

LAKE CLIFTON / HERRON STRUCTURE PLAN



STRUCTURE PLAN REPORT

**FINAL
JANUARY 2010**

PREPARED AND APPROVED PURSUANT TO

*CITY OF MANDURAH LOCAL PLANNING FRAMEWORK
(CLAUSE 9.6 OF TOWN PLANNING SCHEME NO 3)*

AND

*SHIRE OF WAROONA PLANNING AND DEVELOPMENT POLICY NO 2
(PURSUANT TO CLAUSE 2.4 OF TOWN PLANNING SCHEME NO 7)*

**Record of the Lake Clifton Herron Structure Plan
(Structure Plan) (Plan No 04/1095/001)**

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Record of Modifications to approved Lake Clifton Herron Structure Plan

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EXECUTIVE SUMMARY

The City of Mandurah and the Shire of Waroona have adopted a Structure Plan with the aim of providing guidance on the long term planning for the Lake Clifton – Herron locality.

The local authorities, in preparing the Structure Plan appointed Koltasz Smith to undertake this task with a project team consisting of GHD and Sinclair Knight Mertz.

The Structure Plan was formulated initially through the preparation of an Issues Paper, prepared to highlight concerns from the community as well as issues pertaining to service provision and the environment. Community input was sought through consultation from the Lake Clifton-Herron residents at two workshops held in February 2004, which was used to prepare a draft Lake Clifton – Herron, which was then subsequently adopted by both Council and advertised for public comment during March and April 2005.

The preparation of the Structure Plan indicates that the Lake Clifton – Herron area is developing with a predominantly rural residential character.

Situated between Lake Clifton and the Peel - Harvey Estuary, the Study Area is subject to significant environmental issues such as:

- Ground water contamination from rural and rural residential pursuits;
- The sensitive nature of the World Heritage Listed Lake Clifton;
- The preservation of remnant vegetation; and
- The protection of the native fauna.

Coupled with the lack of services within the Study Area (reticulated water and sewer) and the absence of the area being incorporated into any future servicing plans, it is recommended that the future development of the study area be restricted to rural residential subdivision.

Recommendations have been made for the incorporation of lots/portions of lots into reserves for recreation, due to such factors as remnant vegetation being located on the majority of the site or the existence of wetlands.

The final Lake Clifton / Herron Structure Plan, as adopted by the City of Mandurah and Shire of Murray is provided as Figure 4, which need to be read in conjunction with the following recommendations.

Recommendation One

That the City of Mandurah and Shire of Waroona be adopted as a Structure Plan as a Local Planning Policy and refer the Local Planning Policy to the Western Australian Planning Commission for consideration/endorsement.

Recommendation Two

The City of Mandurah and the Shire of Waroona consider applications submitted to amend the City of Mandurah Town Planning Scheme No. 3 and the Shire of Waroona Town Planning Scheme No. 7 to rezone 'Rural' zoned land to 'Rural Residential', as identified on the Structure Plan.

Evidence shall also be provided to address the requirements of the Structure Plan, and address appropriate and sustainable lot sizes, the impact of humans, agisted animals, and domestic cats and dogs associated with any development within the catchment of Lake Clifton. Any amendment should incorporate appropriate controls in the Town Planning Scheme to mitigate against the negative impact of any new development and actively seek to improve the environmental impact on the locality through appropriate environmental controls.

Recommendation Three

The City of Mandurah and the Shire of Waroona advise developers that detailed environmental assessments are required for all lots that comprise 'Conservation Category Wetlands' and/or remnant vegetation (identified as significant remnant vegetation in the structure plan (as identified from the desktop reviews).

Recommendation Four

All future subdivision incorporating the proposed 100 metre wide wildlife corridor to provide for larger lots in the vicinity of the wildlife corridor and the exclusion of building envelopes from the wildlife corridor. Open fencing is to be provided to enable wildlife to traverse the corridor with minimum hindrance.

No clearing of vegetation is to be permitted without justification provided to the City of Mandurah for assessment. The City of Mandurah shall endeavour to undertake annual site visits to ensure illegal clearing is not occurring.

Recommendation Five

Precinct H to have public access to future recreation node on the Lake Clifton Foreshore. This access to be provided as a condition of subdivision and/or development.

Recommendation Six

The City of Mandurah and the Shire of Waroona to investigate the development of walk trails in the Lake Clifton Foreshore and support the development of walk trails through the reserves abutting Peel-Harvey Estuary.

Recommendation Seven

The City of Mandurah and the Shire of Waroona develop a brochure detailing walk trails throughout the study area and make them available at the City and Shire offices and local visitor centres.

Recommendation Eight

The City of Mandurah and the Shire of Waroona develop a joint community development strategy with the aim of improving provision of information to local residents within the study area of services and local resources. It is recommended that the City and Shire liaise with the Lake Clifton Progress Association.

Recommendation Nine

The City of Mandurah and the Shire of Waroona prepare a tourist development policy that outlines the areas of permitted tourist accommodation and the assessment criteria that require compliance, including:

- *Water efficient usage on site;*
- *Effluent disposal to be contained on site and alternative sewer treatment devices such as ATUs be utilised to avoid leeching of effluent into the ground water system;*
- *Land clearing to be avoided where possible;*
- *No tourist development on Vasse Soils;*
- *A visual impact statement to be prepared by developers to detail any possible impact on the visual amenity of the locality; and*
- *No tourist development within 150 metres of the Lake Clifton foreshore.*

Recommendation Ten

The Environmental Protection Authority Guidance Statement No 28 "Protection of the Lake Clifton Catchment" be incorporated into the Shire of Waroona Town Planning Scheme No 7.

Recommendation Eleven

The Old Lake Clifton Townsite be left undeveloped and the land incorporated into the Yalgorup National Park to ensure the protection of the stated vegetation community. This matter is to be undertaken Department of Conservation and Land Management, the Shire of Waroona and the Department of Land Information.

Recommendation Twelve

The City of Mandurah and Shire of Waroona where appropriate incorporate the given public open space portions of Lots 305, 479, 437, 1496 and 57 into the appropriate reserve system as per the Peel Region Scheme, Town Planning Scheme or as recommended in the 2004–2009 Management Plan for Island Point to Kooljerrenup.

Recommendation Thirteen

The City of Mandurah and Shire of Waroona encourage landowners in parkland areas to undertake planting of Tuart trees outside of the area of the building envelope to maintain the local tuart population and visual aesthetics of the study area.

Recommendation Fourteen

Developers undertake an indigenous cultural heritage study before lodgement of subdivision or rezoning to determine whether there are any significant Aboriginal Heritage issues as the per the Aboriginal Heritage Act.

Recommendation Fifteen

The City of Mandurah and the Shire of Waroona lobby Transwa to improve the bus service, in terms of co-ordinating trips, to cater for the residents of Lake Clifton and Herron.

Recommendation Sixteen

The City of Mandurah and the Shire of Waroona lobby CALM to implement the recreational pursuit proposals contained in the Yalgorup National Park Management Plan 1995-2005.

Recommendation Seventeen

The City of Mandurah and the Shire of Waroona promote the establishment of a "Friends Of" Group in the Lake Clifton-Herron area.



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PART 1 INTRODUCTION

The City of Mandurah and the Shire of Waroona, via the appointment of Koltasz Smith (in conjunction with Sinclair Knight Merz and GHD), has prepared and adopted the Lake Clifton-Herron Structure Plan (the '**Structure Plan**') to provide guidance on the long term planning for the Lake Clifton and Herron localities to achieve the following objectives:

1. Create a vision for the future development of the Lake Clifton-Herron area that reflects community needs and aspirations;
2. Address planning, environmental and servicing constraints in an integrated manner;
3. Ensure that recreation, community and commercial facilities are appropriately located to ensure that the community needs and aspirations are met in a sustainable manner; and
4. Provide for a robust and integrated local road network and subdivision pattern.

The Structure Plan has been adopted as a Local Planning Policy in accordance with the relevant provisions of the City of Mandurah and Shire of Waroona's Town Planning Schemes to provide an overall framework/position statement for the development of the Lake Clifton and Herron localities.

As part of the adoption process, the Structure Plan has been the subject of extensive community consultation and consideration by the City of Mandurah and the Shire of Waroona – details of which are incorporated into this report.



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PART 2 BACKGROUND AND CONTEXT ANALYSIS

2.1 LOCATION

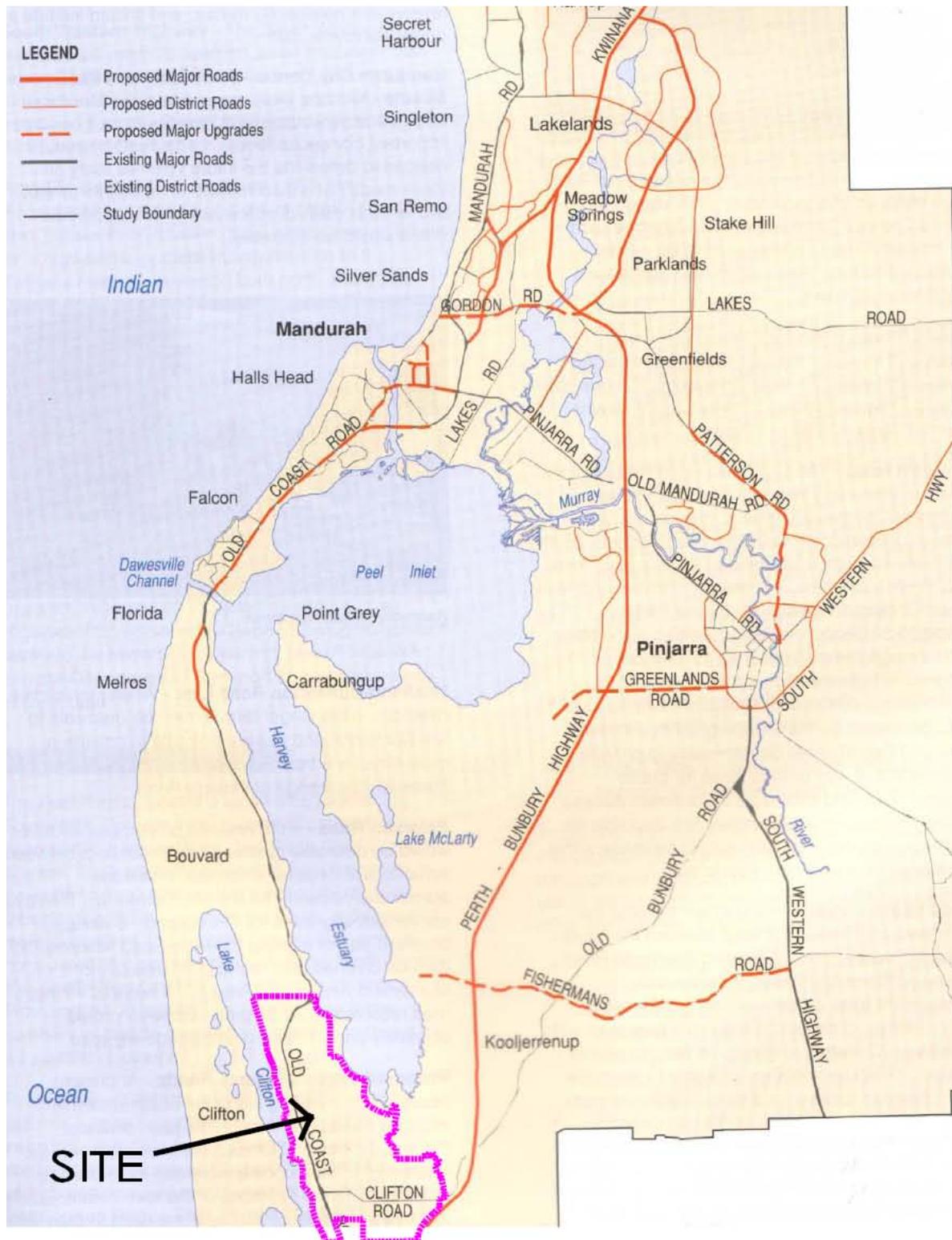
The Study Area is approximately 28 kilometres from the Mandurah City Centre and 26 kilometres from the Waroona Townsite.

Florida Beach is approximately 15 kilometres from the Study Area, Dawesville 12 kilometres and Preston Beach 25 kilometres away (Refer *Figure 1*).

These locations cater for the majority of consumer needs for residents of the study area, with Preston Beach offering the least amount of services.

It is important to note that Preston Beach and White Hills Beach are the closest beach access points for non-four wheel drive access.

Figure 1 Location Plan



2.2 STUDY AREA

The Lake Clifton-Herron Structure Plan Study Area (the **'Study Area'**) is bound by Lake Clifton to the west, Yalgorup National Park to the south, Harvey Estuary to the east and Mount John Road to the north. (Refer **Figure 2**)

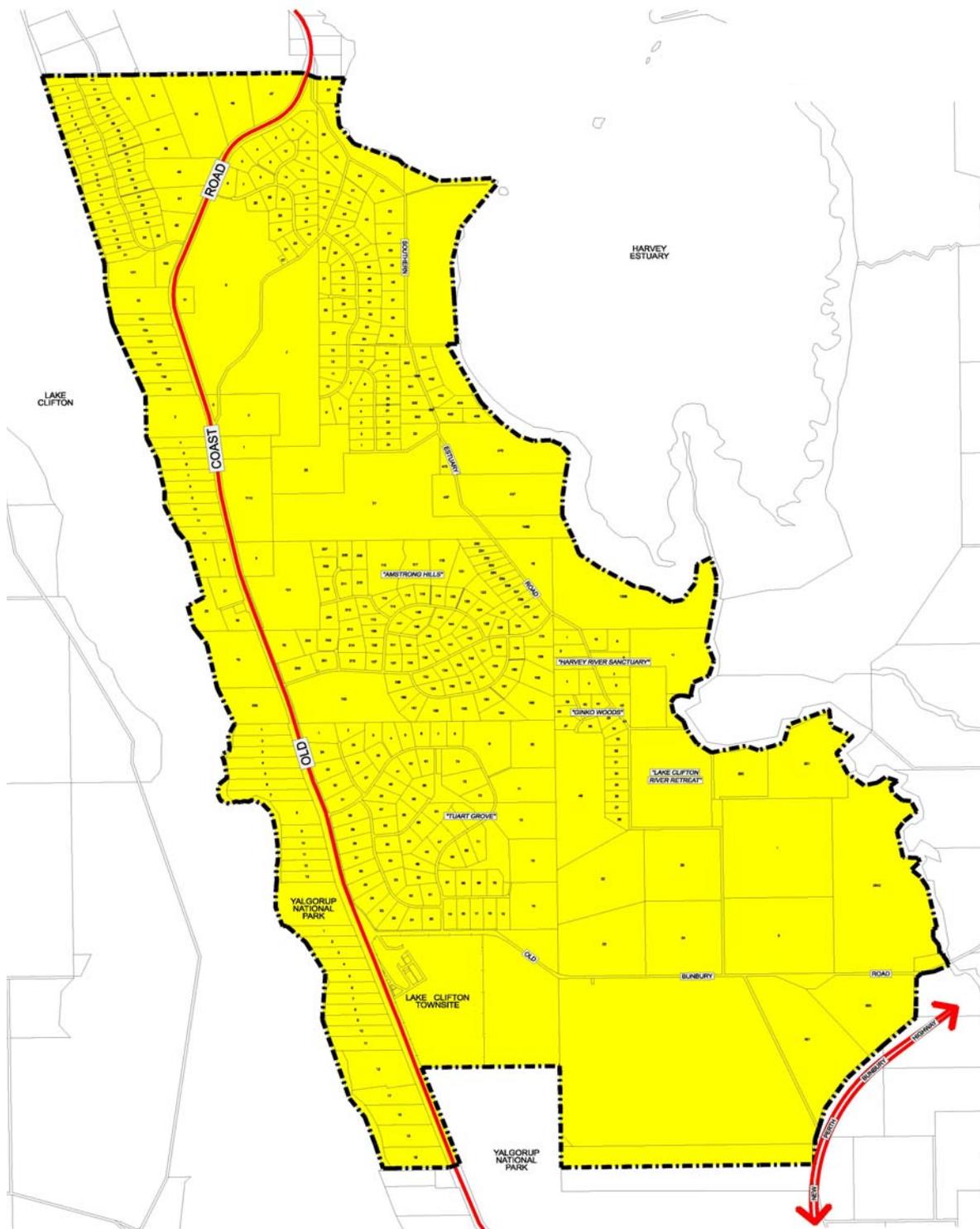
The study area is approximately 3528 hectares in size.

There are currently a variety of land uses currently occurring within the Study Area.

Most of the land was traditionally for agricultural uses, however, popularity of the "lifestyle" living has seen rural-residential become the most common land use within the Study Area.

Other land uses include National Park, commercial facilities (caravan park and tavern), community facilities (community hall) and recreation uses.

Figure 2 Study Area



2.3 STATUTORY PLANNING FRAMEWORK

The Study Area is currently governed by a number of statutory documents and policies, as follows

2.3.1 City of Mandurah Town Planning Scheme 3

Gazetted on 21 July 1999, Town Planning Scheme 3 (Scheme 3) stipulates development controls over the Study Area located within the City of Mandurah's boundaries.

The Study Area's Zoning varies from 'Rural', 'Rural Residential', 'Regional Open Space' reservation, 'Local Recreation' reservation and 'Primary Regional Road' reservation.

Within the Study Area, Scheme 3 acknowledges that any development shall comply with the requirements of the WAPC's Coastal and Lakelands Planning Strategy and the Environmental Protection Authority's Bulletin 864 – Final Criteria for Environmental Acceptability for Land Use Proposals within the Catchment of Lake Clifton.

2.3.2 Shire of Waroona Town Planning Scheme 7

As with the City of Mandurah's Scheme 3, the Shire of Waroona Town Planning Scheme 7 (Scheme 7) imposes development controls on landholdings within the Shire's boundaries.

Gazetted on 17 December 1996, Scheme 7 indicates zones of 'Rural', 'Rural-Residential' (Rural 6), 'Primary Distributor Road' reservation and 'National Park/Proposed National Park'.

Scheme 7 acknowledges the then Statement of Planning Policy No. 2: Peel-Harvey Coastal Plain Catchment, gazetted 21 February 1992 (now SPP 2.1) and that Council is to be guided by relevant Environmental Protection Policies applicable to its municipality.

2.3.3 Peel Region Scheme

The Peel Region Scheme (Region Scheme) was initiated to provide for the reservation and protection of land for regional transport, conservation, recreation and public uses. The Region Scheme also indicates the zoning of land and enables for compensation of landowners where land has been reserved for public purpose.

It is important to note that the Region Scheme prevails over local government schemes if inconsistencies occur.

The majority of the land within the Study Area is zoned 'Rural' with a significant proportion being reserved as 'National Park' within the PRS, with specific reference to carefully planned rural living developments.

A 'Primary Regional Road' reservation is indicated for Old Coast Road and the Perth – Bunbury Highway.

2.3.4 Inner Peel Region Structure Plan

This plan was endorsed in final form in December 1997 and was prepared by the then Ministry for Planning to provide the basis for the preparation of the Peel Region Scheme. Its purpose was to describe the structure plan for the Inner Peel Region.

Specifically relevant to the Study Area is the classification of the majority of the Study Area for 'Greenbelt Rural Living', identifying the importance of 'Rural Residential' land use in protection the character of the region. The Inner Peel Region Structure Plan identified the need for the 'Greenbelt Rural Living' to terminate the southerly urban expansion.

2.3.5 Coastal and Lakelands Planning Strategy

The Coastal and Lakelands Planning Strategy is a strategy position report that provides policy guidelines as well as a detailed resource information base for the provision of further planning studies and legislation for the landholdings between Dawesville and Binningup.

Specific to the Study Area, guidance is given to the issues such as minimum and average lot size, environmental considerations, permitted land uses and so forth.

Within the Study Area the Strategy indicates within its structure plan the following categories for future land use:

- Rural Residential (majority of land holdings);
- Possible Future Rural Residential;
- Rural 3 – Highway Environs; and
- Other Sensitive Areas Subject to Closer Investigation.

2.3.6 State Planning Policy 2.1 - Peel Harvey Coastal Plain Catchment

SPP Policy 2.1 – The Peel Harvey Coastal Plain Catchment was gazetted 21 February 1992 and is a WAPC controlled document.

The policy was primarily created to control the algal blooms that became prevalent in the Estuary before the Dawesville Channel was constructed. The policy recognised that these blooms were created by a build up of phosphorus that was draining into the Estuarine system due to clearing and intensive horticultural uses being unchecked. The objectives of the policy are as follows:

- The improvement of social, economic, ecological, aesthetic, and recreational

potential of the Peel-Harvey Coastal Plain Catchment;

- To ensure that changes to land use within the Catchment to the Peel-Harvey Estuarine system are controlled so as to avoid and minimise environmental damage;
- To balance environmental protection with the economic viability of the primary sector;
- To increase high water-using vegetation cover within the Catchment;
- To reflect the environmental objectives outlined in the Draft Environmental Protection Policy (Peel Harvey Estuarine System) 1992; and
- To prevent land uses likely to result in excessive nutrient export into the drainage system.

2.3.7 State Planning Policy 2.5 Agriculture and Rural Land Use Planning

The Statement of Planning Policy 2.5 – Agriculture and Rural Land Use Planning was gazetted in March 2002.

The role of the policy is to preserve viable agricultural land from urban expansion and overdevelopment of Rural Residential land use.

Clause 5.3.2 (i) indicates that *“in areas zoned “Rural-Residential” the following town planning scheme provisions should apply:*

- the lot size should range from 1ha to 4ha depending on local conditions; and*
- mandatory provision of a reticulated potable water supply to an appropriate standard as determined by the licence holder.”*

Discussions with the Department of Planning Peel Region Staff has indicated that the level of assessment of the study area within documents such as the Peel Region Scheme, Inner Peel Region Structure Plan, SPP2.1, Coastal and Lakelands Planning Strategy have indicated and encouraged lot sizes of an average of 3 hectares (with 5 hectare average in certain areas).

As reticulated water will not be provided to the study area in the foreseeable future, it is not necessarily justified to apply the 4 hectare minimum development lot size for areas without reticulated water within the Study Area.

The use of “should” in relation to town planning scheme provisions allows some degree of flexibility in assessment of lot areas, while an appropriate standard of water supply is determined by the licence holder, in this case the Water Corporation, who have indicated that there is no intention of supplying reticulated water to the region. The Water Corporation has not objected to previous rural-residential subdivisions

in the Study Area on the basis that reticulated water is not available.

The Study Area is not indicated as a Strategic Agricultural Resource site.

2.3.8 Island Point to Kooljerrenup Management Plan 2004

This Management Plan impacts five private land holdings within the study area. Adopted in 2004 by the City of Mandurah, the plan outlines management measures to protect the western foreshore of the Peel-Harvey Estuary south of Island Point to the Kooljerrenup Nature Reserve.

2.3.9 Economic Development and Recreation Management Plan for the Peel Waterways

This management plan was prepared for the Water and Rivers Commission in August 2002 and was funded by the Commonwealth Government. The plan impacts lots to the east of Southern Estuary Road within the study area.

The plan proposes to demarcate areas of conservation, recreation and employment opportunities within the estuary. It provides strategic direction to future regional tourism, recreation, conservation and waterway needs, both in the public and private realm.

2.3.10 City of Mandurah Local Commercial Strategy

The Local Commercial Strategy was prepared to guide Council’s update of the Retail Strategy and provide for a framework of commercial development within a planned hierarchy of centres.

While no specific centre is planned for the Study Area, the Local Commercial Strategy does outline various criteria for creating future commercial centres. These would need to be considered when incorporating commercial facilities into the Study Area.

2.3.11 City of Mandurah Community Infrastructure Needs Study Review

The City of Mandurah Community Infrastructure Needs Study Review was undertaken to identify major failings in the provision of community facilities and services within the City of Mandurah. Of particular relevance to the Study Area is the indication of the requirements for the creation of a local community centre.

2.3.12 Shire of Waroona Community Strategic Plan

The Community Strategic Plan is now defunct and is being replaced by a plan that identifies the community needs for the next 20 years. This new strategic plan is currently being prepared.

2.3.13 Planning For Bushfire Protection

This document was prepared by the Department for Planning and Infrastructure and the Fire and Emergency Services Authority of Western Australia and endorsed in December 2001. It provides performance criteria and acceptable development solutions that aim to minimise the impact of fire of communities. The document focuses on new subdivisions and related developments in rural and urban rural communities and townsites with particular reference to those that are exposed to the risks of bush fires.

The Bush Fire Protection document sets out a three level method for assessing bush fire hazard. These are as follows:

1. "Broad Brush" assessment – undertaken during preparation of local planning strategies or new town planning schemes;
2. More detailed, precinct-level assessment – undertaken to determine whether individual rezoning, subdivision or development proposal is subject to bush fire hazard, and to determine the hazard extent; and
3. Detailed site specific assessment to be undertaken at the application for planning approval and building licence application stage.

Consideration of all of these documents and policies has been given in the formulation of this report.

Each of documents and policies have been given due regard in the formulation of the Structure Plan.

2.4 ENGINEERING CONSIDERATIONS

GHD Bunbury was engaged to investigate engineering considerations in the formulation of the Structure Plan for the Study Area. The following outlines the status and issues of the various servicing requirements.

2.4.1 Drainage

Uncontrolled discharge of stormwater into inland watercourses is not environmentally acceptable and land uses requiring a high dosage of fertilisers should not be located close to the wetlands due to nutrient leaching. The implementation of Water Sensitive Urban design techniques is recommended to restrict flow of stormwater discharge into Lake Clifton, Harvey Estuary and Harvey River.

Urban expansion in areas of flat topography and high water tables makes drainage an important engineering and environmental consideration, particularly close to wetlands where urban development may affect water levels in wetlands and will require artificial replacement. Substantial fill may be required to mitigate flooding due to high groundwater levels.

Two thirds of the City of Mandurah portion and most of the Shire of Waroona portion of the study area is located within the boundary of the Peel-Harvey catchment and as such, is subject to the provisions of the *Statement of Planning Policy No. 2 The Peel-Harvey Coastal Plain Catchment*. The implementation of Water Sensitive Urban Design techniques is recommended, as is revegetation of cleared sites with high water-using vegetation. It should be noted that the principles of the above policy would also be appropriate for the management of Lake Clifton and its environs.

Suggested Water Sensitive Urban Design techniques for the study area include infiltration of the stormwater runoff as high in the catchment as possible using swale drains along roads and residents looking after their own stormwater runoff within their property boundaries. Closer to the watercourses stormwater runoff should be treated by structures such as gross pollutant traps and infiltration basins to allow maximum opportunity for nutrients to be redistributed using natural means.

2.4.2 Water Supply

Water Corporation planning indicates that the northern area (north of Armstrong Hills Road) will be serviced from a future 2700 kL (TWL ~ 72.5m AHD) ground tank, which is planned to be located off Southern Estuary Road. This tank will be supplied by a 300-diameter water main from the existing main in Perth - Bunbury Highway south of Park Ridge, a distance of approximately 7 km.

The area south of Armstrong Hills Road is planned to be serviced from a future 2800 kL

ground tank and a 160 kL elevated tank (TWL ~ 81.35m AHD) located east of Tuart Grove Ave. This tank will be supplied by a 250-diameter water main from the future Southern Estuary Road tank, a distance of approximately 5 km.

As these tanks and supply mains are identified as permanent head works in current Scheme Planning, the Corporation will ultimately be responsible for the cost of providing these assets. Any developer/s in this area may be required to pre-fund the provision of these works for a period to be negotiated with the Corporation.

The timeline for the above works will be scheduled as demand requires it and is not currently on the Water Corporation's capital works program. Location of the infrastructure will typically be in road reserves and public land.

Until these works are complete, the potable water supply will need to come from rainfall storage tanks. This appears to be the current method of potable water supply. Size of water tanks is to be 92,000 litres as per the requirements of the City of Mandurah Town Planning Scheme No. 3 and the Shire of Waroona Town Planning Scheme No. 7.

2.4.3 Reticulated Sewer

As this area is outside the area to be serviced by the Water Corporation in its overall planning, and lots proposed are rural-residential style lots, the Corporation would not service these lots with a reticulated supply. On-site effluent disposal to the satisfaction of the Health Department, the Local Authorities and the State Planning Policy No. 2.1. The Peel-Harvey Coastal Plain Catchment is required in this area. The septic systems required within the study area require amended soils for soakage trenches and leach drains. However, the soil type in the vicinity of the mouth of the Harvey River is not conducive to traditional septic tank systems. Thus alternative treatment units will be required if these areas are to be developed.

2.4.4 Telecommunications

Telstra has indicated that they have adequate existing infrastructure to provide services to most residents in the rural-residential area as it currently stands.

However in the southern part of Lake Clifton current communications infrastructure will need upgrading as the load increases. Currently the majority of lots already have services provided to them via direct buried cables. A lot of the cables providing services are located inside private properties, in some cases, when the blocks are redeveloped these cables have to be protected and in some instances relocation of the plant could be required. The costs for this relocation will be at the developer's expense.

Telstra is locating a low impact mobile phone tower just south of the study area. The study area has some mobile phone coverage at present.

2.4.5 Power

According to Western Power there is sufficient infrastructure to be able to provide service to the proposed structure plan area, especially if the development is primarily residential development with an average of 2 ha lots. Western Power advised that should any major commercial/industrial development be required then there may be issues with loading of the system and may require upgrading of the high voltage supply to the study area. Another corner store may put enough load on the current system to require another high voltage line and transformer to be installed.

2.4.6 Gas

Alinta Gas advised that provision of reticulated gas services to lots greater than 0.25 ha in size is generally not viable. It is recommended that bottled gas would be the gas supply method in this circumstance.

Bulk reticulated gas provision would require the support of the vast majority of the community to install as it is an expensive exercise. Alinta gas has advised that this is likely to not be viable, however if the community initiated investigations then it would determine whether a supply may be provided. This exercise would be developer funded.

2.5 ENVIRONMENT

The environmental considerations for the preparation of the Structure Plan were investigated by SKM. A copy of the SKM's Lake Clifton-Herron Draft Environmental Report was provided with the draft Structure Plan.

This study has been determined that the Study Area holds a number of significant environmental characteristics which can be maintained through appropriate guidelines set out in the Town Planning Schemes of the two local governments.

These environmental characteristics include:

- The RAMSAR listed Lake Clifton and Harvey Estuary;
- Undeveloped lots of land holding regionally significant vegetation and wetlands;
- Lake Clifton thrombolite community is a Threatened Ecological Community (TEC) and within the Lake Clifton catchment, consideration should be given to the thrombolite community with any future subdivision or development proposal
- Large areas of good quality woodland, held within currently developed and undeveloped land, with intact understorey which would undoubtedly provide excellent habitat for native fauna; and
- Large areas of parkland tuarts.

With respects to preserving the environment of Lake Clifton, the Environmental Protection Authority (EPA) has set out a series of management criteria for rural residential developments within the catchment of Lake Clifton as in Guidance Statement No 28:

1. *For any subdivision within the catchment, the average lot size should not be less than 5ha. In achieving the average lot size, no lot should have an area of less than 2 ha. Further subdivision of the same land, or part thereof, should not be permitted where this would result in an average lot size less than the 5 ha as originally determined. Innovative design measures to reduce potential impacts, for example clustering, should be used where lot sizes are allowed below 5 ha while maintaining the overall 5 ha average;*
2. *Domestic water allocation should be limited to 1500 kL per lot per year (ie bore);*
3. *Conventional septic systems should not be permitted, instead alternative effluent systems with high nutrient retaining capacities should be used; (ie where sites are not connected to sewage)*
4. *Stock should only be allowed in the area of the lot between the building envelopes and*

the edge of the lot as an occasional fire control measure on those lots already parkland cleared (ie tree canopy intact but understorey largely cleared);

5. *Stocking rates (as advised by Agriculture Western Australia) should be determined based on area of cleared land, and not total lot size;*
6. *Stocking rates should be set as those for dry pasture, with no importation of feed allowed;*
7. *For lots adjacent to the lake, either the number of lots abutting the lake should be minimised, or appropriate management measures should be applied to reduce uncontrolled human access to the lake, the vegetated buffer and the thrombolites (eg.fencing, directed access to a particular location(s), in consultation with CALM);*
8. *Building envelopes should not be located on the Vasse landform type, be set back at least 150m from the high water mark of the lake (as defined by the edge of the salt water dependent wetland vegetation species), and be set back at least 20m between the edge of the Vasse landform and/or freshwater wetland.*
9. *Intensive land uses requiring high water and fertiliser usage should not be permitted;*
10. *For lots covered with native vegetation, clearing of vegetation should be restricted to the provision of services and building envelopes;*
11. *For lots parkland cleared, wherever possible, the loss of trees should be avoided through careful design of the lot (position of building envelopes, track and fire breaks etc); and*
12. *Unless otherwise determined by the Western Australian Planning Commission, and in accordance with the Coastal and Lakelands Planning Strategy, subdivision should be supported by Town Planning Scheme provisions, where appropriate, to ensure that these criteria can be met.*

These criteria in short deal with issues such as minimum lot sizes, water extraction, sewage disposal, stocking rates, building envelopes and clearing native vegetation.

The EPA has determined that changes to the catchment of Lake Clifton with respect to these criteria could impact on the quality of the environment of the Lake. Any changes to this will result in "the need for greater controls on new land uses " further if existing land uses are causing significant environmental problems further Environmental Protection Policy may be formulated.

It is recommended that The Environmental Protection Authority Guidance Statement No 28 "Protection of the Lake Clifton Catchment" be incorporated and enforced through the associated Town Planning Schemes of both Shires over the study area as a whole.

The Environmental Study also provided the following recommendations:

- There are four parcels of land (Wellington Location 3167 Old Bunbury Road, Wellington Location 2942 Southern Estuary Road and lots 1 and 3 Southern Estuary Road) which require further environmental assessment by any future developer as there is the possibility of holding significant vegetation.
- It is recommended that the Wellington Location 3167 Old Bunbury Road, Lots 1 and 3 and Wellington Location 2942 Southern Estuary Road are to have further indigenous cultural heritage assessment undertaken as per Recommendation 16.
- The old Lake Clifton townsite holds a vegetation community (shrublands of *Melaleuca acerosa* and *M. huegelii*) that has a conservation status of 'susceptible' and as such is recognised as a system that is easily modified or destroyed by human activities.
- It is recommended that the Old Lake Clifton Townsite is left undeveloped and the land incorporated into the Yalgorup National Park to ensure the preservation of the stated vegetation community.
- The 2004 – 2009 Management Plan for Island Point to Kooljerrenup recommends that the public open space portions of Lots 305, 479, 437 and 1496 be resumed and incorporated into Reserve 23756 and that the public open space portion of Murray Location 57 be incorporated into Reserve 2990.
- It is recommended that where appropriate the given public open space portions of Lots 305, 479, 437, 1496 and 57 should be incorporated into the appropriate reserve system as per the Peel Region Scheme, Town Planning Scheme or as recommended in 2004 – 2009 Management Plan for Island Point to Kooljerrenup.
- A number of wetlands have been identified on Lots 479, Lot 436 Location 2942, Lots 1, and 3 and are registered by the Department of Environment as Conservation Category Wetlands.
- These landholdings will require further environmental assessment before any rezoning, subdivision or development will be supported by the City of Mandurah and Shire of Waroona.
- As identified in the study there is a considerable area of Parkland tuarts existing in the study area and within the catchment of Lake Clifton. These mature trees are of regional importance through visual aesthetics, providing habitat for a variety of local fauna and effects on local hydrology. It is also recognised that there is also lack of recruitment of new trees within these areas.
- It is recommended that the City of Mandurah and Shire of Waroona encourage land owners in parkland areas to undertake planting of Tuart trees outside of the area of the building envelope to maintain the local tuart population and visual aesthetics of the area.
- From a search of the DIA aboriginal heritage database, a number of Aboriginal Heritage sites have been identified in the study area and are represented in the Opportunities and Constraints Plan (Appendix B). A detailed ethnological survey is required to clarify the exact location and status of these sites.
- It is recommended that further field investigations by an archaeologist are undertaken to determine if proposed development plans will impact any of these sites.
- To ensure the requirement of the Aboriginal Heritage Act are met, it is recommended that an aboriginal heritage site survey should be undertaken prior to subdivision and development of properties in the study area and be funded by the developer.
- Due regard is given to the Tuart Conservation and Management Strategy and Yalgorup National Park Management Plan in consideration of future development proposals.

2.6 COMMUNITY

Prior to preparing the Structure Plan, a series of community workshops and background research was undertaken. This was undertaken by by Domenic Marzano on behalf of Koltasz - Smith in February and March 2004 to:

Involve a broad spectrum of Lake Clifton - Herron community representatives, to describe community values and visions for the future.

The objectives of the study were to:

- Identify recreational, community and commercial facilities needs for the future; and
- Prioritise recreational, community and commercial facilities needs for the future.

The full Consultation Report was included with the draft Structure Plan under a separate cover.

This community consultation component of the Structure Plan preparation consisted of two community workshops and a mail survey.

- Community Workshops

The community workshops were conducted in order to develop a community vision for stakeholders within the area.

- Mail Survey

The Mail Survey consisted of a number of sections as follows;

- Personal details
- Likes and Dislikes About the Area
- Future Planning and Aspirations for the Area
- Recreational Facilities and Open Space
- Commercial Facilities and Community Facilities.

Relevant background information was included and participants were also given the opportunity to provide general written.

- Response Rate

- Advertisements were placed in local newspapers and invitations were sent to residents within the Study Area. The invitations were part of a survey form, which the resident was invited to complete if they could not attend a workshop.
- One hundred and fifty one participants registered at the two workshops, while sixty two people participated in the mail survey.

- The response rate is broken down by gender, age, tenure, occupancy, workshop or survey participant and private resident of organisational representative.
- The results suggest that females are under represented (41.1%) while males are over represented (58.4%), (0.5% missing data). An over representation of the older segment of the target group is also evident with only 9.5% of respondents being under 35 years old.

- Limitations

Generally, the consultation gives a fair representation of the target population with the exception of people under the age of 25. During the workshop process participants worked together to record their priorities for the area on butcher's paper, which was later displayed to the whole group. Individuals were then asked to vote for their top 3 individual priorities by placing a sticker on the recorded statement (each participant was supplied with 3 stickers each).

Results for the workshops and the survey are reported as a whole (the effect the extra votes have on the whole process is negligible).

- Workshop Findings

The summary findings of the two community workshops are indicated below.

- Positive Attributes

The highest priority for participants is the natural environment of the Study Area, with the second highest priority for participants being lifestyle and related factors within the Study Area. The third highest priority for participants is the size of the blocks and the open space, while the fourth highest priority for participants is the estuary lake and beach attractions.

- Negative Attributes

The findings from the workshops indicate that the major concern for residents is the lack of services and facilities.

These include water, shopping and schooling services. A lack of beach access was also strongly indicated with some suggestions for a causeway to cross Lake Clifton.

This request was acknowledged in the draft Structure Plan but was recognised that this would require significant environmental and statutory justification.

The mosquitos were also identified as having a negative impact on residential

amenity and there were concerns over traffic issues such as access onto Perth - Bunbury Highway, road surface quality and a lack of street lighting at intersections.

- Community Vision

The following community vision can be formulated from the responses received public consultation:

“Lake Clifton-Herron is valued for its natural surroundings and rural lifestyle and its residents appreciate the estuarine surrounds. The community foresees the need in providing community and commercial facilities that service the community, but do not detract from the amenity of this unique environment.”

- Summary of Community Workshops

From the Lake Clifton – Herron Community Consultation Report it can be surmised that those attending community consultation place a high level of importance on the following:

- Maintaining and preserve the natural surroundings;
- Maintaining the current lifestyle;
- Ensuring that large lot development predominates;
- Protect the estuary, lake and beach attractions;
- Improve the services and facilities within the study area;
- Improve beach access;
- Improve traffic safety;
- Control environmental damage;
- Provide a general store; and
- Provide recreational facilities.

2.7 DEMOGRAPHIC PROFILE

A demographic profile was compiled for the Study Area, utilising a number of data sources. Firstly, results from the community survey and consultation workshops have given an indication of the demographic breakdown of the study area. 70.9 percent of the results received from the consultation process were from workshop participants, while 29.1 percent were from survey participants.

As a cross reference, Australian Bureau of Statistics (ABS) 2001 Census data from the Waroona Collector District was used. Whilst this does not provide an accurate description of the Study Area, it enables an understanding of a general cross section of the community.

As a result, the current population of the Study Area cannot be exactly determined by the Census date, and as such a population of 2.68 persons per dwelling or lot has been assumed. This figure has been based on the population per dwelling information supplied under the 2001 ABS Census Data for Western Australia.

Upon a review of the mailing details of land owners within the Study Area, of the 552 mailing addresses, 247 of those are not located within the Study Area and 17 of these addresses are to government agencies.

This indicates that 41.7 percent of land owners in the Study Area are not permanent residents. This can be interpreted to mean that just over half the population within the study area are utilising their land holdings on a non-permanent basis or as a 'retreat', perhaps for the weekend or for holiday purposes. As such, the provision of community and commercial facilities needs to take into consideration that over half the catchment will not be there seven days a week.

Survey results indicate that 30.4 percent own in the Study Area but do not reside within the area. In terms of the utilisation of this data, the figure of 41.7 percent for land owners who do not reside within the Study Area will be utilised as this will give a lowest population scenario for the study area. Alternatively, a one hundred percent occupancy rate will also be utilised to indicate a highest population scenario for the study area.

2.7.1 Survey Results

The following are results documented in the Lake Clifton – Herron Community Consultation Report. These figures present a breakdown of the study area community.

The information gathered indicates that:

- a greater number of males live within the Study Area;

- a majority of residents are between 45 and 64;
- the greater majority of survey participants own their own properties while 30.4% do not reside within the Study Area; and
- Over half of the properties are two person households.

As such, it may be surmised that the majority of residents are living within the Study Area for lifestyle reasons. The majority of the populace have no dependent children residing with them and a significant proportion of residences are for weekend or holiday use that is rural retreats. This is important to note in the provision of future recreation, community and commercial facilities.

2.7.2 ABS Data

This data is for the Waroona Collector District and while not being specific to the Study Area, it provides a general 'snapshot' of the demographic and socio-economic characteristics that may exist within the Study Area, and can be summarised as follows:

- that there are a greater number of males than females within the collector district, however the difference is not significantly great;
- 34.9 percent of residents within the collector district are 19 years of age or under. This is not represented in the survey data and indicates that consideration may be given to the provision of youth facilities.
- 26.2 percent of residents within the Study Area are between the ages of 30 and 44 years of age, being most likely parents. 32.3 percent of the population within the collector district are 45 years of age or older. This is likely to indicate that many of these residents are either retirees or living within the area for lifestyle reasons.
- A majority of dwellings are fully owned. There are a greater number of rented properties within the collector district (11.6%) compared to the survey results (0.6%) which can be attributed to the rental opportunities around, but not including, the Waroona townsite.
- The majority of households within the collector district are without children (40.6%), while 26.9% of families within the collector district have children under 15. This confirms the requirement for consideration of youth facilities within the Study Area, while recognising that a significant proportion of residents are without children. Therefore, youth facilities should be small scale.
- A wide range of occupations of residents within the collector district, with one fifth of residents being classified as 'Managers and

Administrators'. The second most significant occupation was the 'Tradespersons and Related Workers category'; and

- There is a spread of incomes over the collector district. Those earning a nil income are likely to be young people. A significant proportion earn between \$200 - \$299 per week (14.2%), however there is a significant spread between the \$120 per week and \$1,499 per week categories. This indicates that there are a variety of socio economic categories, varying between trade workers, professionals and retirees.

2.7.3 Projected Population

From the above data and from a future lot yield based on an average of five hectare lots a future population projection can be calculated. For this study two population figures have been provided, a low projection and a high projection.

The low projection is based on a 41.7 percent vacancy rate of dwellings within the study area. If this assumption is based on the number of lots currently existing within the study area (432 lots) then the current population is 490 persons. As such a projected population of 889 has been calculated based upon 790 lots existing within the study area.

The high projection is based upon a 100 percent occupancy rate of dwellings within the study area. As such the current population would be 1139 persons. With a potential for 154 lots the total population based upon 2.68 persons per household would be 2121 persons.

2.8 DRAFT STRUCTURE PLAN

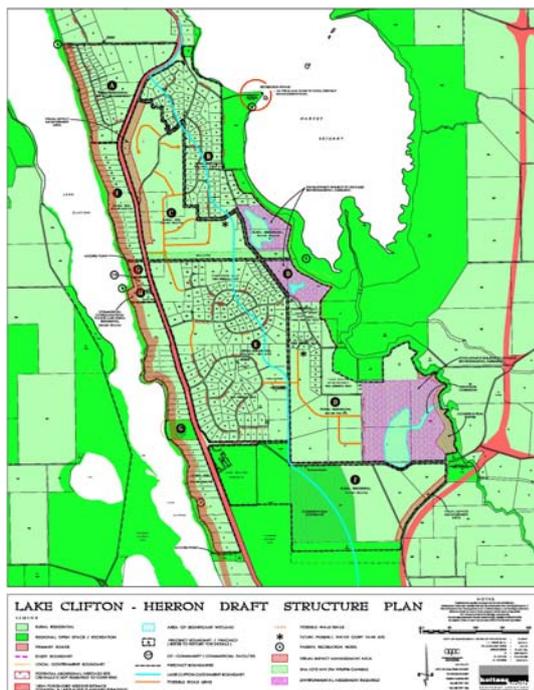
The draft Structure Plan (Refer **Figure 3**) was advertised for public comment by the City of Mandurah and Shire of Waroona during March and April 2005.

As a result of the advertising of the draft Structure Plan, 53 submissions were received from the public, government departments and servicing authorities.

The draft Structure Plan incorporated a number of key planning and community strategies to guide the development of the Study Area, being:

1. That the City of Mandurah and the Shire of Waroona endorse the Draft Structure Plan and refer to the Western Australian Planning Commission for endorsement.
2. The City of Mandurah and the Shire of Waroona consider applications submitted to amend the City of Mandurah Town Planning Scheme No. 3 and the Shire of Waroona Town Planning Scheme No. 7 to rezone 'Rural' zoned land to 'Rural Residential', as identified on the Structure Plan.
3. The City of Mandurah and the Shire of Waroona advise that future developments will be required to undertake detailed environmental assessment of land holdings identified for reservation to clearly identify whether vegetation located on private landholdings is considered significant remnant vegetation, as per the recommendations of the environmental report.

Figure 3 Draft Structure Plan



4. All future subdivision incorporating the proposed wildlife corridor to be a minimum lot area of five hectares, with a minimum depth of 250 metres with open fencing to enable wildlife to traverse this corridor with minimum hindrance. No clearing of vegetation is to be permitted without justification provided to the City of Mandurah for assessment. The City of Mandurah shall undertake annual site visits to ensure that those requirements are being met.
5. Precinct H to have public access to future recreation node on the Lake Clifton Foreshore. This access to be provided as a condition of subdivision and/or development.
6. The City of Mandurah and the Shire of Waroona to consider the allocation of funding in future budgets for the development of walk trails to the Lake Clifton foreshore and support the development of walk trails through the reserves abutting Harvey Peel Estuary and Lake Clifton.
7. The City of Mandurah and the Shire of Waroona develop a brochure detailing walk trails throughout the study area and make them available at the City and Shire offices and local visitor centres.
8. The City of Mandurah and the Shire of Waroona develop a joint community development strategy with the aim of improving provision of information to local residents within the study area of services and local resources. It is recommended that the City and Shire liaise with the Lake Clifton Progress Association.
9. The City of Mandurah and the Shire of Waroona prepare a tourist development policy that outlines the areas of permitted tourist accommodation and the assessment criteria that require compliance, including:
 - Water efficient usage on site;
 - Effluent disposal to be contained on site and alternative sewer treatment devices such as ATUs be utilised to avoid leaching of effluent into the ground water system;
 - Land clearing to be avoided where possible;
 - No tourist development on Vasse Soils;
 - A visual impact statement to be prepared by developers to detail any possible impact on the visual amenity of the locality; and
 - No tourist development within 150 metres of the Lake Clifton foreshore.
10. The Environmental Protection Authority Guidance Statement No 28 'Protection of the Lake Clifton Catchment' be incorporated into the Shire of Waroona Town Planning Scheme No 7.

11. The Shire of Waroona advise owners of Wellington Location 3167 Old Bunbury Road, that the vegetation portion of this landholding will be required to be reserved at the time of subdivision and/or rezoning.
12. The Old Lake Clifton Townsite be left undeveloped and the land incorporated into the Yalgorup National Park to ensure the protection of the stated vegetation community. This is to be initiated by the Shire of Waroona in consultation with the Department of Conservation and Land Management.
13. The City of Mandurah and Shire of Waroona, where appropriate, incorporate the given public open space portions of Lots 305, 479, 437, 1496 and 57 into the appropriate reserve system as per the Peel Region Scheme, Town Planning Scheme or as recommended in the 2004-2009 Management Plan for Island Point to Kooljerrenup.
14. Rezoning and/or formal subdivision/development applications for Lots 479, 436, Location 2942 and Lots 1 and 3 Southern Estuary Road require further environmental assessment with regard to existing wetlands and remnant vegetation.
15. The City of Mandurah and Shire of Waroona encourage land owners in parkland areas to undertake planting of Tuart trees outside of the area of the building envelope to maintain the local tuart population and visual aesthetics of the study area.
16. Developers undertake an indigenous cultural heritage study before lodgement of subdivision or rezoning applications to determine whether there are any significant Aboriginal Heritage issues as per the Aboriginal Heritage Act

2.8.1 Main Issues Arising From Submissions

Local Road Connection Armstrong Hills/Tuart Grove

Several submissions objected to the provision of a road connection between Armstrong Hills and Tuart Grove rural residential estates on the basis that there would not appear to be any benefit for the road link to be created.

One of the objectives of the Structure Plan was to provide for a robust and integrated local road network and subdivision pattern based on the need to improve permeability between the existing residential estates and future development areas. This objective is in line with *Liveable Neighbourhoods*, which espouses the provision of local street networks that are highly inter-connected to help limit travel distances, promote walking, cycling, public transport usage and a strong sense of community. Highly inter-connected street systems also enable the efficient movement of service and emergency vehicles. The current 'conventional development' design of Armstrong Hills and Tuart Grove

estates incorporates a number of cul-de-sacs and a street system that is not inter-connected.

From the community consultation workshop, the issues of providing link roads in order to bypass the need to access the highway, provide access to the community hall and between Armstrong Hills and Lake Clifton were identified as priorities (ranked 3rd in the first priority issue of 'Transport' associated with "*Community Facilities*" and "*Future Planning – Aspirations*").

It is recommended that the link road between Armstrong Hills and Tuart Grove rural residential estates be retained on the structure plan.

Walk Trails Along Lake Clifton Foreshore

A few submissions objected to the provision of walk trails along the Lake Clifton foreshore as it is felt that allowing the public to access the area will be detrimental to the ecosystem of the lake.

The current planning philosophy is that lots should not back onto public open space/regional open space in order to demarcate the public and private realms, thus ensuring that public areas are retained for public usage without private development encroaching into the area – as has been the case in other areas within the City of Mandurah. In areas where existing lots back onto public open space/regional open space, shared paths/walk trails are proposed in an effort to address the associated issues, whilst also providing improved and/or controlled access to sensitive environments (if applicable).

With regards to this proposed walk trail, it is acknowledged that there are issues associated with the construction of such a walk trail, particularly in terms of the vegetation and

landform in the area. Taking this into account it is likely that boardwalks would be required and this can be costly. In addition the Lake Clifton foreshore is under the care and control of the Department of Conservation & Land Management, thus any works in this foreshore reserve require their approval/consideration – at this stage CALM have supported in principal the provision of walk trails through the area.

From the community consultation workshop, there were mixed opinions on providing access to Lake Clifton – although there was support for the provision of walk trails throughout the area.

It is recommended that the walk trails along the Lake Clifton foreshore be retained, with the associated strategy being modified to reference the need for further investigation into the development of the walk trails. This modified strategy identifies that further work is required to be undertaken in relation to this proposal given the sensitive nature of the Lake Clifton foreshore and the tenure of the Lake Clifton foreshore.

Wildlife Corridor

Three submissions were received from the affected landowners objecting to the provision of a wildlife corridor on their properties.

The purpose of the proposed wildlife corridor was to provide a link between the Peel-Harvey estuary and Lake Clifton. Lots 1496, 21 and 1175 (being the lots the proposed wildlife corridor is located on) present the best opportunity to provide for an east-west wildlife corridor in the study area as they have the potential for further subdivision and generally have not been extensively cleared of vegetation, although it is recognised that some revegetation works may be required within the wildlife corridor area.

The creation of wildlife corridors is consistent with the City of Mandurah's *Bushland Protection Strategy* and the EPA's *Guidance Statement No 33 – Environmental Guidance for Planning & Development*, with CALM, the Peel-Harvey Catchment Council and the Peel Preservation Group all supporting the notion of the wildlife corridor proposal.

It was recommended that the proposed wildlife corridor be retained on the Structure Plan, with the strategy reference being modified to amend the reference of 'a minimum lot size requirement of 5 hectares and minimum depth of 250 metres' to 'larger lot sizes being provided for in the vicinity of the wildlife corridor, with building envelopes not being located within the 100 metre wide wildlife corridor'.

Bus Service

A few submissions referenced problems associated with the bus service that travels through the area, with the issues relating to

service times and the associated lack of a return bus service.

Recent investigations into the bus service that runs through the area has revealed that there is a service provided by Transwa that has a pick-up/drop-off point at Lake Clifton Roadhouse and travels through to Mandurah (with a pick-up/drop-off) at the Mandurah Transit Station or the Mandurah Visitors Centre). Passengers can opt to travel through to Perth or can be dropped off in Mandurah. However, although patrons can take an afternoon or evening bus into Mandurah there is no return bus to Lake Clifton available for later in the afternoon/evening. This obviously does not promote usage of the service by Lake Clifton and Herron residents.

It is therefore recommended that the City and Shire should lobby Transwa to improve the bus services, in terms of co-ordinating trips, to cater for the residents of Lake Clifton and Herron given it was identified as a service that the residents are seeking to be provided in the area.

2.8.2 Modifications Proposed to the Structure Plan Map and Report

As a result of submissions received and a review of the Structure Plan, the following modifications to the draft Structure Plan map and/or report were recommended, with the final Structure Plan being provided in Section 3 of this Report:

1. Precinct A - reference to 'no further subdivision' on the map and within the report to be modified to reflect that any subdivision proposals for larger lots in this area will need to demonstrate that the average 5 hectare lot size requirement is still being maintained as per the Coastal & Lakelands Planning Strategy requirements and EPA Bulletin 864.
2. Lot 57 Southern Estuary Road – map to be updated to reflect on the eastern portion of the site being classified as 'Regional Open Space' consistent with the Peel Region Scheme reservations, with the remainder of the site to be designated as Rural Residential.
3. Lot 1 Southern Estuary Road – a notation be incorporated on the map and within the report to the effect that a review of the foreshore reservation on this site is required in accordance with the Peel Region Scheme 'Recommendations Requiring Further Investigation' process. The report also needs to reference that there is a 'multiple use category' wetland on-site that will require re-assessment by the Department of Environment.
4. Primary Road Reservation being extended in the vicinity of Perth-Bunbury Highway/Southern Estuary Road intersection consistent with Town Planning Scheme No 3 and the Peel Region Scheme.
5. Part Lot 5 Old Coast Road – a notation be included within the report to reference that consideration needs to be given to any buffers associated with the quarry operations on-site should further development of the subject lot or adjoining Lot 7 occur. The incorporation of this reference ensures due consideration is given should rezoning/subdivision applications be lodged for these lots and the quarry is still operational.
6. Precinct B – references on map and report to be modified to reflect the 2ha min/3ha average lot size requirements to apply for those properties outside of the Lake Clifton Catchment Area and the 2ha min/5ha average lot size requirement to apply for those properties within the Lake Clifton Catchment Area.
7. Lot 501 Southern Estuary Road – map to be updated to reflect a 'Regional Open Space' reservation on the northern and western portions of the site consistent with the Peel Region Scheme.
8. Wellington Location 2942 Old Bunbury Road – the conservation buffer zone to be deleted on the basis that the site has been designated for detailed environmental assessments to be undertaken associated with any development proposal and issues such as any buffers, if required, would be identified at that stage.
9. Wellington Location 3167 Old Bunbury Road – the map and report to be modified such that the references to the conservation covenant and the regional open space are removed and replaced with a rural-residential base with the 'environmental assessment required' overlay.
10. Precinct G – all lots within this precinct to be modified from 'rural-residential' to 'rural smallholdings' consistent with the Shire of Waroona's draft Local Planning Strategy and Coastal & Lakelands Planning Strategy classification of Rural 3: Highway Environs.
11. Precinct H – the report to identify that Lots 19, 21 and 22 Old Coast Road have been identified as a contaminated site. This identification in the report identifies this as an issue for further assessment/consideration at the development application stage.
12. The wetland mapping information on the structure plan map and associated references on the report to be updated in accordance with the latest wetland mapping information - with all Conservation Category Wetlands (CCW) to be mapped. This includes removing the references to a wetland on Lot 1496 Southern Estuary Road.
13. The Visual Impact Management Area be reduced in width from 100 metres to 50 metres consistent with the Shire of Waroona visual setback requirements for Armstrong Hills and Tuart Grove. The Visual Impact Management Area also extending to cover Lots 1175, 7, 101 and 103 (being the lots that have future development potential abutting).
14. The 'Visual Impact Management Area' in Precinct F to reference that the visual impact management area is to be a minimum width of 50 metres, with the final extent of the visual impact management area to be determined upon the finalisation of the Peel deviation alignment. A reference to the provision of larger lots in the vicinity of the visual impact management area in order to address minimising the visual issues associated with building siting is also required.
15. The 150m foreshore reserve setback referenced on the map and in the report be modified to '150 metre building envelope setback' with the notation that "the setback is to be measured from the high water mark of Lake Clifton as defined by the edge of the salt water dependent wetland vegetation species".

16. The potential Aboriginal heritage sites to be identified on the structure plan map and the opportunities and constraints map.
17. The Potential Acid Sulfate Soils data be identified on the opportunities & constraints mapping and associated references in the accompanying report.
18. Inclusion of references in the report that other factors such as the assessment of land capability and environmental constraints need to be taken into consideration when determining appropriate lot sizes for any subdivision proposals.
19. Inclusion of additional information on the environmental significance of Lake Clifton (i.e. significance of thrombolites, EPA management criteria) and associated statutory processes.
20. Strategy 1 – rewording of this strategy to reflect the adoption of the Structure Plan as a Local Planning Policy by the City of Mandurah and the Shire of Waroona and the subsequent referral of the policy to the WAPC for their consideration/endorsement.
21. Strategy 3 – rewording of this strategy to reflect that detailed environmental assessments are required for those lots within the study area that comprise CCW wetlands and/or remnant vegetation identified as significant remnant vegetation from the desktop reviews undertaken to date. The report also needs to reference that notwithstanding those lots that have specifically been identified at this stage, all lots the subject of a rezoning/subdivision application are still required to undertake the necessary environmental assessments.
22. Strategy 4 – rewording of the strategy to amend the reference of ‘a minimum lot size requirement of 5 hectares and minimum depth of 250 metres’ to ‘larger lot sizes being provided for in the vicinity of the wildlife corridor, with building envelopes not being located within the 100 metre wide wildlife corridor’. The reference to the City undertaking annual site visits should also be reworded to reflect the City shall endeavour to undertake annual site visits. This modification is proposed as it would be anticipated that the City will have the resources to undertake these inspections, however this may not be the case.
23. Strategy 6 – rewording of this strategy to reference the need for further investigation into the development of the walk trails. This modified strategy identifies that further work is required to be undertaken in relation to this proposal given the sensitive nature of the Lake Clifton foreshore and the tenure of the Lake Clifton foreshore.
24. Strategy 8 – this strategy to also incorporate the provision of information to local residents on other relevant information – i.e. tree removal requirements, Heavenly Hectares programmes, building setbacks, effluent disposal requirements, Ross River Virus issues and the management of mosquitoes, groundwater usage issues etc.
25. Strategy 11 – deletion of this strategy as it is a double-up of Strategy 3.
26. Strategy 14 – deletion of this strategy as it is a double-up of Strategy 3.
27. Inclusion of a new strategy that recommends the City of Mandurah and Shire of Waroona lobby Transwa to improve the bus service, in terms of co-ordinating trips, to cater for the residents of Lake Clifton and Herron given it was identified as a service that the residents are seeking be provided/improved in the area.
28. Inclusion of a new strategy to lobby CALM for the implementation of some of the recreational pursuit proposals contained in the Yalgorup National Park Management Plan 1995 – 2005.
29. Inclusion of a new strategy promoting the establishment of a “Friends of” Group in the Lake Clifton-Herron area.
30. Administrative and typographical errors – wrong lot numbers, spelling errors etc

2.8.3 WAPC Endorsement of the Structure Plan

On 2 December 2009, the Western Australian Planning Commission resolved to endorse the Lake Clifton Herron Structure Plan subject to the following modifications being made to the Structure Plan.

The Structure Plan, as presented in Section 3 has been modified to reflect these modifications.

1. The following notations being added;

- (a) Prior to the rezoning of land for Rural Residential purposes an assessment of the remnant vegetation must be carried out. The assessment is to detail vegetation type and condition, identify any declared rare flora, threatened ecological communities or fauna habitat and is to assign a level of bushfire hazard in accordance with Planning for Bushfire Protection (WAPC 200). Subdivision Guide Plans should take into account the findings of the vegetation assessment.
- (b) Subdivision of Rural Residential areas must be in accordance with a subdivision guide plan approved by the Local Government and the WAPC, or has come into effect as part of a town planning scheme amendment. Further subdivision of the same land, or part thereof, should not be permitted where this would result in an average lot size less than was originally determined.

2. Notations 1, 8 and 10 being deleted from the Structure Plan.
3. The road link through Lots 11 and 12 Tuart Grove being deleted.
4. The possible walk trail through Lot 2 Old Coast Road being deleted from the Structure Plan.
5. All quarries currently under operation being shown on the Structure Plan.
6. Notation 6 being modified to read as follows;

Future development of Rural Residential areas to consider buffers associated with quarry operations in accordance with the Peel Region Scheme Strategic Mineral and Basic Raw Materials Resource Policy.

7. A notation and corresponding number being added to the Structure Plan as follows.

Further subdivision of Lot 2 Sharee Close is permitted to facilitate the construction of a road connection through to Armstrong Hills Drive subject to the road being constructed and ceded as a public road reserve and a 2ha minimum lot size being maintained.

8. The Visual Impact Management Area (50m wide) is to be indicated on all Regional Road frontage within the Structure Plan area, including lots fronting Forrest Highway.
9. The legend being modified to title "Rural Living" areas as "Rural Residential" areas.
10. The Legend being modified to include the following notation under " Environmental Assessment Required;"
11. *(This does not preclude the need for environmental assessment elsewhere within the Structure Plan area depending on the environmental values present, and the purposed action/development).*
12. Regional Open Space surrounding the wetland on Lots 437 and 479 being replaced with Local Open Space.
13. Possible new roads with cul de sacs within Precinct C being modified to through roads connecting into the local road network.
14. The possible new road through Lot 1175 being moved 250m to the north of the present location, linking with connections through Lot 20.
15. Subdivision layout, local open space, and possible new roads updated in accordance with the latest approved subdivision guide plans for Lots 2942 Old Bunbury Road, Lot 3 Old Coast Road, Lots 46 and 502 Southern Estuary Road and the latest cadastre for Lots 16, 22 and 25 Southern Estuary Road.
16. Deletion of red stripes designating 'Environmental Assessment Required' for Lots 3167 and 2942 Old Bunbury Road, Lots 16 and 1209 Southern Estuary Road.
17. The 'Potential Indigenous Heritage Site' on Lot 2849 Old Bunbury Road, being relocated to Lot 500 Old Bunbury Road.

The following modifications being made to the Structure Plan report;

1. Section 3.2.6, fourth paragraph, first sentence being deleted.
2. Section 2.5 to state that the Lake Clifton thrombolite community is a Threatened Ecological Community (TEC) and within the Lake Clifton catchment, consideration should be given to the thrombolite community with any future subdivision or development proposal.
3. Section 2.5 to reference the Tuart Conservation and Management Strategy and the Yalgorup National Park management Plan.



LAKE CLIFTON / HERRON STRUCTURE PLAN
STRUCTURE PLAN REPORT
FINAL JANUARY 2010

PART 3 STRUCTURE PLAN

The final Structure Plan, as adopted by the City of Mandurah and the Shire of Waroona and endorsed by the Western Australian Planning Commission is presented in **Figure 4**.

The Structure Plan has taken into consideration the information provided within this report.

Structure Plan Objectives

1. Create a vision for the future development of the Lake Clifton-Herron area that reflects community needs
2. Address planning, environmental and servicing constraints in an integrated manner;
3. Ensure that recreation, community and commercial facilities are appropriately located to ensure that the community needs and aspirations are met in a sustainable manner; and
4. Provide for a robust and integrated local road network and subdivision pattern.

Structure Plan Notes

1. Amendments to Town Planning Scheme No. 3 to rezone Rural Lots to Rural-residential can be considered, provided they are consistent with the objectives of the Structure Plan, provisions of Town Planning Scheme No. 3, and appropriately address any potential adverse environmental impacts.
2. Prior to the rezoning of land for Rural Residential purposes an assessment of the remnant vegetation must be carried out.

The assessment is to detail vegetation type and condition, identify any declared rare flora, threatened ecological communities or fauna habitat and is to assign a level of bushfire hazard in accordance with Planning for Bushfire Protection.

Subdivision Guide Plans should take into account the findings of the vegetation assessment.
3. Subdivision of Rural Residential areas must be in accordance with a subdivision guide plan approved by the Local Government and the WAPC, or has come into effect as part of a town planning scheme amendment.

Further subdivision of the same land, or part thereof, should not be permitted where this would result in an average lot size less than was originally determined.
4. Extent of foreshore on Lot 1 to be reviewed in accordance with Peel Region Scheme recommendations.
5. 'Multiple Use Category' Wetland on-site requires re-assessment by Department of Environment and Conservation.
6. Recreation Focus as per Island Point to Kooljerrenup Management Plan.
7. Future development of Rural Residential areas to consider buffers associated with quarry operations in accordance with the Peel Region Scheme Strategic Mineral and Basic Raw Materials Resource Policy.
8. Future Development Subject To Detailed Environmental Assessment
9. Possible Site for Aboriginal Cultural Purposes (Shire of Waroona)
10. Further subdivision of Lot 2 Sharee Close is permitted to Facilitate the construction of a road connection through to Armstrong Hills Drive subject to the road being constructed and ceded as a public Road reserves and a 2ha minimum lot size being maintained.

LAKE CLIFTON / HERRON STRUCTURE PLAN



Base Cadastre Updated October 2009

Plan Modifications
Version A (Jan 2010): Updated as per WAPC Approval

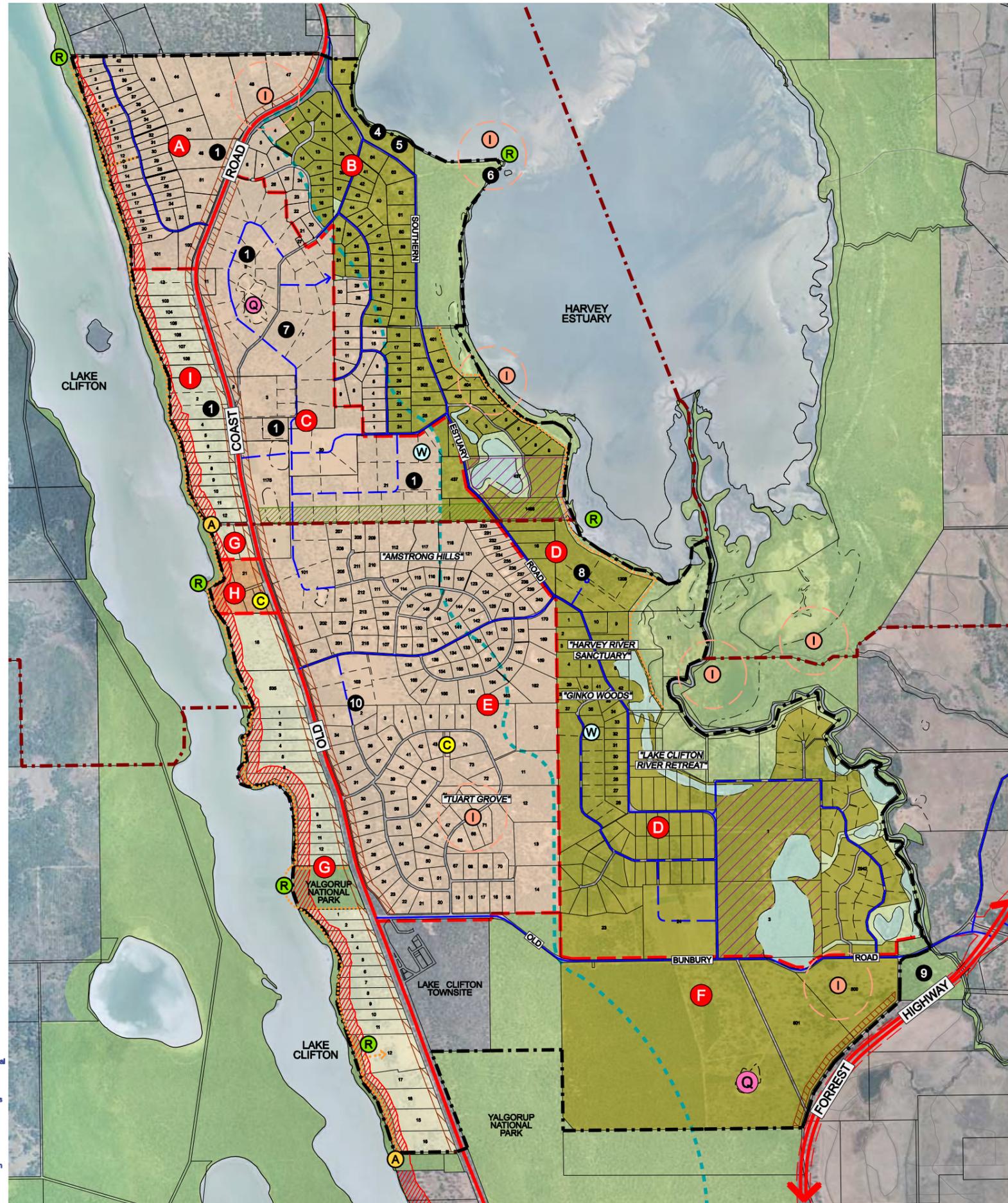
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Purpose of plan is to provide guidance in the assessment of rezoning and Subdivision Guide Plans as required under town planning schemes.

All details are indicative only. Final design and lot layouts are subject to refinement at subsequent planning process upon receipt of relevant details.

Final Structure Plan adapted from Kollasz Smith Plan (Plan No 30040.2006; Dated 1 Sept 2006)

Plan to be read in context with Structure Plan report.



Structure Plan Legend

Reserved Land / Public Open Space

- Regional Open Space
- Local Open Space
- Waterways

Indicative Land Use / Zoning Category

- Commercial / Tourist Node
- Rural Residential A (2ha Minimum; 3ha Average Lot Size)
- Rural Residential B (2ha Minimum; 5ha Average Lot Size)
- Rural Small Holdings (5ha Minimum and Average Lot Size)

Access and Road Network

- Primary Regional Road
- Key Existing Local Roads
- Potential New Roads (Provided via new subdivisions)
- Possible Walk Trails

Structure Plan Overlays

- Conservation Category Wetland (Indicative Locations)
- Wildlife Corridor (Lots Subject to 5ha Minimum Lot Size)
- Environmental Assessment Required (as part of future rezoning under TPS)
(This does not preclude the need for environmental assessment elsewhere within the Structure Plan area depending on the environmental values present, and the proposed action/development)
- Visual Impact Management Area (Minimum 50m in width)
- 150m Building Setback Area (Measured from High Water Mark of Lake Clifton; as defined by edge of saltwater wetland dependant vegetation)

Structure Plan Information

- Passive Recreation Node
- Community / Commercial Node
- Access Point
- Potential Indigenous Heritage Site (Detailed Studies Required to Confirm)
- Possible Water Tank Site
- Existing Quarry / Extractive Industry Site

Structure Plan Boundaries

- Lake Clifton Catchment Boundary
- Sub-Precinct Boundary
- Local Government Boundary
- Structure Plan Boundary

3.1 INDICATIVE SUBDIVISION PLAN

A majority of the Structure Plan area has been identified as being suitable for rural residential and/or rural small holdings, based on recommendations of the Coastal and Lakelands Planning Strategy and relevant Environmental Protection Policy requirements for development near Lake Clifton.

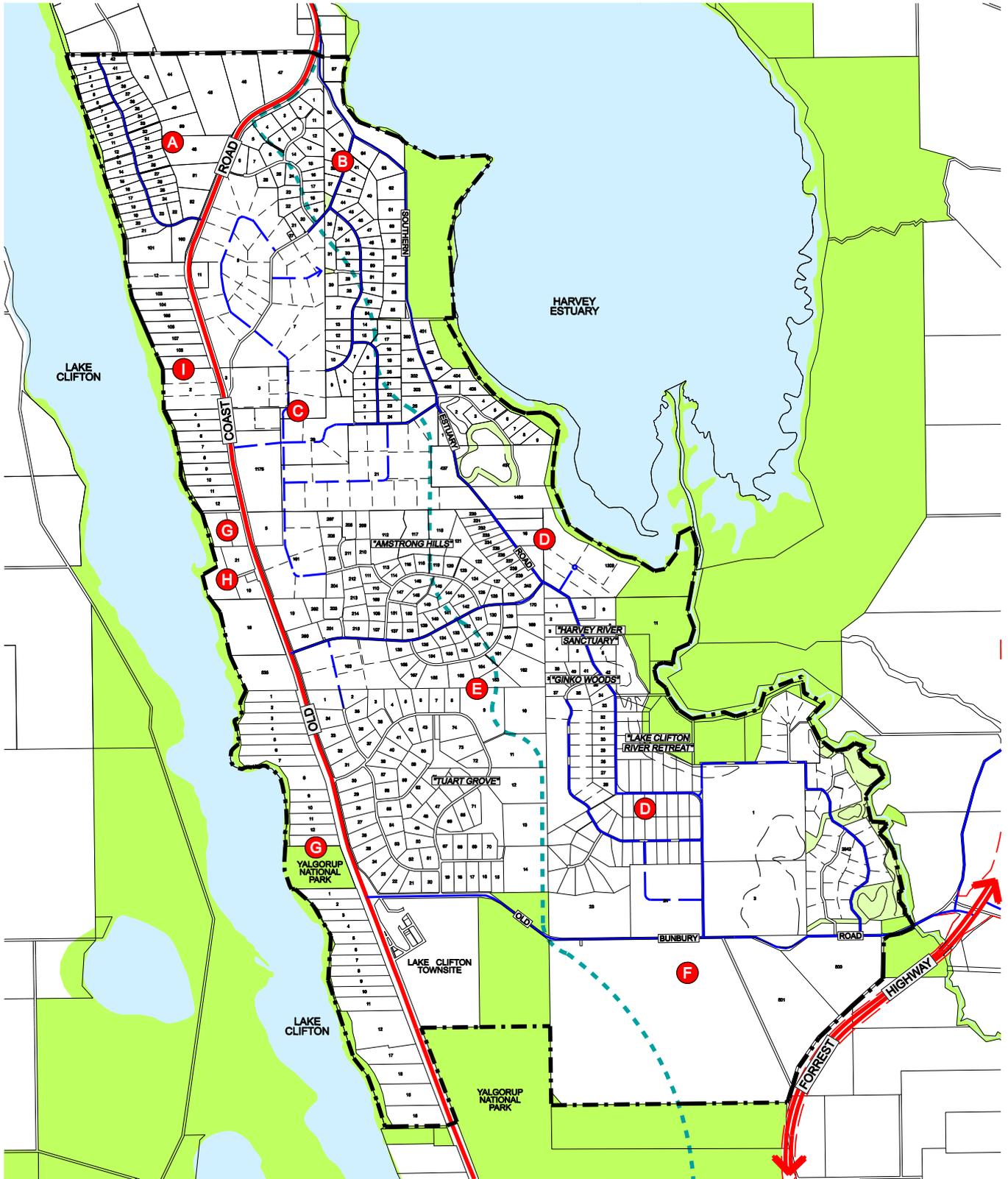
Environmental Protection Policy recommends a minimum lot size of 2 hectares and an average of 5 hectares within the Study Area.

The Coastal and Lakelands Planning Strategy recommends a minimum lot size of 2 hectares and an average of 3 hectares for areas of land outside the Lake Clifton Catchment Area. This Structure Plan has been based on the recommendations of the Coastal and Lakelands Planning Strategy.

Within the Structure Plan, a Subdivision Guide Plan has been included to give an indicative indication as to the number of lots that may be created in each of the undeveloped land holdings. This lot layout is indicative only and thus should not restrict alternate designs. Instead it should aid assessing officers in quickly referencing the number of lots permitted. A copy of the Subdivision Guide Plan is provided as **Figure 5**.

It is important to note that the road links indicated may be altered subject to a detailed contour and feature survey and environmental assessment.

Further explanation of the Structure Plan is provided within each Precinct Area.



**LAKE CLIFTON / HERRON
STRUCTURE PLAN**

**FIGURE 5
SUBDIVISION GUIDE PLAN**

Base Catchment Updated October 2009
 Plan Modifications
 Version A (Jan 2010) Updated as per WAPC Approval
 Purpose of plan is to provide guidance in the assessment of rezoning and Subdivision Guide Plans as required under town planning schemes.
 All details are indicative only. Final design and lot layouts are subject to refinement at subsequent planning process upon receipt of relevant details.
 Adapted from Final Structure Plan (Plan No 04/1085/004A, Dated 9 January 2010)
 Plan to be read in context with Structure Plan report.

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Plan Legend

- Regional Open Space
- Local Open Space
- Waterways
- Primary Regional Road
- Key Existing Local Roads
- Potential New Roads (Provided via new subdivisions)
- Lake Clifton Catchment Boundary
- Sub-Precinct Area
- Structure Plan Boundary



3.2 SUB PRECINCT REQUIREMENTS

In order to assist in identifying issues associated with further development within the Study Area, the Structure Plan has been divided into Nine Precincts. The location of the Sub-Precincts is shown in **Figure 6**.

3.2.1 Precinct A

Located in the northern portion of the Study Area, Precinct A borders Mount John Road and Lake Clifton and consists of subdivided rural-residential land pursuits, including horticulture and raising of livestock.

From a review of the history of subdivision approvals in this precinct, it appears that subdivision has occurred in accordance with the minimum 2 hectare/average 5 hectare lot size requirement, with the larger lots that currently exist in the precinct having been created to achieve the average 5 hectare lot size requirement.

Any subdivision proposals for the larger lots in this precinct will need to demonstrate that the average 5 hectare lot size requirement is still being maintained as per the Coastal and Lakelands Planning Strategy requirements and the EPA Bulletin 864.

Additional requirements for the Precinct include the following:

- Building setback from Lake Clifton foreshore requirements
- Any future development must have a mosquito moratorium placed on the titles of all lots created within a 3 kilometre radius of mosquito breeding areas.
- Any stocking of animals on rural residential land must be in accordance with Agriculture Western Australia's stocking rates requirements.

3.2.2 Precinct B

Precinct B is located to the north east of the Study Area and mainly consists of subdivided rural-residential land pursuits.

The Lake Clifton Catchment boundary dissects the precinct.

For those lots located within the Lake Clifton Catchment, the minimum 2 hectare/average 5 hectare lot size requirement applies.

For those lots not located within the Lake Clifton Catchment, the minimum 2 hectare/average 3 hectare lot size applies.

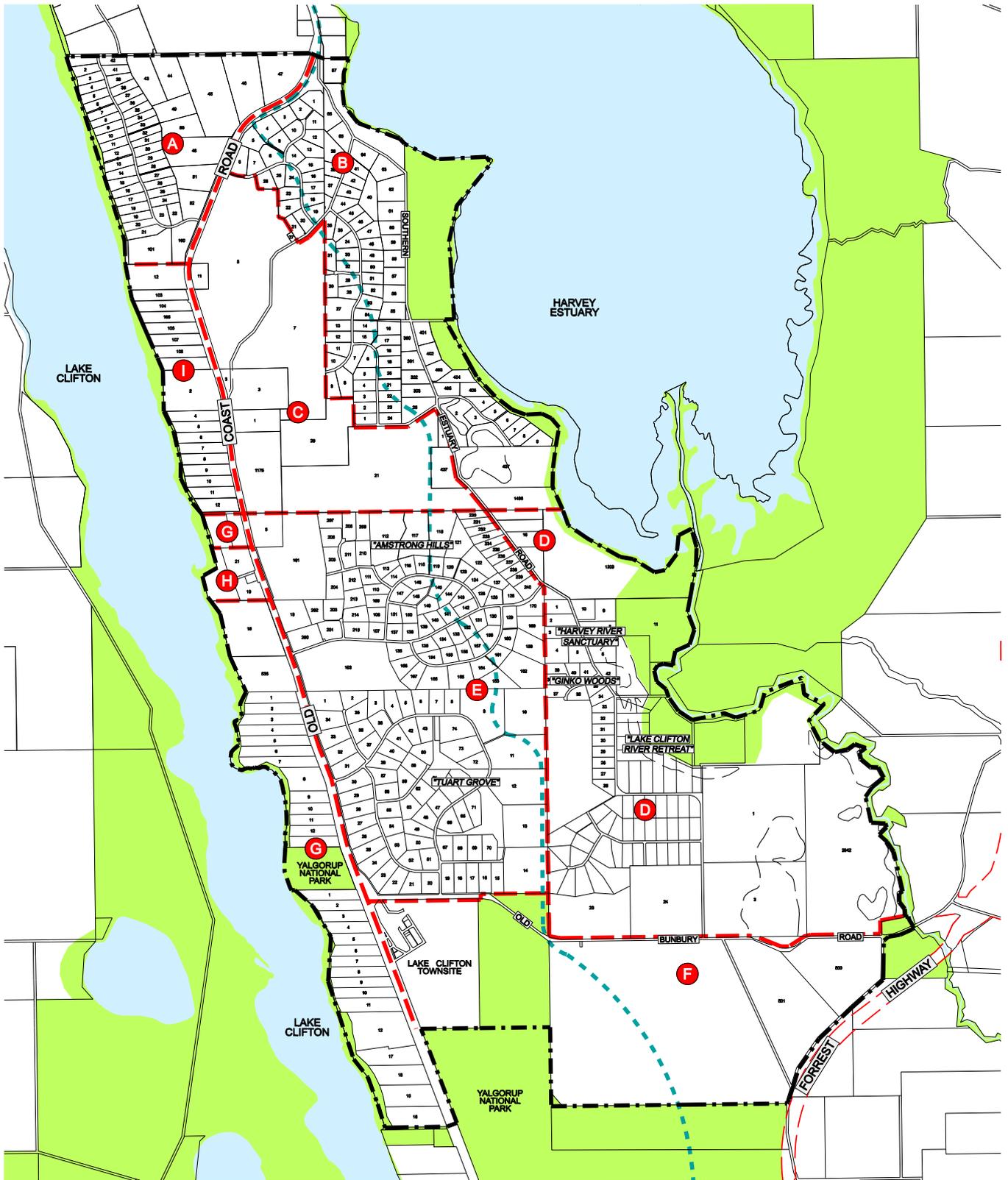
Based on current land area, Lots 1, 437, 479 and 1496 Southern Estuary Road have the capability of being subdivided further. These four lots are not located within the Lake Clifton Catchment, thus the lot size criteria of minimum 2 hectare/average 3 hectare applies.

It should be noted that Lot 479 Southern Estuary Road has been rezoned from 'Rural' to 'Rural-Residential' and a Subdivision Guide Plan has been adopted by the City of Mandurah.

Notwithstanding the above mentioned lot size criteria that applies, other factors such as the assessment of land capability and environmental constraints need to be taken into consideration when determining appropriate lot sizes for any subdivision proposals.

In this regard, the environmental constraints on Lots 1 and 437 Southern Estuary Road that are known at the time of this report being prepared are:

- Lot 1 – the 'Multiple Use Category Wetland' that is located on-site requires re-assessment by the Department of Environment; a review of the extent of the foreshore reservation in accordance with the Peel Region Scheme 'Recommendations Requiring Further Investigation' process is required.
- Lot 437 – the 'Conservation Category Wetland' that is located on-site requires assessment by the Department of Environment to determine the extent of the associated buffer (NB - this wetland extends over Lot 479 Southern Estuary Road and was assessed by the Department of Environment at the Scheme Amendment and Subdivision Guide Plan stage).



**LAKE CLIFTON / HERRON
STRUCTURE PLAN**

**FIGURE 6
SUB PRECINCT AREAS**

Base Catchment Updated October 2009
 Plan Modifications
 Version A (Jan 2010) Updated as per WAPC Approval
 Purpose of plan is to provide guidance in the assessment of rezoning and Subdivision Guide Plans as required under town planning schemes.
 All details are indicative only. Final design and lot layouts are subject to refinement at subsequent planning process upon receipt of relevant details.
 Adapted from Final Structure Plan (Plan No 04/1085/003A, Dated 9 January 2010)
 Plan to be read in context with Structure Plan report.

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Plan Legend

- Regional Open Space
- Waterways
- Lake Clifton Catchment Boundary
- Sub-Precinct Boundary
- Structure Plan Boundary



Portion of the proposed 100 metre wide wildlife corridor, which provides an east-west link between the Peel-Harvey Estuary and Lake Clifton, is located on Lot 1496 Southern Estuary Road.

The creation of wildlife corridors is consistent with the City of Mandurah's Bushland Protection Strategy and the EPA's Guidance Statement No 33 – Environmental Guidance for Planning & Development.

Any subdivision proposal for Lot 1496 is to provide for larger lots in the vicinity of the wildlife corridor, with building envelopes being excluded from the wildlife corridor. Open fencing is to be provided to enable wildlife to traverse the corridor with minimum hindrance. No clearing of vegetation is to be permitted without justification provided to the City of Mandurah for assessment.

The City of Mandurah shall endeavour to undertake annual site visits to ensure illegal clearing is not occurring.

Additional requirements for the Precinct include the following:

- Any subdivision proposal for Lots 437 and 1496 Southern Estuary Road also need to take into account the road link on Lot 479.
- Any future development must have a mosquito moratorium placed on titles on all lots created within a 3 kilometre radius of mosquito breeding areas.
- Any stocking of animals on rural residential land must be in accordance with Agriculture Western Australia's stocking requirements.

3.2.3 Precinct C

This precinct is located to the east of Perth - Bunbury Highway and borders Precinct B. Existing land use includes agricultural and quarry uses.

There is the potential to subdivide this area into lots of two hectares minimum with a five hectare average, however consideration needs to be given to how this subdivision will impact the requirement for the Study Area to average five hectares.

It is also recommended that lots fronting/adjoining Perth - Bunbury Highway have a visual impact management study undertaken before subdivision is permitted as per the Coastal and Lakelands Planning Strategy requirements for areas within 'Visual Management Zone A'.

This is to be undertaken by the developer and lodged with the subdivision and/or rezoning documentation. This is to ensure that the environmental integrity of the area is not reduced and visual amenity for tourists utilising Perth - Bunbury Highway is not compromised.

It is recommended that lots created within this visual amenity zone not be less than five hectares. This Visual Impact Management Area is indicated on the Structure Plan and the City of Mandurah should note this in assessment of future subdivision applications and detail how building envelopes and building heights will impact the visual and environmental amenity within this zone.

It is also recognised that there is a limestone quarry within this precinct and this will need to be considered at time of subdivision to determine rehabilitation opportunities and future impacts on road network.

Portion of the proposed 100 metre wide wildlife corridor, which provides an east-west link between the Peel-Harvey Estuary and Lake Clifton, is located on Lots 21 and 1175.

The creation of wildlife corridors is consistent with the City of Mandurah's Bushland Protection Strategy and the EPA's Guidance Statement No 33 – Environmental Guidance for Planning & Development.

Any subdivision proposals for Lots 21 and 1175 are to provide for larger lots in the vicinity of the wildlife corridor, with building envelopes being excluded from the wildlife corridor. Open fencing is to be provided to enable wildlife to traverse the corridor with minimum hindrance.

No clearing of vegetation is to be permitted without justification provided to the City of Mandurah for assessment. The City of Mandurah shall endeavour to undertake annual site visits to ensure illegal clearing is not occurring.

Additional requirements for the Precinct include the following:

- Any future development must have a mosquito moratorium placed on titles on all lots created within a 3 kilometre radius of mosquito breeding areas.
- Any stocking of animals on rural residential land must be in accordance with Agriculture Western Australia's stocking requirements.

3.2.4 Precinct D

Precinct D extends to the south of Precinct B and continues down to Old Bunbury Road. Portions of this precinct have already been rezoned for rural residential land use, namely Harvey River Sanctuary, Gingko Woods, and Lake Clifton River Retreat. Southern Estuary Road provides the main access to Old Coast Road and Old Bunbury Road.

There are potential sites of Aboriginal Heritage located within the precinct. Any change of use will be required to take these sites into consideration.

There is the potential for rural-residential subdivision with a two hectare minimum lot size with an average of three hectares, as this precinct is outside of the Lake Clifton catchment. There are a number of wetlands within this precinct and subdivision design should take this into consideration.

Consideration will need to be given to the drainage and geotechnical issues pertaining to Location 2942 Old Bunbury Road when/if subdivision occurs.

Additional requirements for the Precinct include the following:

- Any future development must have a mosquito moratorium placed on titles on all lots created within a 3 kilometre radius of mosquito breeding areas.
- Any stocking of animals on rural residential land must be in accordance with Agriculture Western Australia's stocking requirements.

3.2.5 Precinct E

This precinct includes the Armstrong Hills and Tuart Grove Rural Residential Estates.

The Lake Clifton-Herron Community Hall is located within this precinct and has a basketball half court, tennis court and children's play equipment.

There are a number of lots with subdivision potential. As the majority of these lots are within the Lake Clifton Catchment, there is a requirement of minimum lot size of 2 hectares with an average of 5 hectares.

Additional requirements for the Precinct include the following:

- Any future development must have a mosquito moratorium placed on titles on all lots created within a 3 kilometre radius of mosquito breeding areas.
- Any stocking of animals on rural residential land must be in accordance with Agriculture Western Australia's stocking requirements.

3.2.6 Precinct F

Precinct F is located to the south of the Old Bunbury Road and has the opportunity for rural-residential subdivision, with lots averaging three hectares with a minimum of two hectares.

This precinct also contains significant remnant vegetation as recognised by the EPA. This includes the Lake Clifton Townsite. It is recommended that no further subdivision occurs and this includes a significant portion of Lot 3167 Old Bunbury Road. A portion of Yalgorup National Park is included within this precinct.

It is also recommended that lots fronting/adjoining the future Peel Deviation have a visual impact management study undertaken before subdivision is permitted similar to the Coastal and Lakelands Planning Strategy requirements for areas within 'Visual Management Zone A'.

This is to ensure that the environmental integrity of the area is not reduced and future residents have visual buffer from the Peel Deviation.

It is recommended that lots created within this visual amenity zone not be less than five hectares. This Visual Impact Management Area is indicated on the Structure Plan and the Shire of Waroona should note this in assessment of future subdivision applications and detail how building envelopes and building heights will impact the visual and environmental amenity within this zone.

Additional requirements for the Precinct include the following:

- Any future development must have a mosquito moratorium placed on titles on all lots created within a 3 kilometre radius of mosquito breeding areas.
- Any stocking of animals on rural residential land must be in accordance with Agriculture Western Australia's stocking requirements.

3.2.7 Precinct G

Precinct G fronts Lake Clifton and forms the western boundary of the Study Area up to the boundary between the Shire of Waroona and City of Mandurah. This precinct has predominantly been subdivided for rural-residential land uses, with lots extending from Perth - Bunbury Highway to Lake Clifton foreshore reserve.

There is the opportunity for subdivision into lots with a minimum of five hectare as per the requirements of the "Highway Environs" zone in the Coastal and Lakeland Planning Strategy.

There is a 150 metre setback for development from the Lake Clifton Foreshore to ensure no contamination of ground water into the lake system.

Additional requirements for the Precinct include the following:

- Any future development must have a mosquito moratorium placed on titles on all lots created within a 3 kilometre radius of mosquito breeding areas.
- Any stocking of animals on rural residential land must be in accordance with Agriculture Western Australia's stocking requirements.

3.2.8 Precinct H

This precinct incorporates the Lake Clifton Caravan Park and Tavern and it is recommended to retain these land uses and future development to occur in accordance with the Lake Clifton Development Guide Plan.

There is the opportunity to consolidate the rural-residential land use to the west of this precinct, mindful of the need to control access to the foreshore reserve and to expand the 'Special Use' zone to include the whole precinct. This may be undertaken by the land owner/developer.

Additional requirements for the Precinct include the following:

- Any future development must have a mosquito moratorium placed on titles on all lots created within a 3 kilometre radius of mosquito breeding areas.
- Any stocking of animals on rural residential land must be in accordance with Agriculture Western Australia's stocking requirements.

3.2.9 Precinct I

Precinct I has similar characteristics to Precinct G with the main difference being its location within the City of Mandurah. There is minimal opportunity for rural residential subdivision, but what subdivision that will occur will be required to meet the 5 hectare minimum lot size requirement as per the Coastal and Lakelands Planning Strategy.

There is a 150 metre setback for development from the Lake Clifton Foreshore to ensure no contamination of ground water into the lake system.

Additional requirements for the Precinct include the following:

- Any future development must have a mosquito moratorium placed on titles on all lots created within a 3 kilometre radius of mosquito breeding areas.
- Any stocking of animals on rural residential land must be in accordance with Agriculture Western Australia's stocking requirements.

Recommendations

Arising from the Structure Plan are the following recommendations.

Recommendation One

That the City of Mandurah and Shire of Waroona adopt the Draft Structure Plan as a Local Planning Policy and refer the Local Planning Policy to the Western Australian Planning Commission for consideration /endorsement.

Recommendation Two

The City of Mandurah and the Shire of Waroona consider applications submitted to amend the City of Mandurah Town Planning Scheme No. 3 and the Shire of Waroona Town Planning Scheme No. 7 to rezone 'Rural' zoned land to 'Rural Residential', as identified on the Structure Plan.

The City of Mandurah will not progress any amendments to Town Planning Scheme No. 3 to rezone rural lots to rural-residential until the Environmental Planning Authority has reviewed Guidance Statement No 28 "Protection of the Lake Clifton Catchment".

Evidence shall also be provided to address the requirements of the Structure Plan, and address appropriate and sustainable lot sizes, the impact of humans, agisted animals, and domestic cats and dogs associated with any development within the catchment of Lake Clifton.

Any amendment should incorporate appropriate controls in the Town Planning Scheme to mitigate against the negative impact of any new development and actively seek to improve the environmental impact on the locality through appropriate environmental controls.

Recommendation Three

The City of Mandurah and the Shire of Waroona advise developers that detailed environmental assessments are required for those lots that comprise 'Conservation Category Wetlands' and/or remnant vegetation (identified as significant remnant vegetation in the structure plan (as identified from the desktop reviews).

Recommendation Four

All future subdivision incorporating the proposed 100 metre wide wildlife corridor to provide for larger lots in the vicinity of the wildlife corridor and the exclusion of building envelopes from the wildlife corridor.

Open fencing is to be provided to enable wildlife to traverse the corridor with minimum

hindrance. No clearing of vegetation is to be permitted without justification provided to the City of Mandurah for assessment. The City of Mandurah shall endeavour to undertake annual site visits to ensure illegal clearing is not occurring.

Recommendation Five

Precinct H to have public access to future recreation node on the Lake Clifton Foreshore. This access to be provided as a condition of subdivision and/or development.

3.3 RECREATION

Recreation requirements and strategies have been formulated utilising responses from the community survey and workshop process.

3.3.1 Sporting Complex

The community consultation highlighted a high demand for a sporting complex within the Study Area (138 votes). A sporting complex is generally established on a district or regional level, not on a local level.

The City of Mandurah's Community Infrastructure Needs Study Review indicates that the provision of a district recreation centre requires a population of between 30,000 and 50,000 people. With a maximum population of 2100 persons within the Study Area the establishment of a sporting complex is not considered viable.

3.3.2 Recreation Facilities

Although a sporting complex is not considered viable, there is the opportunity to provide for some recreation facilities within the Study Area. This would provide facilities for families living within the study area to utilise.

Located within Tuart Grove is the Lake Clifton-Herron Community Hall, which has a basket ball half court and tennis court. The community hall was jointly funded by the Lake Clifton Progress Association, the City of Mandurah and the Shire of Waroona.

This location is quite central in consideration to the Study Area as a whole but it appeared at the community consultation stage that not all residents were aware of the existence of the community hall. As such it is recommended that a leaflet be prepared by the City and Shire in conjunction with the Lake Clifton Progress Association and distributed to all residents within the study area advising them of the facilities available at the community hall.

Community facilities may be established on the Lake Clifton Tavern site. Play equipment is also recommended in this area for younger children. The location of these facilities at this site will be utilised when/if future commercial facilities are located on the site. Parents will be able to allow their children to play on the equipment before or after they have undertaken their shopping requirements.

3.3.3 Walk Trails

A walk trail network has been introduced on the Structure Plan. The workshop consultation revealed this as an important service provision to the community, as there were 54 votes for walkways or cycleways of some format.

This pathway system provides the opportunity for residents within the locality to traverse the study

area and journey between the Peel Harvey Estuary and Lake Clifton. The opportunity would also exist for the public access a greater area of the foreshore reserves for both the Lake and the Estuary. This would provide a greater opportunity for tourists as well as local residents to enjoy the character of the Study Area.

The pathway system links the separate rural residential estates to each other and existing infrastructure (Lake Clifton Tavern Site and Lake Clifton-Herron Community Hall) as well as future recreation nodes. This will enable those without vehicles (children) and those who chose to use alternate modes of transport for recreation pursuits (bicycles, horses or pedestrians) to traverse the Study Area.

Recommendations

Recommendation Six

The City of Mandurah and the Shire of Waroona to investigate the development of walk trails in the Lake Clifton Foreshore and support the development of walk trails through the reserves abutting Peel-Harvey Estuary.

Recommendation Seven

The City of Mandurah and the Shire of Waroona develop a brochure detailing walk trails throughout the study area and make them available at the City and Shire offices and local visitor centres.

3.4 COMMUNITY AND COMMERCIAL

Community consultation revealed workshop participants saw a need for additional community and commercial facilities.

3.4.1 Transport Issues

When asked what priorities were important the workshop participants indicated that transport issues were the most important, particularly the New Perth Bunbury Highway being constructed as soon as possible.

Improved bus services with particular regard to a bus service to Mandurah and a Bunbury to Mandurah service were highlighted. Recommended Policy Position 4 “Minimum Service Objectives” for New Suburbs from the City of Mandurah Community Infrastructure Needs Review recommends that public/community transport is provided to the nearest district centre for all suburban suburbs.

As the Study Area is not an urban area, it is unlikely that the provision of a public transport service will be considered viable. There is an existing bus service travelling from Bunbury to Mandurah and it is recommended that the City and Shire promote this service in conjunction with the service provider. This service may be promoted by leaflets distributed to all residents within the study area.

There is the opportunity to provide a weekly or fortnightly bus service to health or community facilities to district centres for the over fifty fives who may not be mobile. It is recommended that further consultation occur with the Lake Clifton Progress Association and local residents to determine the need for such a service.

3.4.2 Medical/Health Facilities

A health facility was seen as important to workshop participants. A health and medical centre is considered suitable for a local centre with a catchment of between 5,000 and 7,000 people. With a maximum future population of 2100 people within the Study Area a medical and health centre is not considered to be sustainable.

A doctor visits the Lake Clifton Herron Community Hall on a regular basis.

It is recommended that this be advertised to the study area community via an information pamphlet as information from the community workshops indicated that many of the residents within the study area were not aware of this service.

3.4.3 Aged Care Facilities

There was significant interest for Aged Care facilities to be located within the study area. These facilities are being provided more and more on a private level. A basic aged health service may be provided by the visiting doctor.

It is recommended that the City of Mandurah and Shire of Waroona liaise with the Progress Association and local residents to confirm the requirement and demand for such a service.

3.4.4 Commercial Facilities

The City of Mandurah’s Community Infrastructure Needs Study Review indicates the following services should be provided in a local centre (population catchment of between 5,000 and 7,000 people) as a general catchment:

- Small supermarket suitable for weekly shopping;
- Daily and “impulse” shopping needs (video, liquor store, extended grocery shopping hours)
- Automatic Teller Machines;
- Public toilets; and
- On-line information/library “kiosk”.

It is acknowledged that country towns provide commercial facilities for a much smaller catchment, however due to the proximity of Waroona and Mandurah, the viability of such a facility is unlikely.

As previously indicated, the current and projected population of the Study Area will not support a local centre. As such it is recognised that any commercial facility will be established primarily to service the passing trade of the Mandurah-Bunbury traffic and local residents will be the secondary market.

As such it is anticipated that future commercial establishments would provide basic impulse shopping needs, with minor provision of groceries. There is also the opportunity for a small newsagency and post boxes to be located within this commercial establishment. Such a facility would serve to cater for some of the requirements of Preston Beach residents.

At present, residents travel to shopping facilities in Falcon, Waroona or Mandurah.

Liaison is required with major banks to investigate the opportunity to locate an ATM within the commercial site and with Telstra to provide a public phone booth.

It is recommended that the commercial facility be located within the Lake Clifton Development Guide Plan area (the Lake Clifton Tavern Site).

This is recognised as being relatively central (on a north south axis) within the study area and its location on the Perth to Bunbury Highway ensures high exposure to passing trade. The location of community and recreation facilities around this site will lead to the development of strong commercial/community node that provides the local community with a better level of service.

There is the opportunity to provide a bus shelter at the commercial facility for school children (and possible future community bus services). This would provide the opportunity of parents to collect children and purchase convenience shopping items.

As such, it is recommended that the Shire of Waroona liaise with the owner of the Lake Clifton Tavern Site to revise the Lake Clifton Development Guide Plan to incorporate commercial and community facilities.

The following strategies have been developed for the provision of community and commercial facilities.

Recommendations

Recommendation Eight

The City of Mandurah and the Shire of Waroona develop a joint information package strategy with the aim of improving provision of information to local residents within the Study Area of services, local resources and issues that affect their property (i.e tree removal requirements, effluent disposal requirements, Ross River Virus issues and the management of mosquitoes, groundwater usage issues etc).

It is recommended that the City and Shire liaise with the Lake Clifton Progress Association.

3.5 EMPLOYMENT

As the study area has been developed for rural residential purposes and that is the direction the future development will occur there is very little opportunity for local employment to flourish. Opportunities exist for small scale industries to provide employment.

Such industries include:

- Tourist development;
- Home business;
- Cottage industry;
- Aquaculture (interest has been raised with the Shire of Waroona);
- Commercial outlet; and
- Small scale rural pursuits.

The Study Area should not be encouraged to develop large scale employment opportunities as the residents of the study area have located there for lifestyle not employment reasons.

Environmental impacts must be considered with each development application lodged for such industries.

3.5.1 Tourism Opportunities

The proximity of the study area to Lake Clifton and the Peel – Harvey Estuary creates the opportunity for tourist development to locate within the Study Area.

In considering this, environmental impacts of such development on the sensitive ecosystem must be considered.

As such small scale tourist facilities such as bed and breakfasts, chalets and small scale motel accommodation are likely to have minimal impact on the environment if issues such as effluent disposal, water use and land clearing are considered in a sustainable manner.

As such the following strategy is proposed.

Recommendations

Recommendation Nine

The City of Mandurah and the Shire of Waroona prepare a tourist development policy that outlines the areas of permitted tourist accommodation and the assessment criteria that require compliance, including:

- ***Water efficient usage on site;***
- ***Effluent disposal to be contained on site and alternative sewer treatment devices such as ATUs be utilised to avoid leaching of effluent into the ground water system;***
- ***Land clearing to be avoided where possible;***
- ***No tourist development on Vasse Soils;***
- ***A visual impact statement to be prepared by developers to detail any possible impact on the visual amenity of the locality; and***
- ***No tourist development within 150 metres of the Lake Clifton foreshore.***



LAKE CLIFTON / HERRON STRUCTURE PLAN
STRUCTURE PLAN REPORT
FINAL JANUARY 2010

PART 4 IMPLEMENTATION

The Lake Clifton-Herron Structure Plan has been adopted as a Local Planning Policy by the City of Mandurah and the Shire of Waroona to provide an overall framework/position statement for the development of the Lake Clifton and Herron localities.

As per the Local Planning Policy adoption process specified in the City of Mandurah and Shire of Waroona's Town Planning Schemes, a draft Structure Plan was prepared and subsequently adopted as a draft Local Planning Policy for advertising purposes by the City of Mandurah and the Shire of Waroona in February 2005.

The draft Structure Plan was advertised in accordance with the requirements of the respective Town Planning Schemes for the adoption of a Local Planning Policy. At the close of the advertising period, 53 submissions were received from the public, government departments and servicing authorities.

All submissions received during the advertising period were the subject of review by officers from the City of Mandurah and the Shire of Waroona, and as a result a modified Structure Plan was prepared for consideration of final adoption as a Local Planning Policy by the City of Mandurah and the Shire of Waroona.

In this regard, the Lake Clifton-Herron Structure Plan was adopted by the City of Mandurah at its Ordinary Council Meeting on 21 March 2006 and the Shire of Waroona at its Ordinary Council Meeting on 28 February 2006.

Notwithstanding the above, the Structure Plan also makes the following recommendations in regard to future development of the Study Area:

Recommendations

Recommendation Ten

The Environmental Protection Authority Guidance Statement No 28 "Protection of the Lake Clifton Catchment" be incorporated into the Shire of Waroona Town Planning Scheme No 7.

Recommendation Eleven

The Old Lake Clifton Townsite be left undeveloped and the land incorporated into the Yalgorup National Park to ensure the protection of the stated vegetation community. This matter is to be undertaken Department of Conservation and Land Management, the Shire of Waroona and the Department of Land Information.

Recommendation Twelve

The City of Mandurah and Shire of Waroona where appropriate incorporate the given public open space portions of Lots 305, 479, 437, 1496 and 57 into the appropriate reserve system as per the Peel Region Scheme, Town Planning Scheme or as recommended in the 2004–2009 Management Plan for Island Point to Kooljerrenup.

Recommendation Thirteen

The City of Mandurah and Shire of Waroona encourage landowners in parkland areas to undertake planting of Tuart trees outside of the area of the building envelope to maintain the local tuart population and visual aesthetics of the study area.

Recommendation Fourteen

Developers undertake an indigenous cultural heritage study before lodgement of subdivision or rezoning to determine whether there are any significant Aboriginal Heritage issues as the per the Aboriginal Heritage Act.

Recommendation Fifteen

The City of Mandurah and the Shire of Waroona lobby Transwa to improve the bus service, in terms of co-ordinating trips, to cater for the residents of Lake Clifton and Herron.

Recommendation Sixteen

The City of Mandurah and the Shire of Waroona lobby CALM to implement the recreational pursuit proposals contained in the Yalgorup National Park Management Plan 1995-2005.

Recommendation Seventeen

The City of Mandurah and the Shire of Waroona promote the establishment of a "Friends Of" Group in the Lake Clifton-Herron area.