and Rockingham Regional Industrial Strategy (FRIARS) to be re-zoned to Industrial under the MRS. In addition, the relevant draft Basic Raw Materials Policy (SPP No. 10) shows a significant area of land in this locality requiring protection as a prime limestone resource area.

Given this situation, there may be little or no productive rural land remaining in Cockburn by 2026.

In fact in the 1960's, the Spearwood Valley was one of the most important market gardening areas in Perth. The re-zoning of this land under the MRS from rural to urban in the 1980's saw its demise, as landowners took the opportunity to superannuate their land by subdividing into residential allotments.

The increase in land values, as the metropolitan urban area expands, will make rural land within the Metropolitan Area more difficult to retain unless it is constrained by groundwater protection or industrial buffers.

4.7.5 Jandakot Groundwater Protection Policy

The MRS was amended in 1998 to re-zone 2349 hectares (15.8%) of the district from Rural to Rural - Water protection Zone. Most of the land affected is used for rural-residential, agistment, grazing, and sand mining. The purpose of the zone is to protect the quality and quantity of underground water which is contained in the Jandakot Mound. It is likely that the end use for all this area will be rural-residential and hobby farming.

Essentially, land use and development in this zone, is controlled by the Water and Rivers Commission, the Environmental Protection Authority, Department of Minerals and Energy and the WAPC. The Council's local scheme will have to adopt a zone to be consistent with the MRS and include provisions in the text to enforce the Jandakot Groundwater Protection Policy. Under the proposed draft MST Guidelines, the most suitable zone for the local scheme is the "Resource Zone".

4.8 ENVIRONMENT

4.8.1 Landform and Landscape

The City of Cockburn contains a variety of landform and landscape features which are depicted on Figure 17. These vary substantially from west to east across the district, with the western portion being dominated by the nearshore and coastal landforms which grade into the Spearwood and Bassendean Dune Systems. The Spearwood area contains a prominent western dune ridge running north to south, with the Spearwood valley to the east, containing the eastern chain of the Beelihar wetlands system. The Spearwood system begins an easterly transition into the Jandakot System with the western chain of Beelihar wetlands located within this transitional zone. East of this zone the landform becomes generally flat with an undulating low dunal system, which is interspersed with damplands and wetlands within inter-dunal swales. Each of these different landform units has different vegetation associations and complexes which help to create a varied and rich local landscape character within Cockburn.

4.8.2 Vegetation

Several native vegetation complexes exist within the City of Cockburn which are associated with the major landform units. These complexes are outlined in the table below.

TABLE 19 - LAND FORM COMPLEXES

Complex	Landform Unit	Typical Flora
Quindalup	Quindalup	Tuart, Rottnest Island Pine
Cottesloe Central and South	Spearwood	Coastal Heath, Tuart Woodland
Karrakatta Central and South	Spearwood	Jarrah/Marri/Banksia Woodland
Bassendean Central and South	Bassendean	Jarrah-Banksia, Jarrah-Marri Woodland

Approximately 30% of the original remnant vegetation remains with the City which equates to an area of approximately 4,700 hectares. Much of this vegetation is located within the southern and eastern portions of the district with the Cottesloe central and south, Herdsman and Bassendean central and south vegetation complexes best represented. Limited areas of Karrakatta and Quindalup complexes remain. The remaining vegetation is extremely important from a local landscape perspective, as well as providing substantial biodiversity value and habitat for local native fauna, including bandicoots, kangaroos, possums, bats and a range of reptile and avian species. There are a number of populations of rare and priority flora which exist in the district, together with approximately 10 rare or priority fauna species.

A number of areas of remnant vegetation within the district have been nominated as regionally significant under the Bushplan and Regional Reservations System. 18 sites within the City have been included within the draft Bushplan on the basis of their regional significance, including large areas of Woodman Point, Beelihar and Jandakot Regional Parks. In addition to this, substantial areas of locally significant vegetation occurs across the district on both private land and within conservation reserves vested within the district.

The protection of this remnant vegetation will be a significant challenge in the future as urban development expands. While vegetation identified as regionally significant generally has a good level of protection, major challenges exist in protecting and conserving areas of locally significant vegetation. Opportunities exist through the structure planning and subdivisional planning processes to retain good representations of locally significant vegetation within the public open space system, subject to the support of the WAPC.

4.8.3 Wetlands

The district contains a significant number of wetlands which are depicted on Figure 18. Currently there is over 2,500 hectares of wetland which can be classified into three main groupings. The first of these is the western chain of the Beelihar wetlands which run north to south on the eastern side of the main Spearwood dune ridge. Wetlands within this chain include Manning Lake, Market Garden Swamps, Lake Coogee, Lake Mt Brown and Brownman Swamps. The majority of the wetlands within this chain are shallow and seasonal with several of the wetlands saline in character. To the east of this runs the eastern chain of the Beelihar wetlands.

This chain of wetlands is located within the depression between the Spearwood and Bassendean geomorphic units and runs in a north to south direction. This wetland chain includes North Lake, Bibra Lake, South Lake, Little Rush Lake, Yangebup Lake, Kogolup Lake, Thomsons Lake and Banganup Swamp. These wetlands are slightly deeper than those in the Western Beeliar chain and tend to be more permanent and contain fresh water year around.

Further to the east lies the Jandakot suite of wetlands which are typified by sumplands and damplands located within the Bassendean dune system. This area contains numerous wetlands which vary greatly in size. These wetlands are typically seasonal with some only holding standing water for limited periods.

A number of the wetlands have formal protection through the Swan Coastal Plain Lakes Environmental Protection Policy and have been included within Bushplan and Beeliar and Jandakot Regional Parks. Many other wetlands, in particular those of the Jandakot suite have been classified as conservation category by the Water and Rivers Commission, attracting a high level of informal protection whilst others are classified as resource enhancement and multiple use wetlands. These wetlands provide significant local landscape character as well as providing substantial local biodiversity and fauna habitat values. Wetlands are used extensively by terrestrial animals such as bandicoots and reptiles, as well as water birds. In particular, Thomsons Lake has been identified as a wetland of international significance because of its role in providing habitat for trans-migratory birds.

Unfortunately, many of the wetlands within the district have been degraded as a result of eutrophication, pollution, loss of fringing vegetation and changes to their hydrological regime as a result of surrounding land use activities and clearing within their catchments. This gives rise to algal blooms and midge problems in several lakes. Additionally, many of the original wetlands have been lost as a result of development and inappropriate setbacks between development and wetland areas. While many of the remaining wetlands have formal protection through their inclusion in Regional Parks or the Lakes EPP, many of the smaller wetlands within the Jandakot suite will be placed under considerable pressure as a result of future development and land use. Opportunities exist for protection of these areas through structure planning, subdivision design and public open space provisions, however substantial care will need to be taken to ensure the protection of water quality and the hydrological regime within these remaining wetlands. Careful ongoing management will also be required to protect wetland values in the long term, and to achieve this the Council will require the support of the WAPC and the EPA.

4.8.4 Groundwater Catchment

The Jandakot Underground Water Pollution Control Area (UWPCA) is located in the east of the district. The UWPCA occupies an area of more than 4,000 hectares within the City and protects groundwater within the Jandakot Groundwater Mound. Water from the overall Jandakot mound is extracted by the Water Corporation as part of the Perth Metropolitan water supply system. The overall mound supplies approximately 3% of the Perth region's current water sources. In order to protect the quality of water within the Jandakot UWPCA, the State Government has implemented a number of Policies and actions aimed at managing land use within the area. These include the proclamation of the UWPCA, the recent review of its boundaries and the designation of areas of Priority 1, 2 and 3 within the UWPCA. Additionally, the Government recently rezoned the Jandakot UWPCA under the MRS to the Rural Groundwater Catchment Protection zone and included in the region open space reserves in the Water Catchments reservation.

This has recently been supplemented by the Jandakot Groundwater Protection Statement of Planning Policy No. 6 which provides more detailed guidance on land use and subdivision within the UWPCA. The provisions of the MRS amendment and the SPP are currently being incorporated into the existing local scheme.

The key implication for land use of the Jandakot UWPCA relate to the restrictions on land use and subdivision which apply through these zonings and provisions of the SPP. These restrictions place constraints on future development within the area with land uses limited to those which are complementary to the groundwater protection objectives within the area.

4.8.5 Significant Features

A number of significant features are present within the district which add to its character and landscape. These features are mainly natural and include the coast, western dune ridge and in particular Mt Brown which is located in the south west corridor of the district. The Spearwood ridge and valley is also a prominent local feature as are the two chains of the Beelihar wetlands. Added to this, is the remnant native vegetation which is a significant local feature, particularly within the Beelihar wetland chains, the south-western portion of the City and throughout the eastern area including the various damplands and sumplands throughout Jandakot. The dunal systems across the district can also be considered a significant local feature as a result of their morphology, landscape value and the elevated views they provide over Cockburn, to the hills and in some areas, glimpses of the Perth CBD.

4.8.6 Buffers

A major issue within Cockburn relates to the presence of a number of industrial and utility based buffers. In the order of 60% of the City of Cockburn is affected by one or another buffers as shown below:-

TABLE 20 - BUFFERS WITHIN COCKBURN

	Area - Hectares
City of Cockburn Total Area	14,800.0
Kwinana EPP Buffer	2,131.9
Jandakot UWPCA	4,180.8
Midge Buffer	1,817.0
Watsonia Buffer	147.8
Water Corporation Buffers - Woodman Point	466.6
- Bartram Road	43.0
ANEF greater than 25 contours	454.9
WANG Gas Pipeline Buffer	188.2
UXO Buffer	1,099.5
Total Buffer Area	9,029.0
Percentage Buffer Area in Cockburn	61%

These buffers are depicted on Figure 18 and place a range of constraints on land use within the areas affected, depending on the nature and purpose of the buffer. The Kwinana EPP Buffer has a significant impact on land use within the south-west, while the Jandakot UWPCA places constraints on much of the eastern area.

Subdivision and rezoning for residential purposes within areas affected by the Midge Buffer around the eastern wetlands chain are also constrained as is residential development in the vicinity of the Watsonia and Water Corporation. Similar constraints apply in the areas around Jandakot Airport affected by the ANEF > 25 contours, while some constraints apply to residential and other development within the vicinity of the WANG gas line. The UXO buffer relates to unexploded ordnance within the south-western portion of the district and whilst not necessarily limiting land use, care needs to be taken with development in this area to ensure that the possibility of encountering unexploded ordnance is minimised.

Overall, these buffers have a substantial impact on land use options which would otherwise be suitable for these areas. Council has however, argued for some time, that a number of these buffers should be reviewed to ensure that their boundaries are scientifically based and that the extent and impact of buffer areas on land use is minimised.

4.8.7 Jandakot Airport

Jandakot Airport is located within the north-eastern corner of the City. The airport covers an area of 622 hectares and contains 3 runways as well as a number of airport related businesses and facilities. The airport is heavily utilised for flight training and by light commercial traffic. The airport has recently been leased to Jandakot Airport Holdings for 49 years from the Federal Government. The key issue associated with the airport, is noise on residences within the vicinity of the airport.

ANEF contours have been developed for the airport which provide guidance for land use planning in the vicinity. These contours are currently being reviewed by Air Services Australia. Residential development is not permitted within the 30 ANEF contour while development between the 25 - 30 ANEF contour is required to be consistent with the recommendations of Australian Standards for Aircraft Noise Intrusion for Building, Siting and Construction. Noise associated with the airport continues to be a major local issue with a number of studies being undertaken in relation to the measurement and management of aircraft noise from the facility. Future expansion of the airport is proposed to provide for a 4th runway and extensive commercial / industrial development.

4.8.8 Management

The Council has undertaken a number of strategic initiatives relating to the management of local environmental issues. These include the preparation of a State of Environment Report, commencement of an Agenda 21 Strategy, Greening Plan, Integrated Coastal Management Plan and the completion of a number of technical studies and management plans for natural areas. In addition to this, the Council has been active in environmental planning through ensuring that environmental issues are adequately addressed through structure and subdivisional planning, and in relation to major development proposals. The management of conservation areas vested in the Council as public open space is a high priority.

4.8.9 Future

A number of key challenges exist in balancing future development in the district with the protection of key environmental resources such as native vegetation, wetlands, the coast, groundwater, air quality and local landscape. Opportunities exist to guide development in a way that will lead to the protection and enhancement of these key assets for the Council, subject to the support of the WAPC and the EPA.

4.9 HERITAGE

4.9.1 Character

The character of the City of Cockburn is diverse, and is not only reflected in the built environment, but also in the natural, physical and cultural environment. The district is subject to development pressures, both industrial and residential, and it is imperative that Cockburn's unique character and heritage is not lost to "progress".

It is difficult to summarise Cockburn's heritage and character, due to its diversity. However, the locality has a variety of heritage buildings including the Fremantle Power Station, a number of the century weatherboard houses, limestone dwellings constructed in the 1920's, quarried from local quarries, and a variety of buildings indicating Cockburn's cultural past, including houses, halls, stables, schools and hotels. There are also numerous natural features such as the Beeliar Wetlands Chain, significant Tuart trees and Norfolk pines, and parklands which contribute to the interpretation of the character of Cockburn.

The Council is endeavouring to retain and maintain the character of the existing built and natural environments for future generations.

4.9.2 Municipal Inventory

In accordance with the provision of the Heritage Act of WA (1990), Council has prepared and adopted a Municipal Inventory of Heritage Places consisting of sixty three (63) places. The Inventory is not a statutory document, rather a list of places that the Cockburn community considers to be important as evidence of its history, and which should be recorded.

One of the major functions of the Inventory is to provide Council with a reliable source of information, relating to places of heritage value in the locality. The information assists Council to make decisions about the future development and management of these places. Figure 19 illustrates the extent of heritage places listed on the Inventory.

There are five (5) categories of places in the Inventory with different management recommendations for each. These categories do not all have the same implications for the owners, as places in the highest category (A) require the highest level of protection, management and assessment than do places in the lower categories. The Inventory is not a fixed document and can be amended, reviewed and updated as required from time to time.

4.9.3 Protection

District Zoning Scheme No. 2 - Clause 5.8 - District Heritage (Significant Places), provides Council with the statutory authority to enforce protection of listed places, and provides the statutory link to the Inventory.

Clause 5.8 provides for:-

- Establishment and maintenance of Heritage List of Place (Inventory)
- Adoption of a designated Heritage Area, and procedure involved
- Review of Heritage List
- Procedure for dealing with development application, and permitted uses
- Advice from external bodies
- Heritage Advisory Committee

- Conservation incentives

In considering any application for planning consent, in respect to any Heritage Significant Place listed in the Inventory, Council has regard for the historic, architectural, scientific, scenic or other values, and the desirability to retain those places in their present or restored original state, and each application is assessed on its individual merits.

4.10 TRANSPORT

4.10.1 Road Network

The regional road network is planned and determined by Main Roads WA in conjunction with the WAPC. The regional road network is set out in the MRS as Primary Regional Roads Reservations and Other Regional Roads Reservations.

These reserves are automatically included in local schemes.

The regional road network provides for through traffic and the distribution of local traffic within the district.

The regional road network has a north south orientation with a lesser emphasis on east west road linkages.

The CAH reserves within the district are:-

- Kwinana Freeway (north - south)
- Stock Road (north - south)
- Fremantle to Rockingham Highway (north - south)
- Roe Highway (east - west)

The Other Regional Roads Reservations are:-

- North Lake Road / Armadale Road
- Spearwood Avenue
- Beeliar Drive
- Hammond Road
- Russell Road

Figure 20 illustrates current proposals and construction timetables for extensions to the regional road network and public transport facilities.

The residential collector road network has resulted from structure planning and subdivision designs as new suburbs are developed. This is an ongoing process. Road networks are planned and designed in accordance with State Policy and Structure Plans and subdivisions are approved by the State. Therefore it is assumed that the existing and proposed road network for Cockburn is acceptable to the State agencies. Most of the district road network is planned and designed by town planning consultants on behalf of their client landowners. The role of the Council and the State is to scrutinise these plans and ensure that the plans are co-ordinated between different properties, a clear hierarchy is evident and the principles of the Community Design Code have been acknowledged.

4.10.2 Public Transport

Public transport in Cockburn is restricted to passenger buses operated by the State and private companies. The planning of the routes and the level of service is determined by the Department of Transport. The Council has a very limited role in public transportation and can, where appropriate, lobby the service providers to provide or improve services within the district.

About 3% of the workforce in Cockburn uses public transport, according to the 1996 ABS data. The Council is keen to promote the use of public transport to reduce the reliance on private car travel to travel to work.

Currently there are no passenger rail services within the City of Cockburn.

Existing bus routes are shown on Figure 21. Bus routes provide a high level of service in the established and inner suburbs of Cockburn where services converge on Fremantle and towards the Perth CBD. In the newly developing residential areas, services are not as effective as they tend to follow demand.

In the Council's community survey conducted in December 1997, it was found that 71% of the respondents rated public transport as important or very important and of these 41% were not satisfied with the service. They thought that the Council should be doing more to improve the level of services, particularly in the South and East Wards of the district.

The Council is limited to lobbying the State Government and local members of Parliament to improve the level of public transport services in the City of Cockburn.

The Council has, however, adopted the Community Design Code as a Policy, in an endeavour to apply the principles to redevelopment and development planning within the district, which includes designing for public transport routes and catchments.

4.10.3 Cycling and Walking

According to the ABS information for 1996, around 1% and 2% of the workforce either rode a bicycle or walked to work respectively.

The Council installs dual use footpaths throughout the district and bicycle routes in accordance with an overall bicycle and pathway network plan. This planning has been undertaken in consultation with the support of Bikewest. Dual use paths are retro-fitted into the older suburbs and new paths are a recommended condition to be imposed on new subdivisions as appropriate.

It is envisaged that as part of the proposed TPS No. 3, development standards will be derived for the provision of bicycle racks for certain landuse types. The Council is keen to foster the use of alternative modes of travel in the district for community recreation and leisure.

Figures 22 and 23 illustrate the existing and planned network of bicycle paths in the district.

4.10.4 Jandakot Airport

Jandakot Airport is a major Commonwealth facility located in the north-east corner of the district.

The airport is owned by the Federal Government and in June 1998 was leased for 49 years to Jandakot Airport Holdings Pty Ltd (JAH) a private company charged with the responsibility of operating, managing and developing the airport. The area of land controlled by the Airport is 622 hectares and under the MRS is in part reserved for public purposes (CG) and the balance is zoned rural. Currently there are in the order of 300,000 aircraft movements per year at the airport. It is expected that by 2018/19 the movements will increase to around 470,000.

In April 1986, the Jandakot Airport Master Plan was published by the Department of Aviation, and has been used as the plan for the development and management of the airport. As part of the privatisation of the operation of the airport to JAH in 1998, it was a requirement that the new airport operator prepare a new Master Plan for the airport. In February 1999 a "Preliminary Draft Master Plan and Environmental Strategy" was published by JAH for public comment. The public comment period closed on 24 May 1999. The Master Plan report prepared by Sinclair Knight Merz on behalf of JAH is comprehensive and provides for limited development of the airport property for commercial use, a possible 4th runway as provided for in the current plan and the retention of bushland areas around the perimeter of the airfield.

The airport is included in System 6 and is affected in some parts by the Jandakot Groundwater Protection Policy (SPP No. 6).

Land in the ownership of the Federal Government is exempt from State and local laws, and this presents some potential difficulties in the planning and development of the airport land surplus to aviation requirements. It is necessary that a protocol be established to ensure that there are arrangements in place for the State and the Council to be involved in proposals for and decisions relating to the future of the airport.

The airport because of its location and high level of use, as the State's second general aviation airport, impacts on the adjoining rural and residential areas in terms of development potential, land use and amenity. The flight paths and training circuits need to be managed by JAH to ensure that aircraft noise is minimised and confined to those areas within the published ANEF contours. In the interests of residents living in the rural, rural residential and residential areas adjoining and near to the airport the Council monitors the noise, erects signs in the vicinity advising existing and future residents of the noise potential and where appropriate recommends that memorials be placed on the titles of subdivided lots to ensure purchasers are aware of the airport and its potential impacts.

4.10.5 Transport Planning

Transport planning is undertaken by the Department of Transport, Main Roads WA and the Ministry for Planning.

The designated truck routes within the district for permit vehicles are:-

- Armadale Road
- Beeliar Drive
- Cockburn Road
- Kwinana Freeway
- North Lake Road
- Phoenix Road
- Rockingham Road
- Russell Road
- Stock Road
- Warton Road

Local government is not directly involved in transport planning, and usually only provides an advisory role. Transport planning is commonly confined to public transportation and the region road network, namely the controlled access highways and the important regional roads.

The Council is involved in the preparation of structure plans within the district which "fills-in" the road network within the regional road framework, providing for local distribution and access roads, generally in accordance with the WAPC Residential Roads Policy DC 2.6, published in June 1998.

In addition the Council utilises the Community Design Code for road planning by reference to Element 1 - Community Design and Element 2 - Movement Network. These provide an acceptable basis for preparing structure plans for the new urban areas within the district.

Transportation and land use are inter-related and therefore it is essential that planning within the district is undertaken in such a way as to achieve this.

4.11 UTILITIES

4.11.1 Sewerage

The suburbs of Hamilton Hill, Spearwood and Coolbellup are being sewered by the State Government under the Sewer Infill Programme. Areas which have been connected to sewer and which are proposed to be connected are identified on the Water Corporation plan (March, 1999) included as Figure 24. Extension of sewer infrastructure in these suburbs provides some impetus for residential redevelopment and, in some areas, a review of residential densities may follow the completion of the programme. The extension of sewer to Coolbellup has been brought forward to coincide with the 'New Living' programme for the suburb being undertaken by the State Government. Other residential localities, namely Coogee (with the exception of the old Coogee townsite), Bibra Lake, Leeming, Munster, Beeliar, Jandakot, Success and Atwell are sewered.

The majority of industrial localities are currently unsewered. Proposed trunk infrastructure extensions in Jandakot will enable the existing Jandakot industrial areas to be sewered in the future. Larger sites within the Bibra Lake industrial area (particularly the APM land holding) will be provided with sewer via the subdivision process. The North Coogee industrial area and the Watsons factory in Spearwood are connected to sewer infrastructure designed specifically for food processing, seafood and other bio-product industries.

Regional wastewater treatment facilities located at Woodman Point are currently being upgraded. The Woodman Point plant has a substantial odour buffer which currently represents a constraint to residential subdivision in the Munster locality east of Lake Coogee. The treatment plant is to be upgraded at a cost of \$127 million in order to accommodate ultimate capacity from the Perth South catchment. This includes the extension of the Bibra Lake Main Sewer and construction of a new pumping station on the western side of Lake Coogee. The planned upgrading will ameliorate odour problems experienced around the existing Mayor Road pump station in the Packham Urban Development Area.

The major urban expansion areas are Yangebup / Beelias (Cells 6, 8, 9 and 10) and Atwell / Success which is subject of the Southern Suburbs District Structure Plan. Sewer does not present a major constraint to residential rezoning and subdivision, given the normal frontal extensions of sewer infrastructure, with developers being required to prefund works if necessary. Some temporary facilities may be required.

4.11.2 Water Supply

Reticulated water supply is currently provided to existing residential localities within the district. Special Rural and Rural properties are serviced by on-site potable groundwater bores or a rainwater supply. The urban expansion area of Success, between Bartram and Russell Roads can be serviced by linking to the Bartram Road Water Treatment plant. Extensions of distribution mains will be required as part of the normal subdivision process in the Atwell, Yangebup and Beelias localities.

The Bartram Road Water Treatment plant has a 340 metre odour and risk buffer which represents a constraint to residential subdivision.

A Water Corporation high level water supply reservoir is established south of Beelias (Cell 11) and west of Thomsons Lake.

The Jandakot Public Ground Water Supply Area currently contributes approximately 3% of the metropolitan public scheme water supply. Private abstraction of this groundwater resource is also substantial, supporting a range of industrial, rural, special rural and domestic uses. The Stage 1 public supply borefield has been in operation since 1979. Statutory protection of the groundwater resource is provided through a range of measures, including Bylaw and Licensing provisions for the Jandakot Underground Water Pollution Control Area; Statement of Planning Policy No. 6; and the Rural Groundwater Catchment Protection Zone implemented via MRS Amendment No. 981/33. At local authority level, a corresponding amendment (No. 202) to Council's District Zoning Scheme No. 2 was recently advertised for public comment. This classifies the area as a 'Resource Zone' and these Scheme provisions will also be reflected in Town Planning Scheme No. 3.

4.11.3 Power

Existing residential localities are serviced with either aerial or underground supply depending upon the era in which subdivision occurred. For the past ten (10) years, Government Policy has required that new subdivisions incorporate a mandatory underground power supply.

Existing high voltage aerial mains blight the appearance of some local streetscapes within a number of the City's suburbs. The most significant is the 330 Kv transmission corridor adjacent to the Kwinana Freeway which presents a constraint to proposed residential subdivision in the Success area.

4.11.4 Gas

Alinta Gas's current policy on connecting gas distribution pipework in new subdivisions is based on the economic justification of individual proposals. Frontal extension of infrastructure is generally feasible.

There is a WANG gas transmission pipeline traversing the district along Power Avenue, Henderson Road and Miguel Road. This poses a constraint to most forms of development within the easement and the prescribed risk contour, particularly in Beeliar Cell 11.

4.11.5 Telecommunications

Telecommunications infrastructure includes a number of established exchanges, for example, Wattleup, Munster and Spearwood. Existing telecommunications services often require amplification to meet new demands. Telecommunications networks change constantly as frontal extensions to accommodate new subdivisions occur or as new technology is introduced. New cabling occurs underground, using subdivision trenching shared with other services.

Development of 'high impact' telecommunications infrastructure such as mobile phone and microwave towers is now subject to the Town Planning and Development Act. New infrastructure is constantly established by telecommunications carriers operating in a deregulated commercial environment. No published strategic plans for new infrastructure provision have been made available by the telecommunications carriers. Consequently, the Council is required to respond to individual applications for new mobile phone towers and other 'high impact' facilities on an individual basis. This is guided by Council Policy which has a presumption towards the establishment of 'high impact' facilities in non-residential zones.

4.11.6 District Drainage

There are two main drainage schemes in the City of Cockburn, namely, the South Jandakot area and the Lake Coogee / Packham area.

The South Jandakot catchment area includes substantial areas of high water table. The main drainage infrastructure is funded mainly from developer headworks contributions and comprises a series of main drains, nutrient stripping buffer lakes and pumping stations. The system is designed to ensure adequate urban drainage, maintain acceptable water quality and water levels for the Beeliar wetlands, and provide groundwater recharge of acceptable quality for the Jandakot Groundwater supply. The ultimate proposed outlet for the system is via the Southern Lakes Main Drain ocean outfall at Woodman Point.

The Lake Coogee / Packham main drainage area comprises approximately 650 hectares. The catchment drains to the Market Garden Swamps and Lake Coogee. The system consists of a series of nutrient-stripping basins at the perimeter of the wetlands. The wetlands are hydrologically connected, with water levels controlled by pumping. The system is designed for occasional overflows into Lake Coogee and ultimately to a proposed ocean outfall at Woodman Point. Council seeks to maintain the natural seasonal drying regime of the Market Garden Swamps in order to control potential midge and mosquito breeding environments and consequent adverse impacts on adjacent residential areas.

4.12 KEY ISSUES

The KEY planning issues in Cockburn are many and varied, and can only be successfully resolved by a co-operative approach between the Council and the State's planning and development agencies. The key issues are identified on Figure 25 and are outlined as follows:

4.12.1 Land Use Issues

(a) South Beach

There is a need to re-develop the Bradken, Westrail and Wesfarmers properties located at South Beach on the boundary between the Cities of Cockburn and Fremantle. The land is currently zoned Industrial under both the MRS and the local scheme. The area involved exceeds 17 hectares.

Following the vacation of the Bradken site early in 1998, the opportunity arose to investigate the possibility of alternative land use for this prime piece of coastal land in conjunction with the Westrail and the Wesfarmers properties immediately to the east. It is imperative that this land be re-zoned urban under the MRS to prevent it being used for general industrial uses, which, from a land use planning viewpoint this would be totally unacceptable.

By zoning the land urban, it achieves the following:-

- Certainty to the residents of South Fremantle that heavy industry will not encroach northward from the existing Robb Jetty Industrial Estate across Rollinson Road.
- The scope for a mix of uses and for the ability to achieve a land use transition from industry to residential.
- The ability to allow the existing land uses to remain, except for ANI Bradken.
- The potential to provide for residential development on the land.

There is little doubt that residential use represents the highest and best use for the land. It would also complement and reinforce the South Fremantle residential precinct and create a residential enclave around South Beach. Initiatives have already been taken to amend the MRS and the local scheme to facilitate the transformation of this beach front land into a medium density residential area.

(b) North Coogee

The North Coogee Agreement Area is being reviewed by the Ministry for Planning. The Council is keen to have options for the future use of this strategically important area evaluated, given that it is at a "gateway" into the district and also to the most picturesque piece of the metropolitan coast line.

The Council has been instrumental in bringing about the review and is hopeful that some or all of the North Coogee Area can be developed for residential purposes.

Unfortunately the industrial subdivisions are continuing to be constructed on the old Robb Jetty Abattoir site with lots being sold and developed primarily for light industrial uses. As this continues so it creates a greater impediment to using the land for higher and better uses. In recognition of this potential problem, the WAPC adopted a Clause 32 call-in under the Metropolitan Region Scheme in May 1999.

None of the industries established in the area need to be by the ocean. These premises occupy sites which have extensive ocean views.

This is a major issue for the Council that needs to be resolved quickly in the interests of the South Beach re-development, the re-use of the South Fremantle Power Station and the Port Catherine Marina project.

(c) South Fremantle Power Station

The South Fremantle Power Station is a large derelict building which requires a viable use to enable it to be re-developed, rehabilitated and re-used in the community interest. If a viable alternative use is not found, and the building remains on the State Heritage List, then it could become dilapidated and have a detrimental effect on a prime piece of the Cockburn coast.

(d) Watsonia Odour Buffer

Watsonia is a slaughter house for pigs, with the pig product being manufactured on-site for sale. The activity produces an odour, and the EPA have prescribed a 500 metre buffer around the site, to preclude incompatible uses, such as residential, being established in close proximity. To enable the Packham Development Area to be finalised, it is necessary for the odour buffer to be scientifically determined, and a final ODU contour established following improvements to odour control technology currently being undertaken. Structure planning and subdivision of the nearby land can then be undertaken which is an important issue for the landowners in Packham.

(e) Jervoise Bay Shipbuilding Estate

The Council supports the shipbuilding industry as a major employer in the district. However, the Council has resolved to strongly oppose the extension of the estate to accommodate the proposed Southern Harbour Project which will double the size of the waterside facilities at Jervoise Bay.

The Southern Harbour Project is a major undertaking, which requires the removal of a significant limestone ridge, the incorporation of more than 10 hectares of coastal cliffs which form part of System 6 and the filling in of 60 hectares of Jervoise Bay to provide for land backed wharfs.

This proposed project is a major community issue, because of concerns about water pollution, the loss of sea grass, the loss of conservation areas, the unknown cumulative effects of this and other projects on Cockburn Sound and the potential to restrict public access to the Sound and to the nearby waters.

The Federal and State Governments are committed to the project, because of the perceived economic benefits to the shipbuilding industry and to the State.

(f) Quarrying

Sand and limestone quarrying is a major land use activity in Cockburn as shown on Figure 26. Because of the inadequate enforcement provisions in the Town Planning and Development Act, it is often difficult to require quarry operators to comply with their conditions of approval.

Although quarrying in the district is mainly confined to privately owned rural zoned land, there have been applications to the Wardens Court for prospecting permits or mining licences in regional reserves both in the Jandakot Botanic Park and the Beeliar Regional Park. The Mining Act provides for the excavation of minerals from national, regional and district parks and is an issue that the Council is very concerned about, because of the risk to the natural heritage of Cockburn.

(g) Buffers

Industrial and land use buffers have a significant impact on the planning and development of the district. In fact 61% of the district is affected by buffers.

The issue for Council is that nearly all the buffers applying to industry, treatment works, poultry farms, and airport noise tend to be generic rather than scientifically based. The problem of the buffers is that they limit or even sterilise land use potential that may have accrued to private landowners, had the land not been affected by a buffer. The Council is of the view that this is unfair and the situation should be reviewed by the EPA as a matter of priority.

The Kwinana Air Quality Buffer affects the south-western sector of the district. It is understood that the boundaries of the buffer are to be reviewed in 1999. However, in 1997, the Fremantle Rockingham Industrial Area Regional Strategy (FRIARS) commenced, based on the existing buffer area. Although the study has not been completed a draft report released in 1998, and a final draft in 1999, indicate that most of the land within the buffer was proposed to be included in the MRS as industry. From a Council point of view this is considered premature, because the buffer edges could change and have a measurable effect on the land use patterns in Cockburn and Kwinana.

Of most concern is the fact that the FRIARS study promotes a preferred option, Option 4, which would see an extensive area east of Wattleup converted from rural to industrial zoning and require the relocation of residents from the Wattleup townsite. The Council is totally opposed to this proposal.

Buffers in the City of Cockburn are a major development and land use issue.

(h) The Australian Paper Manufacturers Land

The Australian Paper Manufacturer (APM), known as Amcor, was relocated under a State Agreement from Bayswater to a site on Phoenix Road in Bibra Lake in 1960. The site was around 160 hectares in area.

Although the site is zoned industrial, only the northern 45% has been developed for the manufacturing plant with the balance being largely retained in its natural state. Given the extent of the bushland remaining on the land and the fact that it abuts South Lake, which forms part of the Central wetland

chain, the Council's Planning Service was surprised that it was not included in Perth's Bush Plan released in December 1998.

Although the land is zoned industrial it is not well suited for this purpose because of limited road access and the fact that it is undulating and well timbered. The land would be best suited for residential development, but unfortunately it is affected by the Council's midge buffer, which extends 500 metres west of South Lake across the eastern half of the site. Other than the midge buffer, the land is not adversely affected by adjoining land uses. The APM Plant itself is established in a parkland cleared setting and to the west there are a series of woolstores and to the south the Cocos Park Industrial Area separated from the land by a disused railway reserve.

Because the APM property is such a large area of undisturbed bushland, it is likely to contain a number of native animal habitats. Before any works take place a fauna survey would need to be undertaken followed by the trapping and relocation of animals into other suitable and protected bushland reserves.

If fully developed for any of the possible uses for the land, it will have a significant impact on the surrounding road system. A road connection between North Lake Road and Sudlow Road to provide another east-west link midway between Phoenix Road and Yangebup Road, which are more than 3 kilometres apart will be required. A traffic study as part of the planning for the land would be a fundamental part of a structure plan report.

The Bibra Lake Industrial Zone has developed slowly. The uses in the "Bibra Lake Commercial Valley" have predominantly been quasi-commercial rather than industrial, with most of the industrial uses located south of Spearwood Avenue and in Cocos Park. Given this, together with the likely recommendations of the FRIARS study to zone extensive areas of additional industrial land, within the Kwinana Air Quality Buffer, it is doubtful that there will be a high demand for industrial uses for the land, particularly in the short to medium term.

It would be desirable for one or two large land users, such as an institutional use located on the land so that it was not subdivided into small lots, but used in a more site sensitive and beneficial way. For example the relocation of the Perth Zoo to this site would be highly desirable given the location and context of the site, its size and setting. Being adjacent to Adventure World the benefits of destination marketing could advantage both these theme parks. The Zoo currently attracts 600,000 visitors per year and Adventure World has around 300,000.

The issue for the Council is the detrimental impact that industrial development is likely to have on this attractive bushland area which provides an important backdrop to South Lake and the Beeliar Regional Park generally.

(i) The Railway Triangle

The railway triangle is located in Yangebup south of Barrington Street and north of Yangebup Road. This triangular piece of land is defined by the intersection of the Fremantle to Rockingham standard gauge railway line with the Rockingham to Kewdale line. Access to this land is confined to Erceg and Simper Road. The area of the land in the triangle is 14 hectares and is primarily owned by Homeswest. The land is zoned urban deferred under the

MRS and rural and light industry under the local scheme, and to date identifying a suitable use for the land has been elusive.

The Simper Road access currently joins Yangebup Road, but this will be closed following the cul-de-sacing of Yangebup Road at the railway line when Beeliar Drive is built under the recently constructed railway bridge. Access into the triangle will therefore be limited to Erceg Road which has industrial uses along it. This is not suitable as an approach to a possible residential area.

Other difficulties in making this area residential is the proximity of general industry, the noise and vibration from passing trains, and having only one level crossing access into this area, which is not desirable in the case of an emergency. The land is also isolated from facilities such as shops, schools and community services. The 14 hectares could provide for the creation of around 200 standard housing lots, which is too small a catchment for the provision of basic facilities.

The triangle should not be used for general industrial uses, because of existing and future housing areas planned for Yangebup. Appropriate uses could be for a large single land user such as an institution, cemetery, education facility, or sporting and recreation facilities.

A use that may be suitable is a residential composite zone which provides for residences and businesses to be established on common lots. Examples would be truck parking, marine dealers, plumbers yard, bobcat operators, builders yard, cottage industries, equipment servicing and similar low impact activities which would enable people to live and work in one area.

Homeswest are keen to find a suitable use for this highly constrained piece of land.

(j) Wattleup Townsite

This is an isolated community of 1600 people located on the southern boundary of the district.

The townsite is zoned urban under the MRS and residential and rural under the local scheme. The undeveloped portion of the townsite east of the standard gauge railway to Moylan Road which is zoned rural under the local scheme, has never been required to be brought into conformity with the MRS. The reason for this is that the townsite is within the Kwinana Air Quality Area Buffer and the State is opposed to increasing the resident population within it.

Development in Wattleup has been restricted for many years because of the limitations of the air quality buffer. However, over the past decade the air quality in the air buffer has improved significantly to be only about 1/3 of the World Health Organisation standard. Therefore, from a local residents perspective the air quality is acceptable and the townsite is a pleasant place to live.

The Wattleup shopping centre has declined with the closure of the service station and other businesses. Anecdotal evidence suggests that the extension of the Kwinana Freeway to Thomas Road in Kwinana has caused a 30% decline in the number of vehicles using Stock Road which has reduced passing trade.

Of greatest concern to residents is the lack of certainty about the future of the Wattleup townsite because of the limitations the Air Quality buffer imposed on the land in respect to development and property values. The FRIARS study has not clarified the situation, as the Government preferred option (No. 4) in the draft 1999 report proposes that the Wattleup townsite be rezoned to industry and residences may be purchased over time. If Option 4 is adopted it may take many years for it to be fully implemented, which will have significant implications for residents. The Council does not support this option.

(k) Jandakot Airport

Jandakot Airport is one of the busiest in Australia with around 300,000 movements per year. Jandakot Airport is a general aviation airport that is used for pilot training, recreational aviators and light commercial aircraft. It occupies about 622 hectares and is buffered from the adjoining rural areas by bushland. The airport is included in the System 6 Conservation Area, and this limits its scope for alternative uses.

In July 1998, the airport was leased to Jandakot Airport Holdings, a syndicate comprising a property developer, a sandmining operator, a construction company and an airport manager. The airport has been leased for 49 years with the scope to renew for another 49 years, according to newspaper reports. The decision to lease the airport is part of the Federal Governments privatisation programme for the sale and lease of Federal Airports across Australia. The new operator has prepared a master plan for the airport which is to be submitted to and approved by the Federal Minister for Transport. It is not clear what role the State or the local government has in this process. Despite this, however, Federal owned land is not bound by State planning and environmental laws and as the airport is leased, the private owners are also exempt.

The major issue for Council is that in the past there have been noise complaints from residents about training aircraft which do not fly within published flight circuits over the suburbs of Jandakot, Banjup, South Lake, Bibra Lake, North Lake and Leeming.

The Council needs to be recognised as a formal part of the airport planning and development process, by a protocol similar to that applying to Perth Airport. The Council seeks Air Services Australia to enforce compliance with flight paths in an endeavour to minimise noise nuisance for residents living in the vicinity.

(l) Rural Water Protection

In 1998 the MRS was amended to include a new zone, the Rural Water Protection Zone. This is supported by a Statement of Planning Policy No. 6, Jandakot Groundwater Protection Policy, also adopted in 1998. The Statement of Planning Policy, provides the basis for land use and development, monitoring and management of the zone so as to protect the quantity and quality of the Jandakot underground water mound which forms part of Perth's water supply.

The zone boundaries, together with the restrictive nature of the provisions of the Planning Policy, do not make for easy implementation of the new requirements.

The Council has initiated an amendment to District Zoning Scheme No. 2, to comply with the Metropolitan Region Scheme. The amendment was originally referred to as Amendment No. 188, but was unacceptable to the Ministry, and the Council was instructed to initiate a fresh amendment. The new amendment is No. 202 and is based on the Statement of Planning Policy No. 6.

4.12.2 Transportation Issues

(a) Fremantle Eastern Bypass

The Council does not support the construction of the Fremantle Eastern Bypass because of the potential problem of traffic leaving the bypass at its southern end and dispersing through Hamilton Hill and Spearwood using Cockburn Road, Hamilton Road, Rockingham Road and Forrest Road. This additional traffic in local streets would have a potential detrimental impact on the amenity of the Hamilton Hill and Spearwood localities.

If the Fremantle Eastern Bypass is to proceed then the Council is of the opinion that the bypass should be conceived as a total road system linking the Stirling Bridge in Fremantle to Stock Road in Hamilton Hill utilising the Roe Highway Reserve. By including the Roe Highway as part of the bypass it would minimise, if not eliminate, the potential impact on the local road system.

Stock Road is seen by the Council as the primary north-south arterial road through the district, west of the central wetland chain, onto which district and regional traffic should be directed. The Roe Highway reserve, west of Stock Road is almost entirely owned by the State, and through thoughtful design at the connection with the Fremantle Eastern Bypass, surplus road reserve land can be created which could be re-zoned and developed for residential use and become a source of construction funding. This is a significant issue for the Council that needs to be resolved in the interests of its ratepayers and in the promotion of a sustainable regional road network.

(b) Roe Highway

The Council supports the construction of the Roe Highway as part of the regional ring road system, however, the Council is concerned about two key issues associated with the construction of this road.

The first is the potential impact on North Lake, Bibra Lake and associated damplands north of Hope Road between Bibra Drive and Progress Drive. The Council is of the opinion that this section of the highway route should be re-aligned to follow the existing Hope Road reserve to utilise the existing crossing and thereby minimise the impact of the road on the wetland and park reserve. The design standard for the road between Bibra Drive and Progress Drive should be reduced to facilitate a "best fit" alignment based on environmental requirements. There is little doubt that when the Highway is commenced in 2005/6 between the Kwinana Freeway and the Fremantle Eastern Bypass, there will be a significant local community reaction that will need to be addressed through an innovative and environmentally acceptable solution if this part of the regional ring road is to be achieved.

The second is the current proposal to connect Bibra Drive into the Roe Highway and the likely impact that this could have on the residences in Bibra Lake and therefore is not supported. However, because of the lack of district road connections from the suburb of Bibra Lake to the regional road system it is necessary for Bibra Drive to at least connect into Farrington Road to enable traffic south of the Roe Highway to access northern destinations via the Kwinana Freeway.

This is an issue that needs to be resolved in the interests of both the local community and the State if the regional ring road is to be successfully completed with public support.

(c) Perth To Mandurah Rail Service

The proposal to provide a metro rail electric train service between Perth and Mandurah using, in part the Kwinana Freeway Reserve, is supported by the Council.

Currently it is proposed to complete the rail service to the Thomsons Lake Town Centre by 2005/6.

The Council supports the relocation of the rail into the Freeway median together with the proposal to have a park and ride stop at the Berrigan Drive junction, the Thomsons Lake Town Centre, the Russell Road junction and the Rowley Road junction. With a median rail alignment the stations should be located under the grade separated roads to provide easy pedestrian access to the platforms. At the Thomsons Lake Town Centre, the major stop within the City of Cockburn, the station should be located to gain the most direct and convenient access to the Gateways Shopping Centre, and the proposed town centre and bus transfer station. The station should be designed as a central and integral part of the planning and development of the shopping centre and town centre in accordance with State Government policy.

The issues to be resolved in relation to the Perth to Mandurah railway line as it affects the City of Cockburn, is the final design of the railway and the size and location of the railway stations and park 'n' ride facilities. This decision is fundamental to enable the planning of the existing and future urban areas located along the Kwinana Freeway corridor, to be undertaken.

(d) Mandurah To Fremantle Rail Service

Currently, it appears that the demand for a rail service connecting Mandurah to Fremantle is low and therefore not warranted, at least in the short to medium term. However, should a rail connection be contemplated in the long term the Council supports a connection branching off the Perth to Mandurah line at the Thomsons Lake Town Centre to follow the disused railway reserve via Bibra Lake to the Fremantle to Rockingham freight line on the coast.

This route is preferred to the alternative being considered by the Department of Transport which is to connect Fremantle to the Perth to Mandurah line using the Roe Highway. This alignment is not as efficient as the Council's preferred connection, it requires road and rail design requirements be co-ordinated, it will adversely impact on residents in Bibra Lake, it would need to cross the central wetland system, and require an additional dedicated reserve between the Fremantle Eastern Bypass and the coast, impacting Hollis Park.

In contrast the use of the existing disused railway reserve is a more efficient connection between Fremantle and Mandurah, the required gradients and radii exist, the reserve is already designated in the MRS, the reserve is largely in the ownership of Westrail and its operation will have a minimal impact on nearby residential areas such as South Lake. In addition, the disused rail reserve can better serve residential and employment centres away from the hinterland of the Fremantle CBD, where there is less competition from converging bus services and short CBD travel times.

The disused railway line provides the opportunity to establish a station adjacent to the junction of Berrigan Drive and North Lake Road to service South Lake and Yangebup residents, another at the southern boundary of the APM land to serve the Bibra Lake Industrial Estate, another at Rockingham Road where the service would intersect with the proposed Fremantle to Rockingham Transitway and the suburb of Spearwood and then on to the coast with possible stations at the proposed Port Catherine Marina and also at South Beach where residential re-development is being contemplated.

Between Fremantle and Rockingham Road and between the Thomsons Lake Town Centre and Mandurah, the metro railway line exists or will be in existence by the time the Fremantle to Mandurah connection is required. This represents a significant infrastructure saving compared to the Roe Highway alternative.

(e) Fremantle To Rockingham Highway

The proposal to extend the Fremantle Eastern Bypass south along the Cockburn coast as a Primary Regional Roads Reservation connecting Fremantle to Rockingham has formed part of the MRS for many years. Over time, however, the Council has determined that Stock Road should be the primary north-south arterial serving the western sector of the district, and that the proposed Fremantle to Rockingham Highway should be down graded to a coastal access road and tourist route rather than a major road separating residents from the public beaches.

In this context, the Council believes that Cockburn Road should not be promoted as a major through road but be designed as a divided dual carriageway. The road should have at grade intersections to enable visitors and residents to gain convenient access onto, from and across the road, so that it does not act as a major barrier to the coast. In an endeavour to down grade the perceived status of the Fremantle to Rockingham Highway the Council has in recent times referred to the road as the 'Cockburn Road re-alignment', and has promoted 'T' intersections at its northern end with the Fremantle Eastern Bypass and at its southern end at Stock Road to discourage through traffic.

Importantly, the Council was successful in gaining the Government's support to delete the Primary Regional Roads Reservation reserve south of Russell Road, so that it does not bisect the Beeliar Regional Park at Mt Brown or link directly into the Stock Road and Rowley Road intersection. This served to de-emphasise the Fremantle to Rockingham Highway in the regional network and by using Russell Road to connect to Stock Road caused the highway to become a primary east-west lateral road intersecting with the Kwinana Freeway. This tends to reinforce the east-west rather than the north-south function of the Cockburn Road re-alignment within the district road network. The deletion of the Primary Regional Roads Reservation from the Beeliar

Regional Park creates advantages to the Henderson Industrial Area in that greater road access can be gained into the estate and improved connectivity can be achieved between the marine support and the shipbuilding areas. Importantly, the integrity of the Beeliar Regional Park is maintained as an important conservation area and the Stock Road/Rowley Road intersection is simplified.

The northern end of the Primary Regional Roads Reservation is currently planned to follow the ridgeline east of the North Coogee industrial strip, where the road reserve is within the Manning Park Regional Reserve. Although the route is elevated with panoramic views to Cockburn Sound, it follows steeply undulating terrain which is unsuited to the construction of a major road because of cost and the visual impact on the ridgeline. Given this, the Council would prefer to keep the ridgeline intact, and use Cockburn Road as the alignment for a dual carriageway with direct, indirect or limited property access. As part of the review of the North Coogee Agreement, it will be possible to re-consider the alignment of the Fremantle to Rockingham Highway.

The Council supports the re-alignment of the highway east around the proposed Port Catherine Marina, provided the road does not breach the ridgeline and is mainly confined to the western slopes, with the balance of the Beeliar Regional Park to the east of the re-aligned road reserve being retained.

At this time, the Council has not determined its position in relation to the westerly extension of Spearwood Avenue from Hamilton Road to connect into the Fremantle to Rockingham Highway north of the Port Catherine Marina. The connection itself is not of concern because it would provide an important east-west connection between the western suburbs and the coast, but more related to the traffic impact such a connection could have on residences which have direct property access onto Spearwood Avenue in that section between Rockingham Road and Stock Road. It was unfortunate that at the time the residential subdivisions occurred in this part of Spearwood Avenue, that direct property access onto this divided dual carriageway which is shown in the MRS as an Other Regional Roads Reservation was not restricted.

The issue to be resolved is the finalisation of the function, status, alignment and design of the Fremantle to Rockingham Highway and Spearwood Avenue so that the planning of property and beach front access can be undertaken together with the standards for intersection spacings.

(f) Fremantle To Rockingham Transitway

The Department of Transport is currently planning a Transitway between the Fremantle CBD and the Rockingham Regional Centre, which passes through the Town of Kwinana and the City of Cockburn.

In Cockburn, the route enters the City in the north at the western end of Rockingham Road, following it to Stock Road where, after passing the Wattleup Townsite, travels south into Kwinana via the Fremantle to Rockingham Highway through Hope Valley. Within the City of Cockburn the Transitway is planned to have stops located near the Newmarket Hotel on Cockburn Road, at the junction of Rockingham Road and Carrington Street, Phoenix Road, Coleville Crescent, Edeline Street, Barrington Street, Troode Street at the St Jeromes School, Gardiner Avenue adjacent the planned

Marine Technology Park and the last stop will be on Stock Road to serve the Wattleup townsite.

It is planned that the Transitway be located on an established route, with the design of the route being based on light rail requirements and geometry. Initially the service will be provided by on-road buses with a specific bus and stop livery which will differentiate it from other bus services. As demand for the service increases, the buses could be operated within an exclusive use lane with stops located on either the kerb or a central median. In the long term, subject to demand, modal preferences and technology, the buses could be replaced in the exclusive use lanes with a light rail service.

The Council supports the investigation into the planned Transitway, but is concerned that the implementation of the plan may detrimentally affect the residences which front onto Rockingham Road. The landowners' concerns relate to property access, noise and vibration impacts, visual impacts and the trafficability of Rockingham Road, which could result in reduced property values. Generally, however, the Council supports initiatives to increase the accessibility and convenience of public transport for its residents and to reduce the dependence on private car usage.

During the planning of the Transitway, initiatives were taken by the Department of Commerce and Trade and Landcorp to commence the design of the Skills Training Centre in the Marine Industries Technology Park as the first stage of a long term project. Unfortunately, the Technology Park proponents had determined, through the adoption of a Structure Plan for the Jervoise Bay Southern Harbour Project by State Cabinet, to locate the training centre at the southern end of Lake Coogee on Russell Road. This meant that the proposed Transitway stop to specifically serve the Park was more than 800 metres from the Training Centre which is contrary to published State Government policy.

Given that the Skills Training Centre is a public investment of around \$10 million and the Transitway about \$150 million, the Council's Planning Services has been keen to bring the two plans together to achieve State objectives, and to produce a better outcome for students of the Training Centre and taxpayers generally. To co-locate this important public transit generator with a Transitway stop reflects sound planning principles and should be achieved during the planning phase of each project, if possible.

The primary issues confronting the Council in relation to the Transitway are the extent of the impacts on private property and the co-location of the Skills Training Centre and the Transitway stop.

5.0 STRATEGIC PLAN

5.1 ULTIMATE STRATEGIC DISTRICT PLAN

Early in 1996, it was determined that there was a need to prepare a generalised plan for the district so that the Council could announce its vision for the future planning and development of the district over the next 15 or 20 years.

The purpose of the Ultimate District Strategic Plan is to provide the Council with a guide as to the ultimate land use pattern for the district and to provide a context for planning and development under both the Metropolitan Region Scheme and the local scheme.

The Strategic Plan also provides the basis for preparing the extent and distribution of the various zones and special control areas to be provided for under proposed Town Planning Scheme No. 3.

The plan was prepared on the basis of what the ultimate development of the district could be, had it not been constrained by buffers and other planning limitations. The plan contained a limited range of land uses, namely urban, town centre, industrial, rural-living and metropolitan rural together with regional open space. The plan, of necessity, followed the format of the Metropolitan Region Scheme. The plan also included major movement networks including roads, railways, bus routes and pathways. This was adopted by the Council in 1997.

- The plan was revised in 1998. It also contained a limited range of land uses, namely urban, town centre, industrial and region open space, but deleted rural-living and metropolitan rural and substituted these with rural and water resource protection area respectively and also added the Jandakot Airport. The movement categories remained the same.

Since the re-adoption of the Ultimate Strategic District Plan in 1998, a number of significant issues have been determined which required the plan to be reviewed.

It was also necessary to review the plan as a prelude to proceeding with the preparation of Town Planning Scheme No. 3.

The following modifications were made to the plan and adopted by the Council on 16 February 1999, (refer Figure 27) namely:-

- The gazettal of the Rural - Water Protection Zone to protect the underground water at Jandakot.
- The promotion of the Roe Highway between the Fremantle Eastern Bypass and Stock Road as part of the regional road system.
- The possibility that Cockburn Road, at North Coogee will continue to be part of the Fremantle to Rockingham Highway rather than the construction of a new road across the hills of the region open space east of the existing industrial area.
- The possibility of connecting Spearwood Avenue directly into Cockburn Road as a link road between the coast, Port Catherine and the Spearwood residential area.
- The potential for the North Coogee Industrial Area to become urban for residential development on this prime coastal land which could result from the WAPC review of the North Coogee Structure Plan and Development Agreement.

- The Port Catherine Marina has been re-designed and therefore its development area has changed.
- At the Council workshop to discuss Town Planning Scheme No. 3 it was decided that the land around Cockburn Cement not be shown as future industrial, but be retained as rural, to provide a buffer to the cement works and that the Rural Living Area designated east of Wattleup extending to the Thomsons Lake Reserve be retained as Rural, to allow a wide range of rural pursuits to continue.

Other mapping changes related to:-

- The inclusion of Jandakot Airport as part of the plan because it is a major specific use type within the district and needs to be recognised as part of the plan.
- The reference to "Metropolitan Rural" was substituted with to "Water Resource Protection Area" to reflect both the MRS, and the Jandakot Groundwater Protection Policy.
- As a result of recent public concerns about the proposed alignment of the Perth to Mandurah railway line by residents in Glen Iris and South Lake, the railway line was relocated down the Kwinana Freeway median and this needed to be shown on the plan as the preferred approach.
- Additional commuter and district bicycle routes were included on the plan for both commuter and recreational cyclists. Particularly on the coast where the Port Catherine and Jervoise Bay projects are proposed.
- The Fremantle to Rockingham Transitway route and stop locations were updated to reflect the current plan as it related to Cockburn.
- A possible road connection across the APM land was shown to link North Lake Road to Sudlow Road to enable east-west traffic to gain access to Stock Road.

5.2 ELEMENTS

5.2.1 Road Network

The road network is based on the MRS scheme map and is divided into primary, secondary and tertiary roads.

The primary roads are the freeways and highways, namely the Kwinana Freeway, the Roe Highway and Stock/Rockingham Road.

The secondary roads are in the large part the important regional roads, the Fremantle to Rockingham Highway and also includes some of the district collectors such as Berrigan Drive, Tapper Road, Beenyup Road, Henderson Road and Rowley Road. This network provides for likely predicted existing and future demand and for improved levels of accessibility within the district using an identifiable road hierarchy.

The tertiary roads utilise the recognised sub-set of district collectors that form part of the historic road pattern serving both the urban and rural areas within the district. The tertiary roads, however, also include new connections such as a link between North Lake Road and Sudlow Road capitalising on the future development of the APM land and the substitution of the Fremantle to Rockingham Highway south of Russell Road with a tertiary road east of the Henderson Industrial area as the alternative coastal route.

The plan provides the "district" framework for the road network and the basis for structure planning developing and re-developing areas.

5.2.2 Public Transport Network

The Ultimate Strategic District Plan reflects the current planning proposal for Cockburn in respect to the Perth to Mandurah railway line and the Fremantle to Rockingham Transitway.

Bus routes are not included on the plan.

The routes for the Perth to Mandurah railway and the Transitway also include the proposed stop locations. These will be finalised and planned in conjunction with the Department of Transport. Once designated they will be used in structure plans and housing density strategies to determine pedsheds in accordance with the Community Design Code.

The plan also contains the Council proposal to provide for a connection between the Perth to Mandurah line and the Fremantle CBD, to utilise the disused railway reserve through Jandakot and Bibra Lake which would conveniently link the Thomsons Lake Regional Centre to the coast. On this line, a number of stops could be provided en route to Fremantle.

The alternative route to this being explored by the Ministry for Planning is to use the Roe Highway reserve to reach the railway line on the coast via a dedicated reserve through Hollis Park west of Hampton Road. This route presents difficulties and currently is not supported by the Council.

It is imperative that the planning and development of public transport services in Cockburn be undertaken in close consultation with the Department of Transport, Transperth, Westrail, the Ministry for Planning and the Council to ensure that all road and future rail services are co-ordinated and complementary.

5.2.3 Bicycle Paths

The Ultimate Strategic District Plan includes the major bicycle paths through the district based on its liaison with Bikewest and recent plans prepared by Perth Bicycle Consultant, Mike Maher and Associates. The bicycle paths are part of a dual pedestrian and cycle network that provide links across the district, linking the coast to the central wetlands and the region open space areas that form a significant and important part of the district. Some of the paths currently exist, some are under construction, while others are being planned and developed as new subdivisions are created. It is intended that the dual use path system will evolve over time as parts are built according to the Council's Bicycle Plan.

5.2.4 Urban Areas

The Ultimate Strategic District Plan includes an urban area which is based on the Urban and Urban Deferred zone in the Metropolitan Region Scheme.

Three significant departures from the MRS are included, based on the Council's "vision" for the future development of the district, namely:-

- The inclusion of the North Coogee Industrial Area into the Urban zone in an endeavour to provide the opportunity for residential development to occur in this prime coastal location. The future of this land will depend upon the outcome of a current review of land use in the area by the Ministry for Planning.

- The inclusion of the rural land to the north-west of the Jandakot Airport to provide for either residential or commercial development. The land is owned by the Federal Government and forms part of the draft Jandakot Airport Master Plan. The draft plan shows the land as having potential for a mix of commercial and light industrial uses. The future of this land will be determined by the Federal Government upon the adoption of the Master Plan.
- The northward expansion of the Wattleup Townsite to expand to population base of this isolated community, to improve the threshold for local services and facilities. The future of this proposal will depend on the outcome of FRIARS, which will be determined by the Western Australian Planning Commission.

Nearly all the urban areas to the north-west and north of the district have been developed. Future urban development will occur in the south-east, along both sides of the Kwinana Freeway. This area is being progressively planned, re-zoned, subdivided and developed. The current structure planning of the new urban areas is being undertaken in consultation with the landowners, their consultants, the Ministry for Planning and the Council's Strategic Planning Services. The planning is comprehensive and is based on the principles of the Community Design Code.

5.2.5 Commercial Areas

At the scale of the Ultimate Strategic District Plan only the proposed Thomsons Lake Regional Centre is shown.

This is located on probably the most strategic commercial location in the district, being on the south-west corner of the intersection of the Kwinana Freeway and Beeliar Drive/Armadale Road. The centre forms part of the Thomsons Lake Town Centre Study being conducted by the Ministry for Planning, the Council and others, to formulate a plan for the future development of this area for regional retailing, office, industry and recreation facilities.

The Thomsons Lake Town Centre Study could be available for public comment at the end of 1999 (refer Figure 28). Most other commercial areas are located within the Urban area.

5.2.6 Industrial Areas

The Ultimate Strategic District Plan generally includes industrial areas based on the MRS. The North Coogee Industrial Area has been deleted and included in the Urban area. The plan also includes the proposed Southern Harbour project as proposed by the Department of Commerce and Trade and also the proposal to establish a port at Catherine Point on the southern boundary of the project. The Jandakot (East) Industrial Area has been reduced from that shown in the MRS to accommodate the development of the Thomsons Lake Town Centre Plan which shows the centre eventually developing on both sides of the Kwinana Freeway.

Cockburn has a preponderance of industrial areas within its district. They are established in consolidated and identifiable areas each having individual land use and development characteristics.

The industrial areas represent the major employment centres within Cockburn providing jobs for local residents and the regional population. Although the Council would not be keen to expand the area of industrial land within the district, the promotion and development of these areas for employment is important for the community.

With the relocation of the Jandakot Woolscourers from the eastern side of Yangebup Lake, the opportunity exists to review the planning and future development of the Jandakot (West) Industrial Area to replicate the Herdsman's Business Park south of the river.

5.2.7 Rural Areas

The Ultimate Strategic District Plan includes only one area of rural land and that is in the south-west sector of the district from Yangebup south to the Council's southern boundary and between Rockingham Road (Stock Road) across to the central wetland reserve.

This area is currently within the Kwinana Air Quality (EPP) Buffer and comprises lots generally less than 3 ha in area. The area is represented by a mix of uses primarily being limestone quarrying, market gardening, agistment and rural-residential properties. Further subdivision is unlikely in the present circumstances, and the rural designation rather than rural-living, enables a wide range of rural pursuits and activities to be undertaken in the area.

The FRIARS study proposes in the preferred government option to convert the majority of the area to industrial uses. The Council in its submission to the Western Australian Planning Commission to the study, was opposed to any more industrial development being located within the district and recommended alternatives to either consolidate any future industrial land around the Kwinana Industrial Area or establish a new industrial estate in Oldbury, east of Kwinana in the Shire of Serpentine-Jarrahdale.

The rural area included in the plan is the last remaining unconstrained rural area within the City of Cockburn and is located on some of the only productive soils in the district. The future of this rural area in the Ultimate Strategic District Plan will depend upon the outcome of the FRIARS study recommendations which will be determined by the Western Australian Planning Commission.

5.2.8 Water Protection Areas

The Water Protection Area shown on the Ultimate Strategic District Plan coincides with the Rural - Water Protection Zone in the MRS. The land use controls and management applied to this area to protect the quantity and quality of the underground metropolitan water supplies are those contained in the Statement of Planning Policy No. 6 - Jandakot Groundwater Protection Policy.

Land uses in the area are primarily limited to four types, namely rural-residential properties, sand mining, agistment and reservations for the Jandakot Botanic Park.

Development in this area is limited and it is expected that as the sand mining operations cease and agistment becomes less viable, so that land will be gradually subdivided into lifestyle lots of 2 ha to provide rural-residential living. This is an ideal location for rural-residential subdivision because the soil is poor and unproductive, the land is poorly drained and yet the area is in close proximity to the urban corridor where a wide range of commercial and community services and facilities are located. Access to Perth and Fremantle is direct and convenient using the arterial road system together with access to the Regional Centres of Armadale and Rockingham.

5.2.9 Public Purpose Sites

The small scale of the Ultimate Strategic District Plan does not allow public purpose sites at a local scale to be shown, except for the Jandakot Airport.

Even the MRS only shows a limited number of public purpose sites relating to secondary and tertiary education establishments and public utilities.

Most local public purpose sites are included in the Urban area and are provided on a case by case basis following negotiation with developers at either the structure plan or subdivision phase of the planning and development process.

Regional Public Purpose reserves within Cockburn are:-

- H - Hospital (State)
- HS - High School (State)
- U - University (State)
- CG - Commonwealth Government (Federal)
- SEC - State Energy Commission (State)
- SU - Special Use (State)
- WSD - Water Authority of WA (State)

Local public purpose reserves used by the City of Cockburn are:-

- AG - Department of Agriculture (State)
- C - Civic LOCAL
- DOT - Department of Transport (State)
- FPA - Fremantle Port Authority (State)
- FS - Fire Station (State)
- GS - Gas Pipeline (Private)
- K - Pre-School LOCAL/ Private
- OP - Oil Pipeline (Private)
- P - Police Station (State)
- PE - Private Education Establishment (Private)
- PO - Post Office (Federal)
- PS - Primary School (State)
- TE - Telstra (Federal)
- TAB - Totallisator Agency Board (State)
- WC - Water Corporation (State)
- WP - Western Power (State)

Of all the public purpose reserves used by the City of Cockburn only 2 out of 23 relate to local purposes.

Nevertheless, Council community facilities are generally confined to libraries, community halls and clinics. Some of these operate out of civic purpose sites or out of facilities erected within public open space reserves. Most public purpose sites are set aside by the State to accommodate its facilities and services, demonstrated by the preceding list of the number and type of public purpose sites within the City of Cockburn.

5.2.10 Region Open Space

The Ultimate Strategic District Strategy contains areas of region open space which is based on the Parks and Recreation Reserves contained in the MRS.

The only inclusions of region open space areas which differ from the MRS are in relation to the Council's Henderson Landfill Site north of the Wattleup Townsite, the System 6 linear extension south of the Harry Waring Marsupial Reserve and the proposal to relocate an existing Parks and Recreation Reserve in the Thomsons Lake Town Centre Area from the western to the eastern side of the Kwinana Freeway. This planned relocation is based on a land exchange with Landcorp to facilitate the development of the Town Centre in accordance with the draft centre plan.

The existing areas of region open space within the district are significant and extensive and are important in the protection of conservation and wetland areas which are synonymous with the City of Cockburn.

6.0 STRATEGIES AND ACTIONS

6.1 TRANSPORTATION

- (a)
- **Strategy** - Maximise development near public transport routes.
 - **Actions** -
 - (1) Apply the R40 coding within the Russell Road Railway Station precinct in the Southern Suburbs District Structure Plan.
 - (2) Review residential densities within the 400 metre 'Ped Sheds' of the proposed Rockingham to Fremantle transitway stations.
 - (3) Concentrate town centre development within the 400 metre 'ped shed' of the Thomsons Lake railway station in accordance with the Thomsons Lake Regional Centre Master Plan.
 - (4) Promote the integration of major traffic attractions (eg. Marine Skills Training Centre) with proposed Rockingham - Fremantle transitway stations.
- (b)
- **Strategy** - Provide for a safe and efficient network of local and arterial roads facilitating access and the distribution of traffic through the area.
 - **Actions** -
 - (1) Liaise with MRWA in planning the extension of the arterial road network, to maximise local convenience and amenity benefits for;
 - Roe Highway
 - Beeliar Drive
 - Fremantle - Rockingham Highway
 - (2) Liaise with Ministry for Planning in the design of Beeliar Drive, Hammond Road, Rowley Road and Russell Road.
 - (3) Include statutory provisions for equitable owner cost sharing arrangements in TPS 3 to facilitate the funding and construction of Beeliar Drive and Hammond Road.
 - (4) Formalise a hierarchy of District and Local Distributor roads.
- (c)
- **Strategy** - Minimise trip lengths in order to maximise local convenience and minimise the environmental impacts of private care users.

- **Action** - (1) Facilitate mixed land use developments and local employment through appropriate zoning for industry, mixed business and home-based businesses in TPS No 3.
- (d)
 - **Strategy** - Encourage cycling by defining and implementing cycle networks and promoting the provision of end-of-trip facilities.
 - **Actions** -
 - (1) Progressively implement the recommendations of the City of Cockburn Bikeplan.
 - (2) Include bicycle parking standards for certain land uses in TPS No. 3.
- (e)
 - **Strategy** - Investigate the extension of the commuter rail network from Jandakot to Fremantle.
 - **Action** -
 - (1) Liaise with the Department of Transport and protect the existing alignment options, namely the freight rail reserve and Roe Highway.

6.2 URBAN DEVELOPMENT

- (a)
 - **Strategy** - Undertake Strategic Planning by the preparation and implementation of structure plans.
 - **Actions** -
 - (1) Require the preparation and review of Structure Plans and Development Plans for Urban Development areas in the district.
 - (2) Incorporate Development Zones and associated Statutory provisions to ensure that Structure Plans and Development Plans are in place to formally guide development and subdivision.

6.3 COMMERCIAL DEVELOPMENT

- (a)
 - **Strategy** - Implement a system of centres ranging from regional to district and neighbourhood centres to be the focus of commercial and community activity.
 - **Actions** -
 - (1) Incorporate a Regional Centre Zone, a District Centre Zone and Local Centre Zones in TPS No. 3 to reflect the existing and planned pattern of commercial development and the Metropolitan Centres Policy.
 - (2) Prepare a Local Commercial Strategy to guide the future development of commercial centres, where applicable.

6.4 INDUSTRIAL DEVELOPMENT

- (a)
- **Strategy** - Make adequate provision for industrial development.
 - **Actions** -
 - (1) Promote the development of appropriately located business parks, for example:
 - North-east quadrant of the Thomsons Lake Regional Centre;
 - Former Jandakot Wool Scourers site east of Lake Yangebup.
 - (2) The City of Cockburn has in excess of three times the metropolitan average of industrial-zoned land. That is, 11.8 percent (1154 hectares) of the district is currently zoned for industry versus the metropolitan average of 3.5 percent. Given this existing context, the Council will seek to facilitate the development of existing industrial zones, rather than promote the creation of additional industrial - zoned land.
 - (3) Participate in the land use review of the North Coogee industrial area to determine an appropriate allocation of Special Industrial land in the locality.
 - (4) Investigate the possible rezoning of the Yangebup 'Railway Triangle' for light industrial, mixed business or composite residential/small scale industry/business uses.
- (b)
- **Strategy** - Investigate strategic sites for the location of Technology Parks.
 - **Action** -
 - (1) The City of Cockburn has supported the development of the Marine Industries Technology Park.
- (c)
- **Strategy** - Encourage existing industry to adopt state of the art technologies to minimise environmental impacts.
 - **Action** -
 - (1) Place the onus on existing noxious industries to scientifically justify land use buffers, based on the use of best practicable technology and management practices to minimise emissions and thereby avoid the unnecessary sterilisation of the economic use of affected land.

- (2) Undertake a land use review of the interim 500 metre odour buffer around the Watsonia factory, following determination of the new odour buffer; to determine an appropriate allocation of 'Mixed Business' or other compatible uses.

6.5 RURAL DEVELOPMENT

- (a)
 - **Strategy** - Conserve a landbank of Rural land to act as a 'Greenbelt' between urban areas and the Kwinana Industrial Strip and to provide opportunities for productive rural activities, rural living and the extraction of basic raw materials.
 - **Action** - (1) Lobby the State Government to retain the existing Rural Zone in Wattleup and Munster as the outcome of the FRIARS study.
- (b)
 - **Strategy** - Preserve existing lot sizes in Rural areas zoned 'Urban Deferred' under the Metropolitan Region Scheme to promote orderly urban development.
 - **Action** - (1) To recommend against the further subdivision of rural land zoned 'Urban Deferred' under the Metropolitan Region Scheme.

6.6 GROUND WATER PROTECTION

- (a)
 - **Strategy** - Ensure that land use strategies are limited to protect groundwater resources.
 - **Action** - (1) Incorporate land use provisions into T.P.S. No 3 in conformity with the MRS 'Rural Water Protection' zone and State Planning Policy No. 6.

6.7 BASIC RAW MATERIALS

- (a)
 - **Strategy** - Protect the potential for extraction of basic raw materials within the rural zone.
 - **Action** - (1) Recognise 'Priority Resource Areas' and 'Key Extraction Areas' by the inclusion of 'extractive industry' as an 'AA' use within these areas.

(2) Actively lobby the State Government to amend the legislation so as to prevent applications for mining licences being made in National, Regional and District Parks and Conservation Reserves.

- (b)
 - **Strategy** - Improve the level of compliance by Extractive Industry operators with rehabilitation and other conditions of Planning Approval.
 - **Action** -
 - (1) Undertake an Annual Review of all Extractive Industries within the district and implement remedial measures where necessary.
 - (2) Include provisions in TPS No. 3 to improve the requirements and performance of quarry operators.

6.8 PUBLIC PURPOSE SITES

- (a)
 - **Strategy** - Ensure that the Scheme reflects existing and future land requirements for infrastructure provided by public agencies.
 - **Action** -
 - (1) Refer TPS No 3 to public infrastructure agencies to enable land requirements for public purpose sites to be confirmed.
- (b)
 - **Strategy** - Ensure that public purpose community purpose sites are identified in Structure Plans/Development Plans.
 - **Action** -
 - (1) Incorporate appropriate provision in TPS No 3 to codify referral requirements of plans to public authorities.

6.9 OPEN SPACE

- (a)
 - **Strategy** - Maintain the amount of local open space per capita.
 - **Action** -
 - (1) Ensure adequate and appropriate provision of local open space is provided via the subdivision process.
- (b)
 - **Strategy** - Improve the quality, amenity and accessibility of local and region open space.
 - **Action** -
 - (1) Progressively implement the recommendation of the Council's Public Open Space Study regarding local open space improvements.
 - (2) Ensure that local open space provided via the subdivision process is functional and preserves significant landscape features such as high quality bushland stands of trees and important flora.

- (3) Enhance the passive recreational values of Region Open Space by the progressive implementation of management plans, including the provision of passive recreation facilities such as cycleways and seating.

6.10 BUFFERS

- (a)
 - **Strategy** - Ensure that uses emitting dust, noise or odours are adequately buffered from residential areas.
 - **Action** - (1) Allocate Mixed Business, open space or other non-residential uses adjacent to residential areas to protect residential amenity.
- (b)
 - **Strategy** - Reduce the extent of land adversely affected by industrial or public utility based buffers.
 - **Action** - (1) Place the onus on existing noxious industries to scientifically justify land use buffers, based on the use of best practicable technology and management practices to minimise emissions and thereby avoid the unnecessary sterilisation of the economic use of affected land.

6.11 EMPLOYMENT

- (a)
 - **Strategy** - Promote service sector employment by ensuring an adequate provision of appropriately zoned land for office and small business development.
 - **Action** - (1) Investigate opportunities for the creation of "Mixed Business" zonings within or adjacent existing industrial areas, and along strategic road frontages.
 (2) Investigate the opportunity to establish a "Mixed Business" zoning within the revised odour buffer around the Watsonia factory in Spearwood.
 (3) Investigate opportunities to establish "Mixed Business" zonings via Structure Plans for Atwell, Success and Banjup.
- (b)
 - **Strategy** - Promote increased employment self-sufficiency by providing appropriately zoned land for businesses in accessible locations.
 - **Action** - (1) Provide for home-based businesses in TPS No. 3 via flexible land use controls in appropriate areas.

(2) Provide for "Mixed Business" zonings in strategic locations accessible to residential areas and transport routes.

- (c)
 - **Strategy** - Improve the appearance of industrial areas in order to promote their potential to attract new businesses.
 - **Action** -
 - (1) Ensure that industrial development meets modern amenity standards by increased enforcement of landscaping conditions and the screening of open storage yards.

6.12 ENVIRONMENT

- (a)
 - **Strategy** - Ensure that wetlands are protected.
 - **Action** -
 - (1) Progressively implement management plans for wetlands in local and region open space areas, for example:
 - Yangebup and Little Rush Lakes
 - Market Garden Swamps
 - Freshwater Parade POS
 - Lake Coogee
 - (2) Seek to ensure that EPP (Swan Coastal Plain) Policy Wetlands are protected in Structure Plans and the subdivision process.
- (b)
 - **Strategy** - Address remnant bushland protection.
 - **Action** -
 - (1) Seek to ensure that local open space preserves high quality bushland and flora.
- (c)
 - **Strategy** - Conserve fauna habitats.
 - **Action** -
 - (1) Seek to ensure that significant fauna habitats are protected in the Structure Plans, the subdivision and development process.
 - (2) Require subdividers and developers to undertake fauna management / relocation programmes within areas subject to large-scale vegetation clearing.
- (d)
 - **Strategy** - Encourage recycling and ensure that sufficient land is allocated for composting and recycling centres.
 - **Action** -
 - (1) Composting and Recycling facilities are provided at the Henderson Landfill site.
 - (2) Council operates a recycling collection system and is a participant in the new Canning Vale waste facility.

- (e)
 - **Strategy** - Seek to stabilise the local production of greenhouse gas emitters in the district.
 - **Action** -
 - (1) Undertake an audit of local greenhouse gas emitters within the district.
 - (2) Lobby the State Government to increase the service kilometres of public transport relative to regional road provision.
 - (3) Promote opportunities for mixed use medium-density urban villages adjacent to public transport routes (eg South Fremantle) to reduce dependence on private car use.
 - (4) Undertake a local energy management audit.
- (f)
 - **Strategy** - Adopt an integrated approach to 'sustainable development'.
 - **Action** -
 - (1) Ensure that structure planning is based on population catchments which are sufficient to sustain the commercial, and community facilities, the recreational and conservation areas provided to support the anticipated needs of the resident populations.

6.13 HERITAGE

- (a)
 - **Strategy** - Enhance local identity and character by preserving buildings and places with historic, architectural, scientific or scenic value.
 - **Action** -
 - (1) Have due regard for buildings and places in Council's Municipal Heritage Inventory when considering applications for subdivision, rezoning and Planning approval.

6.14 COASTAL DEVELOPMENT

- (a)
 - **Strategy** - To encourage appropriate forms of development on and adjacent to the coast, enhance possible recreational use and public access consistent with the protection of coastal areas.
 - **Action** -
 - (1) Implement those elements of WAPC Policy DC 6.1 as are appropriate to a metropolitan coastline.
 - (2) Implement the recommendations of the Council's 'Integrated Coastal Management Strategy' (1999).

- (3) Actively seek to minimise the scope for further potential industrial development on the coast and where possible encourage its relocation.
- (4) Encourage the replacement of industrial coastal land with residential development.
- (5) Oppose the establishment of industries on the coast which have no relationship to or need for a coastal location.

- (b)
- **Strategy** - Preserve the landscape value of coastal landforms.
 - **Action** -
 - (1) Minimise the adverse visual impact on the coastal ridgeline resulting from the existing MRS alignment of the Fremantle-Rockingham Coastal Highway.
 - (2) Attempt to mitigate the adverse visual impacts of industrial development within the viewshed of coastal recreation reserves.

7.0 MONITORING AND REVIEW

7.1 MONITORING

It is important to monitor the relevance and application of the Local Planning Strategy as the framework for the preparation and operation of the local planning scheme. The Local Planning Strategy will need to reflect current State policy and amendments to the Metropolitan Region Scheme given the close affiliation between the two documents. In addition it will be necessary to minimise any inconsistencies between the Local Planning Strategy and the Scheme.

It is assumed that unlike the Scheme Report, which the Local Planning Strategy replaced, the Strategy will be a dynamic document that can be updated to reflect the current attitude and position of the Council in respect to the planning and development of the district.

7.2 AMENDMENTS

Under Clause 2.2 of the draft Model Scheme Text, provision is made for amending the Local Planning Strategy. Amendments will be made to the Local Planning Strategy as deemed necessary by the Council from time to time and any such amendment will follow the public advertising procedure set out in the draft Model Scheme Text.

7.3 REVIEW

There are no specific provisions in the draft Model Scheme Text relating to the review of the Local Planning Strategy. However, in the Guidelines to the draft Model Scheme Text, it states that the purpose of the Strategy is to set out the Council's general aims and intentions for future long-term growth and change. In contrast to the local scheme which has an intended operational life of 5 years, the Strategy is to look ahead for 10 to 15 years into the future. Given this, together with the scope under the draft Model Scheme Text to keep the Local Planning Strategy up to date by amendments, it may not be necessary to undertake a review of the Strategy in the same way as is required for the local scheme.

8.0 PROPOSED TOWN PLANNING SCHEME NO. 3 TEXT

8.1 APPROACH

The purpose of the local scheme is to provide detailed land use and development controls for the district using a zoning map and text.

Town Planning Schemes, or Zoning Schemes, by nature are statutory documents, and tend to follow change, by scheme amendments, rather than promote or facilitate change in the way a strategic plan would do. Proposed Town Planning Scheme No. 3, to a large extent will be a statutory control document comprising one strategic provision relating to Development Areas, where structure plans and development plans will be required as a pre-requisite to subdivision and development. The Development Plan will require the approval of the WAPC before it can be applied by the Council.

8.1.1 Purpose of the Scheme

The purpose of Town Planning Scheme No. 3 will be to:-

- (a) *set out the Council's planning aims and intentions for the scheme area;*
- (b) *set aside land as reserves for public purposes;*
- (c) *zone land within the scheme area for the purposes defined in the scheme;*
- (d) *control and guide land use and development;*
- (e) *set out procedures for the assessment and determination of planning applications;*
- (f) *make provision for the administration and enforcement of the scheme;*
- (g) *address other matters contained in Schedule 1 of the Town Planning Act.*

These statements are based on the Model Scheme Text.

8.1.2 The Aims of the Scheme

The aims of the scheme will be to:-

- (a) ensure that development and the use of land within the district complies with accepted standards and practices for public amenity and convenience;
- (b) ensure that the future development and use of land within the district occurs in an orderly and proper way so that the quality of life enjoyed by the residents is not jeopardised by poor planning, unacceptable development and the incompatible use of land.

The aims of the scheme will be based on the Council's Functional Statement for Statutory Planning Services, given the statutory requirements and operation of the scheme.

8.2 PROPOSED ZONES

It is proposed that Town Planning Scheme No. 3 comprise 13 of the 19 Zones contained in the guidelines to the draft Model Scheme Text.

The Zones are proposed to be:-

1. Residential Zone
2. Regional Centre Zone
3. District Centre Zone
4. Local Centre Zone
5. Mixed Business Zone
6. Business Zone
7. Industry Zone
8. Light and Service Industry Zone
9. Development Zone
10. Rural Zone
11. Rural Living Zone
12. Resource Zone
13. Special Use Zone

The objectives of each of the zones, using the Model Scheme Text Guidelines as a reference will be:-

- **Residential Zone**

To provide for residential development at a range of densities with a variety of housing to meet the needs of different household types through the application of the Residential Planning Codes.

- **Regional Centre Zone**

To provide for a full range of shopping, office, administrative, social, recreation, entertainment and community services, consistent with the region-serving role of the centre and including residential uses.

- **District Centre Zone**

To provide for weekly shopping needs, local offices, health, welfare and community facilities, consistent with the district-serving role of the centre.

- **Local Centre Zone**

To provide for convenience retailing, local offices, health, welfare and community facilities which serve the local community, consistent with the local - serving role of the centre.

- **Mixed Business Zone**

To provide for a wide range of light and service industrial, wholesaling, showrooms, trade and professional services, which, by reason of their scale, character, operational or land requirements, are not generally appropriate to, or cannot conveniently or economically be accommodated within, either the regional centre, district centre, local centre or industry zones.

- **Business Zone**

To provide for the development of offices and associated commercial uses.

- **Industry Zone**

To provide for manufacturing industry, the storage and distribution of goods and associated uses, which by the nature of their operations should be separated from residential areas.

- **Light and Service Industry Zone**

To provide for light and service industries and associated uses which are compatible with residential uses.

- **Development Zone**

To provide for future residential, industrial or commercial development in accordance with a comprehensive Development Plan prepared under the Scheme.

- **Rural Zone**

To provide for a range of rural pursuits which are compatible with the capability of the land and retain the rural character and amenity of the locality.

- **Rural Living Zone**

To provide for residential use in a rural environment.

- **Resource Zone**

To provide for the protection of the Perth Metropolitan underground water resource in accordance with the requirements of Statement of Planning Policy No. 6 published by the Western Australian Planning Commission on 12 June 1998.

- **Special Use Zone**

To provide for uses which have unique development requirements that cannot be easily accommodated by the objectives of any of the other zones included in the Scheme.

The format to the proposed scheme will conform to that required by the draft Model Scheme Text. Council initiated provisions will, therefore be mainly confined to Part 5, Part 6 and the Directory of Words and Expressions.

Part 5 will set out the Council's general development requirements for residential uses, commercial and industrial uses, rural, rural living and resource zone uses and includes specific provisions relating to extractive industries.

Part 6 will provide for special control areas. In this part three types of controls will be included which are considered to be of particular importance to the future development of the district.

The first special control area will relate to Development Areas which apply to future subdivision and development within the district and will require as a pre-requisite, the preparation and adoption of both a Structure Plan and a Development Plan. These plans will provide the basis for subdivision and land use and represent the "strategic" component of the Scheme. It is important that the Council become actively involved in the preparation of Structure Plans and Development Plans within the district, because experience to date tends to demonstrate that plans prepared by proponents are largely ambit claims based on return on investment rather than orderly and proper planning. The role of local government is to protect the community interest by achieving the optimum levels of convenience and amenity, network efficiency, social integrity with minimum liability.

Proposed Development Areas and Developer Contribution Areas to be included in Town Planning Scheme No. 3 are shown on Figure 29.

The second special control area relates to Developer Contribution Areas which will apply to areas of future subdivision and development where land is held in small and fragmented ownerships. The purpose of these provisions will be to facilitate planning and subdivision of land through the equitable participation of affected landowners. These provisions will be particularly important for continued urban development of zoned land in the localities of Packham, Yangebup, Beeliar and Success.

The third special control area will provide for the inclusion of the Peel-Harvey Coastal Plain Catchment Area, Statement of Planning Policy No. 2, which is required to be included in the scheme of those Councils affected by the Policy.

The draft Model Scheme Text includes a number of standard general and land use definitions. However, for the purposes of the City of Cockburn's proposed scheme, additional general and land use definitions will be included to assist in the interpretation and application of the scheme provisions. Other than these inclusions, the proposed Scheme Text either repeats or reflects the standard provisions contained in the Model Scheme Text .

8.3 DRAFT MODEL SCHEME TEXT COMPLIANCE

In order to expedite the approval of the proposed Scheme the Council at its meeting in August 1998, resolved to use the draft Model Scheme Text as the basis for its preparation.

8.4 PROPOSED TOWN PLANNING SCHEME NO. 3 MAP

The form and disposition of the land use pattern and residential densities contained in the Scheme Map will be based on the outcome of a Councillor and staff workshop conducted on 6th August 1998, and is contained in Figure 30.

The Scheme Map will be prepared electronically and will be able to be reproduced in total or in part and at any scale. For the purpose of the Scheme Map, the map has been divided into 25 A3 sheets at a scale of 1:10,000.

The colours depicting the various zones, additional and restricted uses, heritage sites, environmental conditions and special control areas are based on the recommendations contained in the guidelines to the draft Model Scheme Text.

The Map, by necessity, is consistent with the zones and reserves that affect the district of the City of Cockburn as contained in the Metropolitan Region Scheme.

In the large part the Scheme Map will be the same as for Town Planning Scheme No. 2, except that the zones adopted will be more extensive to comply with the draft Model Scheme Text guidelines.

8.5 APPLICATION

The Council's Town Planning Scheme is by default the strategy for achieving desirable outcomes for the local community, identified and pursued under the Local Planning Strategy.

9.0 RECOMMENDATION

The preparation of the Local Planning Strategy is a proposed requirement of the draft Model Scheme Text, and is a substitute for the Scheme Report.

Hopefully, the Local Planning Strategy provides an understanding of the philosophy behind, the approach to and provisions of the proposed Town Planning Scheme No. 3.

It is recommended that the Local Planning Strategy be noted by the Western Australian Planning Commission, given that the Council has already prepared a Scheme Examination report advertised its intentions to review Town Planning Scheme No. 2 and reported on the submissions to the Minister for approval to proceed with the scheme review.

The Ministry for Planning gave approval to undertake a review of Town Planning Scheme No. 2 on 8 January 1997, prior to the preparation of the draft Model Scheme Text.

APPENDIX 1

CHRONOLOGY OF IMPORTANT DECISIONS

APPENDIX 1 - CHRONOLOGY OF IMPORTANT DECISIONS

Important dates and actions taken by the Council in the preparation of Town Planning Scheme No. 3:-

Date	Occurrence
2 July 1996	Council resolved to review Town Planning Scheme - District Zoning Scheme No. 2.
12 July 1996	Public advertisement on the Scheme Examination calling for submissions on the operation of Town Planning Scheme No. 2 which closed on 2 September 1996. On the 4 July, letters were sent to adjoining local governments and interest groups inviting submissions on the examination.
8 January 1997	Hon Minister for Planning grants approval to review the Scheme.
20 May 1997	Council resolved to prepare Town Planning Scheme No. 3 in accordance with Section 7 of the Act.
6 June 1997	Town Planning Scheme Report was submitted to the WAPC in accordance with Regulation 4 of the Town Planning Regulations.
3 October 1997	Government agencies and adjoining local governments advised of the Council's decision to prepare Town Planning Scheme No. 3.
16 December 1997	Proposed Town Planning Scheme No. 3 forwarded to the EPA for assessment under Section 7A(1) of the Act.
20 February 1998	EPA advised that the proposed Scheme does not require a formal assessment and is deemed assessed under Section 48A(a) of the EP Act.
17 June 1998	Draft proposal for Town Planning Scheme No. 3 Text and Map forwarded to the Ministry for Planning as the basis to informal discussions.
5 August 1998	A Councillor workshop on the proposed draft Text and Maps was conducted by planning staff to finalise the Scheme documentation for formal submission to the WAPC for advertising.
13 October 1998	Director Planning and Development presents proposed Town Planning Scheme No. 3 to the WAPC.
15 December 1998	Council resolved to abandon proposed Town Planning Scheme No. 3 (Version 1) original approach and proceed with the new Scheme based on the draft Model Scheme Text. The Scheme Map is to continue to be in accordance with the outcome of the Councillors' workshop held on 5 August 1998.
15 December 1998	Council resolved to proceed with a revised version of Town Planning Scheme No. 3 (Version 2) based on the Draft Model Scheme Text.

Date	Occurrence
25 May 1999	Council resolved to adopt Town Planning Scheme No. 3 (Version 2) for the purposes of seeking approval to advertise it for public comment and to submit the Local Planning Strategy for endorsement.
24 June 1999	Ministry for Planning advise that the Local Planning Strategy was unacceptable and required substantial review before endorsement by the Commission.
13 July 1999	Council resolved to revise the Local Planning Strategy in accordance with the Ministry advice.
13 August 1999 (Friday)	Ministry officers and Council officers met to discuss proposed Town Planning Scheme No. 3 (Version 2) Text and Map and conduct a tour of the district.

APPENDIX 2

ENVIRONMENTAL PROTECTION AUTHORITY ASSESSMENT ADVICE

APPENDIX 2 - ENVIRONMENTAL PROTECTION AUTHORITY ASSESSMENT ADVICE

Copy of letter from Environmental Protection Authority dated 20 February 1998

Your Ref: 9485
Our Ref: 121457
Enquiries: Adrian Vlok

Chief Executive Officer
City of Cockburn
PO Box 1215
BIBRA LAKE WA 6965

Attention: Mr Stephen Hiller

Dear Sir/Madam

SCHEME/AMD TITLE: City of Cockburn TPS No. 3 -
Review of Scheme

LOCALITY: City of Cockburn

RESPONSIBLE AUTHORITY: City of Cockburn

LEVEL OF ASSESSMENT: Scheme Not Assessed - Advice Given (no
appeals)

Thank you for your letter of Wednesday, 28 January 1998 referring the above scheme.

After consideration of the likely environmental factors related to the above scheme amendment and based on the information provided by you, the EPA decided that the overall environmental impact of its implementation would not be severe enough to warrant assessment under Part IV of the Environmental Protection Act, the preparation of an Environmental Review and the subsequent setting of formal conditions by the Minister for the Environment. Please note that there are no appeal rights on the level of assessment set for scheme amendment.

Although there is to be no formal assessment of the scheme amendment the following advice is provided to you on the key environmental factors. A copy of this advice will also be sent to the relevant decision-making authorities and will be publicly available on request. The information provided is advice only and is not legally binding.

ADVICE

(a) Key Environmental Factors

Gaseous emissions, odours, surface water quality - Thomsons Lake

(b) Relevant advice

Generally, Town Planning Scheme No. 3, if gazetted, would effectively rezone land which is zoned Rural in the current scheme (No. 2), to either Urban or Urban Deferred. The majority of this land is located in 3 areas, that is, land generally south of "Watsons" in Spearwood, the Packham area east of Lake Coogee in Munster and land east of Thomsons and Kogolup Lakes. All these areas involve significant environmental issues (eg. buffers, drainage management, bushland, wetland and groundwater protection

and contamination) however none are so significant as to invalidate the development of this land for urban (in broad terms) purposes.

In essence, the issue is not whether development can occur on this land, but rather how. To that end, it is essential that the City of Cockburn, Department of Environmental Protection, other agencies, developers and stakeholder groups continue to discuss and negotiate outcomes which are consistent with best environmental practice and the guiding principles set out in the Scheme (No. 3) text.

Under the provisions of Section 48A(a) of the Environmental Protection Act the above scheme amendment is now deemed assessed by the EPA.

Yours faithfully

Bernard Bowen
CHAIRMAN

cc: Ministry for Planning
Water Corporation
Water and Rivers Commission

20 February 1998

THE LOCAL PLANNING STRATEGY PREPARED IN SUPPORT OF TOWN
PLANNING SCHEME NO. 3 FOR THE DISTRICT OF THE CITY OF COCKBURN
WAS ADOPTED BY THE COUNCIL ON THE DAY OF....., 1999.

CHIEF EXECUTIVE OFFICER

DATE