

Geraldton Region Plan

**A submission to the Western Australian Planning Commission
prepared under Section 16 of the Environmental Protection Act**

Advice of the Environmental Protection Authority

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1. Introduction

The purpose of this report is to provide the Environmental Protection Authority's (EPA) advice under Section 16(j) of the Environmental Protection Act on the Draft Geraldton Region Plan, referred to in this report as the Region Plan (Western Australian Planning Commission 1997).

In its consideration of the Region Plan the EPA acknowledges that the document is proposed to provide a framework for the future management, protection and coordination of regional planning in the region by identifying planning objectives and actions to achieve those objectives. The final document is likely to be implemented through the initiation of a statutory Region Scheme for the greater Geraldton area.

The purpose of the EPA's advice is provide guidance to planning agencies on regional environmental issues and indicate which specific proposals may require assessment by the EPA. The EPA expects that the planning agencies will give due regard to this advice in the finalisation of the Structure Plan and during the formulation of any future Region Scheme, town planning schemes, scheme amendments, subdivision and development proposals so that the environment will be adequately protected.

The environmental issues considered to be of most importance to the EPA, are:

i) Regional:

- Vegetation - identification, retention and conservation of remnant vegetation.
- Regional Parks and Open Space - retention and extension of conservation areas.
- Coastal and Foreshore Management - identifying areas with conservation value.
- Odour - prevention of degradation of amenity.
- Landscape - maintenance of visual amenity.
- Land Use Compatibility - maintenance of environmental quality levels consistent with land use.

ii) Site specific:

- Southern Transport Corridor.
- Oakajee Transport Corridor.
- Brand Highway.
- North West Coastal Highway.
- Rail relocation.
- Geraldton Airport.
- Webberton/Wonthella industrial Area.
- Oakajee Industrial Estate and Port.
- Wizard Peak Industrial Estate.
- Geraldton Port.
- Kalbarri.

Specific advice on each of these issues is provided in Section 4.

2. Background

The Western Australian Planning Commission (WAPC) released the Draft Geraldton Region Plan for public comment in December 1997. The EPA decided to provide advice to the WAPC under Section 16 of the *Environmental Protection Act (1986)*.

It is understood that following the public consultation period and consideration of submissions made during that time the final Geraldton Region Plan will be presented for endorsement to the WAPC and forwarded to the Minister for Planning for final approval. The final plan will be adopted as a policy guide providing the basis for any future Region Scheme, town planning schemes and subsequent amendments to these schemes.

The Region Plan covers the City of Geraldton and the Shires of Greenough, Chapman Valley, Northampton, Mullewa and Irwin (figure 1), drawing together a considerable amount of information regarding regional development, community development, natural and cultural environment, economic development and infrastructure.

The Geraldton Region Plan has two components:

- a) a broad landuse Strategy for the Geraldton Region which includes the surrounding shires and identifies goals and objectives at a regional level (figure 2); and
- b) a Structure plan (figure 3) providing more detail for the Great Geraldton area by interpreting and applying goals and objectives to the arrangement of land uses.

3. Status and purpose of the advice

In its consideration of the draft Geraldton Region Plan, the EPA acknowledged that the Region Plan, once finalised, will provide the framework for future development in the area. The purpose of the EPA's advice in this Bulletin is to:

- a) identify environmental issues which should be addressed at a strategic level and for inclusion in the final plan; and
- b) identify and provide guidance to the planning agencies on environmental issues that are best addressed at subsequent planning stages and which may require assessment by the EPA if not properly addressed. Future Region Schemes, town planning schemes, scheme amendments will be assessed by the EPA under Division 3 of Part IV of the Environmental Protection Act. Future subdivisions and development proposals may also be assessed by the EPA under Division 1 of Part IV of the Act if located outside the area of an assessed scheme.

The EPA's comments and advice contained in this Bulletin are provided under Section 16(j) of the Environmental Protection Act which enables the EPA "to publish reports on environmental matters generally".

The advice contained in this report was formulated by the EPA based primarily on input from the Department of Environmental Protection (DEP) in consultation with officers from the Ministry for Planning.

4. Discussion of environmental matters

4.1 Identification of specific environmental matters

It is the EPA's opinion that the following are regional and site specific environmental matters relevant to the Geraldton Region Plan:

- i) Regional
 - Vegetation - identification, retention and conservation of remnant vegetation.
 - Regional Parks and Open Space - retention and extension of conservation areas.

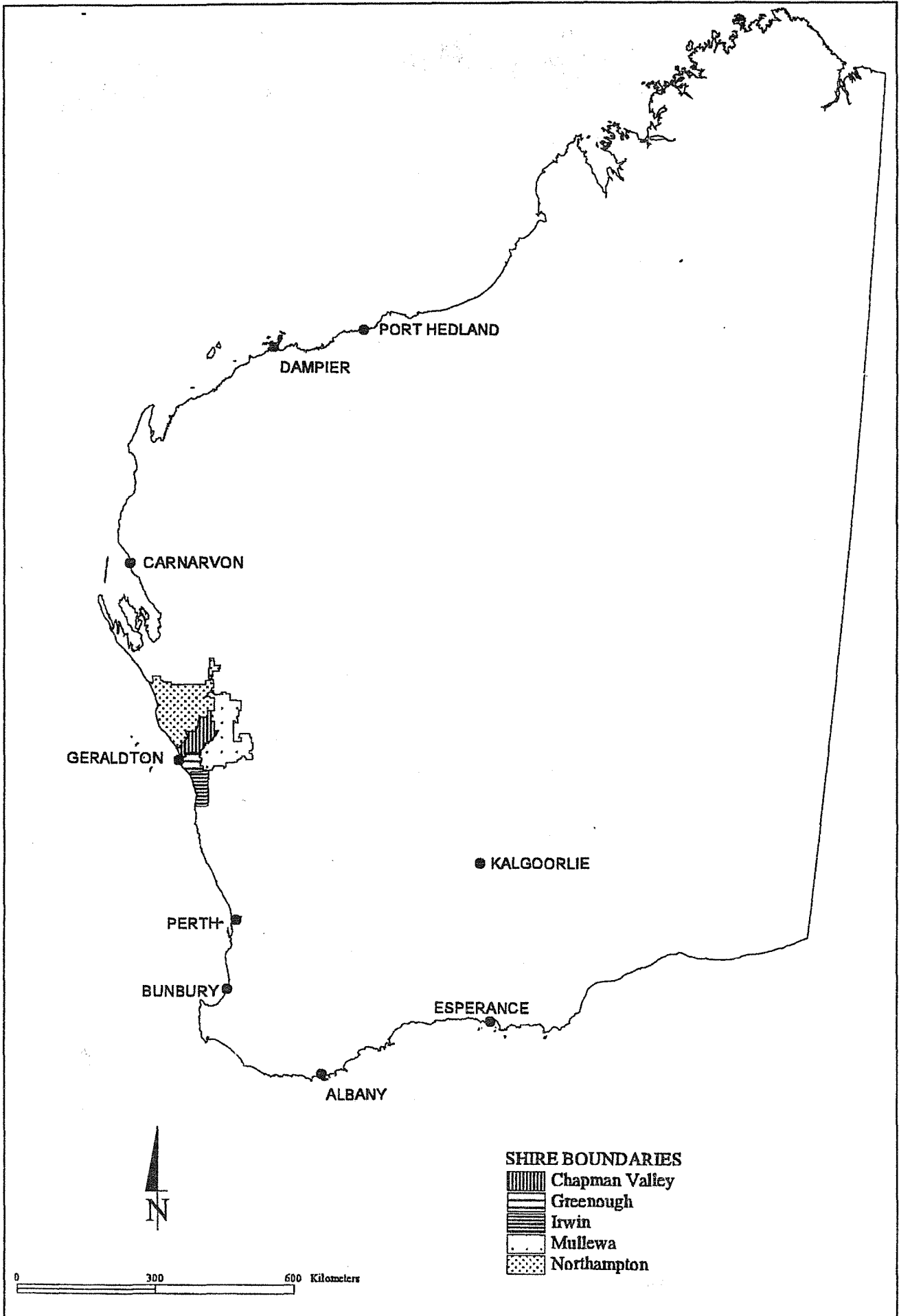


Figure 1. Location Map.

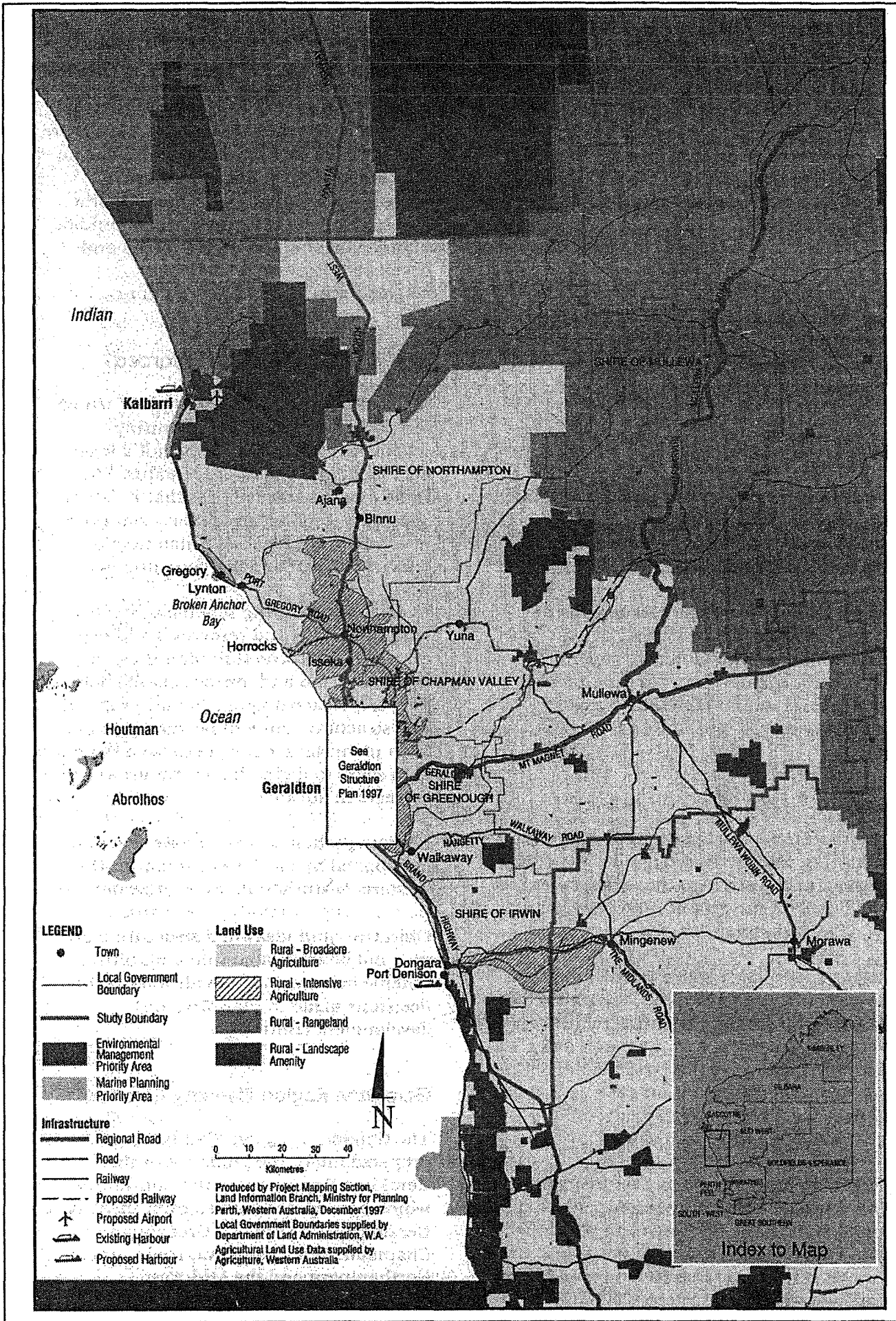


Figure 2. Geraldton Regional Plan.

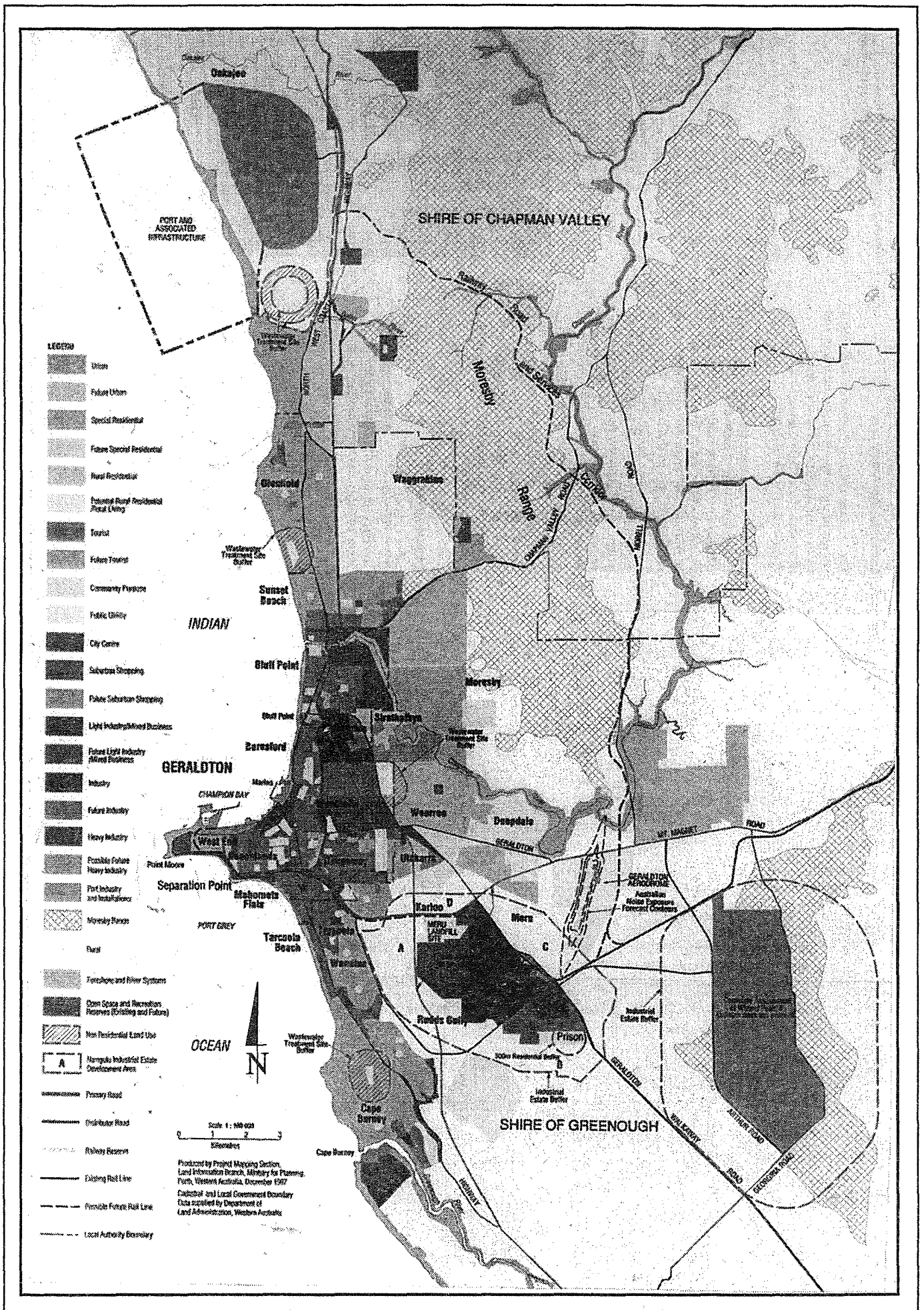


Figure 3. Greater Geraldton Structure Plan.

- Coastal and Foreshore Management - identifying areas with conservation value.
- Odour - prevention of degradation of amenity.
- Landscape - maintenance of visual amenity.
- Land Use Compatibility - maintenance of environmental quality levels consistent with land use.

ii) Site specific:

- Southern Transport Corridor.
- Oakajee Transport Corridor.
- Brand Highway.
- North West Coastal Highway.
- Rail relocation.
- Geraldton Airport.
- Webberton/Wonthella industrial Area.
- Oakajee Industrial Estate and Port.
- Wizard Peak Industrial Estate.
- Geraldton Port.
- Kalbarri.

These regional and site specific matters are discussed below.

4.2 Regional environmental matters

4.2.1 Vegetation

The EPA's objective is to maintain the abundance, species diversity, geographic distribution and productivity of vegetation types and communities.

The Geraldton region has been substantially cleared for agricultural purposes, as a result little native remnant vegetation remains. The EPA supports the proposal in the Region Plan to compile an inventory of, and to conserve, regionally significant remnant vegetation in both private and government ownership. The proposed vegetation inventory should be completed prior to the finalisation of the plan, specifically identifying remnant vegetation on the Moresby Ranges, in proposed urban areas, and elsewhere within the greater Geraldton region.

Once the vegetation inventory is complete, areas identified as supporting regionally significant vegetation should be identified and appropriately zoned for conservation in the final Structure Plan. A bioregional planning approach is recommended to determine the adequacy of the existing reserve system and to establish a comprehensive, adequate and representative reserve system in the region.

Waggrakine has been identified as an area for a future residential development. The eastern edge of the area incorporates the foot hills of the Moresby Ranges. Prior to rezoning further studies should be completed to ensure remaining remnant vegetation is not affected.

The EPA recommends that prior to finalisation of the Region Plan areas supporting regionally significant vegetation be identified for conservation.

4.2.2 Regional Parks and Open Space

The EPA's objective is to maintain the integrity, function and environmental values of regional parks and open space.

The EPA supports the proposal in the Region Plan to identify and protect areas for regional open space through the finalisation and implementation of strategies like the proposed City of

Geraldton Public Open Space Strategy. These areas of open space should include areas identified in the vegetation inventory and be incorporated in the final Geraldton Region Plan.

The EPA also supports the proposed expansion of the Chapman River Regional Park. In some areas, however, the park does not incorporate an adequate buffer from the river. The EPA recommends a minimum buffer of 50m of dryland vegetation for watercourses such as the Chapman River. This is the minimum buffer distance and it should be extended beyond 50m to protect riparian vegetation in good condition. This buffer should be identified in the final Region Plan to assist in the conservation of the foreshore and river systems.

As the Chapman River extends through three local governments the EPA supports the formulation of one consolidated Chapman River Management Plan.

The EPA recommends the modification of the Region Plan prior to finalisation identifying:

- a) areas of open space incorporating those areas identified in the vegetation inventory; and
- b) a minimum buffer of 50m of dryland vegetation for watercourses to assist in the conservation of the foreshore and river systems.

4.2.3 Coastal and foreshore management

The EPA's objective is to maintain the integrity, function and environmental values of coastal and foreshore areas.

The EPA supports the establishment of long-term planning and management strategies for the coastal and foreshore environments at regional and local levels. The EPA recognises the need for criteria identifying areas of conservation value and subsequent protection prior to development in the surrounding areas. The EPA endorses the use of the Western Australian Planning Commission's County Coastal Planning Policy No. DC 6.1 (WAPC 1989) in the final Region Plan for future and existing coastal and foreshore developments to maintain environmental quality in these growth areas.

The area identified as future tourist at Cape Burney abuts the Greenough River and is adjacent to an area identified for a Open Space and Recreation Reserve. The Structure Plan has not identified a foreshore reserve buffer to protect the existing environment from adverse impacts from tourism. Further, access to the tourism areas is through the proposed open space and recreation reserve supporting extensive remnant vegetation. Prior to allowing access through the reserve a vegetation survey should be completed to identify significant vegetation which should be adequately protected. The EPA advises that environmental issues associated with access to the future tourist area at Cape Burney may be addressed through the assessment of a Region Scheme or subject to separate assessment at a later time.

The Buller River forms the proposed southern boundary of the proposed Oakajee Industrial Park buffer area. The draft Structure Plan has identified an area for foreshore reserve and river systems on the southern bank of the river, however an appropriate foreshore reserve has not been identified on the northern bank. The final Structure Plan should recognise the need for a foreshore and river system reserve and appropriately identify an area for this purpose on the northern bank of the Buller River.

The EPA recommends the modification of the Region Plan prior to finalisation identifying a foreshore buffer area for Greenough River at Cape Burney and the northern bank of the Buller River abutting the Oakajee Industrial site.

4.2.4 Odour

The EPA objective is to ensure odours emanating from the proposed or existing development should not adversely affect the welfare and amenity of existing or future residents.

The Structure Plan has identified buffer areas for the existing Cape Burney, Glenfield, and Geraldton and the proposed Oakajee wastewater treatment plants. The buffer areas around the Cape Burney, Glenfield and Oakajee wastewater treatment plants are 500m wide which is consistent with EPA policy. The Cape Burney and Glenfield wastewater treatment plants are

located within an urban zone and future development is potentially planned to occur within the buffer area and up to the plant boundary. This plan should recognise these wastewater treatment plants as being a constraint to certain development and note that proper scientific studies would be required to determine the exact extent of buffer required and landuses compatible with the treatment plant.

The Region Plan should be modified to appropriately identify an area where there is a potential odour impact from the wastewater treatment plants where incompatible land uses are restricted.

4.2.5 Landscape

The EPA's objective is to maintain the integrity, environmental and aesthetic values of landscape.

The EPA identified the Moresby Ranges in System 5 of the Conservation Reserves for Western Australia (DCE, 1983), on the basis that there was a scarcity of conservation reserves in the Geraldton area and recognising the scenic attraction of the Moresby Ranges. Further recommendations of the System 5 report were that the National Parks Authority maintain a watching brief on land suitable for acquisition for National Parks, when financial resources permit and the land becomes available for purchase.

The EPA supports the establishment of the Moresby Ranges management committee and the need to conserve the limited amount of remnant vegetation. However, the EPA acknowledges that the Moresby Ranges are of significant regional landscape value. Local Government town planning schemes currently recognise the high landscape value of the ranges through development control provisions.

The Region Plan should be modified prior to finalisation to reflect and protect the regional landscape value to the Moresby Ranges.

4.2.6 Land Use Compatibility

The EPA's objective is to ensure the maintenance of environmental quality levels consistent with land use.

The EPA has endorsed a range of environmental quality levels in relation to land use, for example noise (EPA, 1997e & 1998), risk (EPA, 1992a & 1992b) and air quality (NEPC, 1997). In addition for the maintenance of environmental quality in residential areas the EPA has prepared a guidance statement on industrial residential buffer areas (EPA, 1997f). In order to maintain environmental quality consistent with proposed land use it is appropriate for the Geraldton Region Plan to adopt these provisions. Specific issues in relation to industrial areas and infrastructure proposals are considered in Section 4.3 below.

4.3 Site specific environmental matters

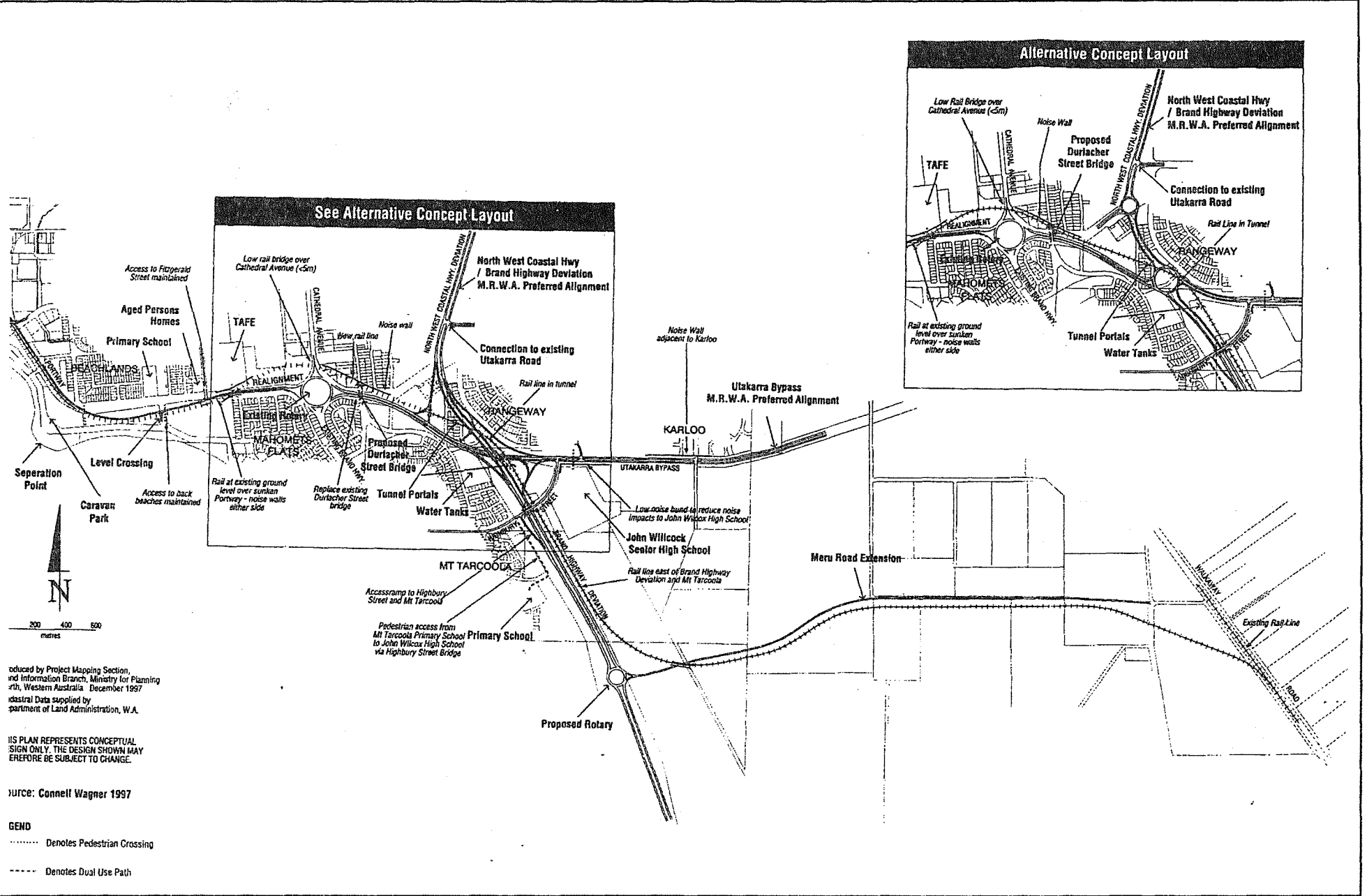
4.3.1 Southern Transport Corridor

The Structure Plan has identified a concept design to consolidate both rail and road infrastructure into a single southern corridor providing dedicated access to the Geraldton Port. The proposed corridor alignment (Figure 4) passes through, and is adjacent to, existing residential development, primary and tertiary education facilities and a short term accommodation facility.

Given the location of the corridor, the likelihood of impact on the surrounding landuses by way of risk, noise and vibration is potentially high. In addition, the alignment may affect existing remnant vegetation.

As the corridor is likely to be included in the proposed Region Scheme for Geraldton and is included in the government's recently announced road building programme, the environmental impacts can be addressed through assessment of the Region Scheme by the EPA or as a separate referral under Section 38 of the Environmental Protection Act 1986.

Figure 4. Southern Transport and Services Corridor Concept Layout.



4.3.2 Oakajee Transport Corridor

The Structure Plan has identified a corridor for road, rail and services extending from Nangulu to Oakajee. This corridor is currently the subject of a separate assessment by the EPA.

4.3.3 Brand Highway

The Structure Plan has suggested that the Brand Highway entry into the City of Geraldton may be re-aligned to reduce traffic impacts on the growing residential population. The re-alignment is proposed to be located to the east of Mt Tarcoola. Prior to finalising the alignment the vegetation survey referred to in section 4.2.1 should be completed and the alignments avoid impacts on any vegetation of conservation value identified in that survey.

As the re-alignment is likely to be included in the proposed Region Scheme for Geraldton the environmental issues can be addressed through assessment of the Scheme by the EPA.

4.3.4 North West Coastal Highway

It is proposed to upgrade the North West Coastal Highway (Figure 5) to include a dual carriage way status and re-align the section bordering Webberton. The re-alignment passes through an area of vegetated land currently acting as an industrial buffer. The area isolated from the re-alignment should be protected or zoned 'urban deferred' until the need for and extent of a buffer is determined.

As the North West Coastal Highway upgrade is likely to be included in the proposed Region Scheme for Geraldton the environmental issues can be addressed through assessment of the Scheme by the EPA.

4.3.5 Rail relocation

The Structure Plan supports the relocation of the foreshore rail line to utilise the proposed Southern Transport Corridor and existing railway reserve through Utakarra, Wonthella, Webberton and the northern part of Beresford to service the existing industry.

The increased use of the existing railway reserve though Utakarra, Wonthella, Webberton and a part of Beresford may adversely impact on the surrounding landuses by way of increased risk, noise and vibration. These impacts will require further investigation.

The proposal will be subject to separate referral and EPA assessment, or as the proposal is linked to the Southern Transport Corridor the environmental impacts may be addressed as a part of the Southern Transport Corridor referral.

4.3.6 Geraldton Airport

The Structure Plan proposes to examine the need to upgrade the Geraldton Airport to airfreight capability. Should this occur, resulting in an increase in air traffic, further investigation may be required to ensure that nearby residents are not subject to unacceptable noise. It is essential that the regional plan make provision for airport upgrading to ensure compatibility between the airport and adjacent land uses.

The proposed Airport upgrade would be subject to separate referral to the EPA at a later time.

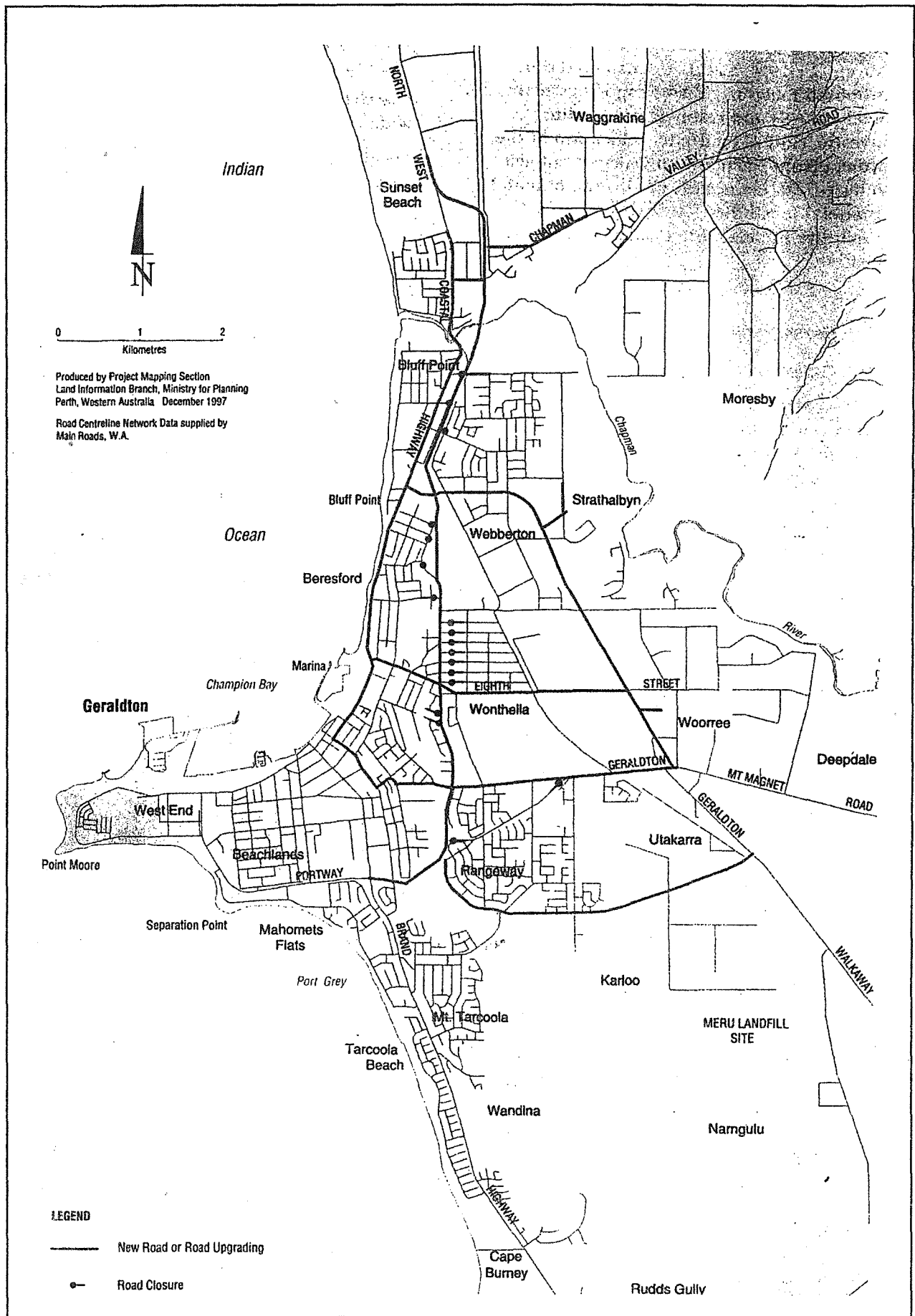


Figure 5. Proposals for the North West Coastal Highway Upgrade.

4.3.7 Webberton/Wonthella Industrial Estates

The Structure plan proposes to expand the Webberton general industrial area east and south into Wonthella. Part of the extension utilises the current Geraldton landfill site. The Structure plan should recognise the need for site investigation as part of the preparation of the proposed Region Scheme to determine the nature and extent of site contamination and to identify clean up strategies consistent with DEP criteria.

The Structure Plan has not identified buffer requirements within the industrial area, however, the EPA believes that given the nature of industry supported on the industrial estate the buffer requirements can and should be addressed on-site and through compatibility of adjacent landuses.

The Region Plan should be modified to provide for on-site buffers as part of the extension of the Webberton/Wonthella Industrial Estates.

4.3.8 Oakajee Industrial Estate and Port

Oakajee has been identified as a proposed heavy industry (Figure 6) site in the Structure Plan. There are still incomplete studies pertaining to the buffer area for the proposed Oakajee industrial area, but it is anticipated that these will be completed during 1998. In the interim, the Structure Plan should recognise this uncertainty and acknowledge that the Region Scheme will need to reflect the land uses compatibility with the industrial development, in particular adequate separation of residential development and retention of agricultural use on the industrial estate boundary.

The Minister for Environment has considered and subsequently issued and approved with conditions the relocation of the An Feng Kingstream Steel from Namgulu to Oakajee, should the proposed industrial estate proceed.

The Oakajee Industrial Estate (Bulletin 848, EPA 1997b) and Oakajee Deepwater Port (Bulletin 866, EPA 1997d) were the subject of separate assessments by the EPA identifying:

- a) rare and priority flora and vegetation communities;
- b) gaseous emissions;
- c) dust and particulate emissions;
- d) noise and vibration;
- e) public health and safety;
- f) visual impact;
- g) regional planning; and
- h) port;

as relevant environmental factors pertaining to the proposed Industrial Estate, and

- a) rare and priority flora and vegetation communities;
- b) seagrass and benthic primary producer habitat;
- c) noise and vibration;
- d) public health and safety;
- e) Oakajee River training;
- f) services and infrastructure; and
- g) transport,

as relevant environmental factors pertaining to the proposed deep water port.

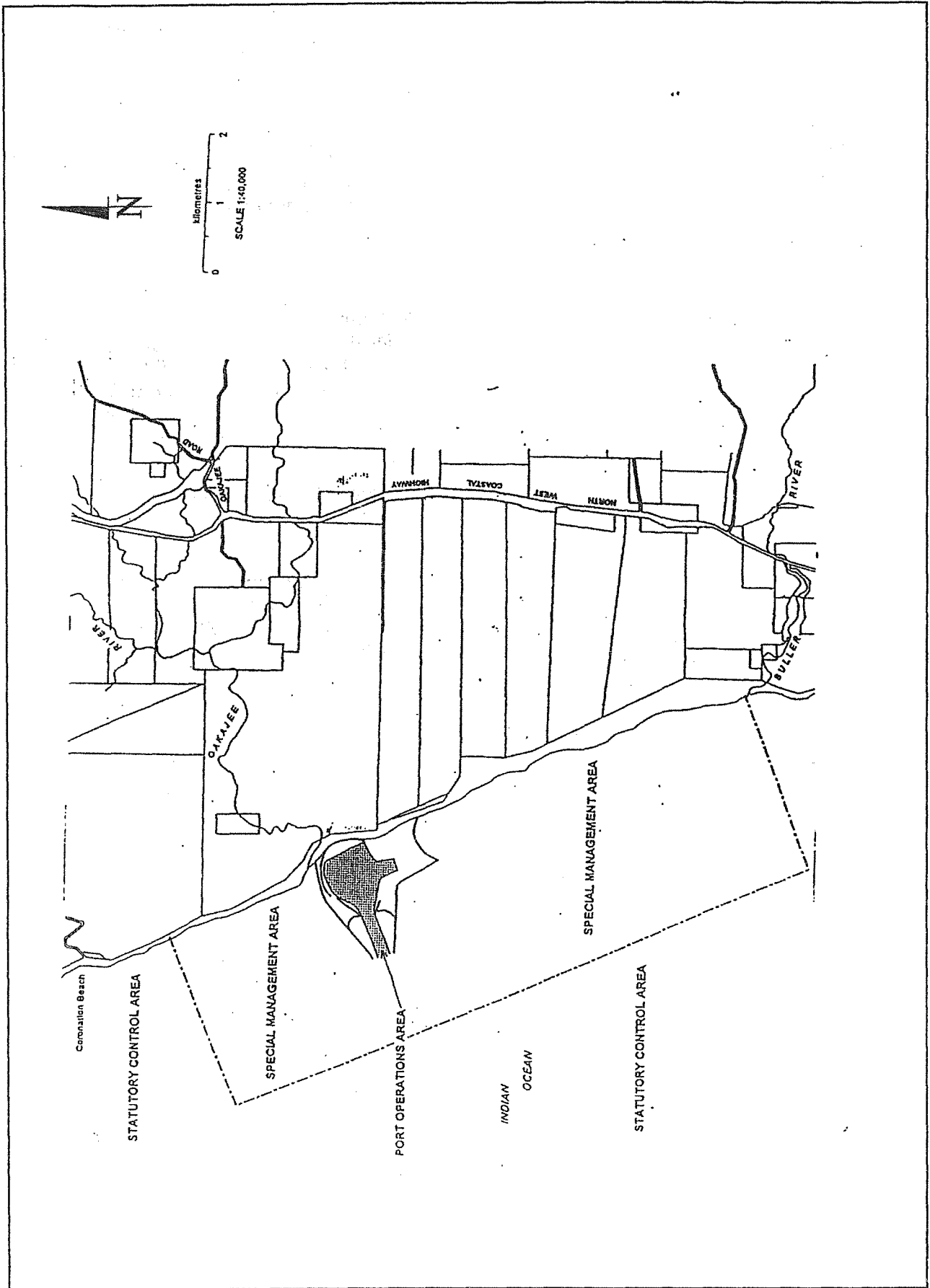


Figure 6. Oakajee Deepwater Port — Proposed Location and Management Areas.

The final Region Plan should give due regard to advice and recommendations pertaining to these proposed developments to ensure the maintenance of environmental quality.

4.3.9 Wizard Peak Industrial Estate

Wizard Peak (Figure 7) was identified in the structure plan as a possible future heavy industrial area should Oakajee not proceed. The EPA recommends the adoption of environmental quality criteria referred to in section 4.2.6 to ensure compatibility of adjacent land uses. The EPA will address this industrial estate in more detail in the formal assessment of the proposal that is currently in progress.

4.3.10 Geraldton Port

The Region Plan proposes to maximise the existing port infrastructure, retain surrounding land currently under residential leasehold for future port-related activities and determine a suitable buffer area in accordance with the State Industrial Buffer Policy (WAPC, 1997). The EPA believes the buffer area should be scientifically derived addressing risk, dust and noise issues, recognising the proximity of the city centre, proposed tourism facilities and residential development. Should the required buffer extend to encompass existing residential areas, impact mitigation or management and/or residential relocation should be instigated.

These issues can be further addressed through the assessment of a Region Scheme.

4.3.11 Kalbarri

The Region Plan proposes to upgrade the Kalbarri airstrip to a regional airstrip and initiate a major tourist development (Port Kalbarri) immediately south of the townsite incorporating tourism activities, a marina, special residential subdivision, motels and hotels. The proposals should be subject to separate referral to the EPA once plans for the development are more advanced. It is appropriate for the Region Plan to make provision for the compatibility of adjacent land uses to these developments.

5. Other Advice

5.1 Marine Issues

The Region Plan should recognise the importance of the adjacent marine environment.

The ecological integrity of the marine environment depends on the:

- *maintenance of key biological recruitment and life cycle processes*; - for example the reservation of important marine larval source areas and nursery grounds;
- *maintenance of marine benthic habitats* - these habitats can be threatened either by direct impacts or indirect impacts. The EPA is developing a position statement that will describe its strategic goal to maintaining marine benthic habitats;
- *maintenance of nearshore geomorphological processes* - these processes can be modified by breakwaters, reclamation, dredged channels; and
- *maintenance of environmental quality* - the EPA intends to develop an Environmental Protection Policy for the quality of the state's marine ecosystems to provide for the establishment of environmental quality objectives and associated criteria.

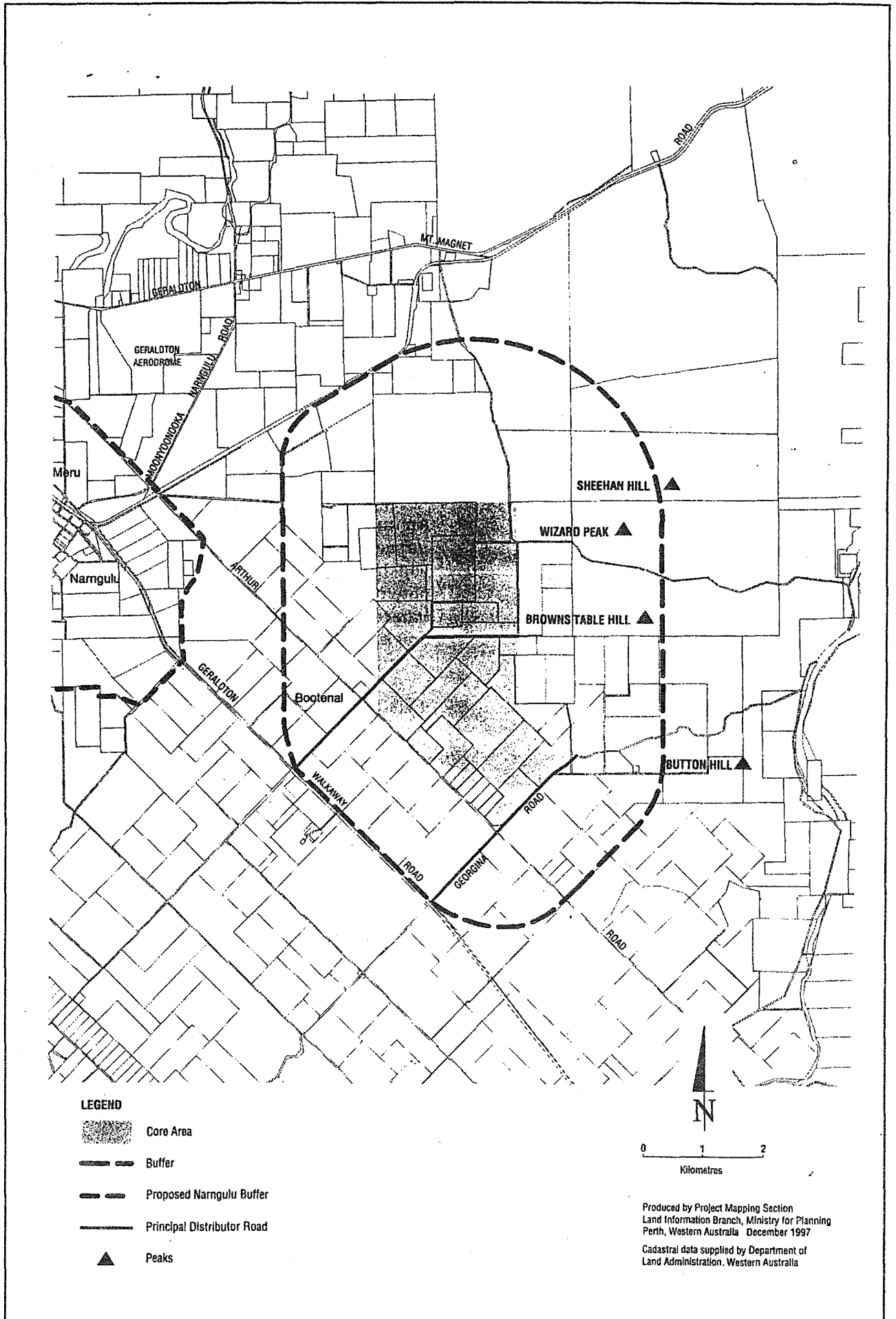


Figure 7. Proposed Wizard Peak Industrial Estate.

The Plan should identify the need for an adequate and representative system of marine conservation and habitat protection reserves.

In addition the Region Plan should acknowledge the strong relationships between waste-generating activities on land and the quality and amenity of the nearshore marine environment; further the impacts of coastal infrastructure projects (breakwaters, reclamation, dredged channels), existing or future could threaten nearshore geomorphological processes or ecological integrity and should be acknowledged in the plan.

6. Conclusions and recommendations

The EPA recognises that the draft Geraldton Region Plan released for public comment (December 1997) is a flexible statement establishing the broad principles for future development in the Geraldton region. The EPA supports the intent of the Region Plan and the recognition of a number of studies to be finalised and incorporated into the final Geraldton Region Plan.

The intent of the EPA's advice in this Bulletin is to identify environmental issues which should be addressed by the plan at this strategic level and incorporated into the final plan and to identify and provide guidance to the planning agencies on environmental issues that are best addressed at subsequent planning stages which may require assessment by the EPA if not properly addressed or under Part IV of the Environmental Protection Act.

The following is the EPA's list of recommended modifications to be made prior to finalisation of the Structure Plan and Region Plan:

- areas supporting regionally significant vegetation should be identified and appropriately designated for conservation;
- areas of open space should be identified incorporating those areas identified in the vegetation inventory;
- a minimum buffer of 50m of dryland vegetation for watercourses should be identified to assist in the conservation of the foreshore and river systems;
- a foreshore buffer area for Greenough River at Cape Burney and the northern bank of the Buller River abutting the Oakajee Industrial site should be identified;
- an area where there is a potential odour impact from the wastewater treatment plants should be appropriately identified to restrict incompatible land uses;
- the regional landscape values of the Moresby Ranges should be appropriately protected in the Region Plan;
- the adoption of environmental quality criteria consistent with EPA guidelines and requirements to ensure compatibility of land uses;
- on-site buffers should be provided as part of the extension of Webberton/Wonthella Industrial Estates.
- the Region Plan should identify the need for an adequate and representative system of marine conservation and habitat protection reserves; and
- the Region Plan should acknowledge the strong relationships between waste-generating activities on land and the quality and amenity of the nearshore marine environment; further the impacts of coastal infrastructure projects (breakwaters, reclamation, dredged channels), existing or future could threaten ecological integrity.

The EPA also wishes to provide the following advice in relation to development within the Region:

- the EPA supports the formulation of a consolidated Chapman River Management Plan;
- prior to finalising the alignment of the Brand Highway a vegetation survey should be completed and the alignment should avoid impacts on any vegetation of conservation value identified in that survey;

- further investigation into the required buffer areas surrounding Geraldton and Kalbarri airports may be required to ensure that nearby landuses are not subject to unacceptable noise levels.

Appendix 1

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