

CITY OF GERALDTON-GREENOUGH

LOCAL PLANNING STRATEGY GREENOUGH

(OCTOBER 2008)

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1. INTRODUCTION

1.1 BACKGROUND

On 22 March 1996 the Greenough Shire Council resolved to review Town Planning Scheme No 4, which has been in use since 30 March 1984.

The new town planning scheme will incorporate a Local Planning Strategy, a Local Rural Strategy, detailed planning strategies (as adopted from time to time), a zoning scheme (TPS 5), and planning policies.

The new zoning scheme (TPS 5) will incorporate a review of Town Planning Scheme No 4, and Town Planning Scheme No 1A. Scheme 1A for the Greenough River Resort was gazetted on 30 May 1986 and covers an area that includes the Southgate dunes, the Greenough River Mouth, an area south of the Greenough River Mouth and inland to the Brand Highway. The scheme area also includes TPS No 3 (the Waggrakine Guided Development Scheme, Gazetted on 6 February 1982), which has been reviewed periodically and is presently under review.

As TPS 5 is yet to be finalised, the current zoning schemes and planning policies will be used as the mechanisms for implementing this Local Planning Strategy and the new Local Rural Strategy. The purpose of this Local Planning Strategy is to identify the likely land uses that will be established in the former shire area (Greenough) in the next 15 years, and to indicate the preferred location for these land uses. The new Local Rural Strategy articulates a more detailed planning strategy for the rural areas of the City of Geraldton-Greenough, while the detailed planning strategies indicate strategies for specific areas e.g. Glenfield Structure Plan, Nangulu Buffer Study etc. A copy of the proposed, adopted, and endorsed detailed planning strategies is available from the Council.

1.2 MODEL SCHEME TEXT

The Model Scheme Text, published in the Government Gazette on 22 October 1999 as part of Town Planning Amendment Regulations 1999, requires that a Local Planning Strategy be prepared as part of the Review of a Town Planning Scheme. This direction was followed up by the publication of a Planning Schemes Manual in August 2000 that contained guidelines for the preparation of a Local Planning Strategy for a Country Rural Local Government and a Country Urban Centre. The new scheme has been prepared in accordance with these requirements.

1.3 SCHEME REVIEW OBJECTIVES

The review of the Greenough Town Planning Schemes had the following objectives and intentions:

- To examine the population dynamics of the former Shire.
- To examine changing land development in the former Shire.
- To review land uses that have changed over time.
- To review the structure and plans for the urban areas.
- To make provision in the Scheme for heritage values.
- To examine the appropriateness of the existing zoned land.
- To review the R-Code designations for residential land .
- To make the Scheme 'user friendly', namely to simplify the Scheme.
- To reduce the number of zones, if appropriate.
- To include community consultation in the planning process.

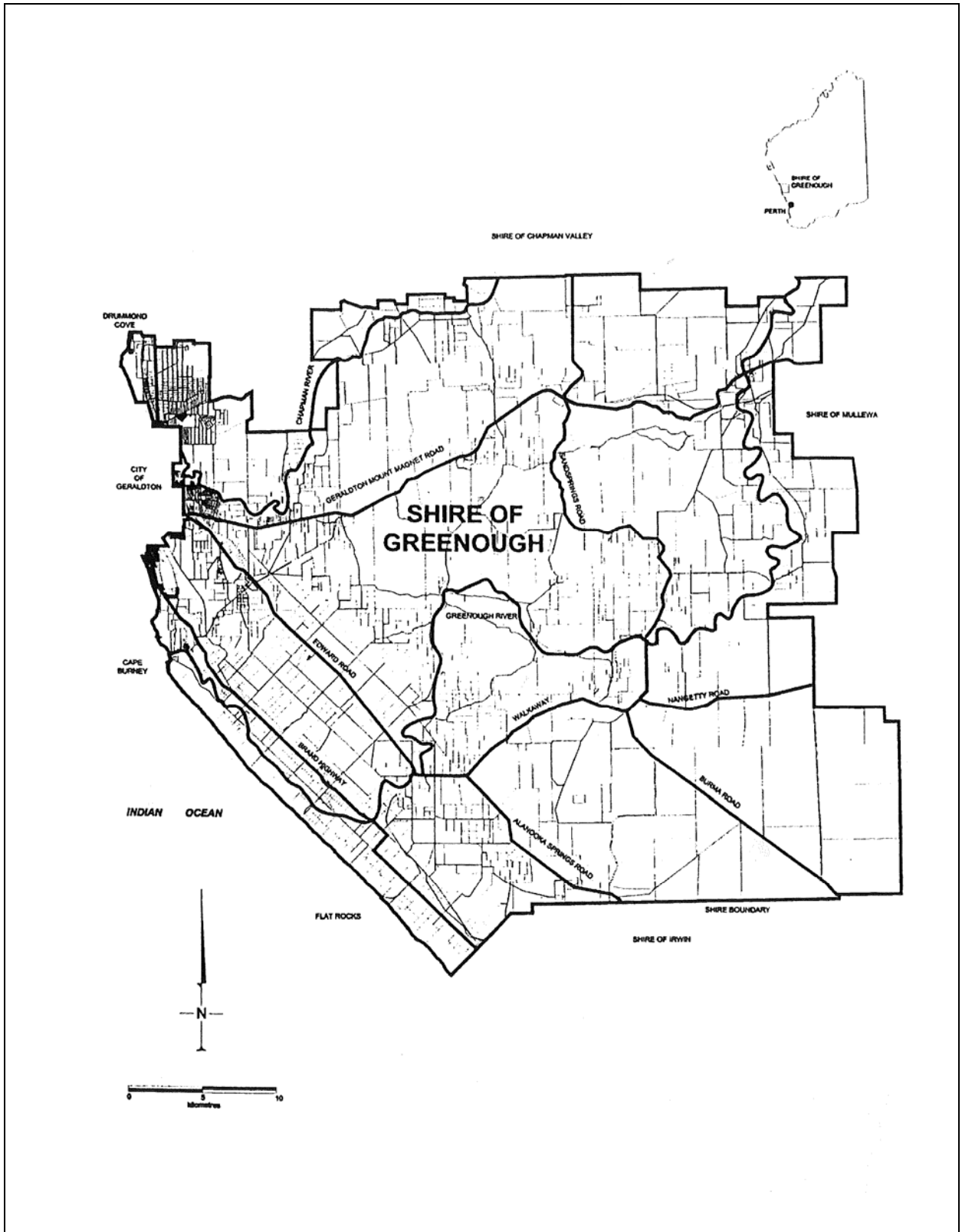
- To review the former Shire of Greenough Rural Planning Strategy as the basis for developing the Local Planning Strategy.
- To protect basic raw materials
- To conserve environmental values
- To minimise land use conflict.

1.4 SCHEME AREA

The former Shire of Greenough area is located in the Mid West Region and encompasses some of the suburbs of Geraldton, and farming areas inland. The Study area has an area of 1,748 square kilometres and a population of 10,721 (Snapshot of Greenough, 2001 Census, ABS Website). The Study area has a large number of suburbs, localities and townsites, some of which are as follows: Drummond Cove, Eradu, Forrester Park, Glenfield, Greenough, Cape Burney, Karloo, Moonyoonooka, Moresby, Mt Tarcoola, Tarcoola Beach, Narngulu, Deepdale, Meru, Waggrakine, Walkaway, Wandina, Strathalbyn, Ukarra, Sandsprings, Wicherina, Rudds Gully, Tibradden and Woorree.

The area to be covered by Town Planning Scheme No 5 includes the entire land area of the former Shire of Greenough (Figure 1). The Local Planning Strategy includes a Strategic Plan Map, which covers the whole former Shire of Greenough area. The Zoning Scheme maps, which also cover the whole former Shire of Greenough area, include twelve zoning maps.

Figure 1: Study Area



2 PLANNING CONTEXT

2.1 INTRODUCTION

The following is a brief overview of the various planning strategies, which affect the former Shire of Greenough area, from the State Planning Strategy through to those that address local planning issues. These strategies provide the long term planning framework within which State, local government, and private sector decisions and investments are made. The important aspect is that these various planning strategies work harmoniously to achieve a shared outcome.

2.2 STATE PLANNING STRATEGY

The State Planning Strategy was published in 1997 and provides a holistic framework for regional and local planning in Western Australia until the year 2029. The main goals of the strategy are to generate wealth, to preserve and enhance the environment and to build vibrant and safe communities.

Some of the main strengths of the State Strategy are that it sets a common vision for land use planning in the State, it provides a guide to a number of State Departments involved in infrastructure and service provision, it identifies likely changes, it prepares for them and it establishes the mechanisms to ensure that they are implemented (Figure 2).



Figure 2: Implementing the State Planning Strategy

Some of the main driving forces for growth and change in Western Australia are seen to be the close proximity to Asian markets, relatively rapidly growing population which is expected to reach 2.7 million people by the year 2029, a range of positive economic opportunities, relatively high economic growth rate and technological changes that enable the perception of distance to be reduced. The implementation of the strategy is seen as being through regional plans and statutory region schemes.

The main strategies for the Mid West Region are as follows:

- Diversification of economic base in agriculture, mining, downstream processing and tourism. It is essential that reference be made to the City of Geraldton-Greenough's Local Rural Strategy for recommended minimum lot sizes, management guidelines and criteria/circumstances that will guide decisions on rural subdivision.

- Development of services and attractions at Geraldton to confirm its role as the major centre north of Perth.
- Protection of coastal and marine environments.

The main implications of the State Planning Strategy for the former Shire of Greenough area are:

- Greenough surrounds the Regional Centre, Geraldton.
- Greenough contains the main regional Industrial Estate of Narngulu.
- Greenough is close to the planned Strategic Industrial Estate at Oakajee, in the Shire of Chapman Valley.
- Greenough contains a large Agricultural Priority Management Area.
- The proposed regional road linking Geraldton to Leinster via Mount Magnet passes directly through the former Shire of Greenough area.
- Indications are that the former Shire area contains relatively good water resources and mineral resources, but more investigation needs to be carried out by the relevant agencies at a regional level to identify and protect regionally significant resources through the planning system.

2.3 GERALDTON REGION PLAN 1999

2.3.1 Introduction

The Geraldton Region Plan was finalised in June 1999. The area examined in the region plan includes the City of Geraldton, Shire of Greenough, Shire of Irwin, Shire of Chapman Valley, Shire of Northampton and the Shire of Mullewa (Figure 3).

The plan seeks to provide a framework for the future management, protection and coordination of regional planning. The purpose of the Region Plan is to identify planning objectives and actions necessary to achieve those objectives. A key objective of the Region Plan is to provide a link between State and local planning and a balance between environmental, social and economic factors.

The Region Plan addresses the principles outlined by the *State Planning Strategy* under five sub-headings: Regional Development, Community Development, Natural and Cultural Environment, Economic Development and Infrastructure. The Region Plan also provides a context for further detailed studies.

The Geraldton Region Plan recommends that a full range of industrial land be made available, that Narngulu be retained for general industry and the buffer be formalised, that the assessment of Wizard Peak as a possible future heavy industrial estate be completed and that a services corridor between Narngulu and Oakajee be identified and protected. The Geraldton Region Plan also supports continued development of a viable, diverse and ecologically sustainable agricultural industry, identified and protection areas of productive land of State and regional significance, identification of rural areas suitable for intensive agricultural uses through local rural strategies, protection of basic raw materials as part of land use planning decisions and recognition and promotion of the Geraldton City Centre as the focus for retail, administrative, cultural, community, entertainment, religious and educational activities in the region.

2.3.2 Regional Development

The *State Planning Strategy's* "Mid-West Vision" states:

"In the next three decades, the Mid-West Region will continue to diversify its economic base in the areas of agriculture, minerals development, downstream processing of commodities and tourism. Geraldton will develop as the largest regional centre north of Perth, offering a wide range of facilities and attractions...."

2.3.3 Community Development Objective

“To enhance the region as a place to live, promote orderly urban growth while recognising environmental and other constraints, and encourage the provision of a range of residential living environments. To ensure that the community is supported by adequate and appropriate community services and facilities”.

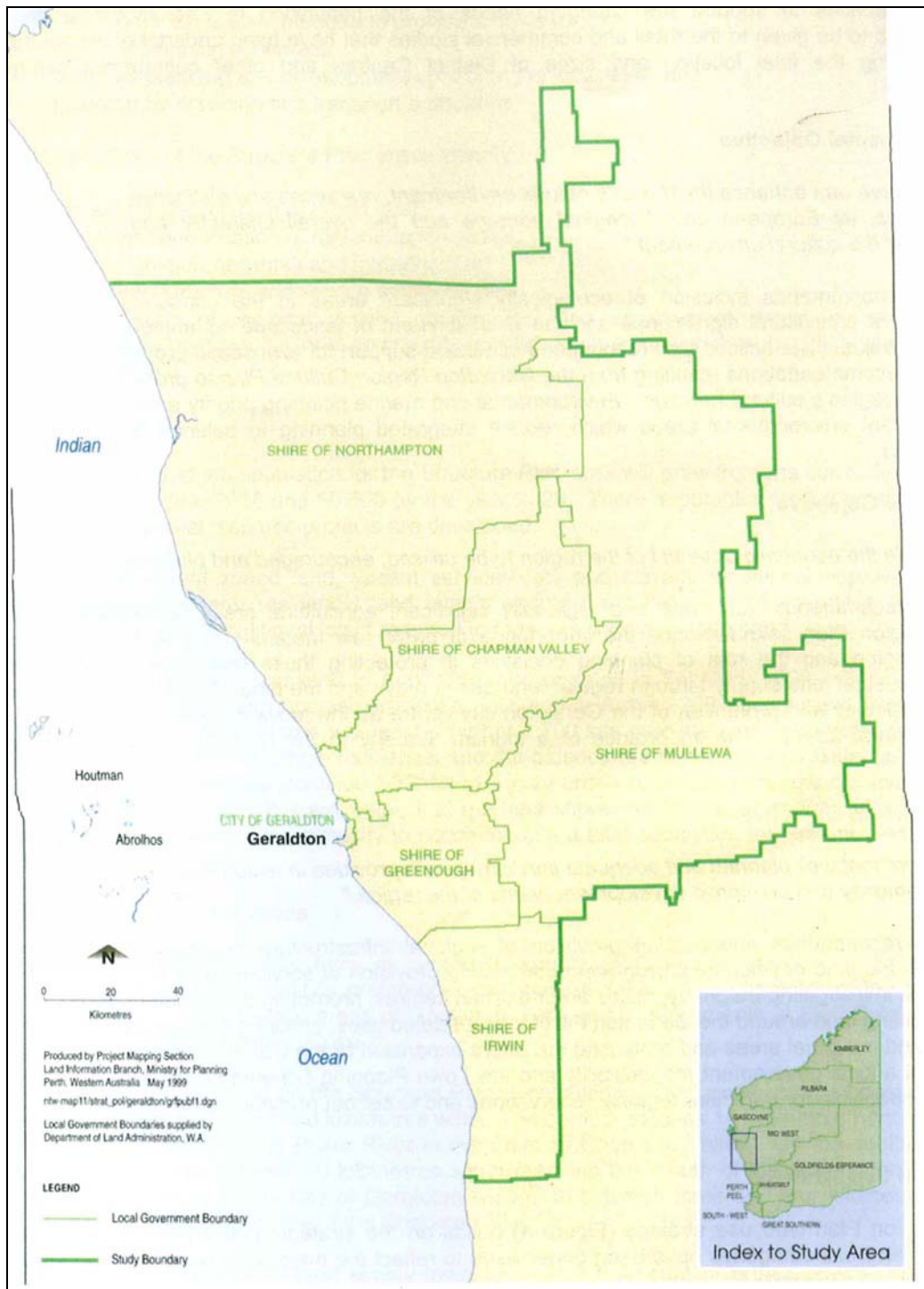


Figure 3: Local Government Areas of the Geraldton Region

(Note: the City of Geraldton and Shire of Greenough were amalgamated on 1 July 2007 to form the City of Geraldton-Greenough)

The Region Plan recommends monitoring the amount of population growth and the structure of the population to ensure that there is an adequate supply of land available to meet anticipated demand for housing, community purposes and other land uses. Other recommended actions are to promote planning for a range of housing and encouraging protection and enhancement of the unique character of the region's towns. Planning to identify land for schools, commercial centres (including a district centre), recreation and other community services to support the changing needs of the population is also recommended. Recognition will need to be given to the retail and commercial studies that have been undertaken within the district in determining the final location and sizes of District Centres and other commercial centre requirements.

2.3.4 Environmental Objective

"To conserve and enhance the region's natural environment, resources and distinctive landscapes, its European and Aboriginal heritage and the overall character and amenity of the cultural environment."

The Region Plan recommends inclusion of ecologically significant areas in the conservation estate, protection of areas of agricultural significance and the establishment of landscape committees to protect areas of landscape value. The actions also recommend continued support for townscape programs and the implementation of recommendations resulting from the *Geraldton Region Cultural Plan* to protect and foster development of the region's cultural heritage. Environmental and marine planning priority areas have been identified as important environmental areas which require integrated planning to balance resource and environmental issues.

2.3.5 Economic Objective

"To enable the economic potential of the region to be utilised, encouraged and planned."

The Region Plan recommends that State and regionally significant agricultural areas be identified and protected. The Region Plan acknowledges the importance of basic raw materials and minerals to the economy of the region and the role of planning decisions in protecting these resources. Monitoring commercial and industrial land supply through regular land use surveys and the land development program is recommended together with promotion of the Geraldton city centre as the focus of retail, administrative, community and cultural activity. The importance of a tourism strategy to the region's economy is also identified.

2.3.6 Infrastructure Objective

"To ensure that well planned and adequate infrastructure is provided in accordance with community and economic development needs of the region."

The Region Plan recommends coordinating provision of regional infrastructure in areas identified for development under the land development program, coordinating provision of services to small, remote and coastal settlements, investigating freight bypasses around urban centres, promoting development of regional tourist roads, protecting land around the Geraldton Port for port-related uses, ensuring adequate port access between the port and industrial areas and protecting the future expansion of the Geraldton Airport. Regional infrastructure is not a local government responsibility and the Town Planning Scheme needs to make clear which agency is responsible for particular regional reservations and to set out procedures for acquisition and compensation.

2.3.7 The Land Use Strategy

The Geraldton Region Plan land use strategy (Figure 4) builds on the strategic policy framework of the Region Plan. The land use categories have been generalised to reflect the major land uses and present a concept of the region as a whole.

2.4 THE GREATER GERALDTON STRUCTURE PLAN

Greater Geraldton is the focus of commercial and administrative activity for the Mid-West Region. The Structure Plan provides a framework for coordinating development and managing growth of the regional centre (Figure 5).

The Structure Plan is also intended to provide a basis for:

- regional planning scheme/s;
- statutory planning and development control at the local level; and
- planning by servicing and transport authorities.

The objectives of the Structure Plan are to identify:

- the extent and location of urban land;
- the extent and location of regional open space;
- future transport networks and infrastructure;
- future infrastructure and service corridors; and
- the location of regional activity centres including employment areas, industrial areas, regional commercial centres, regional community facilities such as universities, hospitals and regional recreation facilities.

2.4.1 Population

It is projected that the population for the Structure Plan area will grow from the currently estimated 32,000 to 41,000 by the year 2011 and 50,600 by the year 2026. There is potential for further increase to 60,800 by 2026 if all potential resource projects are developed.

Analysis of vacant zoned land, vacant serviced lots and current conditional approvals indicate Greater Geraldton's short-term residential land supply should meet the demand scenarios presented and have capacity to produce additional lots if required to meet any increase in demand.

The land use survey conducted in April 1997 and updated in February 1998 indicated there were about 1,450 vacant single and special residential lots and a further 300 vacant rural living lots in the area. Approvals are in place to create at least a further 1,700 lots over the next three years if required. Of these proposed lots, 1,200 are single residential and the balance are either special residential or rural-residential. The land use survey also identified 1,391 ha of vacant urban zoned land with the capacity to create between 9,700 and 12,500 lots. It is estimated that the land shown on the Structure Plan including land north and south of Geraldton has the capacity to accommodate a total population for Greater Geraldton of more than 100,000 people.

2.4.2 Residential Areas

Greater Geraldton benefits from an adequate supply of residential land in a variety of locations to accommodate the community's preferences and requirements. The character of the residential areas is diverse including the historic areas of Geraldton, early beach settlements at Bluff Point and recent coastal developments at Drummond Cove.

The urban form depicted on the Structure Plan is essentially linear, comprising a coastal corridor about 24 kilometres long and about two kilometres wide. The corridor extends 14 kilometres north of the city centre to the southern banks of the Buller River in the Shire of Chapman Valley. On the southern side of the city centre the corridor extends 10 kilometres south reaching the mouth of the Greenough River. The central part of the corridor at the City of Geraldton widens to between three and four kilometres, generally being contained to the western side of the Chapman River.

Assessment of residential land supply indicates that the amount of urban, special residential and rural-residential land designated for development is substantial and will adequately cater for future growth of the region including additional growth associated with future industrial development. However, there is a need to monitor and review development to ensure provision of urban services and infrastructure is coordinated.



Figure 4: Geraldton Region Plan - Land Use Strategy

2.4.3 Commercial Development

A review of the Greater Geraldton Retail Needs undertaken by the Department for Planning and Infrastructure in 2004 indicated that future district shopping centres would be located at Glenfield Beach and at Karloo in the north west sector of the future east-west/north-south Regional roads. In addition, neighbourhood shopping centres would be supported so as to facilitate good retail distribution.

Greater Geraldton has one of the most comprehensive retail networks in rural Western Australia. The majority of residents live within 300 to 400 metres of some form of day to day convenience-based shopping facilities.

The city is the centre of commercial activity in the region providing convenience shopping and a range of comparison goods and services. As the population increases the composition of commercial activity in the city centre will change to strengthen its role as the regional focus for tourism, cultural and entertainment activities. Development of the marina site will strengthen the role of the city centre, complementing rather than competing with the city centre. It will also assist in linking the Northgate Shopping Centre with the city centre.

While supermarket activity is largely responsible for the vitality of the city, it is considered that the city has now reached a size where convenience shopping is more appropriately located within the residential neighbourhoods they service. The draft *Retail and Services Strategy* recommended expansion of retail development to include a district centre, as population increases. The draft strategy indicates that population is unlikely to warrant full development of a district department store in the short to medium term. The need for a future district centre needs to be quantified and if needed, should be located following consideration of a broad range of factors including accessibility to existing and future residential areas.

2.4.4 Community Services

Community services include schools, child-care centres and recreational facilities. The identification of land for community services is necessary to ensure that the land is available in appropriate locations when required. The *Geraldton Regional Infrastructure Study* identified the potential impacts of the population growth associated with industrial development and the actions required by State and local government to ensure that the required community infrastructure (social and engineering) is available to meet its needs.

2.4.5 Rural-Residential Areas

Rural-residential areas are located immediately to the east of the residential development areas, in a band between two and three kilometres wide. The areas of Woorree, Eastlyn, Moresby, Moonyoonooka, Rudds Gully, Cooper Street and White Peak are included in this category of land use.

The Structure Plan recognises rural-residential subdivision as providing an alternative to conventional residential subdivision, but recommends that the development be limited to physically suitable locations where services can be easily provided.

The plan does not support rural-residential subdivision on productive agricultural land, areas containing important basic raw materials, regionally significant landscapes, environmentally sensitive areas and areas suitable for residential subdivision.

2.4.6 Rural Areas

Rural land surrounds the urban area and accommodates a mix of rural activities. There is pressure for rural land to be developed for special rural uses, tourism development and other non-rural uses as a result of proximity to the city centre and physical characteristics. The Structure Plan supports the continued use of rural areas for agriculture and protection of basic raw materials and mineral resources.

2.4.7 Recreation, Landscape and Conservation Areas

The Structure Plan proposes an integrated system of open space including parks and recreation reserves, river corridors, foreshore reserves, landscape amenity areas and urban bushland.

The Moresby Range and Chapman River systems have been identified and are the subject of current studies, which will provide the basis for community consultation, and the preparation of comprehensive management strategies.

The Moresby Range Management Committee has completed a preliminary analysis, which has defined the extent of the Moresby Range, shown on the Structure Plan. The Range is diverse including areas with value for conservation, tourism, recreation and landscape amenity. The Moresby Range Management Committee is currently investigating methods of protecting the special characteristics of the Range. The area shown on the plan does not imply future reservation.

Committees have also been formed to develop and implement management plans for the Chapman River. Work on these plans is continuing.

2.4.8 Industrial Areas

- Strategic Industry

Industry, port and transport issues have been possibly the most contentious regional planning issues in Geraldton for some years.

In November 1996 Cabinet considered the An Feng Kingstream Steel project and resolved to support relocation of the project from Narngulu to Oakajee provided it was technically, economically, environmentally and financially feasible to do so. The site identified on the Structure Plan encompasses 1,100 hectares of core industrial area and approximately 2,500 hectares of buffer and an associated deepwater port.

The Structure Plan also identifies a possible strategic industry site in the area referred to as Wizard Peak. Preliminary assessment indicates that this area has potential for industrial development, but the structure plan states that this site be pursued only if Oakajee does not proceed.

- General Industry

The Local Planning Strategy recommends the zoning for Narngulu prevent the introduction or expansion of industries likely to have adverse impact on surrounding existing or proposed land uses. The Strategy also seeks to minimise the potential for land uses incompatible with industrial development locating in the areas where they may be affected by industrial emissions. Any potential for land use conflict between industries at Narngulu and surrounding land uses needs to be minimised through appropriate planning policies and planning decisions.

2.4.9 Transport

- Geraldton Airport

The Geraldton Airport is strategically situated to serve the needs of Greater Geraldton for the foreseeable future. Appropriate planning around the airport will ensure compatible uses are located adjacent to the airport, enabling its continued operation and future development. The City of Geraldton-Greenough has completed an airport master plan, which will provide the opportunity for further expansion of the facility.

- Port

The Region Plan recognises the importance of the existing Geraldton Port to the economy of the region and includes proposals for road and rail access, which will ensure that the port continues to operate in the long term. The Region Plan identifies the proposed deepwater port at Oakajee and recognises that such a port would complement rather than compete with the existing port by catering for different requirements.

- Railways

The location of the railway along the foreshore was considered by some sectors of the community to be detrimental to the amenity of the town. The Structure Plan includes the removal of the existing rail line along the foreshore, and its relocation into the southern transport corridor. Work has now been completed on Stage 1 of the Southern Transport Corridor, which includes an alternative rail link between Narngulu and the Geraldton port.

The alignment of a possible railway, road and services corridor between Oakajee and Narngulu is also shown on the Structure Plan. The provision of such a corridor provides the opportunity to develop a railway and provide services between the two areas, which may be required in the future.

- Roads

The major traffic movement in the Structure Plan is in a north-south direction. The existing primary north-south route is formed by Brand Highway and North West Coastal Highway. The Structure Plan proposes a variation to the primary route between the intersection of Webberton Road and North West Coastal Highway and Brand Highway, near Devlin Pool Road. The realignment of the primary north-south route between Webberton Road and Cape Burney will provide a bypass of the inner commercial area for through traffic. This road would replace Brand Highway and North West Coastal Highway as the primary route. It is recognised that the preferred route recommended by the Western Australian Planning Commission utilises Webberton Road between its intersection with North West Coastal Highway and the Geraldton-Mt Magnet Road.

The primary east-west route on the Structure Plan is formed by the Geraldton-Mt Magnet Road, the realignment of Geraldton-Mt Magnet Road, west of the airport, a proposed alignment north of the Meru landfill site and Port Way. Road alignment and intersection designs along Eastward Road will be used to encourage use of the east-west route for access by heavy haulage traffic to the port and commercial area.

The Southern Transport and Services Access Corridor Master Plan assessed the primary road alignments shown on the Structure Plan.

- Public Transport

The Structure Plan supports the development of a public transport system including the development of a spine in the old alignment of the North West Coastal Highway in the northern corridor and the Brand Highway in the southern corridor. With the northern and southern urban corridors being only two kilometres wide, these two roads will be nearly central to the future extent of residential development.

- Walking and Cycling

The Structure Plan supports the development of a regional pedestrian and cycle path system to connect with local pedestrian cycle paths and integrated with the main public transport spine along the North West Coastal Highway in the northern corridor and Brand Highway in the southern corridor. As urbanisation proceeds, the development of a continuous dual-use path along the foreshore, from the Greenough River mouth in the south to the Buller River mouth in the north, would be encouraged.

2.4.10 Infrastructure

The Structure Plan considers regional infrastructure requirements including water supply, wastewater and waste disposal. Wastewater treatment sites and buffers are identified on the Structure Plan. Possible land uses within the buffer areas include non-residential uses such as industry, open space and recreation. The regional waste disposal site is identified on the plan and will accommodate future requirements of Greater Geraldton. Infrastructure issues have been addressed in the *Geraldton Land Development Program* and the specific impacts of industrial development on community infrastructure (social and engineering) have been addressed in the *Geraldton Regional Infrastructure Study*.

The Geraldton Region Plan sets the framework for the preparation of the Local Planning Strategy for the City of Geraldton-Greenough. Key elements of the Plan such as the potential Wizard Peak Industrial estate, proposed rail and services corridor to the proposed Oakajee Industrial Estate, will be factored into the plan and considered when deciding the future locations of land uses and development.

2.5 AGRICULTURAL AND RURAL LAND USE PLANNING POLICY

The Agricultural and Rural Land Use Planning Policy (Statement of Planning Policy No 2.5) was adopted in 12 March 2002.

The main objectives of the policy are:

- Protect productive agricultural lands by ensuring that they stay productive, by minimising fragmentation and by improving resource and investment security.
- Provide opportunities for planned, contained and sustainable settlement in locations with access to community services and infrastructure.

- Assist in the conservation, restoration and use of natural resources such as energy, water, land, flora, fauna, minerals and basic raw materials.

The Local Planning Strategy is compatible with the intent of the Agricultural and Rural Land Use Policy in the following ways:

- The zoning terminology was changed to bring it up to date with the new policy.
- Planned, contained and sustainable settlements have been included.
- Conservation and restoration of natural resources such as the Moresby Range, and identification of the Greenough Flats as an Agricultural Priority Management Area of Regional Significance have been included.

2.6 RURAL STRATEGY 1993

The existing rural strategy has been reviewed through preparation of a new Local Rural Strategy.

The main objective of the rural strategy is to ensure continued operation of the rural industry by retaining rural land for unencumbered rural production. This will be achieved by ensuring only large allotment sizes are created, and by not creating concentrations of populations or increasing population densities in rural areas. The new Rural Strategy preserves the environmental values of rural areas, provides for limited rural subdivision, and promotes agricultural diversification in appropriate places.

The strategy provides detailed guidelines on a precinct by precinct basis. The Strategy includes an area overview, major values, key issues, principal policy objectives, land uses (desirable, conditional and undesirable), management guidelines and subdivision and development guidelines.

2.7 AQUACULTURE SITES ASSESSMENT

The Mid West Development Commission prepared a study in 1997 to evaluate sites for land based marine aquaculture in the Mid West Region. The only site, which was evaluated in the former Shire of Greenough area, was one at Flat Rocks. The Flat Rocks site was classified as a tertiary site. Its potential, in the longer term, is likely to be determined by infrastructure development. One of the benefits of Flat Rocks is that the land is freehold and is zoned for general agricultural activities.

It should be noted that there could be other sites identified in the future that could also be found to be suitable for this purpose.

2.8 HERITAGE INVENTORY

The Shire of Greenough Municipal Inventory of Heritage Places was prepared in 1997-98 and was reviewed in 2004 as per the requirements of the Heritage of Western Australia Act 1990 the reviewed document contains 216 places. Places need not necessarily be buildings and may be historical sites of former buildings, activities or events, as well as built structures such as mines, wells or roads.

Entry of a heritage place into the Municipal Inventory is a recognition of its importance to the community. Depending on the level of significance afforded to each place listed a management category is allocated which provides a recommendation for the future conservation of the place.

Places recorded in the Municipal Inventory are not automatically entered into the Heritage Council's Register of Heritage Places. It is likely, however, that the sites will be included in the Heritage Council's database. Places that are entered into the Register are subject to development control and are protected under the Heritage of Western Australia Act 1990.

The Shire of Greenough Municipal Inventory identified 216 places as having heritage significance. This is not a definitive number as the inventory is required to be updated annually and reviewed every four years.

It is proposed that a Heritage List will be drawn from the Municipal Inventory in accordance with the procedures set out by the Heritage Council of WA and in accordance with the Heritage of Western Australia Act, 1990. Such an arrangement will ensure that the heritage places are recognised but, as they are not part of the Scheme, the Scheme will not be required to be amended if the list is added to from time to time. The heritage list has not been compiled as yet.

2.9 MIDWEST TOURISM STRATEGY

A Mid West Tourism Strategy was prepared for the Midwest Tourism Promotions Inc in 1994. The strategy examined a broad range of issues such as status of tourism, tourism product and larger markets.

The study identified a major purpose for the strategy, namely:

"To maintain and develop the Midwest region as a major tourist destination and to foster a local appreciation of the significance of tourism in the community".

The strategy identified the following issues: image and logo, membership services, funding, awareness of tourism and the Midwest Tourism Board.

The Shire of Greenough developed its own Tourism Development Implementation Strategy (1997-2002), in 1997. The strategy has the following objectives:

- To improve the management of tourism within the Shire.
- To make more effective use of available resources and promote the further upgrading of existing product where possible.
- To increase visitor use and awareness of tourism attractions and resources within the Shire.
- To establish a new product.
- To recognise tourism as a social and economic force and as a major or potential major employer within the Council's area.
- To foster and create a community awareness of the benefits of tourism within the Council's area.
- To provide the basic facilities and infrastructure sufficient to encourage development.
- To ensure that facilities within the area are adequate to cater for visitors and residents.
- To actively pursue funding assistance/grants for the promotion and/or improvement of tourism facilities within the Council's area.
- To ensure that Council is at the leading edge of technology when promoting the tourist features of the Shire.
- To actively pursue promotion of the Greenough area through inclusion in major statewide promotional campaigns.

The main implication of this strategy for the Town Planning Scheme is that tourism is a growth industry in the Mid West Region.

2.10 GERALDTON-GREENOUGH RETAIL AND SERVICES STRATEGY

The Geraldton-Greenough Retail and Services Strategy was published for public comment in 1996. The Shire of Greenough received the report but the Greenough Shire Council did not endorse it. The study examined a number of key issues such as demand for centres, location and criteria for centres and the functions of centres.

The strategy reviewed the hierarchy of centres in the region, namely:

- Regional Town Centre (Geraldton CBD including Northgate Shopping Centre).
- Discount Department Store based centre (District Centre).
- Supermarket based centre (Neighbourhood Centre).
- Corner Store.
- Showroom/Retail.

The work undertaken by this study was reviewed by the Department for Planning and Infrastructure in 2004 and the conclusions in the report (Assessment of Commercial Centre and Community Facility Requirements in Growth Precincts North and South of Geraldton) should be taken into account in future planning of the Shire.

The main conclusions and findings of the 2004 study were:

The identification of land requirements for future commercial centres and community facilities north and south of Geraldton;
 That demand exists for community centres to be co-located with commercial centres;
 There will be a need in the future for additional schools (private and government) and churches;
 Further investigation is needed into the demand for further tertiary education facilities; and
 Future structure planning, including provision for community and commercial facilities, is important to the growth of the northern and southern areas of Geraldton.

2.11 GERALDTON REGIONAL ACCOMMODATION STUDY

The Geraldton Regional Accommodation Centre Study was completed in 1997. This study examined accommodation requirements in the Geraldton, Greenough, Northampton, Mullewa and Chapman Valley areas.

The study took the proposed major developments into consideration, namely: An Feng Kingstream Steel and Mount Gibson Iron.

The study concluded that a significant increase in demand for accommodation is expected within the Geraldton region as a result of a number of planned industrial developments at the time. Peak accommodation demand was estimated at over 3,700 dwelling units, of which approximately 1,900 were for single people and 1,800 for families. Accommodation strategies should be prepared if planned industrial developments proceed and potential negative impacts on the property market and tourism are to be avoided.

2.12 BATAVIA COAST STRATEGY

The Batavia Coast Strategy was endorsed by Council in 2001. The study area included approximately 260 kilometres of coast from Dongara in the south to the northern boundary of the Shire of Northampton in the north.

The main implications for the City of Geraldton-Greenough's southern coastal sector are:

- Cape Burney is identified as a Coastal Village.
- Flat Rocks and Lucys are identified as Major Day Use Recreation Sites.
- Seven Minor Day Use Recreation Sites are identified.
- The majority of the southern sector is jointly managed by the landowners and the local government.
- The Tarcoola Beach to Cape Burney sector is predominantly managed by the local government.
- The main implications for the northern coastal sector are as follows:
- Drummond Cove is identified as a Coastal Village.

- The coast is predominantly managed by the local government.
- The majority of the coast is proposed as a fishing exclusion zone.

The recommendations of the Batavia Coast Strategy like those for a nodal structure along the City of Geraldton-Greenough's coast and with respect to management responsibilities need to be taken into account when planning for coastal areas.

2.13 DRAFT MORESBY RANGE MANAGEMENT STRATEGY

A Draft Moresby Range Management Strategy was prepared by the Moresby Range Management Committee. So far the study has highlighted the overall level of environmental degradation of the range and the need to preserve the visual and environmental qualities of the range.

The importance of the values of the Moresby Range have led to the identification of the Moresby Range as an environmentally significant area in the Local Planning Strategy and a Special Control Area in the Town Planning Scheme as a means to control development. The draft Moresby Range Management Strategy has been used as a guide to development controls to be introduced by the Special Control Area.

2.14 CHAPMAN RIVER REGIONAL PARK MANAGEMENT PLAN

A management plan was prepared for the Chapman River by Landform Research in 1999. The report examined a broad range of issues related to the existing condition of the environment, surrounding land uses and possible additional reserve areas.

The report recommended that a Chapman River Regional Park be established to provide an opportunity for the river to be restored to its original quality.

Assessment Reports have recently been prepared for the Chapman and Greenough River Foreshores. The assessment reports make a range of recommendations related to planning, weed control, site preparation, planting, maintenance and monitoring.

The Local Planning Strategy will implement recommendations of these reports where planning proposals abut or include river foreshores. The Local Planning Strategy also includes subdivision and development, and land management guidelines that support improved river foreshore management.

3 KEY ISSUES

3.1 COMMUNITY ISSUES

3.1.1 Introduction

It is important that the long term planning strategies for the region and the City of Geraldton-Greenough as discussed above, be implemented with an awareness of the aspirations and requirements of the community of the day. For this purpose numerous public consultation exercises were undertaken as input into the preparation of the strategy.

Public workshops were held in various former Shire wards in April 1998 to discuss the Review of the Rural Strategy and the Review of the District Town Planning Scheme. The meetings were advertised in the local community newspapers, on ABC regional radio and all relevant community groups were contacted directly and invited to attend. The format for each workshop was similar, namely, introduction by one of the Ward Councillors, briefing by the consultants, a workshop session to examine values, concerns and vision and an open forum to enable the community to ask questions or make statements. The following were the inputs received from the community at each of the meetings:

3.1.2 North Ward

The meeting for the North Ward was held at the former Shire Offices at Utakarra on 20 April 1998 at 7.30pm. The meeting was attended by 18 people as well as Shire Planning Staff, the Regional Manager of the Ministry for Planning office in Geraldton and the Consultant. The main points, which came out of the workshop, were as follows:

Values

- Climate, reliable rainfall
- Family background, personal preference
- Coast close by
- Freedom of choice
- Open spaces
- Country lifestyle
- Proximity to port
- Proximity to large regional centre
- Close to service industries
- Good educational opportunities
- Good sporting opportunities
- Cultural and heritage values
- Good medical services
- Good employment opportunities
- Agricultural diversity; cereal, stock, horticulture, viticulture, aquaculture, floriculture, forestry
- Retirement potential
- Good quality land
- Close to airport
- Good roads

Concerns

- Inappropriate developments
- Substantial rate increases
- Waterless subdivisions
- Don't want amalgamation
- More Commonwealth money for roads
- Roadside litter bad
- Buffer zones cause problems
- Urbanising productive land
- Too many consultants and not enough action
- Want equal fuel prices, town and country
- Existing farm sizes too small, should be about 2,000 acres
- Neighbours don't want to buy farms as they can buy larger properties further away from city

- Planning decisions made without site inspection
- Impact of railway on farm operation
- Conflicting land uses, poultry, piggery and buffer zones
- Spread of urban uses into rural areas
- Lack of thorough public consultation before projects, namely, changes to land without discussing with land owner
- Reject amalgamation
- Rural subdivisions need water
- Pollution, disposal of city and industrial waste
- Too many controls, namely, EPA and AgWest
- Lack of road funding
- Buffer zone around abattoir
- Rubbish tip in wrong place
- Lack of road from airport to Edward Road

Visions

- Bypass road should be to east of Moresby Range
- Land between Woorree and ranges should be developed
- Sustainability of Shire and lifestyle
- Full employment generated by agricultural industries expansion
- Farmers rights, buffer zones and green belts
- Southern access corridor
- Expand harbour at Point Moore
- Preserve unique environmental ecosystems
- Greenough should absorb Geraldton and Oakajee
- Maintain rural lifestyle and viability of rural areas
- Maintain present Shire boundaries
- Improve beaches and coastline, and provide access
- Encourage more resident inputs
- Increase areas of remnant vegetation
- Plant wildlife corridors
- Bitumen roads throughout Shire
- Every subdivision to have plentiful water
- Better access to port
- Build more efficient bypass road

3.1.3 South Ward

The meeting for the South Ward was held at the Walkaway Recreation Centre on 21 April 1998 at 7.30pm. The meeting was attended by 23 people as well as Shire Planning staff, a Planning Officer from the Ministry for Planning office in Geraldton and the Consultant.

The main points, which came out of the workshop, were as follows:

Values

- Fresh air, open space
- Lack of industry
- Excellent sporting facilities
- Good life for children
- Good schooling in area, good P & C and bus service
- Access to natural areas such as Greenough River Mouth, Ellendale Pool and beaches
- Small community, friendly atmosphere
- No vandalism, racism - safe area
- Rural atmosphere - farming community
- Heritage values
- Good equestrian facilities
- Community hall, provided by community
- Two good museums
- Voluntary fire brigade
- Good tourist attractions, Ellendale Pool, Greenough Hamlet, museum, Hampton Arms, Glengarry, Flat Rocks, walk trail at River Mouth and Wildlife Park

- Good medical and cultural services at Geraldton
- Good shop/post office and pub
- Good road system and happy with part sealing of company road
- Love the white galahs (corellas)
- Good proximity to Geraldton, regional centre
- Good community support

Concerns

- The closer settled areas of the South Ward are becoming life style holdings rather than viable farming enterprises
- Heritage being threatened in front and back flats from Devlins Pool to S-bend and Walkaway museum
- Greenough should assimilate Geraldton
- Good productive land being used for housing
- Lack of aged accommodation
- Greenough estuary polluted, should be opened up
- Centralism is interfering in local issues
- Concerned about future of South Ward residents if Geraldton takes over
- Concerned about viability of Shire if take-over by Geraldton
- Concern about new industrial areas and lack of consultation
- Lack of sealed roads
- Too many galahs (corellas) and their impact on trees and vegetation
- Unsafe rail crossing, needs boom gates
- Lack of footpaths in town
- Fragmentation (breakdown) of rural land holdings
- Concern at management of flood waters
- Don't want amalgamation
- Hamlet buildings deteriorating
- Future management of hamlet
- No piped water or postal service in front flats
- Increasing urbanisation
- Spread of castor oil bushes on road verges
- Problems with box thorn and companion weed
- Unsympathetic buildings in sensitive areas
- Proliferation of billboards on Brand Highway
- Restrictions on development on small blocks
- No regard for commercial blocks in town area

Visions

- More open and honest government
- More autonomy for individual landowners
- More quarter acre blocks at Walkaway
- Greenough to stay as it is
- More subdivision of the sandhills and ocean front
- Minimum 20 acre lots for flats
- Walkaway to increase in residential size
- Provide scheme water to front flats
- Turn Greenough Hamlet into living area to enhance tourism
- Provide sympathetic housing developments, appropriate style, at Greenough Hamlet
- Heritage area to be confined to the actual hamlet and Gray's Store
- Expand Heritage area
- Pioneer cemetery should be better maintained
- Develop Flat Rocks for tourist development
- Don't touch Lucy's Beach
- Provide aged persons accommodation
- Open up Greenough River Mouth to flush, not for boats
- Provide boat ramp along south coast
- Provide regular bus or train run from Walkaway to Geraldton
- Manage sand dunes to prevent erosion
- Take commercial signs away from heritage area
- Promote improved tourist signs
- Improve green spaces in and around Walkaway

- Provide entry statements around towns
- Would like to see the Greenough Shire remain rural and semi rural
- Want harmonious living environment
- Want football/soccer oval at Walkaway
- Want townscape improved
- Want Walkaway Development Association to continue
- Want better lighting in town
- Want surfaced roads to Ellendale Pool, Nabeja Road and Arthur Road to Moonyoonooka Road
- Want underground power
- Keep Ellendale Pool area natural

3.1.4 Tarcoola Ward

The meeting for the Tarcoola Ward was held at the Tarcoola Community Hall on 22 April 1998 at 7.30pm. The meeting was attended by 4 people as well as Shire Planning staff, a Planning Officer from the Ministry for Planning office in Geraldton and the Consultant. The main points to come out of the workshop were as follows:

Values

- Good place to live
- Beach park good
- River mouth good
- Good coastal views

Concerns

- Public open space not coordinated
- No play areas for children
- Lack of commercial lots, Glendinning
- Too many lots close to town
- Too many large lots
- Deep sewerage needed
- Eastlyn subdivision poor, 1 hectare lots
- Greenough Flats, settler blocks
- Water needed in Greenough Flats, Water Corporation Scheme
- Glenfield market garden, what future?

Visions

- Personalise streets
- Control height of trees that block views
- Assess land capability
- Provide water to Greenough Flats
- Open up eastern connection at Glenfield Beach, road needed
- Provide land for tourist development on high ground at Wandina
- Set aside tourist lookout at Tarcoola and over city
- Develop more tourist destinations

3.1.5 West Ward

The meeting for the West Ward was held at the Waggrakine Hall on 23 April 1998 at 7.30pm. The meeting was attended by 52 people as well as Shire Planning staff, a Planning Officer from the Ministry for Planning office in Geraldton and the Consultant. The main points, which came out of the workshop, were as follows:

Values

- Open space, freedom, scenic views and peace
- Hobby farming/rural pursuits
- Little crime/safe
- Rural environment/atmosphere for children
- Clean living
- Tranquility/privacy

- Revegetation of Native vegetation/bush
- Horse riding, livestock and bush walks
- Native birds, wildlife (kangaroos)
- Spaciousness
- Central to schools, employment and amenities
- Country lifestyle
- Reasonable land and house prices
- Few roads
- Financial rewards from possible subdivision
- Free from Government bureaucracy
- Proximity to ocean

Concerns

- Inability to subdivide when others can
- Maintain minimum lot size to retain rural lifestyle (1-2 ha suggested) not less than an acre
- Stray dogs kill sheep, makes larger properties less viable
- Crop spraying affects neighbours
- Preserve natural bush, no more clearing (illegal to clear more than 1 ha without a permit)
- Retain pony club in this area
- Rural zone should permit normal rural uses irrespective of 'urban' type uses next door
- Land use contradictions, namely, smaller lots in Chapman Valley
- Bituminise gravel roads (dust control) dust is health hazard and causes poor visibility
- Need community centre
- Provide mutual access, namely, battle axe, to prevent long narrow lots
- Retain ward system
- Some owners will lose 50% of their land at Glenfield
- Bus service to Geraldton poor, particularly, for caravan park
- Require information on sewerage in David/Hall Road area
- School buses on unsealed roads
- When will natural gas be provided
- Rates increase if neighbours subdivide
- West Ward rates higher than broadacre farming areas
- Refusal of 2 houses on one lot
- Unkempt verges and spread of noxious weeds
- Overstocking on small lots
- Lack of control of dogs
- Better policing of roads required
- Reduce traffic speed limits around schools
- Poor water pressure, Cooper Street
- Rate increases but not services
- Need Waggrakine High school
- Bus shelters inadequate
- School buses overloaded
- Cost of breaking up good farm land
- Stabilise sand dunes, plant vegetation
- Shire not spending enough money on West Ward
- Clean up Brisbane Street
- Don't want Waggrakine turned into Woorree or Rangeway
- Traffic speeds too high
- Do not want further subdivision
- Bituminise Beattie Street, promised for 15 years
- Limit State housing
- Don't want amalgamation of Shires
- Shire tree pruner mutilates trees
- Shire spreading Pattersons Curse, and Bindy Burr by mowing
- Spraying needs to be earlier
- Property numbering needs to be improved for emergencies

Visions

- Seal all roads
- Provide community centre

- Improve street lighting
- Provide horse trails
- Maintain rural atmosphere
- Don't want amalgamation
- Maintain uniqueness of 8 hectare lots
- Want Drummond Galleria
- Recycle sewerage water for land management
- More recreational facilities needed in West Ward (parks, footy oval and bowls)
- Increase street trees
- Need connecting road from Waggrakine to Woorree and Mullewa Road
- Subdivide into 2.5 hectare lots
- Fence off Moresby Ranges to keep out stock and feral people!
- Turn David Road Rubbish Tip into well fenced park
- Want ability to subdivide below 4 ha (1-2 ha)
- Want High School in area
- Encourage more population into area
- Provide for a variety of lot sizes
- Encourage a range of small agricultural uses

3.1.6 Individual Community Comments

A separate comments sheet was provided at each of the meetings to obtain individual inputs from members of the public. Eight of these were returned to the consultants as well as a separate letter and an E-mail.

The subject matter of the comments were as follows:

- Power poles of concern to farmers with regard to fires on farms.
- A survey of the ratepayers is needed to assess community concerns about future subdivision in Waggrakine. (This suggestion was acted on and a questionnaire was sent to all property owners in Waggrakine in May 1998. The results of this survey are dealt with in section 3.1.8 below.
- A property owner whose property has been divided by a road wants the smaller remnant to remain in the Rural Zone.
- Strong concerns expressed about guided development scheme at Glenfield and lack of community consultation.
- Land owners want subdivision in Waggrakine to enable them to build new homes.
- Concern about the Glenfield Structure Plan where land owners may lose 50 percent of their land. This is not acceptable. More consultation with land owners is essential.
- Land owner in Waggrakine wants to be able to subdivide 10ha lot. Also wants Drabble Road sealed to reduce dust. Inconsistencies in subdivision policy as some land owners have obtained subdivision and others not.
- Concern about Waggrakine being changed from Rural to Rural Residential. Prepared to subdivide to 2ha lot sizes. Belts of larger lot sizes are desirable. Anticipate amalgamation in 12-18 months and no major planning changes should be made in short term.
- Land owner at Glenfield would like subdivision similar to Woorree, 1-2ha. Disappointed that Shire has subdivided to half hectare lots in this area without consulting adjoining owners.
- Interest in changes to the Wandina area.

These matters will be taken into consideration when proposals are being prepared.

3.1.7 Walkaway

At the public meeting in the South Ward there were a number of conflicting comments concerning the future development of the town and surrounding area.

For example, concern was expressed about:

- Good productive land being used for housing.
- Fragmentation of rural land holdings.
- Concern about management of flood waters.
- Increasing urbanisation.

On the other hand the vision for the future included:

- More quarter acre blocks in Walkaway.
- Want commercial blocks in town.
- Would like to see Shire remain rural.

The major concern with further development at Walkaway is the potential for flooding (Figure 5). The area has been affected by floods on a number of occasions in the past. There has been some Rural Residential subdivision on the south western edge of the town in the past few years.

Owing to the ever present flood hazard at Walkaway it is recommended that further subdivision and development be carefully considered. Development and subdivision applications within the vicinity of Walkaway that may be the subject of flooding should be referred to the Water and Rivers Commission for comment in relation to the latest information on flood levels in this locality. Reference should be made to the Greenough Flood Plain Management Study and the recommendations contained therein as produced by the Water & Rivers Commission.

3.1.8 Waggrakine

Introduction

As a result of the broad range of comments received at the West Ward meeting it was apparent that a large number of property owners in the area would like to subdivide their properties to less than the existing 4ha minimum lot size which has been Council policy for a number of years. It was also evident that there are a number of property owners who do not want to see any further subdivision. It was therefore decided to undertake a simple questionnaire survey of the residents of Waggrakine to better determine the views of the community.

Survey

A Waggrakine Land Owner Survey was mailed to the community on 25 May 1998. A total of 210 survey forms were distributed and a total of 145 were returned, a response rate of 69%.

From the returns the following results were obtained:

- **65.52%** of residents favoured further subdivision below the Council's 4ha minimum lot size. Of these 52.63% favoured subdivision to a minimum of 2ha only and 47.37% favoured subdivision to 1ha or below.
- **34.48%** of residents were not in favour of subdivision below Council's 4ha minimum lot size.

A broad range of additional comments was received from residents, which generally supported the views expressed above.

Spatial Analysis of Survey Replies

Residents who responded were asked to supply their addresses in order to assess the distribution. The responses were then broken down into sectors, namely in a north-south manner bounded by the following streets:

- a. Beattie Road to Hall Road
- b. Hall Road to David Road
- c. David Road to Sutcliffe Road
- d. Sutcliffe Road to Arnold Road
- e. Arnold Road to Hackett Road

In response to the question whether the residents support subdivision to 4ha minimum lot size, the residents of sectors a, b, c and e did not support the status quo. Sector d, however, are supportive of the 4ha minimum lot size.

Social, Economic and Environmental Considerations

The Waggrakine rural area is similar to a large number of rural areas located close to a growing city that experience pressure from the residents to subdivide smaller and accommodate a larger number of people.

The relative close proximity of Waggrakine to the centre of Geraldton and areas of employment suggests that it too would be subject to ongoing pressure to subdivide smaller and accommodate more people.

The fact that a one hectare land subdivision exists to the north of Waggrakine in the Shire of Chapman Valley tends to further emphasise that Waggrakine has the potential to accommodate more people than it does at present.

In addition to the social and economic forces at work the land at Waggrakine, with its gentle westerly slope and views of the coast is arguably good residential land with good potential for housing the people of the expanding region.

Although the land capability at Waggrakine suggests that it has potential for horticulture the relative scarcity of water has resulted in the land being used more for rural lifestyle than productive agricultural purposes.

The Waggrakine Land Owners Survey was repeated in July 1999. A total of 210 questionnaires were distributed and 150 (71.4%) were returned by the due date (30 July 1999). Overall 64.7% of the landowners supported subdivision below 4 hectares and 44% supported subdivision to 1 hectare. A road-by-road assessment indicated that the residents of Arnold Road were the only area to indicate the retention of the 4-hectare minimum standard.

At the Shire of Greenough Council meeting on 29 September 1999 it was resolved that:

- A minimum lot size of 1ha would be supported throughout Waggrakine;
- Waggrakine be rezoned for Rural Residential uses in Town Planning Scheme No 5; and
- A set of development controls be prepared to facilitate development.

Development of the Waggrakine area will be undertaken jointly between the City of Geraldton-Greenough and the DPI and will depend on regional lot creation. Further review of environmental considerations, service provision and landowner responses will need to be undertaken through structure planning and that the endorsement of this structure plan will allow for subdivision in accordance with it.

3.2 LAND USE ISSUES

3.2.1 Introduction

To understand how the long term planning strategies for the former Shire area, and the aspirations of the current Community, may be accommodated, it is important to understand how the land use of the former Shire area has evolved over time. This section will provide information on heritage, population, employment, economics and conservation.

3.2.2 Heritage

- **Aboriginal Heritage**

The Greenough area has been inhabited by Aboriginal people for many thousands of years. The

Greenough region is the boundary between three major Aboriginal groups. It is the northern limit of the Noongar people who dominate the south west. It is the southern limit of the Nganda (Nanda) people who have inhabited the area around Shark Bay. It is the south western limit of the Watjari (also known as Yamadgee) people of the inland areas centred on the Murchison region.

All of these people originally led a nomadic life, and moved as the seasons changed from the hills to the coastal plain. There are a number of Aboriginal sites in the area. Some of these are ethnographic and some are archaeological. The specific location of many of the sites remains confidential to avoid disturbance. All sites are protected by the provisions of the Aboriginal Heritage Act (1972).

The majority of Aboriginal sites are related to coastal and freshwater areas (such as rivers and pools). Clearance from the Indigenous Affairs Department (Aboriginal Sites Branch) is therefore essential for all significant developments.

- **Cultural Heritage**

In 1611 Commander Brower from the Dutch East India Company established a new and shorter route to Batavia which brought ships close to the Western Australian coast. The Batavia was wrecked on the Abrolhos Islands in 1629 and its name has become synonymous with the regional coast, namely, the Batavia Coast. This exploration continued through to the 1800s.

The first known overland exploration to the Greenough area was undertaken by Captain George Grey, who is credited with the discovery of the Greenough River in 1839, while returning to Perth overland from Gantheaum Bay. The Greenough River was named after Sir George Belles Greenough, a one time President of the Royal Geographical Society.

The first systematic exploration of the region was made by AC Gregory, in 1846 and again in 1856. Further exploration by FT Gregory in 1858 and 1861 provided additional information on the region. Settlers first took up land on the Greenough Flats in the 1850s. The Greenough Flats proved to be an extremely fertile area and was soon an important grain producing area.

The Greenough Flats has a rich legacy of historic buildings, which serve as a reminder of the pioneer days. The historical Greenough Hamlet is a focal point for the preservation of settlement culture and successfully preserves the atmosphere and character of the early settlement. It is generally considered that the tourism potential of the Greenough Hamlet, situated on the Brand Highway, has yet to be realised.

A detailed historical chronology of the region was prepared as part of the Shire of Greenough Municipal Heritage Inventory. It is proposed that a list of significant heritage places be prepared and appended to the revised District Planning Scheme. The Heritage List will be comprised of Heritage Places classified Category 1 and 2 in the Municipal Inventory, as per Council's resolution at the February 1999 meeting. It is recommended that the Greenough Flats Heritage Precinct be identified as a Special Control area under the revised District Planning Scheme No 5 with specific reference being made to the Greenough Flats and Walkaway Land Use Strategy to ensure a co-ordinated approach is taken to development and land uses in this area.

3.2.3 Rural Areas

Physical Environment

A detailed assessment of the physical attributes of the City of Geraldton-Greenough together with their associated land use limitations and opportunities is contained within the Local Rural Strategy. The Local Rural Strategy recommends lot sizes for various precincts within the rural areas and the criteria/circumstances that need to be satisfied within those precincts. The following provides a brief summary.

Agricultural Areas

- **Sandplain**

The sandplain has only been cleared since the 1950s and has been developed with the use of fertiliser trace elements. Most of the natural vegetation has been cleared and there is now little remnant vegetation remaining. The introduction of lupins and the use of minimum tillage, incorporating herbicides, have further assisted production without soil structure decline and erosion. The area is susceptible to wind erosion due to the use of legumes and to increased soil acidity as a result of fertiliser use. The breakaway

slopes are highly susceptible to erosion if grazed and are degraded in certain locations.

There is a general lack of trees and windbreaks because the pre-existing indigenous native vegetation was shrubland.

- **Dissected Areas**

Much of the dissected area has been farmed for over 100 years and little remnant vegetation remains. Remnant vegetation is more common on the mesa tops and plateau remnants, which have frequently been grazed. The quality of the soils and the farming practices of cereal cropping and grazing have generally maintained the soil quality. There is gully erosion on some of the steeper slopes and there is considerable loss of vegetation and soil from some breakaway slopes. Elevated soil salinity occurs in isolated places on valley slopes and floors. This is due to increases in shallow ground water following clearing.

The number of trees is reduced through rural tree decline. At Bringo Cutting, the highly fossiliferous Newmarracarra Limestone and geological type sections have heritage value and should be protected.

- **Coastal Plain**

Suitable agricultural land on the coastal plain has been cleared for over 100 years and little natural vegetation remains. However, the unstable Quindalup Dunes bordering the coast are relatively undeveloped.

The soils of the Greenough Flats continue to be highly productive as their quality remains. However, they are being subjected to the encroachment of development from the sprawl of Geraldton. Further subdivision needs to be avoided in the Greenough Flats.

There is a general low number of trees. The Tamala Limestone ridges in the Georgina-Walkaway area have been cleared and grazed but are generally unproductive due to the high proportion of stone. In the north west the deeper Tamala sands have been developed for rural living and urban uses.

There is potential conflict with land use in the Quindalup Land Unit between conservation and other uses. South of Cape Burney only a relatively small area has been designated for conservation. The Southgate Dune is earmarked for development and is being excavated for lime sand.

Development in the north west of the former Shire area is also occurring on Quindalup Dunes. The issues of dune stabilisation appear to be managed and will need further consideration when the remaining area is subdivided. There does not appear to be any conservation of coastal vegetation in this area.

- **Erosion, Soil Degradation and Siltation**

The City of Geraldton-Greenough experiences its strongest winds during the hottest and driest parts of the year. This combined with the fact that large areas of the City of Geraldton-Greenough consist of light to medium soils, cleared of vegetation, has led to soil erosion.

The following table is a broad assessment of erosion risk in the land units:

Table 1: Erosion Risk in the Land Units

Land Units	Wind Erosion	Water Erosion
• Quindalup	high to very high	low to very low
• Tamala	moderate to high	low to high
• Sandplain	moderate to high	very low
• Dissected Area	low to moderate	moderate to very high
• Greenough/Chapman	low	very low
• Moresby Range	low to high	very low to very high

It is evident from inspections that soil erosion is widespread and should be addressed by land managers on an ongoing basis. The monitoring and management is an issue that could be examined by Land Conservation District Committees.

Raw Materials

A detailed discussion on the availability of basic raw materials in the City of Geraldton-Greenough is included in the Local Rural Strategy.

A resource impact assessment will be required for planning proposals considered to have potential to prevent access to basic raw material resources identified on the Strategic Plan Map.

3.2.4 Settlement Areas Introduction

The former Shire of Greenough area provides a wide variety of different residential opportunities ranging from typical suburban areas on the periphery of the City of Geraldton, through to coastal settlements, rural residential subdivisions and rural settlements.

Urban Areas

The following localities have been identified as urban because of their urban character:

- **Drummond Cove**

Drummond Cove is a northern coastal suburb of Geraldton and has potential for approximately 1,500 residential lots. The development of the area is currently guided by a structure plan. Planning for this area will be reviewed through preparation of the Northern Geraldton Structure Plan.

- **Glenfield**

This area is zoned residential but is currently used predominantly for rural purposes, with mixed service industry / residential uses in the south. Glenfield has the potential for approximately 2,500 Residential R12.5 lots and 100 Residential R5 lots. The development of the area is currently guided by an endorsed structure plan. Planning for this area will be reviewed through preparation of the Northern Geraldton Structure Plan.

The urban area of Waggrakine is located adjacent to the northern banks of the Chapman River, and bounded on the west by Glenfield. The area is covered by a guided development scheme and will provide the full range of urban facilities. Planning for this area will be reviewed through the preparation of the Northern Geraldton Structure Plan.

- **Rudds Gully**

Land at Rudds Gully is zoned for Residential, Rural Residential and Rural Uses. It is estimated that there will eventually be in the order of 3,000 lots in this locality. There will be a need to take into account in the long term planning for this area the potential impacts on this area from the Narngulu Industrial area, the potential Wastewater Treatment Plant to be located at Narngulu and future main road alignments in this vicinity. The intention for this area to be subdivided can only occur once a suitable take-up has been achieved in residential estates to the north, and the need for the actual extent and densities of development to be determined through a WAPC endorsed structure plan for the Rudds Gully Locality. Infrastructure routes need to be secured, this can be negotiated at a structure plan stage.

- **Strathalbyn**

Strathalbyn is a relatively new low density residential area containing unsewered lots with a minimum size of 2,000 square metres. The suburb is situated close to the Chapman River and has a good north facing outlook to the Moresby Range.

- **Utakarra**

The Utakarra area has a wide mix of rural land uses as well as urban uses in the east. It is centrally located to a number of major employment areas and is relatively close to the City of Geraldton and the industrial areas.

- **Karloo**

Karloo is a recently developed residential area. It is a conventional residential area that is close to the Utakarra area.

- **Mt Tarcoola and Tarcoola Beach**

These two areas are predominantly urban areas divided by the existing Brand Highway. Mount Tarcoola is situated on the Tamala Limestone ridge and many of the residences have good views over the ocean. Tarcoola Beach, to the west of the Brand Highway, is lower lying (on the Quindalup Sands) and is within walking distance of the beach. Infrastructure routes need to be secured, this can be negotiated at a structure plan stage.

- **Wandina**

Wandina, to the south of Mount Tarcoola, is a developing area and has both developed and undeveloped portions. It is popular as a new residential location owing to the close proximity to the Geraldton CBD and the ocean. There is potential for an additional 1,800 lots in this area.

- **Cape Burney/Southgate Dunes**

Cape Burney is the urban area located at the mouth of the Greenough River. It is expected to grow rapidly in the future owing to its coastal and estuarine location. The Southgate Dunes, to the north of the Greenough River mouth, have been identified for urban development in the future. Development in this area will need to go through a rezoning process. The dune field is presently being stabilised by means of planting vegetation and cutting off the coastal sand supply that led to the dunes growth in the past.

Cape Burney has the 'Greenough on Sea' wastewater treatment plant, this plant is to be retained for the long term and will require compatible land uses within the buffer. Eventually the Water Corporation intends that the 'Greenough on Sea' WWTP will be decommissioned and flows pumped to the Narngulu WWTP.

An additional water tank is required for Southgate, Cape Burney and Rudds Gully. Land has been secured by the Water Corporation for this tank.

- **Rowan's Estate/Woorree New Town**

This area is located to the east of the Chapman River and south west of the Moresby Range. The area is still being planned and it is not certain whether it will be residential or rural residential. There are a few infrastructure issues that have held up the development of the area in the past. A bridge will be required across the Chapman River and wastewater may need to be piped across the river. Careful consideration will need to be given in the pre planning stages to the following issues (although this is not to be taken as a fully comprehensive list of matters to consider and is to be taken as indicative only – specific requirements will be developed up in conjunction with land developers at the time development planning is taking place):

1. The sloping nature of the land in relation to water runoff and potential erosion issues and prevention of storm water runoff directly into the Chapman River Valley;
2. Proximity to the Chapman River Regional Park corridor and the need to protect the river environs;
3. Transport routes and road hierarchy to and through the area;
4. Location of a commercial centre to service the needs of this community;
5. The exposed nature of this site in relation to the prevailing winds – such matters as street layout, landscaping and land clearing will be required to be managed with care;
6. Access to the CBD area and other suburbs from this locality;
7. The views to and from this area – there may be a need for planning controls to ensure that development in this locality does not dominate the Moresby Ranges and reduce the landscaped backdrop to the Geraldton area whilst at the same time maximising the outlook from the land over the ocean;

8. Colours and types of materials to be used on buildings and the scale of buildings to ensure that they become secondary to the landscape value of the locality.

Planning for both water and wastewater will be required to be undertaken for Rowan's estate once land use planning has been finalised.

Rural Residential Areas

Rural Residential areas provide a residential lifestyle in a rural setting and are serviced with potable scheme water. The rural residential areas of the City of Geraldton-Greenough are located predominantly in close proximity to the urban areas of Geraldton and include the following:

- **Waggrakine**

Waggrakine includes a large area of rural uses with an average lot size of approximately 4ha. This locality lies between the North West Coastal Highway in the west and the Moresby Range in the east. This land has good potential for rural residential use in the future owing to its proximity to the City of Geraldton and services in this area. As part of the Scheme Review the Shire of Greenough conducted a questionnaire survey in the Waggrakine area. The majority of landowners indicated a preference for subdivision. The Shire supports the intention to subdivide this area once a suitable take up has been achieved in residential estates to the north. The actual extent and density of development will need to be determined by means of a WAPC endorsed structure plan for the locality.

Waggrakine will require reticulated water in accordance with the requirements of State Planning Policy 2.5.

- **Moresby**

The Moresby locality, which lies between the Chapman River in the west and the Moresby Range in the east, is presently used for rural residential purposes.

The Strategy identifies that there may be a future need and possibility of creating additional Rural/Residential land along the Moresby Range footslopes provided suitable analysis, justification and development controls can be prepared which will only further enhance the public value of the Moresby Ranges as a landscaped backdrop and Regional Open Space to the Geraldton/Greenough Urban areas.

- **Woorree**

The Woorree area is a rural residential area consisting of lots of 2 hectares and larger with a strong equestrian land use character. It is anticipated that this area will remain the same in the future.

- **Deepdale**

Deepdale is located on the eastern edge of Geraldton between the Chapman River and the Geraldton Mount Magnet Road. Portion of this locality will be affected by the airport buffer and reference needs to be made to Section 5.4.10 of this strategy document and the Planning Strategy Map to ensure that the Council's strategic direction in relation to the future use of the Airport and its impact over this locality is understood.

- **Eastlyn**

Eastlyn is located to the south of Deepdale on the southern side of the Geraldton Mount Magnet Road. Portion of this locality will be affected by the airport buffer and reference needs to be made to Section 5.4.10 of this strategy document and the Planning Strategy Map to ensure that the Council's strategic direction in relation to the future use of the Airport and its impact over this locality is understood.

- **Meru**

The rural residential locality of Meru is located to the west of the Walkway Road and has unsealed access to Karloo to the west. Future subdivision in Meru and Karloo should, as much as possible, limit the number of dwellings in the southern portion of the respective zones and maximise the separation distance between those dwellings and Narngulu. Memorials may also be placed on titles to notify prospective purchasers of emissions from Narngulu.

- **Jandanol Road**

The Jandanol Road locality is located south of Rudds Gully Road. Similar subdivision and development guidelines will apply to the northern portions of the Jandanol Road Special Rural zone as to those stated above for the southern portions of Meru and Karloo.

- **West Bank**

West Bank is located on the dunes south of the reserve area south of the Greenough River mouth. It is not directly accessible from the Cape Burney residential area, access being gained by the Brand Highway. Building in this locality has not commenced to date, despite being available for in excess of 5 years.

Rural Smallholding Areas

Rural Smallholdings are characterised by localities, which combine a residential lifestyle with an agricultural or small scale rural pursuit. The localities are located close to convenience shopping and recreation opportunities, but are not provided with potable scheme water. Rural Smallholding localities in the City of Geraldton-Greenough are as follows:

- **Moonyoonooka**

This locality is located to the east of Morell Rd and north of the Geraldton-Mount Magnet Rd. The need to provide an adequate separation distance between residential dwellings in this area and the Geraldton Speedway on the other side of the Geraldton-Mt. Magnet Road will be considered in the assessment of the future subdivision applications for this area. Portion of this locality will be affected by the airport buffer and reference needs to be made to Section 5.4.10 of this strategy document and the Planning Strategy Map to ensure that the Council's strategic direction in relation to the future use of the Airport and its impact over this locality is understood.

Part of Moonyoonooka has been included in a Rural Smallholdings Investigation Area pending further consideration of the impact of the Geraldton Speedway and the Airport buffer on the development potential of the land. This further consideration needs to take into account the suitability of the land for further development initially, and then if development is to proceed the appropriate lot sizes and subdivision design and the need for specific design standards to address any adverse impacts the speedway or the airport may have on the land.

- **Mount Hill**

The Mount Hill area is located on the southern boundary of the former Shire area. Due to its remoteness from community services, additional rural smallholdings in this locality will not be supported.

Villages

Rural villages are a loosely defined spatial collection of buildings, which function as a collective whole for a specific purpose. Villages within the former Shire area are as follows

- **Walkaway**

Walkaway is a village, which provides residential, recreational, educational, and community services to the adjacent rural areas. There has been little growth in Walkaway for a number of years apart from a Rural Residential subdivision on its western edge. The village was at its peak in earlier years when the Midland Railway was operating.

The major concern with further development of Walkaway is the potential for flooding (Figure 5). The area has been affected by floods on a number of occasions in the past. Despite this a Rural Residential subdivision was approved on the western edge of the town in recent years.

Owing to the ever present flood hazard at Walkaway it is Council's position that further subdivision be limited to the Walkaway townsite.

In recent times flood events have been monitored and plotted to the extent that it is possible to impose conditions on future developments in the Walkaway area to reduce the potential for hazards from flooding.

The Council has adopted a procedure of referral of all plans to the Department of Water for consideration of floor RL levels of any development before the Council will issue permits for building residences. Development in Walkaway should be undertaken in consultation with the DoW/DPI.

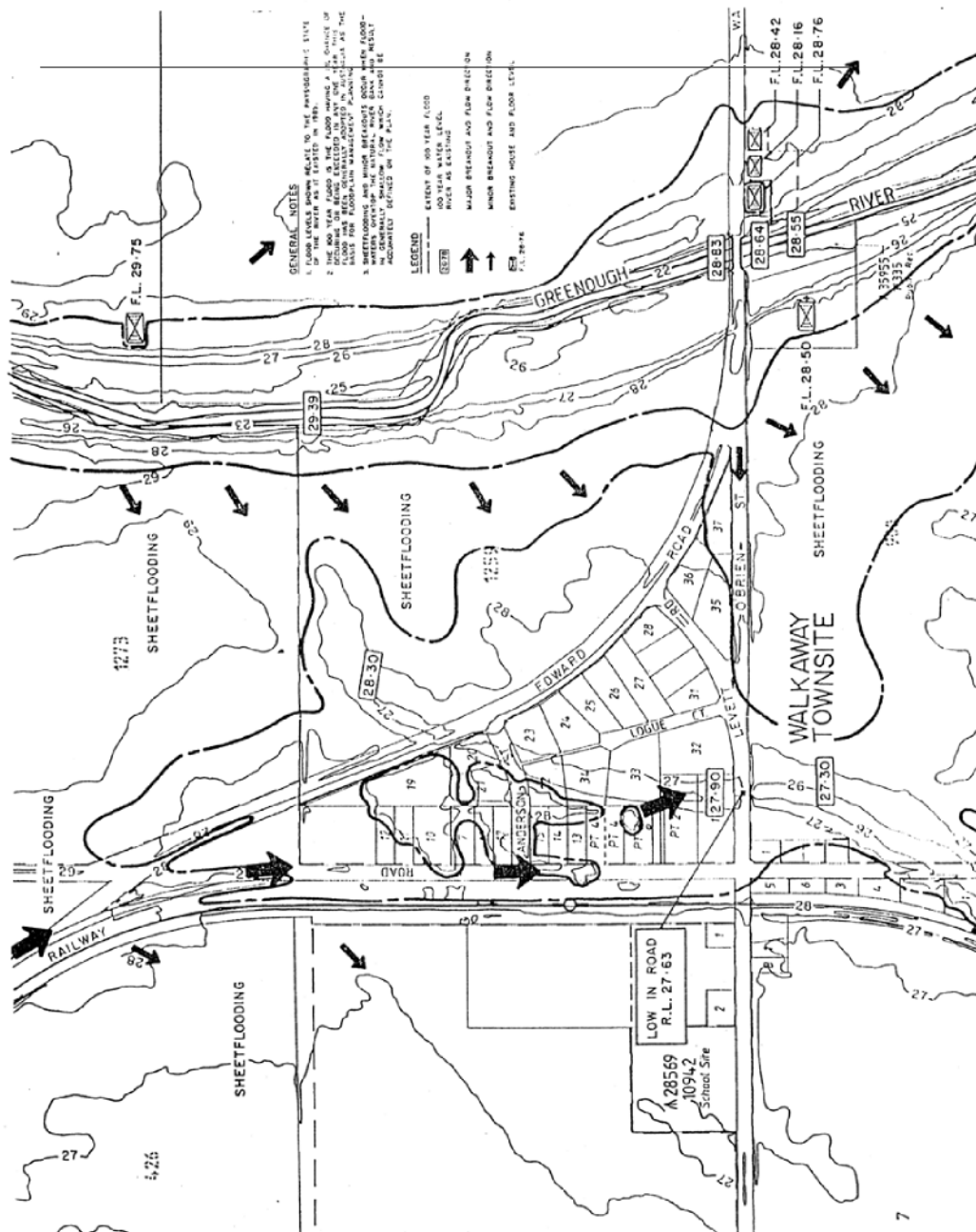


Figure 5: Predicted Flood Levels for the Greenough River at Walkaway

- **Greenough Hamlet**

The Greenough Hamlet is a collection of settler heritage buildings and places on the Greenough Flats. The area is a tourist focus in the former Shire area and this focus is to be strengthened by encouraging appropriate developments in this village area. In consideration of any development or subdivision in this locality reference should be made to the provisions of the Greenough Flats and Walkaway Land Use Strategy. If the zoning is to be altered in the Greenough Hamlet then current water planning will need to be reviewed.

Other Areas

- **Flat Rocks**

The potential for some form of more intensive land use and development centred around Flat Rocks is acknowledged. Any proposal for this area will need to have regard for the character and landscape values of the area, coastal and land management considerations, including bush fire risk, and infrastructure and service requirements. This area will need to be clearly distinguished from surrounding coastal land, both spatially and in the Town Planning Scheme, with specific zoning and development controls. Any proposals for this area will also need to address the recommendations of the Batavia Coast Coastal Planning Strategy, (which identifies Flat Rocks as a major day use area) and the recommendations of the Tourism Planning Taskforce Report 2006.

- **Geraldton Regional Prison**

The Geraldton Regional Prison is located adjacent to the Geraldton/Walkaway Road at the southern edge of the Narngulu Industrial Estate. The limitations on the use and expansion of the Narngulu Industrial Estate caused by the prison are currently being assessed.

3.2.5 Population

The Shire of Greenough had a population of 10,721 persons at the time of the 2001 census (Snapshot of Greenough, ABS Census 2001, ABS Website). The Census recorded 5,285 males and 5,436 females. (These figures include 25 overseas visitors.)

The Shire has recorded relatively rapid population growth over the past census periods except for 1996 – 2001, namely:

·	1981	-	4,610	26%
·	1986	-	5,814	39%
·	1991	-	8,071	28%
·	1996	-	10,362	3.5%
	2001	-	10,721	

Population projections for the Geraldton Region Plan include the following population projections for the former Shire of Greenough area: 10,726 (1996), 12,600 (2001), 14,800 (2006) and 16,900 (2011). It would appear therefore that the projections need to be revised.

The following selected population characteristics were recorded at the time of the 2001 census (2001 Census Basic Community Profile and Snapshot, ABS Website).

- The median age of people in 2001 was 31 years. In 1996 the median age was 30 years and in 1991 the median age was 28 years.
- There were 553 people of indigenous origin in Greenough in 2001. This represents an increase of 208 people (60.3%) since 1996 and an increase of 238 people (75%) since 1991.
- In 2001, 8,996 people (84.2%) stated that they were Australian-born. This compares with 7,945 people (83.7%) in the 1996 Census and 5,905 people (82.9%) in the 1991 Census. Of those born overseas, the three main countries of birth in the 2001 Census were: United Kingdom 561 (5.2%), New Zealand 172 (1.6%) and South Africa 51 (0.5%).
- In the 2001 Census, the three most common ancestries identified with, were: Australian 5,195 (48.6%), English people 4,118 (38.5%) and Irish 1,028 (9.6%).
- English was stated as the only language spoken at home by 9,881 people (92.4%) in the 2001 Census. This compares with 8,795 people (92.6%) in the 1996 Census and 6,536 people (91.8%) in the 1991 Census. The three most common languages spoken at home other than English in the 2001 Census were: Italian 81 (0.8%), Vietnamese 54 (0.5%) and Tagalog (Filipino) 27 (0.3%).

- At the time of the 2001 Census 4,761 people (44.5%) had used a personal computer at home during the previous week. Of these, usage of a personal computer at home by specific age groups reflected 1,972 people aged 0-19 years (18.4%) 1,839 people aged 20-44 years (17.2%), 856 people aged 45-64 years (8.0%) and 94 people aged 65 years and over (0.9%).
- In the 2001 Census there were 4,478 married people (59%) (2177 males and 2301 females), 250 separated people (3.3%) (119 males and 131 females), 231 widowed people (3%) (57 males and 174 females) and 2,189 people who had never been married (28.8%) (1160 males and 1029 females).
- In the 2001 Census 120 (1.6%) of people (57 males and 63 females) held a postgraduate degree, graduate diploma or graduate certificate. This compares with 80 (1.2%) of people (41 males and 39 females) in the 1996 Census and 42 (0.8%) people (23 males and 19 females) in the 1991 Census. In the 2001 Census 462 (6.1%) people (179 males and 283 females) held a bachelor degree compared with 311 (4.6%) people (154 males and 157 females) in the 1996 Census and 175 (3.5%) people (93 males and 82 females) in the 1991 Census.

During the week prior to the Census night 2001, 4,733 people in Greenough (S) – Pt A (2,575 males and 2,158 females) were employed representing 91.9% of the labour force. Of these, 2,887 (61.0%) people (1,974 males and 913 females) were working full time and 1,707 (36.1%) people (521 males and 1186 females) were working part time. This compares with 4,160 (91.8%) people (2,324 males and 1,836 females) who were employed in the 1996 Census and 2,926 (85.6%) people (1,620 males and 1,306 females) who were employed in the 1991 Census.

In the 2001 Census, 358 (7.6%) people (259 males and 99 females) were employed as Managers and Administrators, which compares with 371 (8.9%) people (264 males and 107 females) in the 1991 Census. There were 650 (13.8%) people (281 males and 369 females) employed as Professionals in the 2001 Census, which compares with 531 (12.8%) people (245 males and 286 females) in the 1996 Census and 363 (12.4%) people (161 males and 202 females) in the 1991 Census.

There were 595 (12.6%) people (331 males and 264 females) employed as associate professionals in the 2001 Census, which compares with 532 (12.8%) people (313 males and 219 females) in the 1996 Census and 287 (9.8%) people (186 males and 101 females) in the 1991 Census, 701 (14.9%) people (632 males and 69 females) were employed as tradespersons and related workers in the 2001, which compares with 688 (16.5%) people (622 males and 66 females) in the 1996 Census and 431 (14.7%) people (372 males and 59 females) in the 1991 Census.

In the 2001 Census there were 738 (15.6%) people (177 males and 561 females) employed as intermediate clerical, sales and service workers, which compares with 623 (15.0%) people (156 males and 467 females) in the 1996 Census and 262 (9.0%) people (74 males and 188 females) in the 1991 Census. There were 424 (9.0%) people (243 males and 181 females) employed as labourers and related workers in the 2001 Census , which compares with 354 (8.5%) people (194 males and 160 females) in the 1996 Census and 246 (8.4%) people (118 males and 128 females) in the 1991 Census.

In the 2001 Census, 282 (6.0%) people (224 males and 58 females) were employed in the manufacturing industry, which compares with 263 (6.3%) people (196 males and 67 females) in the 1996 Census and 135 (4.6%) people (99 males and 36 females) in the 1991 Census. There were 372 (7.8%) people (325 males and 47 females) employed in the construction industry in the 2001 Census compared with 344 (8.3%) people (294 males and 50 females) in the 1996 Census and 204 (7.0%) people (173 males and 31 females) in the 1991 Census.

There were 852 (18.0%) people (384 males and 468 females) employed in the retail trade industry in the 2001 Census, compared with 710 (17.1%) people (324 males and 386 females) in the 1996 Census and 514 (17.6%) people (233 males and 281 females) in the 1991 Census. 364 (7.7%) people (190 males and 174 females) were employed in the property and business service industry in the 2001 Census compared with 329 (7.9%) people (189 males and 140 females) in the 1996 Census and 166 (5.7%) people (92 males and 74 females) in the 1991 Census.

In the 2001 Census, there were 390 (8.2%) people (122 males and 268 females) employed in the education industry compared with 315 (7.6%) people (103 males and 212 females) in the 1996 Census and 220 (7.5%) people (64 males and 156 females) in the 1991 Census. There were 432 (9.1%) people (58 males and 374 females) employed in the health and community services industry in the 2001 Census compared with 352 (8.5%) people (45 males and 307 females) in the 1996 Census and 255 (8.7%) people (40 males and 215 females) in the 1991 Census.

3.2.6 Economic Development

The former Shire of Greenough area is central to the expanding economy of the Mid West Region. In this section the economic characteristics of the former Shire area will be examined. The Mid West Development Commission prepared 'Towards 2010: An Economic Development Strategy for Western Australia's Mid West Region', which provides a basis for achievable and sustainable development. The strategy identifies the region's natural resources. The former Shire of Greenough area, being part of the Mid West and containing much of the Geraldton urban area, has a competitive advantage in developing and servicing the agricultural, fishing, mining and tourism sectors.

Commercial

The 1996 census indicated that the largest percentage of employment of the people of the former Shire of Greenough area was in the wholesale and retail sector. Many of these people are employed in the City of Geraldton, which is the largest business and service centre in the region and provides a range of goods and services comparable with those in Perth. The range of commercial services provided include banking, investment and finance, industrial supplies, building supplies, home maintenance, real estate, retail, computer sales and service, accommodation, hospitality, motor vehicles, recreation and cultural services.

It is anticipated that this trend will continue and that the former Shire of Greenough area will continue to be a homebase for the expanding commercial development within Geraldton-Greenough.

Industrial

The former Shire of Greenough area has one of the largest industrial areas in the Mid West Region at Narngulu. The Narngulu Industrial Estate has a total area of 737 hectares zoned General Industry and is located approximately 5 kilometres south-east of Geraldton centre. In this estate there are currently 537 hectares of general industry as well as 200 hectares set aside for noxious industry. The estate is presently over 80 percent sold to a wide range of industrial uses, such as, mineral sands, tanneries and general support industries.

Narngulu has a number of constraints, namely:

- limited supply of land for general and heavy industry;
- close proximity to urban areas;
- proximity to Narngulu residences;
- the need to maintain the buffer.

The major nuisance factors that can affect land uses surrounding industrial areas are noise, dust and odour. A 2km buffer has been identified in the Geraldton Region Plan (WAPC, 1999) to limit the land use conflict between industrial uses at Narngulu and surrounding residential use. Even with this buffer in place the capacity for Narngulu to accommodate additional heavy industry is limited.

Any development of non-compatible uses within this buffer (including farmhouses and the prison) should be avoided where possible. The issue of risk at Narngulu is not considered significant as there are not large inventories of hazardous materials stored on site.

In terms of accommodating future heavy industry Oakajee is owned by the State Government and zoned for industrial development. Other sites (including Wizard Peak) have been identified as options for future industry. Notwithstanding these considerations there is a need to limit the introduction or expansion of heavy industrial uses with large buffer requirements at Narngulu and to minimise the amount of residential use in the vicinity of the buffer recommended by the Geraldton Region Plan.

Within the Narngulu buffer shown on the 'Strategic Plan Map' further intensification of land use will not be permitted if the use is not compatible with the Narngulu Industrial area. Where possible, residential uses will be located outside the buffer. In addition, the number of residential dwellings in proximity to the notional buffer area in Rural Residential precincts will be limited as much as possible and the separation distance between these dwellings and Narngulu will be maximised. Memorials may also be placed on titles to notify prospective purchasers of emissions from Narngulu. In a further effort to minimise the impact of industry at Narngulu on surrounding landowners, the Town Planning Scheme will prevent new industrial uses from locating in Narngulu if the impacts are likely to affect surrounding residents.

The development of heavy industry at Wizard Peak would be partly constrained by the Obstacle Limitation Surface associated with the airport. The expansion of the airport would take precedence over any industrial zoning proposals.

Manufacturing

The manufacturing sector is expected to grow to keep up with the growing population and expanding commercial sector. The main areas include the processing of products and supplying of goods to the fishing, agricultural and mining industries. In the former Shire of Greenough area these include boat building, superphosphate production and mineral sand processing. The expectation of additional mineral processing industries would stimulate further activity in the manufacturing sector.

Construction

The Shire of Greenough experienced the highest proportion of the Mid West Region's dwelling approvals in 1994/95 with 46 percent. Other construction, relating to commerce and industry also contributed to the growing strength of this sector. The Geraldton and Greenough areas also service the construction in the remainder of the region.

Agriculture

Agriculture is a major economic sector in the former Shire of Greenough area. The Total Agricultural Product in 1994/95 amounted to over \$30m. This total comprised **crops** \$1 8m, **livestock** \$6m, **wool** \$5m and the remainder **vegetables** and **fruit** \$1 m (Table 2).

Despite the predominance of the 'wheat and sheep' base of agriculture there has, in the past few decades, been a broadening of the agricultural base in terms of horticulture and aquaculture.

Table 2: Gross Value of Agricultural Products in the former Shire of Greenough, 1994/95

	\$
Pastures cut for hay	21,503
Wheat for grain	10,705,183
Oats for grain	177,006
Oats for hay	910,290
Barley for grain	1,125,676
Cereal crops excluding oats for grain	106,460
Tuticale for grain	471
Cereal crops for grain NEC	7,497
Total cereals for grain	12,015,833
White or yellow lupins for grain	4,404,863
Field peas for grain	48,340
Canola	20,405
Tick, horse and Faba Beans	50,235
Non Cereal Crops	3,783
Total crops for hay	1,016,750
Total legumes for grain	4,503,438
Total oilseeds	20,405
Total other crops NEI	3,783
Capsicum chillies & peppers	939
Marrows & squashes	30,225
Zucchini	29,640
Rockmelons & cantaloupe	24,907
Watermelons	16,907
Green peas	2,484
Tomatoes	85,961

Total vegetables	976,213
Oranges	528
Citrus fruit	3,752
Total citrus fruit	4,280
Wool	110,411
Wool shorn	5,419,556
Total Wool	5,529,967
Sheep & lamb slaughterings	1,798,206
Cattle & calves slaughterings	3,562,641
Pigs slaughterings	105,723
Goat slaughterings (excluding feral)	1,197
Poultry slaughterings	17,342
Eggs produced for human consumption	572,342
Total livestock slaughterings	5,485,109
Total livestock production	6,102,575
Total crops (excluding pastures & grasses)	18,540,702
Total crops (including pastures and grasses)	18,562,205
Total Agricultural Product	30,149,889

Source: Agstats, ABS, 1997

The production of wheat for grain is the largest crop, and white and yellow lupins for grain are also of increasing value.

Potatoes and onions are two of the larger vegetable crops, which make up the greater majority of the total production.

Rockmelons, cantaloupe and watermelons are the largest 'fruit' crops, however, citrus fruit is of growing importance. Cattle, sheep, pigs and poultry are the main livestock in the former Shire area. Egg production for human consumption provides good returns.

Some land uses in the agricultural areas have led to conflict with surrounding landowners. When determining planning proposals over surrounding land buffer requirements related to these uses need to be considered.

Tourism

Tourism is a major contributor to the economy of the region and the former Shire of Greenough area contains a number of key tourist destinations. The major tourist attractions in the former Shire area are the Greenough Flats Heritage Area, the coast and wildflowers.

Some of the main attractions in the Greenough Flats Heritage Area are as follows:

- Greenough Hamlet. The hamlet contains eleven of the original buildings. Conducted tours, a tearoom and shop are available.
- Pioneer Museum. The museum is housed in a restored two storey house situated next to Maley's Mill.
- Clinch's Mill. The mill was originally constructed in 1853 but was enlarged to a three storey building by 1891. The mill operated until 1922.
- Leaning Trees. The leaning trees of Greenough have become a landmark in the area. The most susceptible trees are Eucalyptus Camaldulensis. The reason for the trees leaning is a combination of salt laden wind that inhibits the growth on the windward side of the tree, and the wind itself.

Other attractions in the area are as follows:

- Corringale, a two storey mansion.
- Pioneer Cemetery, with headstones showing the names of pioneers.

- Cliff Grange, home of the mill owner.
- Wesley Church and Gray's Store, a Gothic style church in limestone. The store dates from 1861.
- Walkaway Station Museum situated to the east of the Brand Highway within the townsite of Walkaway, and housing a display of regional transport, weapons and military relics.
- Ellendale Pool, situated 20 kilometres to the north east of Walkaway. The natural pool is adjacent to a river cliff and is surrounded by tall shady trees. This site is a favourite picnic area.
- Greenough Wildlife and Bird Park has a wide range of local fauna and birds and is conveniently located for access from the Brand Highway.
- The coastal areas of the former Shire of Greenough area are also a major tourist attraction. The following are the major nodes:

Cape Burney/Greenough River Mouth

This area has the river estuary, sandy beaches, surfing spots, fishing and many other coastal attractions. It has a 3.3 kilometre walk trail along the Greenough River and a caravan park. The Greenough River Resort is located in this area.

Flat Rocks

The Flat Rocks area is one of the best surfing spots in Western Australia and also has good fishing and other coastal attractions. The area is presently undeveloped and there may be an opportunity for a tourist development at this location if compatible with strategic planning for the coastline.

Drummond Cove

The Drummond Cove residential area is situated on the northern boundary of the former Shire area and is contiguous with the Drummond Cove area of the Shire of Chapman Valley.

The tourists to the region are predominantly from Western Australia (\$37m expenditure), the remainder being interstate (\$8m expenditure) and overseas (\$4m expenditure). The main reasons for travel to the region were pleasure/holiday (71 percent), business (11 percent) and visiting friends and relatives (10 percent).

The Western Australian Tourist Commission have developed a Midwest Tourism Strategy with a clear statement of purpose and objectives. Tourism growth potential in the former Shire of Greenough area is considered to relate to ecotourism (wildflowers), coastal (diving, fishing, surfing, swimming, wind surfing), and promoting the unique landscape of the area (Moresby Ranges).

3.2.7 Infrastructure

The future economic well-being and quality of life for the people in the former Shire area will be largely dependent on the efficiency of the infrastructure.

Road Network

The road network is a key infrastructure aspect of the former Shire area . The following are the major arterial roads:

- Brand Highway south to Perth;
- Geraldton - Mount Magnet Road to the east; and
- North West Coastal Highway to Northampton and the north.

These major sealed roads connect the former Shire area to all the surrounding regional centres and carry general and heavy haulage traffic, including road trains. Main Roads WA has recently completed the Roads 2020 Regional Road Development Strategy for the Mid West. This strategy proposes expansions and improvements of the regional road network to the year 2020. Other major studies are being undertaken for the location and eventual construction of a southern transport corridor and a major north-south route through the Geraldton-Greenough area. The re-examination of the southern port access and east/west traffic movement as part of the review of the Greater Geraldton Structure Plan has resulted in a

realignment of the primary east/west route to the south east from Rangeway, along the northern edge of the Meru landfill site and then north to link back into the Mount Magnet Road to the west of the Geraldton Airport. This proposed alignment has a number of advantages, particularly for the rapidly growing residential areas in the Tarcoola Beach/Wandina area. The proposal also passes close to the Narngulu industrial area and will improve access for heavy traffic.

The predominant north - south road throughout the region is the Brand Highway/North West Coastal Highway. Studies undertaken during the review of the Greater Geraldton Structure Plan resulted in a new proposed alignment being an eastward deviation of the Brand Highway from the Greenough Flats via Rudds Gully, Karloo, and Utakarra to the Webberton Industrial Area.

Air Transport

The Geraldton Airport is located on the Geraldton - Mount Magnet Road in the former Shire area and is the major regional facility. The former Shire Council affirmed its support for the current location in the medium to long term future. The airport facilities constitute a general aviation terminal in that they include a helicopter pad, a private charter operator and servicing/maintenance for light aircraft. A buffer area is to be established around the airport to ensure its continued operation and expansion.

Rail Transport

WA Government Railways operates and provides transport services to the region. Haulage to and through the former Shire area is now exclusively of bulk products and includes coal, grain and mineral sands.

The main depot for the region is at Narngulu and is the junction for the two converging railway lines from the south. One line passes through Northam, Wongan Hills, Perenjori and Mullewa. The other passes through Moora, Three Springs, Mingenew and Dongara. The Geraldton Southern Transport Corridor will provide access to the Port of Geraldton via a southern approach route from Narngulu to the west through the Mount Tarcoola area. A Narngulu to Oakajee services corridor has also been identified to provide rail, road, and services to the proposed Oakajee industrial Estate in the future.

Public Transport

The main form of public transport in the Greater Geraldton area is a bus service. The current route plans provide reasonable coverage of the major populated areas of Geraldton and Greenough. The Geraldton Bus Service terminates at Sunset Beach in the north and Mahomets Flats of the south. With the development of Drummonds Cove and Wandina the bus company will need to review the limitations of the existing routes.

Water Supply

Potable water for the City of Geraldton-Greenough comes from the Allanooka and Dongara-Denison Water Reserves. The water reserves and priority protection areas are located outside the southern boundary of the former Shire area, indicating that detail planning to preserve this water source need not be included in Town Planning Scheme No 5. The Arrowsmith Groundwater Area Management Plan (1995) estimates the safe sustainable limit for the Yarragadee aquifer in the Allanooka area to be 28.8 gegalitres. Of this, 12 gegalitres has been allocated for public water supply with a further 12.3 gegalitres reserved for future supply, reserving a total of 24.3 gegalitres of potable water for public water supply. The remainder of the 28.8 gegalitres is available for private groundwater supply for activities such as horticulture.

The proposed Casuarina ground water area is located within the former Shire area on its southern boundary and is an extension of the aquifer that serves the Allanooka ground water resource. The Casuarina area, although unproven to date, is expected to yield amounts similar to the Allanooka ground water area, based on geological formations of the two resource areas. There is an obvious need to ensure this resource is protected from incompatible land uses via appropriate planning provisions.

To ensure protection in the short-term, planning proposals in the area covered by the Water Resources overlay that have the potential to impact on the groundwater resource, will be referred to the responsible government department for comment.

Geraldton/Greenough's continued urban growth and the effects of climate change are forcing us to change the way that we use our water resources. This includes non-traditional water sources such as roof run-off, shallow groundwater, treated wastewater and stormwater for non-potable water supply.

The Western Australian Government supports the concept of urban water management and the provision of non-potable water from alternative methods as mentioned in the previous paragraph, where appropriate, to supplement traditional scheme water supplies.

The Western Australian Government published the State Water Strategy in February 2003, which aids in providing guidance for the community and developers in non-traditional water use. This Local Planning Strategy supports water management strategies and as such developers that wish to develop should include a water management strategy with their planning and development strategies.

Wastewater Treatment

Currently three wastewater treatment plants are operating to service the Geraldton/Greenough urban area. These are located at Cape Burney - to serve the development at Cape Burney, Wonthella - to serve the Geraldton/Greenough urban area, and west of Chapman Road in Glenfield, the possible relocation of the Wastewater Treatment Plants may be the subject of future investigations. These sites use oxidation ponds which are low energy treatment techniques, and have onsite infiltration of treated wastewater.

No residential development, caretaker's residence or food preparation and distribution business should be permitted within 500 metres of a wastewater treatment plant. It should be noted that actual buffer distances depend on topography and wind direction and these can be more accurately modelled if required.

The buffers for the abovementioned wastewater treatment plants are shown on the Strategic Plan Map. At present there is only the existing Rural Residential zoned land at Woorree, which is directly affected by an existing wastewater treatment plant buffer. No further subdivision of land within the buffer will be permitted. Where land is already zoned approval to construct any new dwellings in the buffer area will be conditional upon notification being lodged against the title to advise prospective purchasers of potential odour emissions from the wastewater treatment plant. A new regional treatment plant is proposed at Narngulu. The Greenough on Sea WWTP will be decommissioned in the long term.

Water Corporation has a total of three WWTP's and the fourth at Narngulu is yet to be completed. A water disinfection fluoridation plant is located at Walkaway and a Quantified Risk Assessment has been completed by the Water Corporation for the buffer.

Narngulu WWTP is a scientific and site modelled buffer. This Special Control Areas is shown in the Town Planning Scheme in both the text and on the map.

Electricity

Electricity to the City of Geraldton-Greenough is supplied by means of a 132KV line, which is connected into the grid from Bunbury, Muja and Kwinana power stations.

Natural Gas

Natural gas is piped through the region from Dampier to Bunbury. The gas pipeline passes to the east of the former Shire area but a branch supply pipe crosses the former Shire area passing to the north of Walkaway and then on to Narngulu and Geraldton. This gas is available for domestic, commercial and industrial purposes.

Waste Management

The largest waste disposal facility in the region is located at Narngulu. The site is to the north west of the industrial area and is a Class IV facility, which deals with a broad range of waste products. This facility is operated by the City of Geraldton-Greenough.

Communication

The City of Geraldton-Greenough is well served by a number of communication mediums. The City receives National and State ABC, GWN, WIN and SBS radio and television services and two commercial FM radio stations and one local community radio station based in Geraldton. Satellite radio services are also available for purchase in the former Shire area. Communication towers are located on the top of the Moresby Ranges adjacent to Geraldton.

Other communication services are state and national newspapers, daily postal services, national telephone network, including STD, ISD, facsimile and teleconferencing facilities. Mobile telephone services are also available in the urban sections of the former Shire area.

Port Facilities

The former Shire of Greenough does not have its own port facilities but the port at Geraldton plays a central role in the former Shire's economy.

Community Services

The former Shire of Greenough has a broad range of community services provided by the Commonwealth Government, State Government, the Council and private organisations as shown below:

- Counselling services such as Aboriginal cultural groups, disability services, returned services organisations and women's advisory services.
- Arts and crafts organisations such as china painters group, papermakers, potters and woodworkers groups.
- Children's activity groups, playgroups, out of school child care, vacation play centres and a youth access centre.
- General interest groups such as environmental, dog training, vehicle (including veteran/vintage and four wheel drives), country women, dance, historical, radio, camera, sea rescue, animal, ambulance and wildflower groups.
- Health and welfare groups such as legal services, aged accommodation, AIDS information, arthritis, blind, asthma, cancer, blood transfusion, Holyoake and family planning organisations.
- Religious groups such as Aboriginal Evangelical, Bahai, Baptist, Roman Catholic, Anglican, Greek Orthodox, Uniting, Lutheran and Salvation Army.
- Service clubs such as Apex, Country Women, Freemasons, Lions, Legacy and Rotary.
- Sporting clubs such as archery, athletics, soccer, basketball, cricket, shooting, equestrian, football and many others.
- Schools (2 government primary schools, 1 government high school and 1 private school located within the Geraldton urban area and 1 other primary school).
- Geraldton bus service on public transport routes.

A study of the community facility requirements in growth precincts to the north and south of Geraldton was undertaken by the Department for Planning and Infrastructure in 2004. The Study identified land allocation in the former Shire of Greenough for community centres and that pressure for additional community facilities is likely in the medium to long term. There is agreement that future community facilities should be located within or adjoining district or neighbourhood commercial centres to ensure maximum use by the community.

The study identified the population ratio and land area requirements that were originally set out in the Geraldton Region Plan in 1999. The study also identified land requirements for future community facilities for the major community land use requirements i.e. community centres, education facilities, technical colleges, churches and active recreation facilities.

For a comprehensive list of community services the Community Directory prepared by the Midwest Chamber of Commerce and Industry should be consulted.

It is recognised that whilst a number of services exist in the former City of Geraldton (2 hospitals and Libraries), catering for the residents of the former Shire of Greenough, the ever-growing need of the former Shire's residents will require additional facilities within the former Shire area in the future. The Shire of Greenough undertook a survey of the Tarcoola, Mount Tarcoola, Tarcoola Beach and Cape Burney localities to ascertain the community needs for these areas and many have been identified and will be worked toward through the Tarcoola Community Development Committee. It is anticipated that as

the former Shire's population continues to grow there will be greater demand on the Council for additional community facilities. To address this the Council of the former Shire of Greenough appointed a Community Development Officer whose role it will be to ascertain the needs of the community and assist in the provision of many of these services.

3.2.8 Conservation

The former Shire of Greenough area has relatively few conservation reserves compared to many other Shires in the State. The former Shire has 13,416.0 ha of remnant vegetation and 10,470.0 ha public land. This amounts to 13.45% of the former Shire land area. The average for the State is 32.52% (AgWest, Spatial resource Information Group, 1996).

The following are the major conservation reserves in the former Shire area:

- A 26663 Burma Road Nature Reserve
- A 2069 Beetalyinna Nature Reserve
- A 2070 Eradu Nature Reserve
- A 48173 South Wicherina Nature Reserve
- C 17711 Wicherina Reserve.

The Burma Road Nature Reserve is the largest conservation reserve in the former Shire area. It covers an area of 6889.5 ha and is vested jointly in the Tree Society and the Department of Conservation and Land Management. The reserve is noteworthy in that it protects an example of the "southern association" scrub heath vegetation along with its associated animal assemblage.

A 1992 study of the area identified 345 species of flowering plants. Many of those collected are unnamed. There are six plant associations in the reserve, namely:

1. Xylomelum (Native Pear) scrub heath.
2. Acacia thicket.
3. Sedge-land.
4. Mallee heath.
5. Acacia scrub-thicket.
6. Banksia woodland.

A detailed account of this survey was reported in the Tree Society Review No. 3, September 1992.

4 PLANNING DIRECTIONS

4.1 INTRODUCTION

This section discusses the major developments proposed for the region as well as the likely growth of the former Shire area based on historical trends, which form the basis of the planning strategy for the former Shire area.

In April 1998 the then Ministry for Planning released the Geraldton Land Development Program 1998-2002. This program examined land release and infrastructure in the area of the Geraldton Structure Plan, namely, from Buller River in the north, to Greenough River in the south and east to Moonyoonooka. The area covers the major populated part of the former Shire of Greenough area. Much of this section has been drawn from the Ministry's report.

In addition to the broader scale structural planning and major land uses the planning direction for commercial centres, community facilities and recreation areas will be undertaken in consultation with the Department for Planning and Infrastructure.

4.2 MAJOR DEVELOPMENTS

4.2.1 Introduction

Since the previous Town Planning Scheme was prepared in 1984 and the region plan was prepared in 1989 there have been a number of major planning and development changes in the region.

4.2.2 Oakajee Industrial Estate

The planned Oakajee Industrial Estate in the Shire of Chapman Valley has the potential to directly impact on the former Shire of Greenough area. Estimates of the projected population growth in Greenough as a result of the development of Oakajee are in the range of 3,000 to 4,000 additional permanent population over a twelve year period (Geraldton Regional Infrastructure Study, 1998). These figures should, however, only be regarded as 'potential' because the proposed developments are presently 'on hold'.

Table 3: Indicative Land Release Schedule

Map Ref	Locality	Area	98/99	99/00	00/01	Other Proj	Single Res	Multi Res	Special Res/Rural	Comm/Indust	Area (ha)	Future Dev
G1	Mt Tarcoola	16.1			148		148					
G2	Wandina	2.2				20	20				29	255
G3	Wandina						***				8	~60
G4	Wandina						***				154	~1500
G5	Wandina	13.1		110			110					
G6	Wandina	23.2			69				69			
G7	Greenough River	4.9			71		71				264	~1500
G8	Rudds Gully						***	***	***		387	~1650
G9	Rudds Gully								***		349	69
G10	Karoo	11.4		87			82	5			158	~1100
G11	Utakarra	37.0		74			***		74		80	~550
G12	Narngulu	9.3		31						31		
G13	Narngulu	63.8			4					4		
G14	Eastlyn	16.0			16				16		205	~100
G15	Deepdale	79.0			68				68		178	290
G16	Moonyoonooka	244.0			27				27			
G17	Strathalbyn	23.9				94			94			
G18	Strathalbyn	6.8			27				27			
G19	Strathalbyn	24				123			123			
G20	Waggrakine	2.9	25				25					
G21	Waggrakine	10.4		42	37		79				24	~168
G22	Waggrakine	6.9			62		62					
G23	Waggrakine	40.4			36				36			

G24	Waggrakine	6.1			24		24	24			161	~1100
G25	Glenfield (Cell A)						***	***	***	***	68	416
G26	Glenfield (Cell B)						***	***	***		65	542
G27	Glenfield (Cell C)						***	***	***		83	696
G28	Glenfield (Cell D)						***	***	***		69	594
G29	Glenfield (Cell E)						***	***	***		84	606
G30	Drummond Cove	16.0			115		115					
G31	Drummond Cove	6.9				31			31			
G32	Drummond Cove	25.0			95				95			
G33	Drummond Cove	13.9			49				49			
G34	Drummond Cove	34.3			251		248	1		2	187	~900
G40	Glenfield	9.6			20				20		36	46
	Shire of Greenough	749.0	25	344	111 9	268	984	6	729	37	2589	~12142

Notes:

1. Projects with timing have current or pending planning approvals to subdivide. The timing is the latest date the project can create lots under the approval.
2. Other projects include lapsed approvals and other projects with short term potential.
3. Future development data provides indicative lot yield based on a gross density of 7 lots/ha generally unless more detailed yields are known. For Future Development proposals, the anticipated land use is identified by ***.

Source: Geraldton Land Development Program, 1998 to 2002.

The Geraldton Land Development Program (1998 to 2002) indicated that there are presently 1,170 vacant residential lots in the former Shire of Greenough area. These together with projected lot yields indicate that there will be sufficient residential land available for the foreseeable future, namely:

- 1998 – 2001 - 1,485 urban residential
- 1998 – 2001 - 709 rural residential
- 1998 – 2001 - 37 industrial

In addition to the above there are large undeveloped areas of zoned residential land.

It may therefore be concluded that the former Shire of Greenough area is well prepared to accommodate the projected impacts from the Oakajee development.

4.2.3 Wizard Peak Industrial Estate

In 1996, as part of the Geraldton Region Plan Review, an Industry and Port Sites Study was undertaken to investigate the siting and timing of future industrial development, port facilities and associated transport infrastructure to meet growth demands in the region. One of the recommendations from this study was that a detailed site selection study be undertaken in the general vicinity of Wizard Peak.

A detailed study was undertaken that examined environmental aspects (geology, soils, topography, surface hydrology, groundwater, ecology) and social and economic aspects, Aboriginal and settler heritage, visibility, amenity, waste disposal, land use, infrastructure and Geraldton airport proximity.

The State government has yet to finalise development of the Oakajee site. The Geraldton Region Plan recommends that the Wizard Peak site be considered if the Oakajee site does not proceed. For this reason land uses in and adjacent to the Wizard Peak site will be controlled to facilitate further

consideration of the area for future industrial estate purposes.

4.3 PROJECTED POPULATION AND LAND REQUIREMENTS

Population projections in the Geraldton Region Plan (1999) indicate that the former Shire of Greenough population will increase to 14,800 by 2006 and 16,900 by 2011. However, the population growth between 1996 and 2001 slowed to 12.6% and the 2001 Census returned a population of 10,721 people. It is evident therefore that the WA Planning Commission population projections need to be revised. According to the Geraldton Land Use Survey (WAPC, 1998) the average urban lot uptake for the Shire of Greenough over the preceding five year period was 250 lots per annum. It is evident that this rate would have diminished in the late 1990s and into the new century.

4.4 URBAN DEVELOPMENT

4.4.1 Land Supply

Vacant serviced lots at Drummond Cove, Wandina and Strathalbyn account for half of the 1,170 vacant lot stock in the former Shire of Greenough area. The former Shire area is also expected to dominate short term subdivision activity with approvals current for 750 lots north of the Chapman River, 300 to the east of the City of Geraldton and 500 lots at Mt Tarcoola, Wandina, Greenough River and Karloo.

If the short term housing demand over the next three years is significant enough to absorb a proportion of the vacant land stock and existing lots with approvals, then further land development will probably occur at Drummond Cove, Wandina and Cape Burney. Ongoing development is also expected at Waggrakine, Glenfield and Karloo. An additional urban area has been identified to the east of Strathalbyn.

4.4.2 Land Release Plan

A land release plan was included in the Geraldton Land Development Program, 1998 to 2002. Table 4 provides a detailed land release plan for the former Shire of Greenough area.

A comparison of the actual building construction in the Shire of Greenough from 1998 to 2001 indicates that the actual land release was lower than anticipated. The actual number of dwellings constructed was as follows:

Table 4: Projected and Actual Land Release in the former Shire of Greenough, 1998-2001

Year	Anticipated in WAPC, LRP	Actual in Shire
1998/99	25	168
1999/00	344	171
2000/01	1,119	104
Totals	1,488	443

Source: Geraldton Land Development Program 1998-2002 and Shire of Greenough Building Statistics

The high projection rates of 1998 may have been related to the anticipated development of Oakajee and the optimistic high growth expectations at the time.

4.4.3 Dwelling Stock and Vacant Lots

The dwelling stock in the Shire of Greenough has increased rapidly over the past decade (Table 5).

Table 5: Growth in Housing Stock in the former Shire of Greenough

Dwelling Type	June 86 Census	Aug 91 Census	Aug 96 Census
Houses	1,675	2,292	3,379
Other	83	100	174
Totals	1,758	2,393	3,553

Source: ABS Census from Geraldton Land Development Program 1998 to 2002.

A detailed examination of the Stock of Dwellings and Vacant Lots indicated that the major growth in housing between 1991 and 1996 occurred in Mt Tarcoola North, Wandina, Strathalbyn and Waggrakine.

Table 6: Stock of Dwellings (June 1991 and 1996) and Vacant Lot Stock (Feb. 1998)

Locality	1991			1996			Vacant Lots
	Houses	Other DU's	Total	Houses	Other DUs	Total	
Shire of Greenough							
Tarcoola Beach	278	25	303	325	49	374	63
Mt Tarcoola South	406	38	444	494	42	536	54
Wandina	120	3	123	301	26	327	294
Greenough River	63		63	106		106	66
Karoo	136	14	150	191	16	207	39
Utakarra - Deepdale	n/a		n/a	80		80	95
Woorree	176	7	183	237	16	253	78
Strathalbyn	43		43	178		178	111
Moresby Rural	n/a		n/a	145		145	85
Waggrakine	257	3	260	402	11	413	34
Waggrakine Rural	142		142	190		190	44
Glenfield	109		109	112	3	115	5
Drummond Cove	92	3	95	156	3	159	202
TOTAL	1,822	93	1,915	2,917	166	3,083	1,170

Notes:

- A number of the localities were originally defined as precincts in the 1994 Residential Land Supply Review and have been modified and aggregated for analysis purposes.
- Some also differ from official gazetted localities as the adopted boundaries utilise census collection districts. *Source: ABS Census*
- Vacant lot figures generally exclude urban zoned broad hectare lots (>3000m²) with future development potential. *Source: MfP*
- Shaded = Vacant rural living Lots. *Source: Geraldton Land Development Program, 1998-2002.*

4.4.4 Vacant Urban Zoned Land

The Western Australian Planning Commission published the "Geraldton Land Development Program 1998 to 2002" in April 1998. The report identified a large area of vacant urban zoned land in the Shire of Greenough at that time. The main urban areas in the Shire were as follows:

• Glenfield/Drummond Cove	361 ha
• Waggrakine	76 ha
• Utakarra	97 ha
• Karloo	155 ha
• Wandina	223 ha
• Rudds Gully	64 ha
• Greenough River	146 ha
	<u>1,122 ha</u>

The existing zoned urban land is capable of accommodating approximately 22,440 dwellings (1,122ha multiplied by 20 dwellings/hectare), and accommodating approximately 58,344 people (22,440 dwellings by 2.6 persons per dwelling). At current housing uptake in the former Shire of Greenough area this is sufficient land to cater for development for the next 90 years (22,440 dwellings divided by 250 dwellings per annum). In reality much of this land will not be available for housing for many years. It may be concluded, however, that supply of urban zoned land should exceed demand for many years to come.

The Council agrees with the Liveable Neighbourhood concepts to provide local facilities within walking distance from residential lots and development that capitalises on public transport where possible.

4.4.5 Vacant Commercial and Industrial Lots

The former Shire of Greenough area does not have extensive areas zoned for commercial and industrial uses. Commercial outlets currently exist within the Sunset/Waggrakine locality, the Mt Tarcoola locality and the Wandina locality. The Department for Planning and Infrastructure's Assessment of Commercial Centre and Community Facility Requirements in Growth Precincts North and South of Geraldton will be used as a guide to determine the land allocation for community centres – the actual location of community centres will be determined through the preparation of Structure Plans for urban release areas. Commercial land will be allocated out of the stocks of urban zoned land as development proceeds. Refer Section 2.10 for an overview of retail services.

It is intended to supply additional industrial land in the area where the Airport and Narngulu buffers overlap and elsewhere in the Narngulu buffer, as recommended by the Geraldton Region Plan (WAPC, 1999).

Table 7: Existing industrial areas in the former Shire of Greenough.

Locality	Occupied Area (ha)	Vacant Lots	Vacant Area (ha)
Utakarra	4.9	10	14.3
Narngulu	546.8	33	145.7
Total	551.7	43	160

Source: WA Planning Commission

The above figures suggest that there is land available within Narngulu for further development. However, studies will be undertaken to ascertain the potential for future industrial uses within the core industrial zoned area and the future buffer land. In the meantime Council will not rezone General Farming land or Rural Residential land for industrial purposes.

4.5 RURAL RESIDENTIAL AND RURAL SMALLHOLDINGS DEVELOPMENT

The Western Australian Planning Commission published the "Geraldton Land Development Program 1998 to 2002" in April 1998. The report identified 302 'Vacant Rural Living Lots' in the following localities:

• Utakarra-Deepdale	95
• Woorree	78
• Moresby Rural	85
• Waggrakine Rural	44
Total	302

The report also states that,

"...vacant lot stock does not imply that all land is available to the market place. Surveys in the Metropolitan Region have shown vacant lots available for sale are as low as 20 percent, as many lots have been purchased for future or other uses".

In January 2002 the number of Rural Residential and Rural Small Holdings lots in the Shire was examined. Table 9 indicates the existing created lots and the potential lots (uncreated yet approved on Structure Plans at the time of rezoning).

Table 8: Review of Rural Residential and Rural Smallholding Lots in the former Shire of Greenough, 2002.

Locality	Existing Created Lots	Potential lots as yet uncreated
Waggrakine	207	-
Moresby	265	25
Woorree	312	0
Deepdale	78	50

Eastlyn	65	130 *
Moonyoonooka	17	67
Rudds Gully	16	69
Overall Total Lots	960	341

* The Eastlyn area is subject to replanning owing to the realignment of the East-West road alignment into Geraldton. It is probable that lots will be lost from this total and land release will be delayed.

The overall situation in relation to Rural Residential lots is, therefore, that they are developed or are being held pending development or later sale. The uncreated lots are similarly not available to the market and it is uncertain as to when they will be created. Council has resolved to support the further subdivision of the Waggrakine area to cater for the future demand for rural residential lots which are close to community services and supplied with the required level of infrastructure. The creation of other rural residential or rural smallholdings developments outside those indicated on the Strategic Plan Map will not be supported by Council.

To accommodate future demands for rural residential lots north of Geraldton in the former Shire of Greenough area, land in Waggrakine will be zoned Rural Residential in the Town Planning Scheme. However, the actual minimum lot sizes and subdivision pattern in the Waggrakine area will be set by the Waggrakine Rural Residential Structure Plan, which requires Western Australian Planning Commission endorsement before subdivision, in accordance with it, can be approved. Criteria for endorsement will include the following:

- adequate provision for a 15 year supply of rural residential lots around Geraldton;
- staging in relation to demand;
- presumption against battleaxe access legs;
- arrangements for cost sharing, particularly for roads;
- minimum impact on remnant vegetation,
- availability of, and access to, infrastructure and services; and
- preference for smaller lots where higher level amenity is available.

4.6 RURAL DEVELOPMENT

4.6.1 Rural Areas

Detailed planning for the rural areas of the City of Geraldton-Greenough is included in the Local Rural Strategy. The strategy recognises the importance of the rural areas as a finite resource upon which the rural economy is based. These resources are to be preserved for predominantly rural pursuits.

In 1997 Council directed the Planning staff to prepare a paper on the possibility of introducing a Green Belt in the former Shire of Greenough area to stop valuable agricultural land from being used for development. Council's staff prepared an item for Council, which explored the background to Green Belt planning.

The report concluded that generally, Green Belts have not been effective as a means of restricting the expansion of urban development. A more practical approach has been to utilize topographical/environmental features such as rivers, mountain ranges and coastal foreshores and to integrate these into an overall open space and recreation network. Council has incorporated this approach into determining the extent of future non-agricultural development areas.

4.6.2 Moresby Range

The ongoing growth and development of Geraldton has begun to put pressure on the Moresby Range, which forms a landscape backdrop to the Geraldton centre. The range also forms a significant topographical limit to urban expansion as discussed above.

The majority of the Moresby Range is private land and ongoing pastoral uses have in some places degraded the visual quality of the area. A Moresby Range Management Committee is currently preparing a strategy for the ongoing planning and management of the area.

The Moresby Range is identified as a separate planning precinct in the recently revised Local Rural Strategy. The land use and management guidelines of the Local Planning Strategy and Local Rural

Strategy have been determined based on compatibility with the intentions of the Draft Moresby Range Management Strategy.

4.6.3 Coastal Dunes

Previous investigations of the stability of the coastal dune areas south of the Greenough River mouth indicated that there are two areas that are more stable than the majority of the dunes and may be capable of development for uses other than rural. These areas are at the West Bank rural residential subdivision and in the vicinity of Flat Rocks. The appropriate future use for Flat Rocks needs to be determined as part of coastal planning for this coastline.

4.6.4 Commercial Uses in Rural Areas

Council has approved the use of truck depots, craypot manufacturers, trade displays and other uses in rural areas. This has led to a haphazard land use appearance in the Utakarra, Woorree, Deepdale, Meru and Moonyoonooka localities.

The Geraldton Region Plan (WAPC, 1999) indicates the areas around the Narngulu industrial area that can be used for future light industrial use.

5 STRATEGIC PLAN

5.1 INTRODUCTION

The following section presents the Strategic Plan for the former Shire of Greenough area formulated within the parameters of existing state, regional and local planning strategies, public consultation, and knowledge of local planning issues as discussed in the previous sections.

In this section, a **detailed planning strategy** may refer to a structure plan, a special control area, a management strategy, a commercial strategy, the Local Rural Strategy or another type of strategy depending on the strategy relevant to the discussion. Where reference is made to a **detailed planning strategy** in the text, it must not be read that such a strategy currently exists, but that such a strategy may exist. A current list of adopted, endorsed and proposed strategies is available from Council.

5.2 STRATEGIC PLAN MAP

The overall strategy for the former Shire of Greenough area is broadly described as a semi-circular development pattern around the former City of Geraldton area and stretching along the coast, with the land in close proximity to Geraldton favoured for urban, rural residential, rural smallholdings, and industrial uses, with the balance of the former Shire area used for agriculture and conservation purposes. This pattern is depicted on the Strategic Plan Map (Figure 6) and its components discussed in detail below.

5.3 AIMS OF THE STRATEGIC PLAN

The aims of the Strategic Plan are:

- To provide a strategic direction for the former Shire area in terms of land use planning and development to ensure the co-ordination of infrastructure and urban growth.
- To ensure development is located such that the required level of existing or future infrastructure can be efficiently provided.
- To identify adequate areas of land for the various urban, rural residential, rural smallholdings, industrial, and rural components to accommodate future requirements.
- To ensure that the future development is economically, socially, and environmentally sustainable over time.
- To ensure access to all significant basic raw material resources is not compromised through planning decisions.
- To protect basic raw materials.
- To conserve the environmental values of the former Shire area.
- To minimise, and where possible avoid, the potential for land use conflict by providing adequate separation distances between incompatible land uses and by preventing the introduction of new land uses that could adversely impact on existing uses.

5.4 LAND USE PRECINCTS

5.4.1 Introduction

Land use precincts of the Strategic Plan are:

- Agricultural
- Basic Raw Materials
- Environmental Value

- Urban
- Rural Residential
- Rural Smallholdings
- Industry
- Commercial, and
- Infrastructure

The precincts indicate the predominant land uses to be established in each precinct, as well as the preferred location of these precincts in the future. Detailed planning for each precinct is contained in either the Local Rural Strategy, detailed planning strategies, or the zoning scheme.

5.4.2 Agricultural

The agricultural area includes the broad acre farming areas of the City of Geraldton-Greenough, and the fertile alluvial valleys and sandplain areas that combine to support grain crops, horticulture, intensive agriculture, wool production, and cattle and sheep for slaughter. Protection of the resources upon which the rural sector depends will be given high priority and achieved by preventing the intrusion of non-agricultural land uses into these areas and giving consideration to subdivision of rural land in accordance with the Local Rural Strategy from the initial position of a presumption against subdivision.

The Greenough Back and Front Flats have been identified in the State Planning Policy No. 11 as an "Agricultural Priority Management Area" and for this reason the concentration of non-agricultural uses into these areas will be confined to the area designated for tourism development around the historic Greenough Hamlet as shown on the Strategic Plan Map.

The agricultural areas of the City of Geraldton-Greenough contain a number of places of heritage value and high priority will be given to managing these in the future. For example, the Greenough Hamlet and surrounding areas are to be protected by means of a detailed planning strategy. Other places of heritage value in the shire are included on a Heritage List and are given special consideration from a management point of view.

Council agreed to establish buffers around the abattoir at Moonyoonooka and Rudds Gully in 1998 and subsequently a 500 metre buffer was proposed. However, during advertising a large number of submissions were received from surrounding landowner stating that the proposed buffer would limit their development potential. As a result the Council decided not to proceed with the buffer. The Minister for Planning supports Council's decision not to proceed with this amendment. It should be noted that both areas were zoned General Farming and the landowner's opportunities for general development are highly restricted. However there is a need for potential buffer requirements to be considered in determining planning proposals over surrounding land.

The strategic direction for agricultural areas of the City of Geraldton-Greenough is to sustainably farm the land in accordance with its land suitability, and to prevent the intrusion of non-agricultural uses which compromise efficient and sustainable farm management practices into these areas. Heritage places in rural areas shall be protected and conserved.

5.4.3 Basic Raw Materials

Development within the City of Geraldton-Greenough and the region depends on the long term supply of basic raw materials. The City is aware of point sources of extraction and approximate extent of the ore bodies. Much of the raw material presently lies in agricultural land and is not under any direct threat of being compromised by development. Resource areas are shown on the Strategic Plan Map and shall be preserved by limiting the encroachment of non-compatible land uses in the vicinity of these areas.

Land use or development proposals having the potential to prevent access to basic raw material resource within the basic raw material overlay require a resource impact assessment to demonstrate that the basic raw materials are not required.

Extraction of basic raw materials will be subject to remediation of the site once completed so the land can continue to be used for agricultural production. In areas covered by the basic raw materials overlay land use or development proposals that have the potential to prevent access to the basic raw material resource will only be permitted where it is demonstrated that those basic raw materials are not required.

The strategic direction for basic raw materials in the City of Geraldton-Greenough is to preserve known resource areas as shown on the Strategic Plan Map by overlaying land use or development proposals that have potential to prevent access to the basic raw material resource. Such developments will only be permitted where it is demonstrated through a resource impact assessment that those basic raw materials are not required. Extraction of basic raw materials will be subject to remediation of the site once completed so the land can continue to be used for agricultural production purposes.

5.4.4 Environmental Value

The former Shire area contains several areas of high environmental (including aesthetic and biophysical) value such as the Burma Road Nature Reserve, the Wicherina Catchment Reserve, the Moresby Range, the Chapman and Greenough River systems, the Greenough River mouth, flora and fauna reserves, coastal foreshore and dune environments. A number of studies have been undertaken to consolidate and protect these sensitive environmental values. Tourist developments, which have an accommodation component, shall only provide for non-permanent residential accommodation. Such developments will only be considered where potable scheme water is provided and which are sensitive to the environmental values of the area. Development in these areas shall be in accordance with their environmental value, the purpose of any reservation over the land, and any adopted and endorsed detailed planning strategy for the area.

Consultation is to be undertaken with the Department of Environment and Conservation (DEC) or Department of Water (DoW) as appropriate to assist in the assessment of proposals with the potential to impact on coastal and river foreshores and areas of environmental value.

The Moresby Range Management Strategy shall be used as a guide to development controls in the Town Planning Scheme.

The strategic direction for the areas of environmental value is consolidate, manage and conserve these areas for the long-term benefit of the City of Geraldton-Greenough and the region and to protect them from inappropriate development in consultation with the DPI and DEC or DoW as appropriate. Where land use and development proposals have the potential to adversely impact on areas covered by the Environmental Values overlay, or other areas considered to have environmental value, those proposals shall be referred to the relevant government department for comment.

5.4.5 Urban

Urban areas cater for a variety of housing types at urban densities, as well as providing neighbourhood shopping, schools, community, recreational and other facilities associated with urban living.

The existing residential areas are a dispersed series of nodes including Drummond Cove, Waggrakine, Strathalbyn, Utakarra, Karloo, Mt Tarcoola, Tarcoola Beach, Wandina and Cape Burney. Each of the residential nodes has surrounding land that has been identified for residential expansion. Land zoned for future expansion currently exists at Drummond Cove, Glenfield, Waggrakine, to the south of Moresby (Rowan's Estate), Strathalbyn, Utakarra, Karloo, Mt Tarcoola-Wandina, Rudd's Gully and Cape Burney. It has been determined that sufficient residential land exists to serve the demand for many years into the future. Additional zonings to accommodate residential development is not anticipated to be supported unless such zoning constitutes infill development or is an integral component of a detailed planning strategy endorsed by WAPC.

Development in these areas shall be in accordance with the relevant detailed planning strategy adopted by Council and endorsed by the WAPC.

The strategic direction is to consolidate future residential development in the urban areas before considering the rezoning and subdivision of any new areas.

5.4.6 Rural Residential

Rural residential areas provide for predominantly residential living on larger lots (1-4ha in accordance with SPP 11 and zoned Special Rural) with potable scheme water, close to urban services. The development of the areas shown as Rural Residential on the Strategic Plan map will provide for the expected demand for this type of lifestyle for the life of this plan. Development in these areas shall be in accordance with any detailed planning strategy adopted by Council and endorsed by WAPC. Portion of these localities will be affected by the airport buffer and reference needs to be made to Section 5.4.10 of

this strategy document and the Planning Strategy Map to ensure that the Council's strategic direction in relation to the future use of the Airport and its impact over these localities are fully understood and catered for within any detailed structure plans that are developed for these localities.

The strategic direction for rural residential development is to consolidate development in those areas indicated on the Strategic Plan Map before considering new areas.

5.4.7 Rural Smallholdings

Rural Smallholdings provide for predominantly residential living (4-40ha lots in accordance with SPP 11 and zoned Special Rural) in a rural environment. There are several areas in the City of Geraldton-Greenough that cater for this type of development currently located at Moonyoonooka, and Mt Hill. Due to the expectations of residents of these areas to be provided with a high degree of services, further developments remote from Geraldton shall not be supported by Council. Also Council will not support any further development of Rural Smallholdings until a detailed settlement strategy (including land capability assessment) has been conducted and adopted by Council and WAPC.

Future development of these rural smallholdings localities shall be in accordance with the relevant adopted and endorsed detailed planning strategy for the locality.

The strategic direction is to consolidate rural smallholdings development within those areas identified on the Strategic Plan Map.

5.4.8 Industry

Major strategic and general industrial activity in the former Shire area shall be located at Narngulu.

Industrial development within the Narngulu Industrial Estate and within the buffer area around the estate shall be in accordance with any adopted and endorsed detailed planning strategy prepared for the locality.

Within the Narngulu buffer shown on the Strategic Plan Map further intensification of land use will not be permitted if the use is not compatible with the Narngulu industrial area. Where possible, residential use will be located outside the buffer. In addition, the number of residential dwellings in proximity to the notional buffer area in Rural Residential precincts will be limited as much as possible and the separation distance between these dwellings and Narngulu will be maximised. Memorials may also be placed on titles to notify prospective purchasers of emissions from Narngulu. In a further effort to minimise the impact of industry at Narngulu on surrounding landowners, the Town Planning Scheme will prevent new industry uses from locating in Narngulu if the impacts are likely to affect surrounding residents.

The zoning to facilitate industrial development on a part of the Wizard Peak Industrial area has lapsed but the identification of the locality shall be maintained as a long term strategic industrial development option for the region.

The strategic direction for industry is that general industry will be accommodated within the Narngulu Industrial estate. Other land uses compatible with the industrial estate shall be considered in the buffer area for the Narngulu Industrial Estate in accordance with any detailed planning strategy for the Narngulu locality. Wizard Peak shall be retained as an area that, subject to further assessment, may be considered as a future strategic industrial area, if Oakajee does not proceed.

5.4.9 Commercial

The CBD of Geraldton is the focal point for regionally based commercial activity, providing higher order shopping, retail, commercial and cultural activities. The need for two district centres located notionally at Glenfield in the north and in the south has been identified. These centres are not intended to compete with the regional or higher order functions of the CBD, but are to provide a commercial, community and cultural focal point for the northern and southern urban and surrounding areas respectively. A Commercial Centres Study was undertaken and reviewed by the DPI in 2004 and the conclusions in the report (Assessment of Commercial Centre and Community Facility Requirements in Growth Precincts North and South of Geraldton) should be taken into account in future planning of the former Shire area.

Commercial activities will only be supported in the urban areas where they are in accordance with an endorsed strategy or structure plan. There is a general presumption against the establishment of retail outlets in rural residential and rural smallholdings localities. Commercial activities will only be supported in rural areas where it can be demonstrated that they are required to service those areas, or where in accordance with an approved tourism strategy.

The strategic direction is to:

- i) provide for appropriate levels of commercial activity throughout the former Shire area consistent with relevant adopted commercial, retail and tourism strategies endorsed by the WAPC; and*
- ii) promote sites for two potential district centres for the northern and southern areas.*

5.4.10 Infrastructure

Considerable work has been undertaken in recent years on the determination of the major infrastructure in the City of Geraldton-Greenough and region.

The integrity and efficient use of this infrastructure shall be ensured by controlling adjacent land uses, and those uses within buffer areas associated with this infrastructure. Development shall be in accordance with the relevant adopted and endorsed planning strategy for the locality.

The main strategic directions for infrastructure within the former Shire area are:

- Roads

A new alignment has been decided for the East-West alignment of the Geraldton Southern Transport Corridor from the Mt Magnet Road through the former Shire area to the Geraldton Port in the City of Geraldton. Also, a revised alignment for the North-South Road has been determined by the Western Australian Planning Commission. The preferred route recommended by the Western Australian Planning Commission utilises Webberton Road between its intersection with North West Coastal Highway and the Geraldton- Mt Magnet Road. Other roads operated by the State are included as Primary Distributor Roads on the Strategic Plan Map. Roads operated by the local government, which require particular consideration to ensure development does not compromise their function, are also shown.

- Railways

The existing railway alignment from the south and east have been shown on the Strategic Plan map. A component of the Geraldton Southern Transport Corridor is to modify the rail network in the future to approach the Geraldton Port from the south-east as shown on the Strategic Plan map. The planned rail and service alignment through the former Shire area from Narngulu to Oakajee in the Chapman Valley Shire is also shown.

- Airport

The Geraldton Airport located approximately 10 Kms east of the City of Geraldton is the major airport servicing the Geraldton/Greenough community and the Mid West region as a whole. This airport is well established and has recently been upgraded with a new terminal building and additional security around the perimeter of the land holding. Due to the increase in activities such as mining, tourism and development generally within the Geraldton and Mid West Regions it is important that an efficient and restriction free airport operation be maintained to service the activities that are important to the growing economy of the region.

Council has adopted and continually revises a Master Plan, which provides for amongst other items an additional runway as well as providing for continued growth in the operation of the airport and its facilities to better service the Mid West Region well into the future. The Master Plan takes into account the existing land ownership by the Council that is available for airport use and at each review of the Master Plan future directions and possible land acquisitions for further expansion of the land required for Airport use are considered.

The Airport is well connected to the road infrastructure by means of good access to the Geraldton Mount Magnet Road. The establishment of a buffer in the surrounding areas to control future land use will retain the integrity of the Airport and allow present levels of service and operation to be maintained and improved into the future as the Region expands.

Considerable work has been undertaken to create a practical buffer area around the Airport to ensure that compatible land uses can be achieved in close proximity to the Airport that will not compromise the continued use of the Airport in accordance with the adopted Master Plan. Council initially undertook to

establish a buffer area using the Australian Noise Emission Forecast (ANEF) standards which are currently the only accepted noise standards for airports in Australia. However from extensive research and liaison with the Department of Transport and Regional Services in Canberra (DOTARS) it was found that in the majority of instances that the ANEF contours have been used to establish a buffer area there have been considerable shortfalls in the ability to control encroaching residential development from affecting the Airport's operations and indeed from protecting the residential areas from influences from aircraft operations. The major problem identified with the ANEF approach stems from the fact that it is an average only of operations around particular runways over a yearly basis (and in most cases does not indicate peak time operations and effects) and hence it defines and introduces various contours around and usually close to the runways of the Airport. New development is able to be established in areas in close proximity to the runways, albeit within acceptable ANEF contour positions, and hence be detrimentally affected by airport traffic to the extent that leads to regular complaints and in the long term added restrictions on the airport operations. Examples of the ANEF's not working successfully appear in the larger trafficked airports such as Sydney and Jandakot (Sydney has had to introduce respite times and rotates runway use – Jandakot restricts flying times to certain hours to avoid disturbance to residents). Whilst it is recognised that the Geraldton Airport is not to the same scale as these Airports at this point in time it was considered that as the Airport usage continues to grow there will come a time in the future where the ANEF control would lead to restrictions having to be imposed on the operations of the Airport following complaints received. Given the relatively "Greenfield" situation with respect to the surrounding land being predominantly General Farming in both usage and zoning it is considered an ideal opportunity to introduce a more conservative approach to development controls around the Geraldton Airport to avoid some of the problems experienced around other airports.

The DOTARS are also undertaking considerable work to address this weakness with the ANEF approach to overcome the recognised shortfalls associated with their use as the only tool to control developments in close proximity to airports. Once this is concluded, there may be the opportunity to refine the approach to land use planning around the airport.

There are two areas shown on the Planning Strategy Map which are influenced by the operation of the Airport, being the Airport Inner Buffer and the Airport Area of Influence.

The Airport Inner Buffer is the area defined by plotting the N70 contour for more than 10 events per day (i.e. the contour that represents the area affected by noise levels in excess of 70dB – a level which is considered to make normal speech difficult to hear for the duration of the noise).

The Airport Area of Influence is the area considered to be the area under the influence of activities generated by the Airport. Both the Airport Inner Buffer and Airport Area of Influence are based on the ultimate operation of the airport.

Subdivision and Development within the Airport Inner Buffer

- There is a presumption against further rezoning and subdivision within the Airport Inner Buffer which would result in the intensification of residential and other sensitive land uses, or in fact be themselves detrimentally affected by Airport activity.
- Council may include relevant noise attenuation or other measures to mitigate against noise and other impacts, to be included as conditions of approval for development within the Airport Inner Buffer.

Subdivision and Development within the Airport Area of Influence

- In broad principle it is envisaged that low density rural residential activities on existing zoned land within the Area of Influence would proceed however Council will require caveats or memorials on the titles of lots as conditions of approval to advise people that they are within an area which is affected by aircraft noise due to the proximity of the Geraldton Airport.

It is recommended that detailed planning be undertaken to investigate land development opportunities around the airport in the context of the wider area of Geraldton-Greenough. Any assessment would be required to demonstrate that proposals would be required to:

- 1 Maintain the strategic integrity of the Airport for long term use as a Regional Airport;
 - 2 Be compatible with the operations of the Airport;
 - 3 Consider matters such as land use, zoning, road hierarchy and access issues, landscaping buffer areas, height limitations as stipulated by the Obstacle Height Limitation Surface, and service requirements; and
 - 4 Include specific guidelines for lot layout, building and height control within the area.
- Wastewater Treatment Plants

Wastewater treatment plants are shown on the Strategic Plan Map. Their integrity shall be ensured by the establishment of buffers in the surrounding areas.

- Water Supply

Potable water supplies are sourced from the declared Dongara - Allanooka groundwater area that lies totally outside the former Shire boundary. The proposed Casuarina ground water area is an extension of this water source and lies in the southern area of the former shire area as an extension of the Dongara - Allanooka source. There is a need to ensure this resource is not compromised by incompatible land uses. Further investigations are required to determine the extent and potential of the Casuarina groundwater area but to protect this resource in the interim, planning proposals that have potential to impact on groundwater resource will be referred to the relevant government department for comment.

- Regional Landfill Facility

The Geraldton Greenough Regional Council Waste Management Authority runs the regional landfill facility, which is located at Narngulu. This facility will be protected by the buffer around the Narngulu Industrial Estate.

- Electricity Generation / Transmission

The main electricity substation for Geraldton is located in Eighth Street Woorree, and has transmission lines emanating from it in numerous directions. The integrity of these facilities will be ensured by maintaining adequate separation distances from incompatible uses.

The strategic direction for infrastructure in the former Shire area is to ensure that land uses are located such that the provision of infrastructure is planned and utilised in an efficient, cost effective manner, and that adequate buffers around this infrastructure are established to ensure their efficient and continued use, and possible expansion, is not compromised.

5.5 COMPATIBILITY WITH STATE PLANNING STRATEGY

5.5.1 Introduction

The State Planning Strategy incorporates a number of principles, which articulate the State's interests, both in a general sense and with regard to the Mid West Region in particular.

The following section discusses the principles and objectives of the State Planning Strategy in the area of Environment, Community, Economic, Infrastructure, and Mid West Regional Development and how they are incorporated into the Strategic Plan.

5.5.2 Environment

Objective: 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 environmentally sustainable principles.

- Increasingly use energy sources that have minimal impact on the environment.

The Local Planning Strategy indicates that urban and rural residential development is best located adjacent to Geraldton. This leaves the remainder of the former Shire area particularly the inland hilly areas to be further assessed for their suitability for the development of sustainable energy production such as wind farms and solar generation.

- Prevent further loss of biodiversity.

The Local Planning Strategy includes the Greenough and Chapman River foreshores into areas with significant environmental value. The promotion of foreshore reserves, foreshore management plans, and revegetation along these rivers will provide a basis for linking other environmentally significant areas to these rivers. In this way a framework for environmental sustainability and biodiversity can be pursued. Foreshore reserves, foreshore management plans and/or revegetation along these rivers will be required as conditions of subdivision to create lots for more intensive use and, where possible, efforts should be made to provide links between these river corridors and other environmentally significant areas (e.g. Moresby Range and the coast).

- Ensure air quality is protected.

The Local Planning Strategy provides buffers for uses that may have air quality impacts and recommends additional sensitive land uses be prevented from the buffer areas to minimise such impacts.

- Ensure that water resources are conserved and their quality protected.

The Local Planning Strategy has indicated that the "Public Drinking Water Protection Areas" are located outside the former Shire boundaries therefore additional planning to protect these resources need not be investigated. Further investigations are required to determine the extent and potential of the Casuarina groundwater area but to protect this resource in the interim, planning proposals that have potential to impact on the groundwater resource will be referred to the relevant government department for comment.

- Ensure that land and soil is safe-guarded and that degradation does not occur.

The Strategic Plan has incorporated the findings of the Local Rural Strategy to ensure that land uses are compatible with the land systems and land capability for the locality.

- Reduce consumption of materials and promote recycling.

The City of Geraldton-Greenough operates a regional tip within the Narngulu Industrial Estate. The Local Planning Strategy identifies the land use aspects required to ensure the continuation of this regional industrial estate. The Management Authority is implementing plans for recycling across the Regional Council area.

- Promote planning, management and protection of resources.

The Strategic Plan Map identifies areas that have significant resources or values. The Strategy requires these resources and values to be protected through planning decisions that have the potential to impact on them.

- Protect landscape, open space and public access.

The Local Planning Strategy promotes the protection of significant landscapes and open space areas, and public access to natural environmental areas.

- Enhance the quality of life for all West Australians.

The Local Planning Strategy promotes the location of compatible land uses to improve the quality of life for its residents, and the efficient use of infrastructure thereby enhancing the quality of life of the State's residents and visitors and the broader community.

- Protect the State's cultural heritage.

Local Planning Strategy promotes the protection of the Greenough Hamlet and places on the Shire's Heritage List, some of which are also on the State Register.

5.5.3 Community

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

- Monitor the amount and rate of population growth.

The Local Planning Strategy assesses the amount and rate of population change and identifies the necessary land and community requirements needed to cater for this change.

- Respond to the changing needs of the population.

The changing needs of the population were assessed by means of community workshops. These Needs have been considered in formulating the Local Planning Strategy.

- Improve the linkages between land use planning and the provision of human services.

The Local Planning Strategy sets a framework for the spatial organisation of localities, which can accommodate the necessary human services such as community centres, medical and educational services, etc required by the surrounding populations. The Local Planning Strategy facilitates the achievement of this spatial organisation by reference to detailed structure planning. The Strategy needs to identify, at least at District level, human service provision and give an indication of how lower order services will be provided.

- Provide a range of housing opportunities.

The Local Planning Strategy anticipates a range of housing densities in locations appropriate to the level of infrastructure and human services available. The Zoning Scheme shall provide linkages through to the Residential Planning Codes to facilitate this aspect.

- Build a sense of community through the design of accessible settlements and public facilities.

The Local Planning Strategy anticipates that such aspects will be achieved through the detailed planning strategy process.

- Incorporate opportunities for consultation and include the views and concerns of local communities and groups with specific needs in local and regional plans.

The Local Planning Strategy formulation process incorporated community consultation workshops where values, concerns and visions were elicited and then reviewed when preparing the final strategy.

5.5.4 Economic

Objective: 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.

- Minimise delays in government approval processes.

The Local Planning Strategy and detailed planning strategies will provide clear guidance in relation to the preferred location of land uses in the former Shire area. This certainty will enable the speedy processing of applications through all levels of government.

- Provide flexibility in the planning system to meet the needs of small business.

The discretionary provisions within the Zoning Scheme will enable Council to consider a proposal in relation to the provisions of the Scheme as well as the particular needs of each application thereby providing flexibility. The Local Planning Strategy provides a guide for future land use in the former Shire area and allows for a wide range of small business opportunities. The Town Planning Scheme has an appropriate balance of control and discretion to provide flexibility to accommodate future growth and development without compromising regional objectives or other community values.

- Provide for the likely growth of downstream processing and value adding industries.

The Local Planning Strategy has assisted in the above process through the identification of planning strategies to ensure the integrity of industrial land. The Local Planning Strategy provides for the option of a strategic industrial site at Wizard Peak and promotes Narngulu for general industry uses. Whichever site is selected for strategic industry, there will be sufficient land available for future downstream processing and value adding industries, both of a heavy and general form.

- Facilitate land use planning for the growth of the tourism industry that is sensitive to environmental constraints.

The Local Planning Strategy has provided for land within the former Shire area to be developed for future tourist industry needs. The Local Planning Strategy identifies historic, coastal and unique natural features as tourist attractions. Specifically, the Strategy provides for compatible tourist development around the Greenough Hamlet. Outside this area, tourist development proposals will be considered against provisions of the Town Planning Scheme.

- Make allowance for the needs of new industries and technologies.

This is a difficult principal to achieve in that we do not know what the requirements for new industries and technologies will be. However, the Local Planning Strategy provides the flexibility for new industries and technologies to be considered. Specifically, the Strategy encourages agricultural diversification and tourism, where appropriate. A large wind farm has been developed east of Walkaway. There are suitable power and water supplies and services, including access to mobile and internet telecommunication networks, to accommodate future urban and industrial growth in the former Shire area.

- Support and further develop the State's main centres of business, culture and administration

The Local Planning Strategy supports the former City of Geraldton area as the business, cultural and administrative centre of the Mid-West Region.

5.5.5 Infrastructure

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

- Integrate land use and transport planning.

The Local Planning Strategy draws on regional planning undertaken by State authorities. The Strategy, where possible, defines district land use and transport requirements. Where this has not been possible, the Council will work with the Western Australian Planning Commission and government agencies to prepare district structure plans for future growth areas (e.g. Northern Geraldton District Structure Plan).

- Provide efficient freight transport routes and hubs.

The provision of freight transport routes is planned at a regional scale with the cooperation of the Council. Freight transport hubs will be provided for through the Town Planning Scheme having regard for the regional freight routes and other locational requirements.

- Plan for public transport facilities.

The Local Planning Strategy outlines current services and future plans for public transport throughout the former Shire area.

- Plan for balanced travel.

The Local Planning Strategy only deals with the travel modes that are required on a Shire-wide basis. This aspect would be accommodated through the detailed planning strategy process. Where feasible, the Council will plan for local facilities that are within walking distance from residential lots. The Council will also plan for development that capitalises on public transport services.

- Ensure the efficient, progressive development and servicing of urban land.

The Local Planning Strategy identifies existing and future urban land and provides for efficient and progressive development and servicing of this land by means of State authority legislation, the Town Planning Scheme and Council Local Laws. Generally it is expected that urban development will occur in a progressive manner as services are extended and at a density that allows for efficient and economic service provision.

- Promote the development and optimal use of key strategic infrastructure.

The Local Planning Strategy promotes the efficient use of existing and proposed infrastructure by identifying affected land and by providing for compatible land uses in surrounding areas.

- Support the development of more nodal urban settlements.

The Local Planning Strategy identifies sufficient land for future urban development to accommodate expected demand over the life of the strategy. The Council will promote more nodal urban settlements based on Liveable Neighbourhoods principles in considering future structure plans and subdivisions.

- Ensure that the provision of public utilities to country areas is based on economic and social considerations.

The Council operates the regional waste facility having regard for community values as well as economic imperatives. The Strategic Plan Map provides for compatible land uses around this facility. The Council also represents the local community in consultations with other service providers regarding the effectiveness of other public utilities.

- Promote public facilities as a means of assisting the creation of regional wealth and providing cultural benefits.

The Council maintains community facilities and recreational areas in an effort to create regional wealth, and where necessary, recognising cultural values.

5.5.6 Mid-West Regional Development

Objective: 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.

- Protect sensitive environmental and cultural heritage areas.

The Strategic Plan Map identifies environmental values within the former Shire area. The Strategy provides guidelines for protecting environmental and heritage values. More detailed management plans and strategies have been prepared for most of these areas, some by the Council.

- Manage and protect natural resources.

The Strategic Plan Map identifies areas with significant environmental values and the Strategy recommends ways of protecting these values and managing the impacts on surrounding land uses and development.

- Plans should address the need for the provision of social facilities.

The Local Planning Strategy identifies the types of social facilities required to support future growth of the former Shire area and recommends appropriate general locations for these facilities

- Provide improved education and training facilities within the region.

Education and training are not Council functions, however, the Council assists in identifying land for this purpose through its detailed planning strategies.

- Improve health services to the region.

The Council is not responsible for health services; however, it assists with the planning of such services.

- Promote opportunities for economic development.

The Council helps to promote opportunities for economic development by numerous strategies including supporting the development of the Greenough Hamlet locality as a tourist destination; protecting industrial land for industrial development; planning for the expansion of the Greenough airport etc.

- Provide a strategic transport network within and to the Mid-West Region.

The Council assists the planning and development of strategic transport network provision.

- Address the need for improved service delivery of regional infrastructure to a highly dispersed population.

The Council is continually improving the service delivery of the regional waste facility. The Council also represents the local community in consultations with other regional infrastructure providers regarding the service delivery of their infrastructure.

5.6 SUMMARY

The Strategic Plan provides the broad framework for development of the former Shire of Greenough area for the next 15 years. It incorporates the principles of the State Planning Strategy, as well as the aspirations of the Council and its residents.

6 MONITORING AND REVIEW

6.1 FUTURE CHANGES

The Local Planning Strategy is based on a broad range of State planning legislation, strategies and policies as well as Regional and Local directions. As these directions and documents are continually being updated and changed it is important that the Local Planning Strategy is monitored and reviewed to reflect the ever changing State, Regional and local objectives.

6.2 MAJOR REVIEW

It is proposed that the Local Planning Strategy will be reviewed every five years. This time frame is in keeping with the statutory requirements to update the Town Planning Scheme.

6.3 AMENDMENTS TO STRATEGY

As the former Shire of Greenough area is undergoing rapid development it is more than likely to require continual amendments as the development proceeds. This can be achieved by means of noting Council resolutions from time to time.

6.4 MONITORING OF THE SUCCESS OF THE LOCAL PLANNING STRATEGY

The Local Planning Strategy will only be successful to the extent that it achieves the stated objectives of the Council. It needs to articulate the desired outcomes of the Council and should be amended and monitored to achieve this aim.

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ADVERTISING

The City of Geraldton-Greenough Local Planning Strategy (Greenough) certified for advertising on 6 April 2004.

Signed for and on behalf of the Western Australian Planning Commission.

An officer of the Commission duly authorised by the
Commission (pursuant to the Planning and Development Act
2005)

Date _____ 20 December 2009

ADOPTED

The former Shire of Greenough (now City of Geraldton-Greenough) hereby adopts the Local Planning Strategy (Greenough), at the ordinary meeting of the Council held on 20 December 2006.

Shire President

Chief Executive Officer

ENDORSEMENT

Endorsed by the Western Australian Planning Commission on 9 September 2008.

An officer of the Commission duly authorised by the
Commission (pursuant to the Planning and Development Act
2005)

Date _____ 20 December 2009

