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Boddington-Ranford Townsite Strategy

April 2010

Prepared by GHD Pty Ltd and the
Shire of Boddington

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1. Introduction

1.1 Background

Boddington is situated 130 km south east of Perth, an hour's drive from Mandurah and has an estimated population of 1,700 people as at June 2007.

Industry is dominated by mining, with the Boddington Bauxite Mine (Worsley Alumina) and re-development of the Boddington Gold Mine (Newmont Boddington Gold) operations in the area. Other industry includes agriculture, jarrah forest harvesting, blue gum and pine plantations and orchards.

The development of the Boddington Gold Mine (BGM) will bring significant change to the local government areas of Boddington, Wandering, Murray and Williams. Production recently commenced with the BGM estimated to have an operational mine life of 20+ years. The workforce peaked at approximately 4,000 people during construction and will consist of approximately 650 permanent employees throughout the production years. Population in the Shire of Boddington is forecast to increase from around 1,700 to 3,500 within 5 - 10 years as a result of mining and mining support employment along with people moving for lifestyle reasons.

1.2 Strategy Purpose

The purpose of the Boddington-Ranford Townsite Strategy is to plan for the potential change over the next 15-20 years for these town sites and nearby areas associated with the redevelopment of the Boddington Gold Mine and to assess other emerging opportunities, including the "tree change" effect. The Strategy seeks to promote increasing sustainable development and ensure the towns grow in a timely manner. The Boddington-Ranford Townsite Strategy identifies a series of strategic 'precincts' within Boddington and Ranford requiring improvements and outlines opportunities for their enhancement and ability to accommodate future growth.

The Strategy provides a framework for future structure plans, scheme amendments (rezoning), subdivisions, development and decision making. The intention is provide a guiding document for the Council, the community, servicing agencies and other stakeholders for use in determining how the two town sites should grow and develop.

1.3 Strategy Objectives

The objectives of the Strategy are to:

- » set a clear vision for the town sites and generally assist Council and others to think strategically about the area;
- » assess opportunities and constraints;
- » assess land requirements and identify preferred locations for growth of relevant land uses (residential, commercial, industrial, conservation, recreation etc);
- » provide greater detail for guiding development/redevelopment in areas such as the Boddington Town Centre;

- » show how existing and future development can be coordinated including key roads and pedestrian/cyclist links;
- » provide a framework for scheme amendments and subdivision applications and coordinate structure plans to assist facilitating timely approvals;
- » ensure existing and required public land is identified to assist in effective management and coordination;
- » promote and support innovative and sustainable urban development;
- » provide direction to servicing agencies on the proposed location and form of development in order to assist in the timely delivery of infrastructure and services; and
- » assist Council in its budgetary and asset management planning.

1.4 Stakeholder Consultation

As part of the development of the Strategy, several rounds of consultation with community, key stakeholder and Shire representatives were undertaken.

1.4.1 Consultation One

The first round of consultation occurred over the 18th & 19th November 2008 in Boddington. The consultation involved detailed discussion in discrete groups of stakeholders over two days. The purpose of this first round of consultation was to determine overarching principles, needs and issues for the future growth of the two town sites for each stakeholder, critical infrastructure requirements or imminent upgrades and potential fatal flaws.

The following stakeholder groups were represented:

- » Boddington High School;
- » Parents & Citizens Association;
- » Youth Centre Committee;
- » Worsley;
- » Boddington Gold Mine;
- » Shire of Boddington;
- » Lions Club;
- » Various sporting clubs (Soccer Club, Golf Club, Riding Club, Tennis Club);
- » Commercial businesses (Post Office; Hardware store);
- » St Johns Ambulance;
- » State Emergency Service;
- » Bush Fire Brigades;
- » Police;
- » Boddington Hospital;
- » Home and Community Care;

- » Community Health;
- » Boddington River Action Group;
- » Friends of Reserves; and
- » Hotham LandCare.

The outcomes of this round of consultation are attached to this report at [Appendix A](#).

1.4.2 Consultation Two

A second round of stakeholder consultation was held on the 9th of December 2008 in Boddington. This round of consultation involved presenting a Preliminary Strategy, based on the outcomes of the first round of consultation, to stakeholders and community representatives. The purpose was to receive feedback on the Preliminary Strategy, both positive and negative, to feed into the preparation of the final Strategy.

All stakeholders that were invited to the first round of consultation were invited back for the second round and presentation of the Preliminary Strategy.

The outcomes of this round of consultation are attached to this report at [Appendix A](#).

1.4.3 Consultation Three

It was identified in the second round of consultation that further discussions were required regarding the Boddington Old School (BOS) and creation of a proposed Civic Precinct behind it. On 17th March 2009 GHD team members met with representatives from the BOS to further discuss the Civic Precinct concept and to present some alternative layout options.

Subsequent to this meeting, a briefing was given to the Shire Council on the preliminary Strategy to receive feedback in preparation for the final Draft Strategy documents.

1.4.4 Public Comment

Following agreement by the Council, the draft Strategy was released for community and stakeholder comment. The public comment period ran between 19 August 2009 and 23 October 2009, during which stakeholders and the public were invited to make comments on the draft Strategy for consideration.

As part of this, an information session/public meeting was held on 8th September 2009 at the Shire of Boddington offices. A presentation was given outlining the process and key initiatives outlined in the Strategy, with opportunity for questions and comments from those in attendance.

The outcomes of this round of consultation are attached to this report at [Appendix B](#).

1.5 Structure of Report

This report is separated into various sections:

Section 2 outlines the broad strategic and statutory framework within which this Strategy will sit once endorsed. The Strategy has been developed with consideration given to the components of these strategies and policies where possible.

Section 3 outlines the current situation in a range of key planning considerations for both Boddington and Ranford. It is these considerations that form the basis for the development of the strategic initiatives within this document.

Section 4 outlines the expected growth and development within the town sites in a number of key areas.

Section 5 contains a number of key strategic opportunities and directions for the two town sites that take into account the information in the previous Sections. This Section outlines the future direction of Boddington and Ranford.

Section 6 outlines an implementation pathway as a mechanism to turn the opportunities in this Strategy into reality.

2. Strategic & Statutory Framework

2.1 Shire of Boddington Local Planning Scheme No. 2

Local Planning Scheme No. 2 (LPS2) is the primary statutory control for development in the Boddington and Ranford town sites. The Shire of Boddington LPS2 covers the entire local government area. A local planning scheme (LPS) has a preliminary outlook of five years and zones and reserves land for certain purposes, in accordance with the orderly and proper planning of an area. LPS2 has been amended on a number of occasions and the Council has recently adopted Scheme Amendment No. 29 (“omnibus” amendment) to make significant changes to the LPS2 text to make it more effective and contemporary. It is expected that public comment will be invited on Amendment No. 29 early in 2010 following gaining consent to advertise from the Western Australian Planning Commission (WAPC). After this, the Council will assess submissions and determine its final position on Scheme Amendment No. 29.

A LPS is a statutory document, which has effect under the *Planning and Development Act* 2005. The Shire of Boddington and possibly the WAPC would endorse this Town Site Strategy to guide future development in the town sites and, if deemed appropriate, LPS2 can be amended to reflect the findings and recommendations of the Strategy. Alternatively, the Strategy can be used to guide the preparation of a new Local Planning Scheme No. 3 for the municipality and the review of the Local Planning Strategy.

The current land use zoning for the two town sites is shown in Figure 1.

Where there are inconsistencies between this Strategy and the LPS2, the LPS2 will prevail.

2.2 Local Planning Strategy

The current Shire of Boddington *Local Planning Strategy* (LPS) was adopted by the Council in April 2007 and endorsed in August 2007 by the WAPC. The LPS has been developed to guide land use and development within the municipality for a period of up to 15 years and provides a framework for the development of a revised Local Planning Scheme for the Shire. The LPS has divided the Shire into five precincts, with the town sites of Boddington and Ranford falling in the Upper Hotham Precinct.

As part of the Upper Hotham Precinct, the objectives relating to Boddington and Ranford town sites are:

- » To provide for urban growth and maximise the use of existing services and infrastructure associated with the Shire’s main population centre, where such growth will not restrict mining.
- » To provide opportunities for rural-residential and rural-small holding activities in areas within reasonable proximity to town in order to stimulate the use and growth of existing commercial and other facilities and to reduce possible adverse impacts of intensive subdivision within the Shire’s main rural and agricultural areas.
- » Provide opportunities for both intensive agricultural land use activities and development/facilities likely to have a tourism benefit to the town.

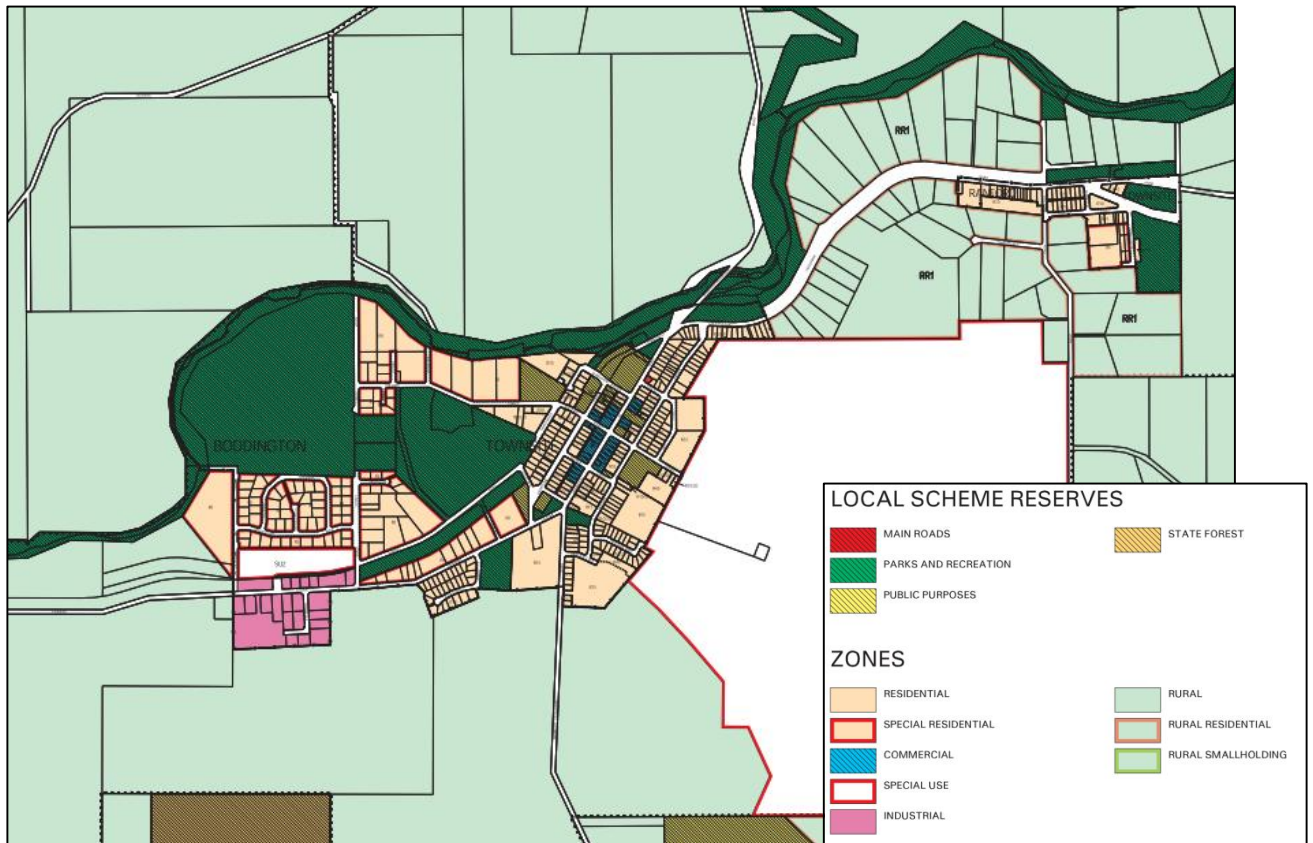


Figure 1: LPS2 Land Use Zoning

The LPS sets out various aims across the municipality. Of relevance to this Strategy are the following aims:

- » To provide the opportunity for rural living development in areas identified as being suitable.
- » To encourage a tourism industry within the Shire that promotes and is sympathetic to the natural environmental of the Shire.
- » To ensure the natural and cultural environments of the Shire are protected and that the principles of environmentally sustainable development are promoted.

The Council's endorsed Local Planning Strategy provides an effective broad strategic tool for guiding subdivision/development and addressing key planning issues. The Local Planning Strategy does not, however, go into much detail relating to the Boddington/Ranford urban area. Further, the Local Planning Strategy does not set out a "vision" for the town sites and adjacent/surrounding rural living areas and plan for change over a 15-20 year horizon. During this time, the area's population may possibly increase to around 3,000-4,000 people.

The Strategy builds on the LPS through addressing matters not previously addressed, providing increased detail and using updated information. Following a more detailed consideration of the town sites and adjoining areas, there are only changes in preferred land use for a small number of sites.

Where there are inconsistencies between this Strategy and the LPS, the LPS will prevail. The Council will require proponents, whose proposals are inconsistent with the content or intent of the Boddington-Ranford Townsite Strategy, to provide appropriate justification for the departure or inconsistency to the satisfaction of the Council.

2.3 Boddington Town Centre Design Guidelines

In adopting design guidelines for the town centre in 2007 as a formal planning policy, Council is seeking to manage the development of the town centre responsibly by balancing private and public interests in the determination of development applications. Good design and the best use of land in the study area are central to enhancing the character and viability of the town centre. Therefore Council's objectives in relation to these Design Guidelines are:

- » To provide a framework of criteria that will assist Council to assess the merit of the design of development applications in the town centre.
- » To ensure development is appropriate to the character of the town and in the best interests of the Boddington community in regard to the future of the town centre.

All development applications in the town centre are assessed against the following design criteria that collectively contribute to achieving these objectives:

- » Building Aesthetic
- » Mass and Scale
- » Building Materials, Colours and Textures
- » Landscaping
- » Signage
- » Car Parking and Vehicle Management
- » Environmental Comfort
- » Heritage
- » Drainage
- » Contributions

The character of Boddington can be defined through a suite of attributes that when articulated as guidelines, become the measure against which all development applications should be tested. If the development application is considered as successful in achieving parity or improving on the amenity of the place, then Boddington will gain a community asset as well as a viable private development that can contribute to the vitality of the town.

This Strategy has been developed to complement the Design Guidelines.

2.4 Shire of Boddington Floodplain Management Study

The Council endorsed the Shire of Boddington Floodplain Management Study on 11 August 2009 and adopted Planning Policy No. 6 Development in Flood Affected Areas on 24 February 2009.

Sinclair Knight Merz (SKM) submitted the *draft Shire of Boddington Floodplain Management Study* to the Shire in November 2008 which incorporated the Flood Modelling Report and the Floodplain Management Strategy. The Council endorsed the public release of the Study at its meeting on the 2nd December 2008 for an eight week period to obtain community and stakeholder comment. The Council, at its meeting on 24th February 2009, considered an interim

report and resolved to seek advice from SKM and the Department of Water on various matters. The four objectives of the study are to:

- » Limit the impacts of existing flooding problems on the wellbeing of individuals to acceptable levels;
- » Limit the property impacts of existing flooding problems to acceptable levels;
- » Preserve, and enhance where possible, the natural functions of the floodplain to convey flood waters and /or sustain dependent ecosystems; and
- » Encourage the compatible planning and use of floodplains as a resource for the use of the whole community

Using the 100 year average recurrence interval (ARI) flood event, it was found that a number of 'breakouts' onto the floodplain would be activated (see [Appendix C](#)). The flood hazard assessment found that provisions are needed in future structure planning for floodplain management.

The main outcomes and recommendations of the Study are:

- » continued monitoring of storm flow events;
- » emergency planning to provide an evacuation strategy for residents in the event of a flood emergency;
- » filling the floodplain to be limited to the areas of flood fringe;
- » building controls to ensure future developments have adequate flood protection from the 100 year ARI flood event;
- » elevation of critical evacuation infrastructure and major arterial roads; and
- » assessment of development to be undertaken on a regional scale rather than in isolated pockets.

The outcome of this work has informed this Strategy.

2.5 Bannister Road Upgrade Study

An upgrade study of Bannister Road was completed in September 2008 for the Shire of Boddington in response to the projected growth in truck movements related to the expansion of the Worsley bauxite mine and the Boddington Gold Mine. The requirements of the study were to consider methods of improving the safety and appearance of Bannister Road, particularly either end which are the main entrances to town. Advice on the public utilities along the road was also sought.

After considering the safety, appearance and public facilities a number of recommendations were made, of which the most relevant to this Strategy are:

- » Installation of parking regulation signs;
- » Improvements in streetscape and pedestrian/cyclist facilities;
- » Formalisation of side street parking;
- » Realignment of some intersections;

- » Converting Bannister Road to underground power;
- » Clearly defining entry points;
- » Creating tourist nodes that can be visually identified;
- » Creating a 'green' aesthetic within the town centre; and
- » General improvements in signage, tables/seating and street art.

2.6 Peel Region Infrastructure Plan

The *Peel Region Infrastructure Plan* was developed in October 2006 jointly by the Peel Economic Development Unit (PEDU), the five Local Government Authorities (LGA's) in the Region, the Peel Development Commission (PDC) and Tourism WA (Peel Region). The Peel Region Infrastructure Plan incorporates identified infrastructure development priorities across the Region and promotes the most critical infrastructure projects that will:

- » Respond to the current social, economic and environmental drivers in the Region;
- » Create new opportunities and underpin the economic potential of the Region;
- » Support sustainable development principles of the Region; and
- » Link to the State Network City Plan in line with State Government priorities.

The current developments in Boddington rate a specific spotlight due to the urgent and immediate nature of the infrastructure requirements. The report indicates that from 2007 to 2010 Boddington's population will increase from 1400 to 2600, nearly doubling in a 2 year period.

The additional 1,200 people are expected as a result of the expansion of the Boddington Gold Mine and the associated industry growth to cater for the workforce. There is also a growing number of the population moving to rural areas as a result of the tree change effect. This dramatic increase in population cannot be catered for with the Shires existing infrastructure.

Due to the delay in the opening of the mine, implications arising from the global recession and delays in new lots being created, this population forecast will not be reached by 2010. The key focus should be on the timely supply of new lots and dwellings to achieve sustainable population growth.

2.7 Local Planning Policies

The Council has a number of planning policies formally adopted through requirements set out in LPS2. Policies of relevance to this Strategy are listed below:

- » Boddington Town Centre Design Guidelines;
- » Urban Drainage Contribution;
- » Rural Residential Lots and Water Supplies;
- » Developer and Subdivider Contributions;
- » Development in Flood Affected Areas;
- » Fire Protection Measures for New Development and Subdivisions; and

- » Car Parking and Vehicular Access.

2.8 State Planning Policies

2.8.1 State Planning Policy No. 2 – Environment and Natural Resource Policy

This policy defines the principles and considerations that represent good and responsible planning in terms of environment and natural resource issues. This policy is supplemented by more detailed planning policies. There are three main objectives of the policy:

- » To integrate environment and natural resource management with broader land use planning and decision-making;
- » To protect, conserve and enhance the natural environment; and
- » To promote and assist in the wise and sustainable use and management of natural resources.

The policy contains measures for a range of environmental and natural resource areas such as water resources, air quality, soil and land quality, biodiversity, agricultural land and rangelands, minerals, petroleum and basic raw materials, marine resources and aquaculture, landscapes and greenhouse gas emissions and energy efficiency.

2.8.2 State Planning Policy No. 2.5 – Agricultural and Rural Land Use Planning

According to this policy, over the past 20 years the rate of conversion of land from active agriculture to other land uses has intensified. Land degradation has also contributed to the reduction of land available for agriculture. This reduction in the amount of land available for agriculture has also occurred through changes in land values and restrictions on farming practice where non-agricultural uses have placed restrictions on traditional farming practices. Essentially the policy is aimed at the need to reinforce the long-term protection and support for agriculture.

The four key objectives of the policy are:

- » Protect agricultural land resources wherever possible by discouraging land uses unrelated to agriculture from locating on agricultural land, minimising the ad hoc fragmentation of rural land, and improving resource and investment security for agricultural and allied industry production;
- » Plan and provide for rural settlement where it can benefit and support existing communities, and have access to appropriate community services and infrastructure;
- » Minimise the potential for land use conflict by providing adequate separation distance between potential conflicting land uses, introducing management requirements that protect existing agricultural land uses, identify areas that are suitable and capable for intensive agricultural pursuits as agricultural priority areas, and avoid locating new rural settlements in areas that are likely to create conflict with established or proposed agricultural priority areas; and
- » Carefully manage natural resources by discouraging development and/or subdivision that may result in land or environmental degradation, integrating land, catchment and water

resource management requirements with land use planning controls, assisting in the wise use of resources including energy, minerals and basic raw materials, preventing land and environmental degradation during the extraction of minerals and basic raw materials, and incorporating land management standards and sequential land use change in the land use planning and development process.

2.8.3 State Planning Policy No. 3 – Urban Growth and Settlement

The overall aim of this policy is to facilitate sustainable patterns of urban growth and settlement by setting out the requirements of sustainable settlements and communities and the broad policy in accommodating growth and change. The objectives are:

- » To promote a sustainable and well planned pattern of settlement across the State, with sufficient and suitable land to provide for a wide variety of housing, employment, recreation facilities and open space..
- » To build on existing communities with established local and regional economies, concentrate investment in the improvement of services and infrastructure and enhance the quality of life in those communities.
- » To manage the growth and development of urban areas in response to the social and economic needs of the community and in recognition of relevant climatic, environmental, heritage and community values and constraints.
- » To promote the development of a sustainable and liveable neighbourhood form which reduces energy, water and travel demand whilst ensuring safe and convenient access to employment and services by all modes, provides choice and affordability of housing and creates an identifiable sense of place for each community.
- » To coordinate new development with the efficient, economic and timely provision of infrastructure and services.

SPP 3 indicates that land between towns and cities in the South West will be conserved in rural use for agricultural production or landscape, conservation and lifestyle purposes.

Managing rural residential growth is dealt with specifically in the policy and is identified as an important component of the settlement pattern in rural areas. Negative impacts that need to be managed include potential conflicts with other land uses and rural resources, such as water catchments, basic raw materials, conservation areas and important landscapes. Rural living development can also limit opportunities for future urban development by fragmenting land around towns and cities.

2.9 Implications for Strategy

The above mentioned strategic and statutory framework provides a sound basis for the Strategy and has guided its preparation and content. The Council is also mindful that State Government agencies, servicing bodies, various community groups and private sector organisations have a variety of strategic documents, business plans, policies, strategies and action plans that can influence development, investment, the provision of services and other matters within the municipality. Through the endorsement of the Strategy, the Council seeks to set out its vision and associated intentions for the development of the towns. The Council seeks

to work in partnership, wherever possible and practical, to achieve effective implementation of the Council's vision for the town sites and surrounding areas.

3. Planning Considerations

3.1 Mining

3.1.1 Boddington Gold Mine

The development and subsequent re-opening of the Boddington Gold Mine (BGM) is expected to bring about significant change to not just the Shire of Boddington, but also the surrounding Shires of Wandering, Murray and Williams. Production at the BGM recently commenced. Newmont (operators of BGM) have prepared a 20 year plan for the mine, a substantially longer period than the 5 years that is considered typical of gold mines. This indicates the significance of the size of the ore deposit. The length of the forward planning indicates that the BGM could have a life span past 20 years.

The permanent number of employees required for the operation of the mine production is approximately 650. Newmont currently have an Occupational Health and Safety policy requirement for all employees working 12 hour shifts that they should not to travel more than 50 km to their accommodation after their shift. This policy has the potential to be very significant in influencing the demand for housing and other uses in Boddington and Ranford. However, the enforcement of the policy remains unclear and would require further direct discussion between the Shire and Newmont. Newmont also have a target of 65% of their workforce to live locally within a 50 km radius of the BGM and this is supported by the Council which seeks to encourage workers to live within the Shire of Boddington outside of the BGM camp. To encourage employees to live locally, a subsidy is offered to employees who live within the 50 km radius. This target has not been entirely successful to date due to the shortage of accommodation within Boddington (and subsequent real estate values) and the proximity of both Perth and Mandurah.

The Department of Mines and Petroleum calculates that for every one mining job, 1.7 'flow on' jobs are created for local economies. Using this calculation, it is estimated that the BGM will be responsible for generating approx 1140 new 'flow on' jobs. Whilst this figure represents a State average, it is understood that flow on jobs for the BGM could occur in the Perth Metropolitan Region and the wider Peel region. It is therefore assumed at this stage that only 50% of the flow on jobs would require to be accommodated within the Shire of Boddington, which would at best provide 500 - 600 local jobs. The types of jobs generated would be electrical services, metal fabrication and maintenance of processing equipment along with jobs in non-mining areas. The implications of local job creation are widespread including increased demand for housing, commercial and industrial land along with increased and enhanced facilities and services.

It has been anticipated that on average there would be 20 truck movements a day through the Boddington Townsite generated during the production phase of the BGM. No final scheduling has been completed as yet; however Newmont have expressed a commitment to avoiding the peak school periods in the morning and afternoon.

3.1.2 Worsley Bauxite Mine

The identified bauxite deposit currently being mined by Worsley stretches all the way to Brookton and future expansion of the Worsley mine is currently being planned. It is envisaged that this expansion would involve approximately 400-500 additional construction workers. This will result in using the existing BGM construction camp.

There is currently a 1200m buffer surrounding identified bauxite deposits that affects the south western portion of the Boddington town site, including land to the south of the golf course and town oval and land to the west of Pinjarra-Williams Rd (see [Appendix D](#)). The Council's influence over further subdivision or control over development of this land, unless the land was zoned for the proposed use before the adoption of the LPS, should be continued.

3.1.3 Department of Mines and Petroleum

Following a request by the Council, the Department of Mines and Petroleum recently advised the Shire (see [Appendix E](#)) that the vast majority of the area covered by the Strategy does not require further mining buffers, as set out in the endorsed Local Planning Strategy (2007), to facilitate future mining. The one exception is in the west of the Strategy area and typically west of Old Soldiers Road. This land is subject to Scheme Amendment No. 20 where a decision of the Minister for Planning is expected early in 2010. Should the Minister grant final approval to Amendment No. 20, the Council will not modify the 1200 metre bauxite mining buffer as set out in the Local Planning Strategy. However, should the Minister not support Amendment No. 20 the Strategy will be modified to reflect the mining buffer as set out in [Appendix E](#).

While noting the Department's advice in [Appendix E](#), should a site outside the 1200 metre bauxite mining buffer later be identified as having mineral resources, the Council will require proponents proposing a development or subdivision application or requesting a scheme amendment to demonstrate that the mineral resources are not a "strategic" resource (of State or regional significance) and to set out feasibility considerations to the satisfaction of the Council.

3.2 Population & Housing

3.2.1 Population

According to the Australian Bureau of Statistics' (ABS) 2006 Census, the town sites of Boddington and Ranford had a usual population of 925 residents. The Shire of Boddington had an overall population of 1,379 usual residents, which means that the two town sites represent approximately 67% of the total population for the Shire. There is a transient nature to the town's population movements due to the proximity to major centres such as Perth and Mandurah and also a high number of shift workers.

Boddington showed no growth in population from the Census in 2001 to 2006. The Shire had actually recorded a decrease in population from 1996 to 2001 of 7.6%, or 115 people.

Table 1 outlines the make up of the population of both Boddington and Ranford town sites in relation to age and sex (using ABS 2006 Census data) and it reveals an even distribution of males to females. It also shows that Boddington has a relatively young population, with 40% of

the population aged less than 30 years and 70% below 50 years of age. This is most likely due to the dominance of the mining industry in the local economy.

Table 1: Boddington/Ranford Age/Sex Characteristics

	Males	Females	Persons
0-9 years	78	77	155
10-19 years	60	68	128
20-29 years	42	45	87
30-39 years	60	70	130
40-49 years	88	72	160
50-59 years	62	64	126
60-69 years	46	36	82
70-79 years	19	24	43
80-89 years	8	6	14
90 - 99 years	0	0	0
100 years and over	0	0	0
	463	462	925

3.2.2 Housing & Accommodation

According to the ABS 2006 Census, there were 363 occupied and 80 unoccupied private dwellings (443 in total) within the Boddington and Ranford town sites. Recent subdivision and construction activity associated with the reopening of the BGM has increased this figure since 2006.

Discussions with local real estate agents revealed that there are still low vacancy levels for rental properties and limited established properties for sale, despite the impacts of the global recession and a softening of the property market generally throughout Western Australia in 2009.

Other housing and accommodation challenges include:

- » The provision of a range of lot sizes and housing types, in a timely manner, which meet the requirements of different demographics and lifestyles;
- » Feasibility issues for the extension of reticulated water, sewerage and power to various parts of Boddington and Ranford;
- » Housing affordability and pressures to construct “barn style” outbuildings as permanent dwellings and other inappropriate development forms which can detract from the appearance and amenity of the surrounding area and in-turn lead to investment confidence and lower property values;
- » Seeking higher standards of design that increasingly address environmental and climatic considerations and are compatible in a country town setting;

- » Empty blocks available for a number of years that have never been developed within the town site;
- » The Boddington Motel (12 rooms and associated ablutions) and Shire operated caravan park (34 sites) are near capacity all year round, and in the case of the caravan park measures have been taken to increase capacity on adjacent Council owned sites;
- » The Boddington Hotel received planning approval for 12 units, and is possibly looking at the refurbishment of their existing 4 units; and
- » Future residential expansion opportunities in Ranford town site are limited due to a lack of sewerage and water supply restrictions.

Scheme Amendment No. 18, gazetted in April 2009, increased residential densities for areas previously zoned R10 in the Boddington town site (outside the bauxite mining buffer) to R10/20 with the higher density subject to connection to reticulated sewerage.

3.3 Commercial Areas & Parking

3.3.1 Commercial Areas

Currently, commercial development within the municipality is largely confined to the Boddington town centre. There is no commercial establishment at Ranford.

To accommodate anticipated population growth, there is a need to clearly identify areas of expansion for businesses in or adjoining the Boddington town centre taking into account vacant blocks available in suitable locations. Large commercial sites for uses such as a service station could be better utilised through bigger, more iconic buildings to reinforce the town centre characteristics.

The Old School buildings are currently utilised for community and incidental commercial uses. Sub-leases to commercial entities are not permitted given it is inconsistent with the purpose of Reserve 17488 for 'Community Purposes' and as set out in the lease agreement. The Council considers there are opportunities to relocate to a site behind the Old School near the river bank, outside of the 100 year ARI floodplain.



Possible location of new Council Administration Centre



3.3.2 Parking

On site parking provision for commercial businesses in the town centre area are historically not very well utilised and as a consequence the demand for on street parking along Bannister Road has exceeded the available spaces. This can cause congestion during peak times before and after school hours. For example, the Boddington Hotel has its own car park but some of its patrons park on the main street instead. Another issue associated with street parking is the need for protection of driveway accesses.

It is understood that a considerable number of the residents from Ranford take care of their conveniences needs (i.e. post office, visiting the Shire office, shopping) when picking up their children from school in the afternoon, impacting on traffic and parking in Boddington.

The Council has recently constructed new public parking in Bannister Road.

The Council will monitor the use and availability of parking within the Boddington town centre and other locations. If considered appropriate, cost effective and there are appropriate Shire resources, the Council may in time examine timed parking (or even paid parking) in key areas of the Boddington town centre.

3.4 Education

The Boddington District High School currently has 320 students enrolled from Kindergarten to Year 12 (Years 11 & 12 are vocational) and has the capacity to accommodate an additional 150-200 students. Tertiary Entrance Exam (TEE) subjects are not currently offered at the school. The Department of Education has a plan to construct a teaching block plus possible transportable classrooms along the eastern edge of the school.

Other considerations in relation to the school include:

- » The current car parking operation at the school is ineffective, with bus, car and pedestrian movements all occurring at once, in the morning and afternoon;
- » There is a possible requirement for fencing to improve security, however it is not considered desirable by the school for visual amenity reasons; and
- » The shared use of the library by the school and the community.

A Technical and Further Education (TAFE) facility, provided by the Department of Training and Workforce Development, currently operates out of the Old School and the District High School. This is due to most TAFE activities already occurring at the new school as it has the appropriate facilities. Currently TAFE offers courses in horticulture, computer based skills, home economics and arts.

There are larger TAFE campuses in surrounding areas including Peel, Rockingham, Perth and Northam that, for instance, currently meet the need for heavy diesel maintenance. A full TAFE facility in Boddington is unlikely due to the proximity of larger centres. The Council, in consultation with the community, will monitor and seek to anticipate the provision of local TAFE courses in relation to the likely growth of Boddington and Ranford. It is suggested that the range of courses and facilities offered by TAFE or other Registered Training Organisations (RTO) will need to expand to promote local educational and training opportunities.

There is no private school within the municipality.

3.5 Medical Facilities/Emergency Services

3.5.1 Medical Facilities

The Boddington Hospital currently has 16 beds, approximately 35 staff (including 12-15 medical staff) and has just completed an upgrade. The services offered include antibiotics, recovery, dressings and general health checks. The hospital has no obstetrics facilities and has no operating mortuary. The hospital can only accommodate five nursing home type patients at one time.

There are currently two doctors in the town and they are the only people allowed to admit patients to hospital. The BGM camp added approximately 2000 people to the Shire's population at the peak of construction, although the Council is advised that on-going number of people in the camp will be around 450. This in turn has significantly increased the pressure on the hospital, mainly through Accident and Emergency care.

A new Medical and Home and Community Care (HACC) Centre is under construction adjacent to the hospital, and the Department of Health has transferred approximately 4,500m² of land to the Shire for this purpose. This new centre will contain Home and Community Care, in addition to the doctors, Community Nurse, Dental and Allied Health services.

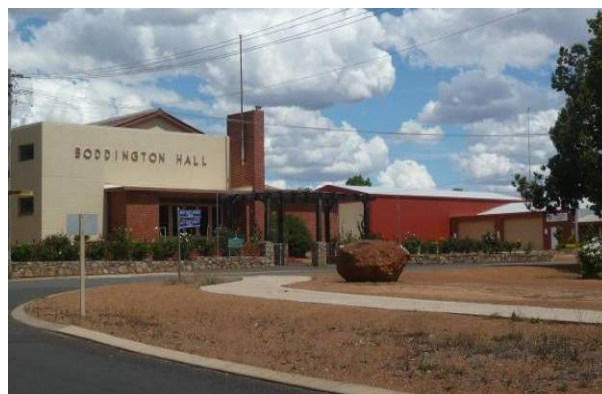
The Shire has plans for a retirement village behind the hospital and new medical/HACC centre site. This will respond to the current need for independent pensioner aged care units. The site is designed to accommodate 38 units.

3.5.2 Emergency Services

Currently the emergency services (St Johns Ambulance, Fire Brigade and State Emergency Services) are located together adjacent to the town hall building and opposite the current medical centre. It is not desirable for St Johns Ambulance to be located within 100m of the hospital as ambulances are not permitted to use sirens within this distance.

The location of the State Emergency Services (SES) adjacent to the town hall has proven to be problematic in the past with parked cars constraining the efficient movement of SES vehicles. This occurs when there is an event at the town hall and the SES vehicles need to enter or exit their facility. The SES are flexible and could move to a more user friendly location with new facilities and would consider the co-location with the other services provided that each service has a separate administration functions. This would be subject to the new site being appropriately located with easy accessibility and of a sufficient size (including the opportunity to expand over time).

Town Hall with SES shed behind (red)



The police station is on a large block with sufficient room to accommodate future expansion requirements in the Strategy timeframe. Currently the station has four officers. There would be a need for additional officers to accommodate the future growth projected for Boddington and the surrounding area. To cater for large events (i.e. the rodeo), additional police officers are brought in from surrounding areas.

3.6 Recreation/Community Facilities

Boddington has a number of parks, ovals and areas for recreation, whereas Ranford currently has limited provision of public open space.

Planning is underway for the construction of a new recreation centre, to be located to the west of the large town oval on Club Drive (see [Appendix F](#)). The vision is to co-locate all sporting activities in a 'precinct' surrounding the new recreation centre and town ovals. The Council is currently completing a tender to engage consultants to design the new centre. There is provision for the relocation of the existing tennis courts closer to the new recreation centre and also for future expansion of the centre if and when required. There is also the possibility of relocating the swimming pool to this area.

Associated with this sporting precinct is the Riding Club, which has a large involvement in the annual Boddington Lions Rodeo. The Rodeo is the largest in the state and in 2008 over 3,500 people attended. The event involves the entire town and is considered the single most important event in Boddington during the year. In its current location east of the town oval, it is easy to walk there as well as to the rest of the town for additional events, such as the Friday Night Festival at the Old School.

There are approximately ten different sporting clubs in Boddington with combined memberships of over 500 people. Clubs include the Riding Club, Soccer Club, golf, bowling, football, tennis, cricket, badminton, basketball and netball clubs. There is a need for two rectangular pitches in the town for the Soccer Club as currently the club plays in Mandurah, as teams have not played in Boddington for five years. In addition, the current change room facilities near the ovals are in urgent need of upgrading.

The Hotham River, including the Hotham Pool, is an important recreational asset for Boddington and Ranford. Recreational activities include kayaking, canoeing, fishing, swimming and opportunities to gather to play and meet.

Ranford Pool has been identified as a popular reserve that is used as an alternative swimming location on the Hotham River. The facilities here are in need of upgrading to provide a more family friendly reserve, including picnic areas, shelters, BBQs and upgraded access to the river. Some recent improvements have been made at the Ranford Pool reserve, which include the erection of a shelter and picnic table along with an extensive re-vegetation program along the river banks.



Ranford Pool reserve



There is currently a small network of walking trails located along the river banks between Boddington and Ranford town sites. These are in need of upgrading as the current shared path is not wide enough to accommodate all users and can sometimes be used by horse riders. Plans for the establishment of two temporary 40 km riding trails around the BGM and Worsley mine sites should assist in alleviating this situation. There are opportunities to utilise the former railway reserve for recreation, although on-going maintenance and management needs careful consideration.

A youth centre function is currently operated out of the Old School on Tuesday and Friday nights where young people can relax, watch DVDs and TV, play pool and air hockey. Every few months there is a Blue Light Disco, with one starting early for younger children and one starting later in the evening for older children. There are also dance and drama courses held in association with the youth centre. The Office of Crime Protection is satisfied with the current levels of activities available for the youth of Boddington.

Boddington has one occasional child care centre and one child care centre run by a not-for-profit group, which is based in a building owned by Worsley Property Trust, and it is only open between 9 am and 3 pm. The Shire is investigating the location for another child care centre to the east of the school buildings on land vested with the Shire.

3.7 Natural Environment

3.7.1 Flooding

The adopted Shire of Boddington Floodplain Management Study indicates that the majority of the Boddington town site would not be affected by a 100 Year ARI flood event. The immediate river bank areas would be affected, along with the northern portion of the golf course and small areas of land adjacent to a creek near Hakea Road. Towards Ranford Townsite, the flooding of the river banks would be more extensive and a small island of land around the Ranford Pool area would be cut by flood waters of between 0.25m and 0.5m (see [Appendix G](#)).

There are also several areas where flood waters would affect road access to and from the main Boddington town site. Pollard Street west of the intersection with Hakea Road would be cut off from the Townsite by floodwaters of up to 2.7m in depth in a 100 year ARI flood event. In addition, Farmers Avenue west of the intersection with Station Street would also be cut off from the town site by floodwaters of up to 1.5m in depth. This would effectively cut off the entire precinct west of Hakea Road and Station Street (including the school, golf course, ovals, and the residential and industrial areas) from the town site during a major flood event, including and

Bannister Road and Bannister-Marradong Road (see [Appendix G](#)). Bannister-Marradong Road would have minor flows of less than 0.25m in depth across it, approximately 800m south of the intersection with Bannister Road/Farmers Avenue.



Potential flooding area on Pollard Street



The Shire of Boddington's Planning Policy 6 – Development in Flood Affected Areas prohibits and/or restricts further development and subdivision within the identified floodway subject to exceptions. Development and subdivision within the flood fringe is subject to strict flood management conditions.

The Council will apply the following approach to the management and tenure of the floodway:

- » Should the subdivision application be within or near the Boddington and Ranford town sites, in the opinion of Council, the Council may recommend to the WAPC that the floodway be ceded to the Crown for conservation/drainage purposes free of cost. This will typically be requested if the subdivision application proposes residential lots and may include where the subdivision application proposes rural residential, tourist, commercial, industrial or possibly rural small holding uses. The condition will be requested to progressively improve community access to the foreshore and/or assist in conservation initiatives in the opinion of Council;
- » Rural small holding subdivisions will be assessed on their merits, although public access may be secured such as through an easement in favour of the Shire of Boddington or a public access way; and
- » The Council will typically not seek to have the floodway portions of rural lots ceded to the Crown (generally this land will continue to be privately owned and managed) unless there is an overriding public benefit in the opinion of Council.

The Council may recommend to the WAPC that a condition be imposed regarding the preparation and implementation of a Foreshore Management Plan or other required strategy.

Development affected by the 'Known Flood Risk (Further Investigation)' areas, shown on the Strategy Plan and on other plans in this report, may require detailed flood risk analysis before any approvals are given.

3.7.2 Contaminated Sites

A search of the Department of Environment and Conservation's (DEC) Contaminated Sites database revealed no contaminated sites in or near Boddington and Ranford. While noting this, the Council recognises that redevelopment and/or development of some sites may require the applicant to appropriate remediate contamination from previous or past activities.

3.7.3 Declared Rare Flora & Fauna

Information supplied by DEC indicates that there are three instances of Declared Rare & Priority Flora within the Boddington town site. There is Priority 3 and 4 flora located along the river bank to the north of the school, and Priority 2 flora located on the northern edge of Farmers Reserve. A spring survey of these areas will be required before any development can take place. This applies more to the Priority 3 & 4 flora north of the school, as this area is currently subject to a scheme amendment application.

Information supplied by DEC indicates that there are also three instances of declared rare fauna in the study area. There are two 'Vulnerable' recordings within Boddington, one to the north of Farmer's Reserve and another to the north of the school. The third is a Priority 4 recording to the south of the Ranford town site. A comprehensive survey of these areas should be undertaken before any future development/construction takes place.

3.7.4 Other

Due to the construction of the Boddington Weir, there has been significant build up of silt in the river at Hotham Pool. Anecdotal evidence suggests that this build up effects the quality of the location for swimming and kayaking, resulting in the increased usage of Ranford Pool.

Hotham Pool



Some activities in Halfway Gully (a waterway which is partially within a Parks and Recreation reserve immediately to the east of Ranford town site) have degraded the quality of the natural environment on the reserve. The Council will seek to ensure that the reserve is appropriately managed with the support of local groups, the community and landowners. Both town sites are subject to weed invasion. Currently spraying is focussed on the old railway reserve.

There is a Public Drinking Water Source Area (PDWSA) to the south of the Townsite, immediately adjacent to the southern boundary of Lot 8016. It is currently rated as 'Unallocated', meaning that the PDWSA has not yet been assigned a Priority status (either Priority 1, 2 or 3) by the Department of Water (DoW). If any development proposal falls either

completely or partially within the PDWSA, the PDWSA will need to be allocated a Priority status, following guidelines set by DoW (see [Appendix H](#)).

3.8 Heritage

3.8.1 Aboriginal Heritage

Analysis of the Department of Indigenous Affairs Registered Aboriginal Sites dataset revealed that there are numerous Aboriginal sites identified within the study area (see [Appendix D](#)). There is one 'Permanent' site which is 'Farmers Avenue' (artefacts), just to the north of the existing industrial area on Farmers Avenue. There are four 'Lodged' sites in Boddington and Ranford (identified as ceremonial, history, or artefacts), subject to further assessment. There are six 'Stored' sites (all artefacts) and one site deemed 'Insufficient Information' (Old Soldiers Road 1), identified as artefacts and quarry.

Any proposed ground disturbance on or near these sites may be subject to an independent ethnographic assessment and/or a full Section 18 Ministerial clearance under the *Aboriginal Heritage Act 1972*. The triggers for these depend on the nature of the site and surrounding area of influence.

3.8.2 European Heritage

The local Heritage List contains two entries within the town sites (see [Appendix D](#)):

- » Boddington Hotel; and the
- » Old Road Board Offices.

Old Road Board



There is also a separate Municipal Inventory, created in 2000, that lists a further 42 entries of heritage significance (see [Appendix I](#)). As this Municipal Inventory was last updated in 2000, the Shire will undertake an analysis and update of the list of properties on the list.

Under the Local Planning Scheme, any proposed development that will affect the external character of the building, as well as the building itself may be referred to the Heritage Council of WA whilst any application is being determined by Council. Council may also require a heritage assessment to be carried out prior to any planning approval.

3.9 Tourism

Boddington is situated in a rolling landscape on the banks of the Hotham River and is only an hour's drive from Armadale and Mandurah. There are also convenient links with Dwellingup, and Pinjarra, ensuring that Boddington is an attractive destination for a one-day scenic drive and also day trips out of Boddington. About half of the Shire of Boddington is State Forest and ideal for camping, hiking, picnics, bird-watching and wildflowers in the Spring.

Boddington is also in close proximity to the historic Marradong Church, St Boniface Church and Old Quindanning Inn. Other attractions include the Bibbulmun Track, that passes through the Shire, and the Boddington Gold Mine viewing platform. Key events in Boddington include the Boddington Community Markets and Auctions and the annual Lions Club Rodeo and associated Rodeo Festival.

Information from Tourism WA and the Peel Development Commission indicates that there were on average 1.8 million day trips to the Peel Region during 2005 and 2006. There were also 454,000 overnight visitors during the same period.

While noting the above tourism assets and level of tourist activity in the Peel Region (largely focused at Mandurah and near the coast), the Council recognises that tourism is not well developed in Boddington and Ranford. The Council supports a growing tourism industry which includes the growth or establishment of new tourist accommodation, facilities and support services such as food establishments, wineries, art and craft galleries. The Council appreciates that successful tourism is based on multiple interrelated considerations that will require a partnership approach with tourist operators, businesses, education and training providers, the community and other stakeholders.

The Council will seek to influence the development of the town sites so they are increasingly places that people want to live, work, invest and visit. In time, the Council seeks to assist the local tourism industry being an important contributor to local employment creation and generating important income for the area.

The opportunities to attract and retain visitors locally is based predominately on natural features and attractions. The preservation and enhancement of the natural landscape as well as access to showcase the landscape is essential. Accordingly, the Council will require tourism development and its design to be sympathetic to the local environment and setting. Experiences that allow visitors to immerse themselves in the natural experience are encouraged, such as walking/biking trail enhancement and expansion, and development of sustainable nature based accommodation experiences.

There are also a number of opportunities to promote the historical activities and the built features of the district. The Council supports the development of mining tourism (including tours and the establishment of a mining visitor centre), the extension of a tourist railway along with innovative tourist activities such as an open zoo.

3.10 Industrial Land

Boddington currently has one industrial area on Farmers Avenue/Assay Terrace to the west of Boddington. This industrial land is nearing capacity and will be complemented by the release of five additional lots in early 2010. Further, the expansion of the existing industrial land is

problematic due to the topography of the area and mining activities in the area in the coming years.

The Local Planning Strategy identifies a new industrial area adjacent to the waste water treatment ponds on Gold Mine Road (approximately 20 lots). This proposal is subject to Scheme Amendment No. 21. Should the Minister approve the amendment, other necessary approvals are obtained and the subdivision implemented, it is anticipated that the new industrial area will be used for light industry, general industry and storage areas with heavy manufacturing to be done in Perth or in other locations.

The Local Planning Strategy also identifies the BGM camp as a "Possible Long-Term Industry Expansion Area". While the BGM camp is likely to remain during the timeframe of the Strategy, the Council continues to support this site being examined for industry following the closing of the BGM camp. Accordingly, the Strategy shows the site as "Future Industry".

The Shire's existing depot site is not big enough for their future needs. The Council has agreed to the relocation of the Shire depot to a site in Assay Terrace. It is expected that development of the new depot site will commence in 2011. This leaves the existing Shire depot site to be potentially made available to the State Emergency Services to relocate from the Boddington town centre.

3.11 Services

3.11.1 Water Supply

The Water Corporation have indicated that an upgrade of the water supply for Boddington and Ranford will occur in two stages:

1. A new 2 ML tank has already been installed;
2. The duplication of the main branch to Boddington from the Harris River Dam to Williams main line.

The limitation of the reticulated water supply to Boddington from the main supply tanks (a length of 2.8 km) could impact on land development. The Water Corporation could seek pre-funding from developers (including BGM) for their developments; however they are endeavouring to bring forward the planned upgrade from 2011/2012.

The water supply in Ranford needs upgrading before any subdivision takes place (which is required to provide reticulated water based on a subdivision condition imposed by the WAPC), possibly all the way through to Wandering. In addition, there are currently restrictions placed by the Water Corporation on any future connections to the current water mains east of the Ranford town site.

The Council considers that the provision of an upgraded reticulated water system to supply Ranford is of critical significance to the appropriate and timely development of the area. Unless suitably addressed, the lack of an upgraded reticulated water may prevent subdivision/development, delay the creation of new lots for many years or result in a more inefficient use of land (such as proponents seeking to gain WAPC support for rural residential lots without the provision of reticulated water). Given Ranford is proposed to expand considerably, as set out in the endorsed Local Planning Strategy and again set out in this Strategy, the Council considers

the State Government has a responsibility to provide essential infrastructure (such as mains pipes with appropriate capacity and pressure) ideally within the development “footprint” as set out in the Local Planning Strategy and certainly within gazetted town sites.

For most subdivisions/developments anticipated in Ranford, it is not feasible to provide a new water main between Boddington and Ranford and there are practical implications of seeking a partnership with multiple landowners. Therefore, most developers are looking to other developers to meet the initial costs.

A contributory development scheme has been previously proposed in Ranford but rejected given there were many landowners not in support, concern with the timing to receive a portion of financial contributions back to subdividers/developers.

In contrast, the Council considers that Water Corporation (possibly with a Community Service Obligation supported by State Treasury) is best placed to provide an upgraded reticulated water supply “upfront” planned to accommodate projected/approved subdivisions and developments and absorb reasonable risks. In time, Water Corporation/the State Government would be refunded as new connections occur and additional charges apply.

Based on the above, the Council has separately resolved to seek the Corporation’s design and financial assistance to provide an upgraded reticulated water supply in Ranford, delivered in the short term, to enable development and subdivision to occur in accordance with the endorsed Shire of Boddington Local Planning Strategy.

The town ovals are currently watered with bore water despite the water salinity being higher in some bores. There is a possibility however of using the old town water supply for the irrigation of sports grounds and local parks. For this resource to be utilised, the Shire needs to pay for the upgrade of the dam wall to reduce its potential failure. Upon the dam’s repairs, the Water Corporation will transfer the management and use of the dam to the Shire. This additional water resource would take pressure off the scheme water and bores and could be used for all municipal landscape demand within the town sites.

3.11.2 Waste Water

The Boddington waste water treatment plant (WWTP) is located to the north of the Boddington town site, on Gold Mine Road. Liaison with the Water Corporation has revealed that the WWTP has recently been upgraded and duplicated to expand capacity to accommodate the forecast future growth for the town site. The current capacity would now support 2,700 equivalent population, which based on current population forecasts would serve the town for the next 5-10 years. The WWTP attracts a 500m buffer for incompatible land uses; however this will not affect the orderly future expansion of the Boddington town site. Water Corporation also advised that there is sufficient room in the current location to expand further to accommodate the remainder of the forecast population growth.

The Water Corporation currently have an agreement with BGM for the disposal of the treated water from the WWTP. Approvals for the scheme are almost finalised and it is envisaged that there will be zero discharge from the WWTP to the environment once the scheme commences in early 2010. The Council supports the treatment and effective re-use of wastewater.

Currently the majority of the Boddington town site has access to reticulated sewerage, although the feasibility of connecting to the reticulated sewerage system for smaller subdivisions/developments in some locations may not be achievable in the shorter term. The areas that do not have access are the Special Residential areas to the west of the school (partly within the bauxite mining buffer) and the industrial area, as well as Ranford town site. The lack of reticulated sewerage in these residential areas outside the mining buffer will limit further subdivision or require larger lots sizes (a minimum 2,000m² for residential lots).

There are currently no plans by the Water Corporation to extend reticulated sewerage to the Ranford town site. Any future expansion of the sewerage network to Ranford would have to be initiated by land developers, after which the Water Corporation would assess the application and determine the costs payable. The Council recognises that reticulated sewerage may not be provided to Ranford within the Strategy period. As a result, Ranford will continue to have a different character and provide different lifestyle opportunities than provided in much of the Boddington town site.

3.11.3 Power

Advice from Western Power in relation to the power supply and future forecast growth of Boddington and Ranford revealed no capacity issues. The current 22 kV distribution feeder via Boddington Substation has the capacity to cope with the forecast increased demand in the Strategy period. Western Power also noted that the distribution and transmission network that supplies Boddington town site is a 'rural' type and the reliability of the supply is significantly lower than what could be expected in an 'urban' type electricity network.

Western Power also qualified that their land development policies will apply to any new development in the town sites. Depending on the location and type of specific subdivisions, the developer may be required to fund extension of the network to supply the development.

The Council supports the development of renewable energy locally provided relevant planning considerations are suitably addressed.

3.11.4 Bushfire Hazard Assessment

In 2010, the Shire commissioned a consultant to prepare a bushfire hazard assessment for the municipality. As part of this, the investigations will identify bushfire prone areas as set out in the Australian Standard 3959 and in the Building Code of Australia.

The bushfire hazard assessment and associated mapping will assist:

- » to better manage risks and address liabilities;
- » in the implementation of this Strategy and associated structure planning and scheme amendment requests;
- » to assist the Council and the Shire administration in the assessment of Planning Applications and Building Licences;
- » the Council undertake its statutory responsibilities; and
- » to implement Council's adopted Planning Policy No. 8 – Fire Protection Measures for New Development and Subdivisions.

The Council endorses a precautionary approach to fire risks. The Council will seek to control the location of development and use of land to avoid placing inappropriate developments in areas that have higher fire risks. The Council will consider fire hazard in the context of other considerations such as environmental impact, vegetation retention and landscape protection.

The Council does not support proposals in areas classified as “extreme” fire risk without permanent and realistic hazard level reduction measures being implemented, that can be sustained in the opinion of Council to reduce the hazard level to high, medium or low.

More intensive land use and development should only take place in areas where the performance criteria and acceptable solutions set out in Planning for Bush Fire Protection document can be achieved.

The bushfire hazard assessment will seek to ensure that future development is appropriately located that takes account of fire risk.

3.12 Possible Bypass for Boddington

The Council would prefer to see heavy haulage vehicles reduced or even removed from the Boddington town centre to make the area safer, increase amenity and add to its attractiveness. To achieve this, a Boddington bypass would need to be developed.

The Boddington Gold Mine is located on the northern side of the Hotham River (north-west of the Boddington townsite) and many heavy haulage vehicles are accessing the Bunbury port and other locations south of Boddington. For much of the Strategy timeframe, it is anticipated that Worsley will be mining south of the Hotham River. While noting this, heavy haulage vehicles will access the mining operations from the Bannister-Marradong Road and pass through the Boddington town centre. In time, Worsley will mine north of the Hotham River. In addition to mining operations, heavy haulage vehicles also pass through the Boddington town centre associated with agriculture, forestry, construction and for other purposes.

The Council will progress negotiations with the Boddington Gold Mine to investigate upgrading the access link directly between the Boddington Gold Mine and the Pinjarra-Williams Road. Such option, if developed, would result in time savings to access the Bunbury port.

In terms of a possible bypass closer to Boddington, the Council considers that a bypass is unlikely to be developed in the foreseeable future given the challenges of topography, existing development, environmental assets, river crossings and funding. The Council does however support assisting Main Roads Western Australia, the mining companies and others in contributing to a more detailed investigation of cost-benefits of establishing a bypass as opposed to a continuation of heavy haulage traffic through the Boddington town centre.

A possible longer term alignment for a Boddington Bypass could make use of Gold Mine Road, Old Soldiers Road and Robbins Road and/or access roads established by Worsley. This option could only be implemented following the completion of bauxite mining south of the Hotham River in the vicinity of Robbins Road.

3.13 Employment

The Council supports local job creation and a diversified local economy. Where possible, taking account of environmental and social considerations, opportunities for value adding should be explored. There are opportunities for considerable creativity and innovation. This is expected to include ecotourism, “green jobs”, the possible development of a visitor centre that promotes indigenous culture etc. In addition to promoting education and training being provided locally, there are opportunities to build “social capital” which can bring widespread benefits to the Boddington-Ranford communities.

3.14 Implications for Strategy

The Council seeks the State Government taking a leadership position on funding infrastructure headworks to promote planned development where consistent with the endorsed Shire of Boddington Local Planning Strategy and where complemented by this Strategy. Current servicing agency practice requires that private developers pre-fund major infrastructure works and may get reimbursed as and when other developments utilise this infrastructure. As a result, with the tightening of available finance, development is not occurring as it would otherwise.

The Council seeks to ensure that essential infrastructure is appropriately maintained and expanded to accommodate timely growth and development of Boddington and Ranford. The Council considers that the timely provision of infrastructure should recognise the significance that mining and other industries, within the municipality, contribute to the Western Australian and Australian economies. The Council will continue to support the establishment of essential services prior to development through State Government funding to promote development in areas identified for future development. Expenses would be recouped as and when developers connect to the infrastructure.

This Strategy seeks to provide clear direction for servicing authorities and other stakeholders as to the location and form of development to assist in the planning and delivering of infrastructure and services by other agencies.

4. Expected Growth & Development

4.1 Growth Projections

4.1.1 Population

With the re-opening of the BGM and Worsley expansion, the district population is forecast to increase to 2,100 within five years and 3,600 by 2031. These projections point towards steady medium to long term growth. These projections are subject to local supply issues however and the availability of additional lots of 2000m² – 1 ha in the next 3-4 years may facilitate population increases on top of that projected.

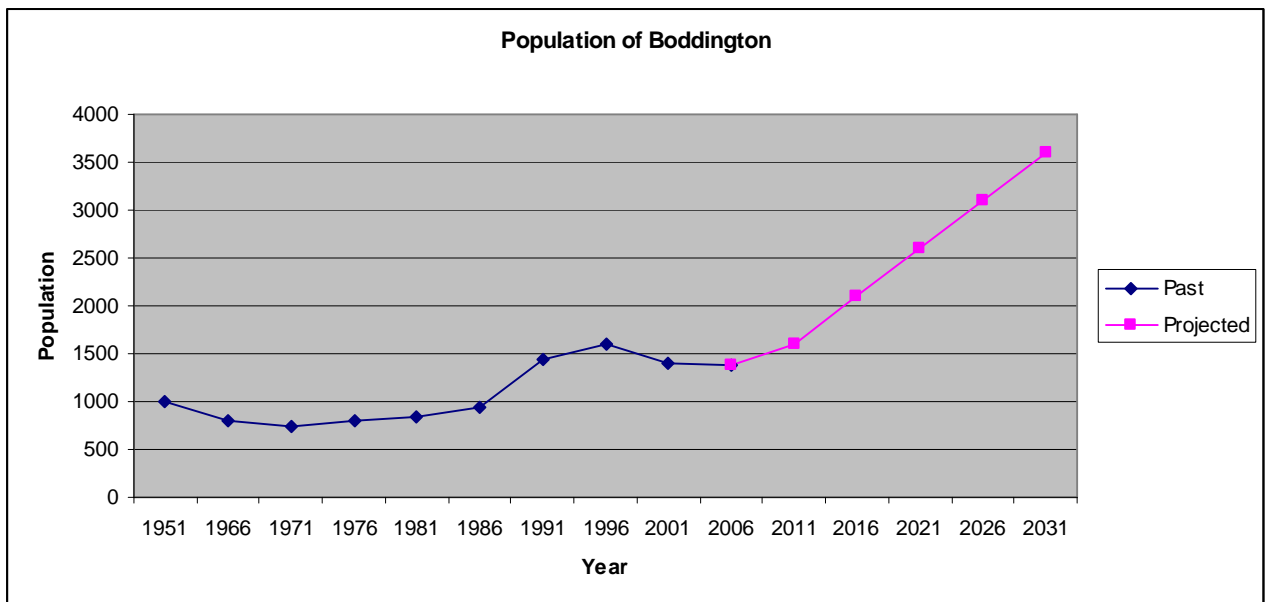


Figure 2: Forecast Population Growth

According to the ABS 2006 Census data, just over 60% of the total number of households in Boddington and Ranford have children. This is reflected in the data in Table 1, which indicates that 30% of the entire population of the two towns are less than 20 years of age. This distribution places pressure on facilities for young people and is likely to grow with the forecast increased population as Boddington develops economically and as a lifestyle destination.

4.1.2 Housing

There are currently as many as ten scheme amendment/subdivision applications before Council for residential/rural residential developments (see [Appendix J](#)). Five of these are sufficiently progressed in subdivision design to indicate that just over 1,000 residential lots will be available upon approval of these applications.

Boddington and Ranford town sites currently have approximately 2.1 people per dwelling according to the 2006 Census data. Using this figure, approximately 2,730 additional people can be accommodated by the 1,300 residential lots currently progressed to subdivision design

level (see Table 2). Based on population forecasts, this capacity would serve the two town sites through to 2031.

Table 2: Dwelling Forecast

	Dwellings	Population (2.1/dwelling)
Current (2006 Census)	443	925
Designed Subdivision Capacity (approx)	1300	2730
Total	1743	3655

It is estimated that the remaining land identified in the LPS for rural residential and rural small holdings could accommodate approximately a further 850 dwellings, or an additional population of 1700 people. The complete development of all of these areas could result in Boddington and Ranford having a population of approximately 5300 people.

It must be noted however, that even with mining commencing and its associated effects on population figures and lot demand, the Council does not support residential, rural residential and rural small holding scheme amendments, subdivision/development outside of the development footprint set out in the Local Planning Strategy being re-zoned until a realistic demand is identified. This position is set out in Planning Policy No. 10 Boddington-Ranford Townsite Strategy.

4.1.3 Accommodation

The Council recognises there will be a need for a wider range of accommodation within Boddington if forecast population targets are reached. Current accommodation facilities are often at capacity and additional capacity will be required.

A wider range of accommodation is also required to increase the attraction of Boddington to a wider range of visitors. Camping grounds in and near the town sites taking advantage of the Hotham River and natural landscape and character are encouraged, along with support for bed and breakfast establishments in rural residential areas and possible investigation into eco-chalet type developments in rural small holding and rural areas.

4.2 Community & Services

4.2.1 Shire Resources

The forecast increases in population will result in additional pressures being placed on service provision by the Shire which will result in a requirement for additional staff. The current Shire office is too small to accommodate additional staff and services and as such, the Shire Council is currently seeking funding to relocate to a site behind the Old School near the river bank.

4.2.2 Medical

A new medical/HACC centre is under construction adjacent to the hospital, and the Department of Health has transferred approximately 4,500m² of land to the Shire for this purpose. This new centre will contain Home and Community Care, in addition to the GP, Community Nurse, Dental and Allied Health services.

The current hospital has only 16 beds and this will need to be increased along with staff numbers as the population grows. There is sufficient room around the current hospital for expansion and renovation of the current building which is anticipated to be sufficient during the Strategy time period. Any expansion would provide an opportunity to create increased links with the proposed medical centre and the proposed adjoining retirement village.

4.2.3 Retirement Village

The Council also has plans for a retirement village style development behind the hospital and new medical/HACC centre site. This will respond to the current need for independent pensioner aged care units. The site is designed to accommodate 38 units.

4.2.4 Education

In 2006, the town sites of Boddington and Ranford had approximately 190 children of school age between 5-18 according to the ABS Census data. This represents 20.5% of the total town sites' population. On a Shire wide basis, there are approximately 280 children aged between 5-18, representing 20.3% of the total Shire population. In 2010, there are 320 children enrolled at the Boddington District High School.

If the population reaches 2,100 within the next 5 years, then there may be up to approximately 425 children aged 5-18 within the Shire if the current proportion is maintained. At the town site level, there may be approximately 288 school aged children. By 2031, these numbers could increase to approximately 730 (within the municipality) and 495 (within/near the town sites). With Boddington in close proximity to Mandurah, Armadale and Perth, it is expected that a proportion of school aged children in the Shire will attend schools outside of the Shire.

The District High School currently has 320 students enrolled with capacity to expand to accommodate up to 200 additional students, indicating that the current school has the capacity to accommodate up to 520 students. This capacity would accommodate the projected increase in school aged children within the Shire for the next 5 years and beyond.

The Department of Education currently has a plan to locate transportable classrooms along the eastern edge of the school. There is currently enough land near the school to accommodate any further buildings to cater for forecast numbers above the current capacity within the Strategy period. As part of the Federal Building the Education Revolution program, a new four classroom building is due for completion within 2010.

The duplication of services and infrastructure associated with a second public school is not considered appropriate during the Strategy period. The current site has room to expand and is in a central location, adjacent to playing fields and Boddington town site. The existing school was completed in 2000 and was designed to be a blueprint for district highs schools for the twenty-first century according to the Department of Education and Training. It has 'state-of-the-

art facilities' that should be utilised by all students with specially designed and purpose built rooms. The expense at duplicating these services for a second school is considered prohibitive. Regional District High Schools often have large numbers of students for these reasons (e.g. Kununurra has 600 students).

Discussions with various stakeholders revealed that there is limited interest in establishing a private school in Boddington and Ranford in the foreseeable future. Given the anticipated population growth of the area in the coming years, the Council expects that a private school or schools may establish locally at some stage. In terms of possible school locations, there is a need to address Liveable Neighbourhoods and WAPC Policy, with key considerations being accessibility by walking, cycling and motorised transport, on-site drop-off and pick-up, parking and compatibility with adjoining/nearby uses.

The Council notes that there may also be an opportunity to establish a private school in a rural setting not immediately within the town site; however it should still be within close proximity to ensure ease of access for students, staff and parents. The school could take advantage of the unique surrounding countryside near Boddington and embrace the rural aspect of the Boddington lifestyle.

4.2.5 Commercial

It is estimated that there is currently approximately 7,200m² of commercial space in Boddington, made up of 17 buildings. With a total Shire population of approximately 1,600 at present this equates to approximately 4.5m² of commercial space per head of population.

Using this information and population forecasts, an additional 2,250m² of commercial space may be required in the next 5 years for a total of 9,450m². A further 6,750m² may be required by 2031, for a total of 16,200m².

Boddington currently serves a local commercial catchment typically from within the Shire boundaries and from some areas in the adjoining Shire of Wandering. The catchment is influenced by significant areas of State Forest, Conservation and National Park areas to the north and west of Boddington.

The local commercial function of Boddington is anticipated to remain the likely scenario into the short to medium term, with Boddington and Ranford residents accessing regional and higher order commercial goods at Mandurah, Armadale, Perth and Narrogin. The local commercial function, however, is expected to increase as the population grows. Increases in passing trade associated with mining activity may also increase over time.

There would appear to be limited influence of tourists currently contributing to the local economy. The Council and this Strategy seeks to assist Boddington and Ranford to promote tourism and attract additional visitors which can assist to strengthen the local economy. This can be achieved through increasing the range of accommodation on offer, and enhancing the experiences for visitors.

4.2.6 Waste Water

In terms of waste water capacity, the current capacity of the WWTP would now support 2700 equivalent population, which based on current population forecasts, would serve the towns for

the next 5-10 years. Past this, the Water Corporation advises that there is sufficient land in the current location to accommodate further growth in capacity when required. There is also the likelihood that not all the forecast population will require access to sewerage (i.e. Rural-Residential developments).

4.3 Open Space/Recreation

4.3.1 Recreation Centre

Planning is underway for the construction of a new recreation centre, to be located to the west of the large town oval on Club Drive (see [Appendix F](#)). The Council's vision is to co-locate all sporting activities in a 'precinct' surrounding the new recreation centre and town ovals to provide efficient services to cater for the increased population. The Council is currently completing tenders to engage consultants to design the new centre. There is provision for the relocation of the existing tennis courts closer to the new recreation centre and also for future expansion of the centre if and when required. There is also the possibility of relocating the swimming pool to this area.

4.3.2 Riding Trails

There are also plans for the establishment of two temporary 40 km riding trails around the BGM and Worsley mine sites, which in the short term should assist in alleviating problems concerned with conflicts between horses and pedestrians on the existing path between Boddington and Ranford.

4.4 Implications for Strategy

There are a number of important implications including increasing pressure to supply enhanced and additional services and facilities which will impact the Shire, wide ranging service providers and others. Determining funding and seeking timely provision will be critical to effective implementation of the Strategy.

5. Strategic Opportunities

5.1 Vision and Land Use Expectation

The Council expects that the town sites of Boddington and Ranford will be thriving community hubs in 15-20 years time, supporting a population over 3,000 people. They will be communities in which people want to live, work, play, visit and invest. Increased services in association with a large range of housing and lifestyle opportunities will be available. The towns will become increasingly sustainable, with innovative and environmentally friendly housing design and materials being utilised through a range of housing and accommodation products.

The Strategy supports the provision of further development and consolidation of the town sites in a manner which recognises and enhances the existing character of the towns and which seeks to ensure that environmental, landscape and servicing considerations are appropriately addressed by new proposals.

An increased environmental focus will result in the conservation and enhancement of strategic environmental corridors and increased public recreation areas for community interaction. An enhanced education and recreation precinct will cater for increased activity levels, and improvements in recreation facilities in Ranford will provide improved access to facilities and services for the local community.

The economy will be diversified with increased mining support industries as well as increased local opportunities to provide Boddington and Ranford with a range of commercial and retail opportunities.

A new civic precinct will provide a focal point for the administration of the town sites and will become a focus area on the key gate way into the town sites. It will provide linkages to the town centre and provide an opportunity for residents and visitors alike to participate in community activities.

The Council supports the creation of well connected communities which include the provision of safe and convenient access for pedestrians, cyclists and motorists. Where possible, the Council will seek to support opportunities for residents to increasing journey by walking and cycling. As Boddington and Ranford grow, the Council will monitor opportunities in partnership with other key agencies and groups to provide a localised community transport/public transport service. A key consideration will be feasibility and how any service can be funded (capital and on-going operational costs).

The Council will seek to ensure that future subdivision and development is coordinated. To achieve this, the Council may require a Local Structure Plan / Outline Development Plan to be prepared by the proponent for an area beyond the land subject to the proposal. The extent of the Local Structure Plan / Outline Development Plan area will be determined by reference to the following factors, but not limited to the:

- » need to provide adequate road access options in the locality;
- » extent of regional or local ecological linkages;
- » extent of local surface water or drainage catchments;

- » character of the landscape and key view sheds;
- » extent of fire management requirements; and
- » the impact on and associated catchment of key infrastructure/services.

Figure 3 sets out the key principles and strategic directions to guide future development/subdivision within and around the town sites of Boddington and Ranford. The trails depicted are indicative and are subject to detailed design and gaining necessary approvals. It is intended to provide a framework outlining how Boddington and Ranford may develop in the next 15-20 years. The implementation of this vision will typically occur through scheme amendments, assessment of subdivision applications and the creation of targeted structure plans or outline development plans that reflect the overall direction outlined in Figure 3.

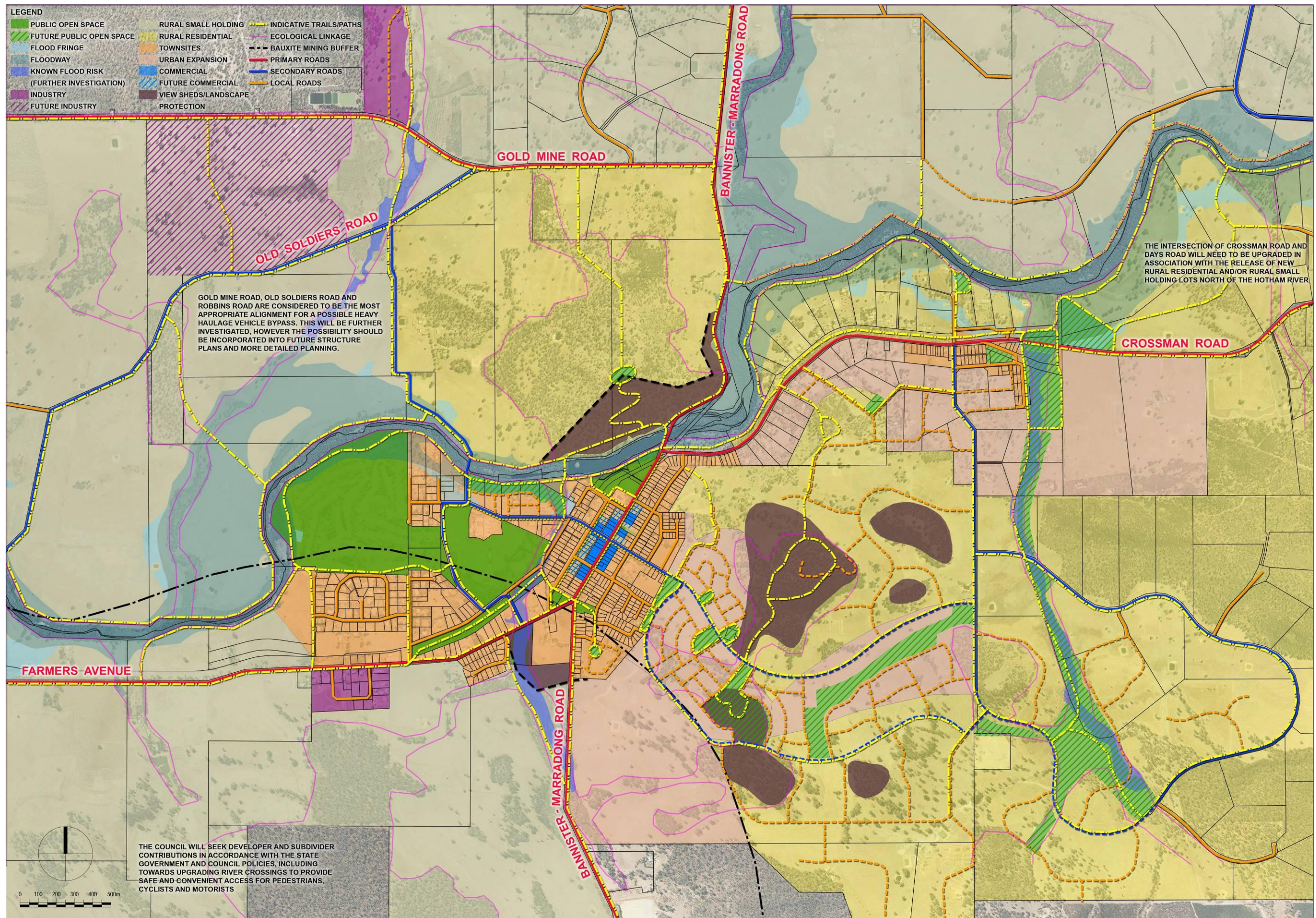


Figure 3: Strategic Direction

5.2 Recreation & Sporting Precinct

The current school and recreation area has been identified as the community hub of Boddington. The Council and this Strategy endeavours to support and further enhance the facilities and activities within this area to create a fully integrated Recreation & Sporting Precinct for Boddington and Ranford (see Figure 4 overleaf). Figure 4 is conceptual only and provides one option for how the precinct could be developed. The Council will undertake more targeted and detailed consultation with users, key groups and the community prior to developing a preferred plan for the precinct.

There are plans for the construction of a new recreation centre on the western side of the current main town oval, adjacent to Club Drive. Under the current plans, the location of the centre would potentially block views from the community club over the oval, disrupting the visual amenity and also reducing the opportunity for natural surveillance of the oval. With the current road and oval alignments, there is minimal room to move the proposed centre southwards.



Current view from the Community Club over the Recreation Precinct

This can be overcome by the realignment of the southern segment of Club Drive westwards. The road reserve is sufficiently wide to accommodate such a realignment allowing the recreation centre and main oval to be located further south. This would maintain the views from the community club, and provide enough room in the central area for a centralised change room area to service the whole precinct. In the short term, the proposed oval relocation will not affect the current change room facilities in the event that these are refurbished.

This movement south of the oval and proposed recreation centre will also allow enough room for two full sized soccer pitches in the north west corner of the precinct, with sufficient room for car park areas adjacent to both pitches and main oval.

There are opportunities to create a new formal entry to the precinct from Farmers Avenue and Colin Street, thus better connecting the precinct to the main street (Bannister Road). The access could terminate at the main oval and adjacent areas of cleared vegetation can be utilised for additional car parking for the sports grounds and the rodeo ground.

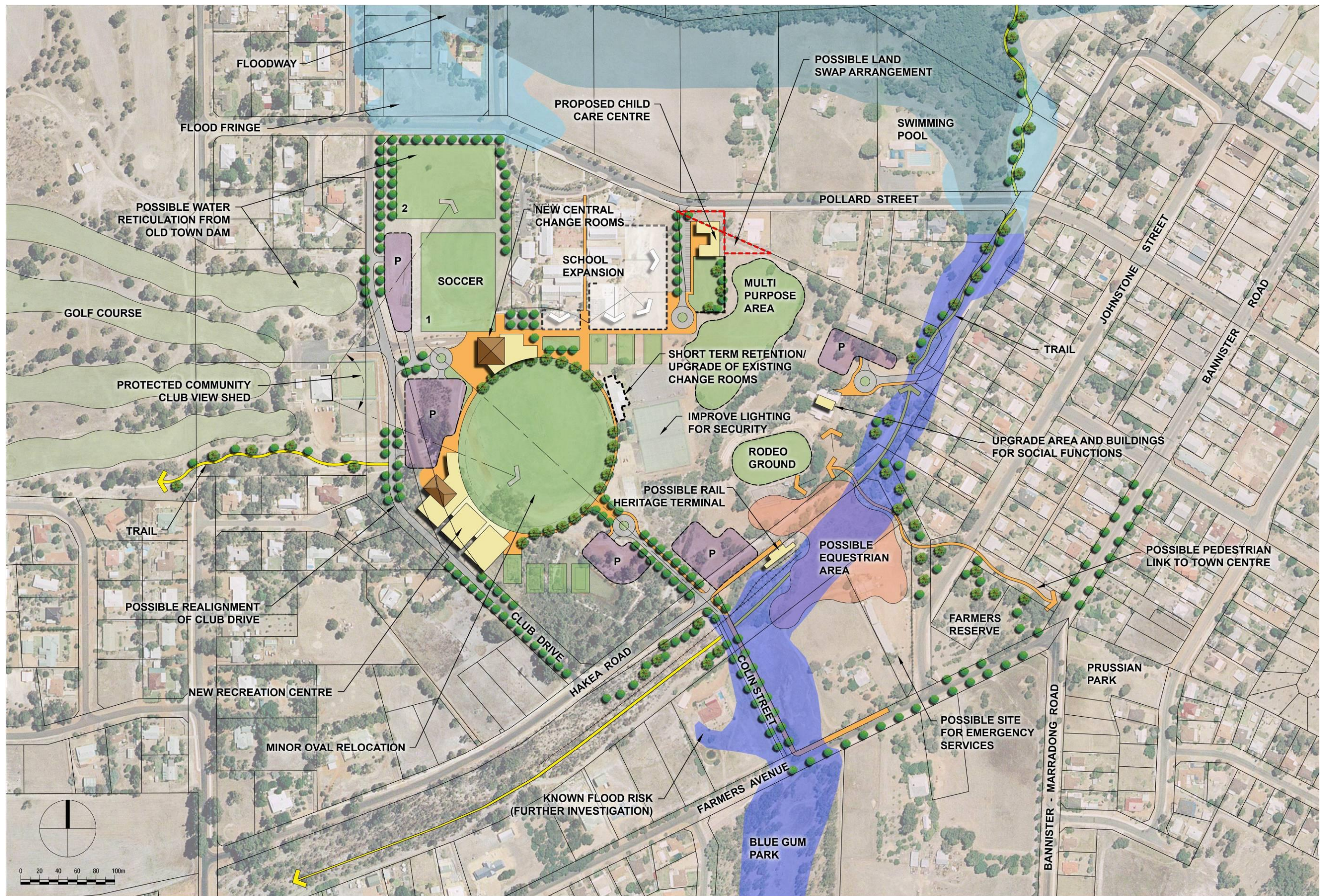


Figure 4: Recreation & Sporting Precinct

5.2.1 Dwellingup – Boddington Railway

A proposal exists to revive the railway from Dwellingup to Boddington. If it comes to fruition, the Council envisages the train station will be located adjacent to this new access (to the Recreation & Sporting Precinct), whilst still in the old railway reserve. This location provides a central access to the recreation precinct and equestrian area (advantageous during the Boddington Rodeo), and also to the rest of the town through existing and proposed footpaths.

There are various other opportunities for the former railway reserve including for walking, cycling, horse riding and a possible tram/light rail between Boddington and Tullis Bridge.

The original proposed station location on Lot 62 Pollard Street near the caravan park (on Wuraming Avenue) is partially within a floodway, requires the crossing of Pollard Street and is constrained in space for car parking and bus drop-off/pick-up and therefore is considered unsuitable. The Council does not support the railway station being developed on Lot 62 Pollard Street.

The Council will separately consider alternative options for this Shire owned property which includes land within and outside of the 100 year ARI floodplain. While public open space is Council's preferred use for land within the floodplain, the Council will consider community purpose, an expansion of the caravan park and residential use for the portion outside of the floodplain.

5.2.2 Rodeo Ground

The Council supports the retention of the rodeo ground and facilities in their present location, for the foreseeable future, subject to on-going community support to run and attend the rodeo. This iconic activity for Boddington should remain as part of a redeveloped recreation precinct to capture additional synergies with the surrounding recreation uses.

The formalisation of the entry off Hakea Road and parking arrangements and general upgrade of facilities will increase the functionality of the area and improve its potential for large social functions to be held there. The retention of a multi use open area north of the rodeo ground can be utilised by the Riding Club as well as the school, however the use of the area to the south as an equestrian area should also be considered as it is partially cleared, within a floodway, is unsuitable for development and can provide a linkage with trails along the railway reserve.

5.2.3 New Child Care Centre

The Shire is currently considering a new child care centre off Pollard Street on the eastern edge of the school on Shire owned land (part of over all recreation reserve). A land swap agreement would need to be finalised with the adjoining property (Lot 31) to provide access to the child care centre. It would also result in a more appropriate shaped land parcel for Lot 31. This arrangement would also allow the creation of another access into the recreation and education precinct and also additional car parking area for the child care centre and school.

General lighting and path upgrades/extensions are suggested to increase the overall security and permeability of the precinct for both school children and general pedestrian use.

5.3 Civic & Heritage Precinct

As set out in section 4, there will be a need for an expanded Shire administration centre/Council Chamber to accommodate additional staff and facilities as the population of Boddington and Ranford grows. The options to accommodate the administration centre are on the current site (Lots 9 and 65 on the corner of Bannister Road/Forrest Street) or to relocate to a dedicated 'Civic & Heritage Precinct' behind the old school on the river's edge.

The draft Strategy sought community and stakeholder input on the preferred location of the administration centre, in particular at two possible sites at the Boddington Old School (BOS) and retaining the administration centre on the current site. Based on submissions received, this revealed support to retain the administration centre on the current site and to not relocate to the BOS.

It is highlighted that locating the administration centre on the current site or at the BOS both have advantages and disadvantages.

Following an assessment of submissions and other considerations, the Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire (Reserves 17428, 26566, 21600, 29622). The reasons for this include:

- » it would create a high quality precinct dedicated to a range of community and civic functions for Boddington and Ranford through locating the administration centre in a location adjacent to the BOS, the Town Hall, the memorial, the arts and craft area and the grassed riverbank area. The Council considers that the concentration of these types of activities will create a strong sense of place for the town and a centre of community activity;
- » it can realise the value of Lots 9 and 65 Bannister Road/Forrest Street given this is owned freehold by the Shire. The Shire owns limited freehold land throughout the municipality and Lots 9 and 65 are prime sites in the town centre. This is accordingly a prudent use of ratepayer assets;
- » subject to gaining a change in the purpose of the reserve/s from the State Government, which are vested in the Shire, there would be no cost to locating the administration centre on a reserve;
- » the site is located on the edge of the town centre, especially in relation to a growing Boddington and Ranford;
- » the site provides greater opportunity for the administration centre to expand, as required, well outside the Strategy timeframe;
- » there would be considerable less disruption to Shire administration activities in the construction phases;
- » the new administration building would have spectacular views over the Hotham River and adjacent protected view shed, and also be incorporated with the BOS and memorial site, creating a civic centre for the town and community focus point;
- » assisting to showcase/rebrand Boddington and make a lasting impression on visitors;
- » making better use of the river, which is a key asset to the town; and

- » the relocation of the administration centre will create an important and large corner site on the key intersection within the town site.

There is a need for more detailed investigations and work in determining the preferred site and layout at the BOS, progressing designs and determining costs for a new administration centre. While the draft Strategy set out two options in the Civic & Heritage Precinct (see Figures 5 and 6), there may be other options for this precinct. The Council commits to consulting and keeping the community and relevant stakeholders informed on key design considerations at the BOS.

The State Government's Social Infrastructure Fund and opportunities through the Royalties for Regions Scheme will provide a substantial component of the cost of developing the new administration centre.

The Council will ensure that in the final design, buildings will be constructed outside of the 1 in 100 ARI floodway and community access along the Hotham River foreshore will be maintained. The Council expects that there will be a retention of part of or all of the existing BOS buildings and the old school oval. This is to reflect the important functions that the BOS provides to the community and the heritage nature of the buildings. The mission of the BOS is 'to provide accessible and appealing facilities and programs which enhance the cultural, social, economic and environmental fabric of our community.' Some of the facilities the BOS provide for the community include rural & regional community development, arts & cultural, tourism & heritage, community, training & education, youth & senior support, grounds & outdoor facilities, and business enterprise development.

Reserve 17428, which BOS is located on, is vested with the Shire of Boddington, so it is expected that a building audit structural report will be undertaken to determine the structural integrity of the buildings, address health and safety requirements and set out cost estimates over the longer term to retain the structures in good condition.

As mentioned above, there are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council. At this stage, two main options have been developed which are outlined below and shown in Figures 5 and 6.

Option 1 allows for vehicular access to a new administration centre off Wuraming Avenue, in line with Johnstone Street. This would require the demolition of some of the BOS buildings, but the retention of the original buildings in the south east corner. This option allows for a new administration building almost directly adjacent to the BOS buildings on the site of current tennis courts, outside of the floodway. The advantage of this location is that it is in close proximity to the BOS for increased synergies between the buildings, but also it is close to Wuraming Avenue and provides for a visual corridor down Johnstone Street, enhancing the visual aspect and symbolic status of the new building.

Option 2 allows for the retention of more of the BOS buildings and could also be adapted to retain all of the existing buildings, as the vehicular access has been moved to Bannister Road, north of the memorial site, with a car park and access to a new administration building. This option also retains the memorial site and school oval with the new buildings situated outside of the floodway. The advantage of this option is that the BOS retains its tennis courts, and also moves the new buildings closer to Bannister Road, with access of the main street. A pedestrian

corridor is shown through the BOS, however this could be adapted to maintain all the existing buildings, whilst still provide this visual link from the Town Hall through to the new building.

The Council recognises the importance of Lots 9 and 65 on the corner of Bannister Road/ Forrest Street to the Boddington town centre. The site is situated on the key intersection in the middle of the town centre. While the Council expects the current Shire administration to, in time, be demolished, the Council will require the town square to be retained. While there are existing Boddington Town Centre Design Guidelines (see section 2.3), the Council will consider developing additional design requirements for this site to ensure future development enhances the town centre.

The Council supports the development of a “landmark” building, possibly two storeys in height, which relates well to street frontages with car parking appropriately located and not dominating the streetscape (especially on the Bannister Road frontage). The Council also supports the development of a Visitor Centre/Mining Centre on all or a portion of the site.

The Council will separately undertake investigations as to whether to seek subdivision approval from the Western Australian Planning Commission to subdivide the lots before sale.

The Council does not support the caravan park further expanding along the foreshore. Consideration will however be given to the future use of adjoining Lot 62 Pollard Street (located outside of the floodway) for possible caravan park expansion, along with considering other uses for the site. Should there be a need to expand local caravan park bays, an alternative opportunity is considered perhaps in the Ranford Pool area or at other sites.



Figure 5: Civic & Heritage Precinct Option 1



Figure 6: Civic & Heritage Precinct Option 2

5.4 Boddington Town Centre

The Council will seek to ensure that the Boddington town centre is the dominant commercial area in the municipality. To accommodate anticipated population and commercial demand, the Boddington town centre will need to expand, with support for using land more efficiently (including second storey development).

The Strategy considers various aspects of the Boddington town centre including potential improvements in car parking (both on and off street), identification of potential expansion of the commercial area, small changes to the road network and improvement in streetscapes (see Figure 7). The objective is to improve the functionality and visual amenity of the town centre and to provide for the forecast increase in population.

The Council expects that different parts of the town centre will develop their own character over time. While Bannister Road is expected to remain the key commercial area, parts of Johnstone Street may increasingly attract professional offices that initially may use existing dwellings. The demand for bulky commercial goods in Boddington, and when it will be feasible to provide locally is difficult to accurately predict. This form of commercial retailing is constantly changing. The Council would prefer to see any location for the sale of bulky commercial goods near the Boddington town centre, so it can complement the town centre. The Council will seek a high standard of design which exceeds traditional “box” designs. Subject to landowner preference and commercial feasibility, bulky commercial goods appear to have merit on Lot 1 corner of Bannister Road and Farmers Avenue (south side). Any proposals would however be subject to a scheme amendment and associated community and stakeholder input.

5.4.1 Car Parking

To accommodate anticipated population growth and associated increased traffic generation and car parking demands, there is a need to more effectively and efficiently provide car parking in the Boddington town centre. The Council however does not want car parking to dominate important streetscapes as it wants the town centre to increasingly be an attractive place to visit, work and where appropriate to live.

The Council considers there is limited need for large, visible open car parking areas in rural towns such as Boddington. On street parking and discrete on site parking areas are generally preferred and assist in maintaining the rural ‘main street’ feel to towns. On street parking should continue to not be taken into account in determining car parking requirements for new developments. Current provisions for one bay per 40m² of floor area in the commercial zone set out in the Shire of Boddington Local Planning Scheme No. 2 (LPS2) are considered to be appropriate. The Council, when it reviews LPS2 and develops Local Planning Scheme No. 3, will consider possible reference to retail uses specifically within the commercial zone. Different car parking standards could apply for non-retail uses.

High demand for street parking on Bannister Road has triggered the investigation of alternative parking arrangements on the perpendicular streets to Bannister Road (i.e. Wuraming Ave, Pollard St, George St). A preliminary parking layout analysis was undertaken for Pollard Street using Australian Standard 2890.5-1993 Parking Facilities – On-Street Parking (see [Appendix K](#) for detailed drawings). The analysis revealed that right angle parking would yield the most

parking bays, however at the expense of appropriate footpath widths and for a gain of just four bays. It was concluded that the continuation of parallel parking was the most efficient solution for those streets. Table 3 illustrates the potential yields of the different arrangements investigated.

Table 3: Pollard Street Car Parking Yields

Car Parking Arrangement	Yield (bays)
Parallel Parking (current)	23
30° Angle Parking	23
45° Angle Parking	16
90° Right Angle Parking	27

The analysis suggests that the existing rear laneways should be better utilised by commercial uses on Bannister Road (and Johnstone Street in the future). The introduction of rear parking areas using this laneway is preferred as it would increase the amount of off-street parking and also maintain the amenity and ‘country feel’ of the main street. To achieve this, the Council seeks that new building footprints should be situated at the front of the lots to provide enough room at the rear for car parking off the laneways. This could be incorporated into car parking requirements for new developments with rear laneway access.



Current view of the laneways

The Council supports undertaking more detailed investigations and consultation regarding the possible relocation of the emergency services, which could provide a catalyst for the creation of these rear laneway parking areas. If the emergency services (SES, St Johns and Fire Brigade) were to relocate to the western end of Bannister Road (near Farmers Reserve or the Shire depot site), this would free up valuable land on Bannister Road in the heart of the town site for commercial uses and the establishment of laneway car parking areas. This new parking area would link the Town Hall and Old Road Board buildings. The overall concept would also eliminate the existing conflict between the SES need for 24 hour clear access and occasional community parking at the Town Hall.



Figure 7: Proposed Boddington Town Centre Changes

Cash in lieu payments received by the Shire for parking requirements should be utilised to facilitate the rear laneway car park areas along with developing other new or upgrading car parking areas. This will involve the resurfacing of the laneways, surfacing of car park areas, landscaping requirements and stormwater design initiatives. Payments could also be used for the resurfacing and formalising of on-street car parking on Pollard and George streets as well as landscaping and drainage features.

Developers and subdividers will also need to address the requirements of Council Planning Policy No. 9 Car Parking and Vehicular Access.

5.4.2 Commercial Areas

Areas for commercial expansion have been identified along both Bannister Road and Johnstone Street (see Figure 8). It is highlighted that this reflects possible demand for commercial sites within the Strategy period rather than current commercial needs.

The areas identified on Bannister Road are 'infill' areas, located adjacent to or in between existing commercial properties. The intent is to contain the primary focus of the commercial area on Bannister Road within the existing extent and not encourage further expansion along the street. This will serve to create a more intense commercial precinct.

As set out in Section 5.3, consideration at some stage is required for the location of bulky commercial goods, with Lot 1 corner of Bannister Road and Farmers Avenue appearing to have merit.

The recommended creation of a secondary commercial strip along Johnstone Street is centred around the foreseeable significant increase in truck and general traffic movements on Bannister Road. The main commercial enterprises will still have a desire to remain on Bannister Road to take advantage of increased exposure from visitors and passing trade along the main road. Johnstone Street is expected to provide an opportunity for smaller, boutique businesses on a quieter road utilised by local traffic. These properties will have access to the rear laneways and car parking opportunities outlined in Section 5.4.1, and Johnstone Street has the potential to become part of a key linkage to the establishment of a consolidated Civic Precinct near the Old School.

As noted in earlier sections, the Council supports the relocation of the Shire administration centre to near the Old School which provides the opportunity for commercial or other town centre uses on the current Shire administration centre site.

As Boddington and Ranford grow, as anticipated during the Strategy timeframe, there will be a need for an expanded and/or additional supermarkets to accommodate local shopping demands. While the Council will seek to ensure they are developed in the Boddington town centre, it will be commercial decision regarding the development of expanded/new supermarkets.



Figure 8: Current and Proposed Commercial Zoning

The Shire of Boddington’s LPS2 currently provides opportunities for shops in residential, rural and industrial zones in addition to the commercial zone. The Council considers this practice is not entirely appropriate if a more condensed and vibrant commercial precinct is to be encouraged in the centre of the town site, as it encourages a more ‘loose’ commercial network. It will also undermine the primary/secondary nature of the proposed commercial hierarchy.

The Council recognises that opportunities for commercial uses in industrial areas should be maintained as discretionary as there may be a need for small lunch bars in these areas. This will also allow the ability for bulky goods type retailing to locate in larger, more open areas where considered appropriate by Council and where it does not impact the primacy of the Boddington town centre.

5.4.3 Road Network

The supported road hierarchy for the Boddington and Ranford town sites, and wider area is set out in Figures 3 and 9. This includes proposed roads in scheme amendments and key subdivisions. There are gaps in the road network on sites where no development proposals have been put forward and the road hierarchy will be updated as required. The primary roads will remain as Bannister-Marradong Road, Bannister Road, Gold Mine Road, Crossman Road and Farmers Avenue. Under these there is a network of secondary and local roads. Bannister-Marradong Road and Bannister Road are roads that are controlled by Main Roads Western Australia.

The road hierarchy seeks to assist in providing a safe, effective, efficient and accessible transport network and provide a clear direction to the community and stakeholders as to which roads are intended to take non-local and/or more substantial traffic. The proposed subdivision on Lot 28 Crossman Road provides a road link south to Lot 8016, however there isn't a reciprocal road link in the subdivision design of Lot 8016. If this link was created, it would create a north-south connection for residents, assist in emergency situations and provide enhanced opportunities for pedestrians and cyclists to conveniently access the Hotham River foreshore and other areas. Co-ordination between adjacent subdivision designs is required in this instance to ensure road network permeability and connectivity for future developments.

The Strategy does not include any major changes to the road network within the town centre of Boddington which has a permeable road network based on a traditional grid layout.

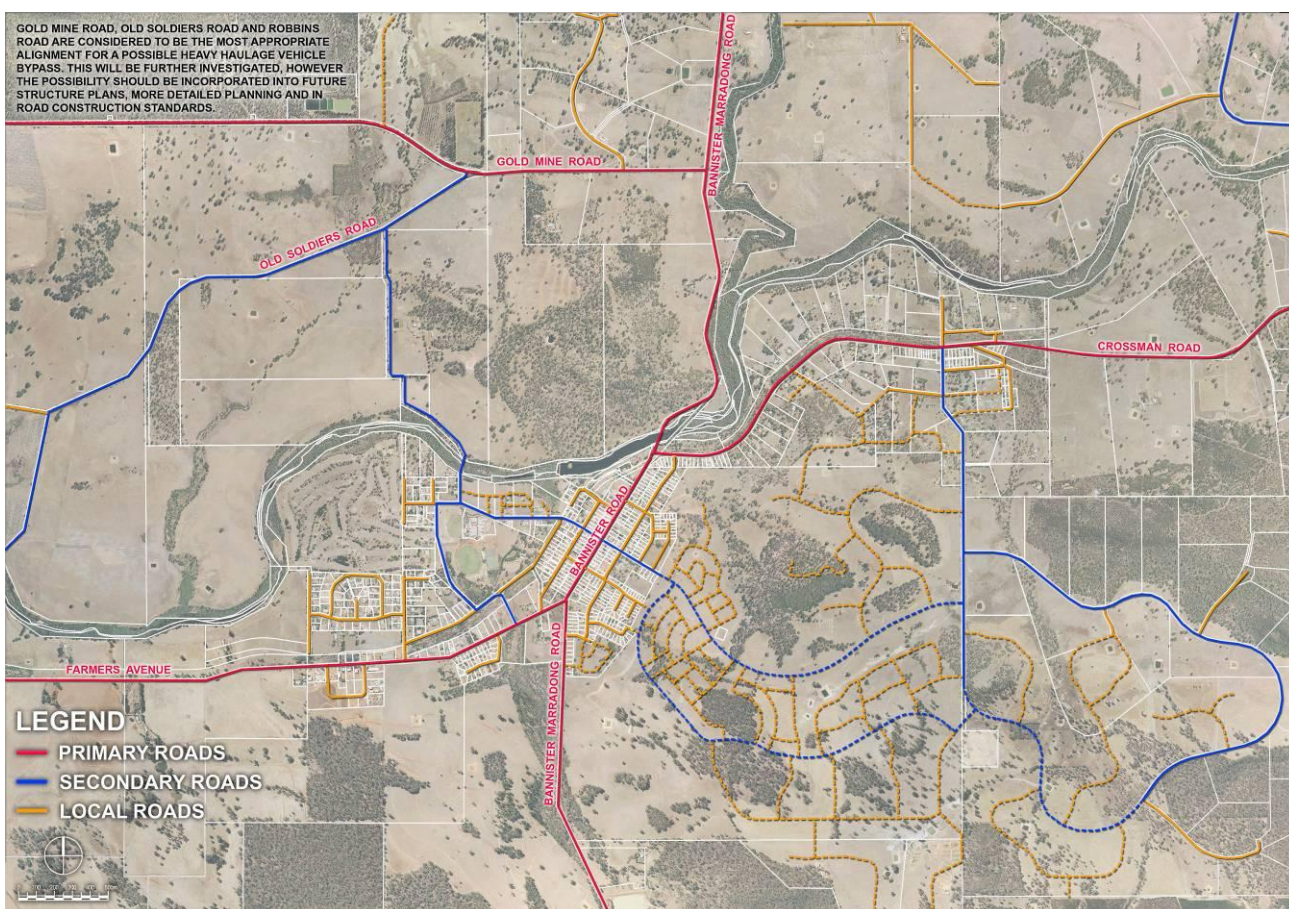


Figure 9: Proposed Road Hierarchy

5.4.4 Streetscapes

The Council supports progressively undertaking streetscape improvements throughout the town centre, including the undergrounding of power lines which would allow the introduction of larger trees. This is especially relevant for Bannister Road as the main street and the enhancement of the overall visual amenity of the town. The Council will also seek to progressively improve and expand the footpath network to increase the access and permeability for pedestrians throughout the town to key nodes. The Council will seek appropriate contributions from developers and subdividers in accordance with Council Planning Policy No. 5 Developer and Subdivider Contributions.

Streetscape upgrades may include public furniture, public art, vegetation, lighting, paving, playgrounds and key entrance statements as outlined in the *Bannister Road Upgrade Study* (Connell Wagner – see [Appendix L](#))

The Council supports the retention of the current arts & crafts centre and open area on the corner of Wuraming Avenue and Johnstone Street. This area is a valuable part of the community activity within the town, and it also provides a transition link to the functions of the Boddington Old School across the road and the development of the proposed Shire administration centre and Civic Precinct around the Old School.

The Shire of Boddington currently has plans to locate a new medical/HACC centre on the western side of the hospital buildings (as shown in Figure 7). Plans of the medical centre indicate that the main entrance will be on the western side of the building, adjacent to Lot 128.

Currently the buildings on Lot 128 are in a somewhat dilapidated state and the Council considers this may have a negative visual impact on the creation of an entrance statement for the new medical centre. There are redevelopment opportunities for Lot 128 or possible opportunities for Lot 128 to be acquired and incorporated into the medical centre area, thus providing an opportunity to create a large landscaped feature entrance to the medical centre. Subject to the intent of the landowner, available funding and agreed sale price, the Council will investigate opportunities with the landowner to acquire of Lot 128.

5.5 Ranford Townsite

The Ranford Townsite is not currently serviced by reticulated sewerage and is unlikely to be serviced in the foreseeable future nor within the Strategy timeframe. As a result, the minimum residential lot size (based on current WAPC policy) which is permitted is 2,000m². Further residential expansion within the Ranford town site will require a major upgrade of the water supply (refer to Section 3). Beyond this, the Strategy focuses on improvements in community and recreation infrastructure and amenities (see Figure 10) which the Council seeks to progressively implement in partnership with the community, subdividers/developers and relevant stakeholders. These improvements are centred on Ranford Pool and the Crossman Road/River Road intersection. All development proposed is outside of both the floodway and flood fringe.

Recent road works have been carried out on River Road with the road being sealed. A small shelter and some revegetation of the river banks have also been recently completed. The Council considers that Ranford Pool presents an opportunity to create a community recreation area for Ranford that has the potential to become a family destination for the local residents, as well as the Boddington residents. This could also be accompanied by upgrading the walking trail along the river bank and creating new trails from the picnic area to Crossman Road and the old railway reserve.

The Council proposes to remove vehicular access to the water edge to a car park set back from the picnic area to enhance the bush amenity of the reserve and foreshore. This will be achieved by formalising the road system, picnic shelters and family areas, and by introducing a car park and turn around area.

Access road (foreground) & proposed commercial store site



Currently Ranford does not have the critical mass required to support a small commercial establishment, however it may in the future given that substantial planned growth is set out in the endorsed Local Planning Strategy and in this Strategy. Following further subdivision/development, a small corner store/deli may become economically viable and a site has been identified in this Strategy. The store is proposed for the north east corner of the intersection of Crossman Road and River Road. This is the main intersection in Ranford and leads to the Ranford Pool reserve, meaning that this site would be able to take advantage of the area of highest exposure in the town site. A residential component could be incorporated into the store as an economic incentive. The site is currently reserved for Parks & Recreation under LPS2 and would require a rezoning, most likely to a Mixed Use/Residential zoning. The Council expects that commercial development in Ranford will remain very minor given the Council's preference to see the majority of new retail and commercial development locating in the Boddington town centre.

The proposed recreation areas and small commercial store will become more desirable if the population of Ranford increases significantly through further development of rural residential and special residential lots. The Council expects the playing grounds and community facilities would serve the increased population and provide suitable local focal points for the wider community. The provision of a children's playground to provide a more peaceful and quiet play area could be accommodated on Lot 53 at the intersection of Christie and Burnett Streets. This is Shire land would require a rezoning from Residential to a more appropriate designation, most likely Parks and Recreation. There are opportunities to rationalise a portion of the wide Roberts Road reserve and incorporate into an expanded POS.

Access and protection arrangements of Halfway Gully on the eastern boundary of the Townsite should formalised and enhanced to ensure the preservation of this bushland area, as the area is in a floodway.

The Council will seek subdividers making a POS contribution of 5% of the unimproved land value, in accordance with the *Planning and Development Act 2005* for special residential lots at Ranford. This is because all anticipated future lots at Ranford will be above 2000m² and there should be an equitable approach between subdividers who are all contributing to increased development, gain commercial benefits through subdividing and where future residents of the lots created will generate future impacts and demands for services and facilities – including POS.

Where appropriate, in locations to the satisfaction of the Council, the Council will seek the provision of well located sites of a meaningful size for POS. Overall, the Council will be guided by the location set out in the Strategy. The Council will look at alternative sites for POS and this could involve the retention of significant areas of remnant vegetation. Cash in lieu payments of 5% of the land value could also be provided towards the management of other POS areas. A large influx of new special residential lots will contribute towards any future POS demands.

The Council will also seek subdividers ceding land adjoining Halfway Gully, especially containing areas of flood risk, important areas of remnant vegetation and cleared areas that can locate well aligned dual use paths/tracks for the benefit of the community.

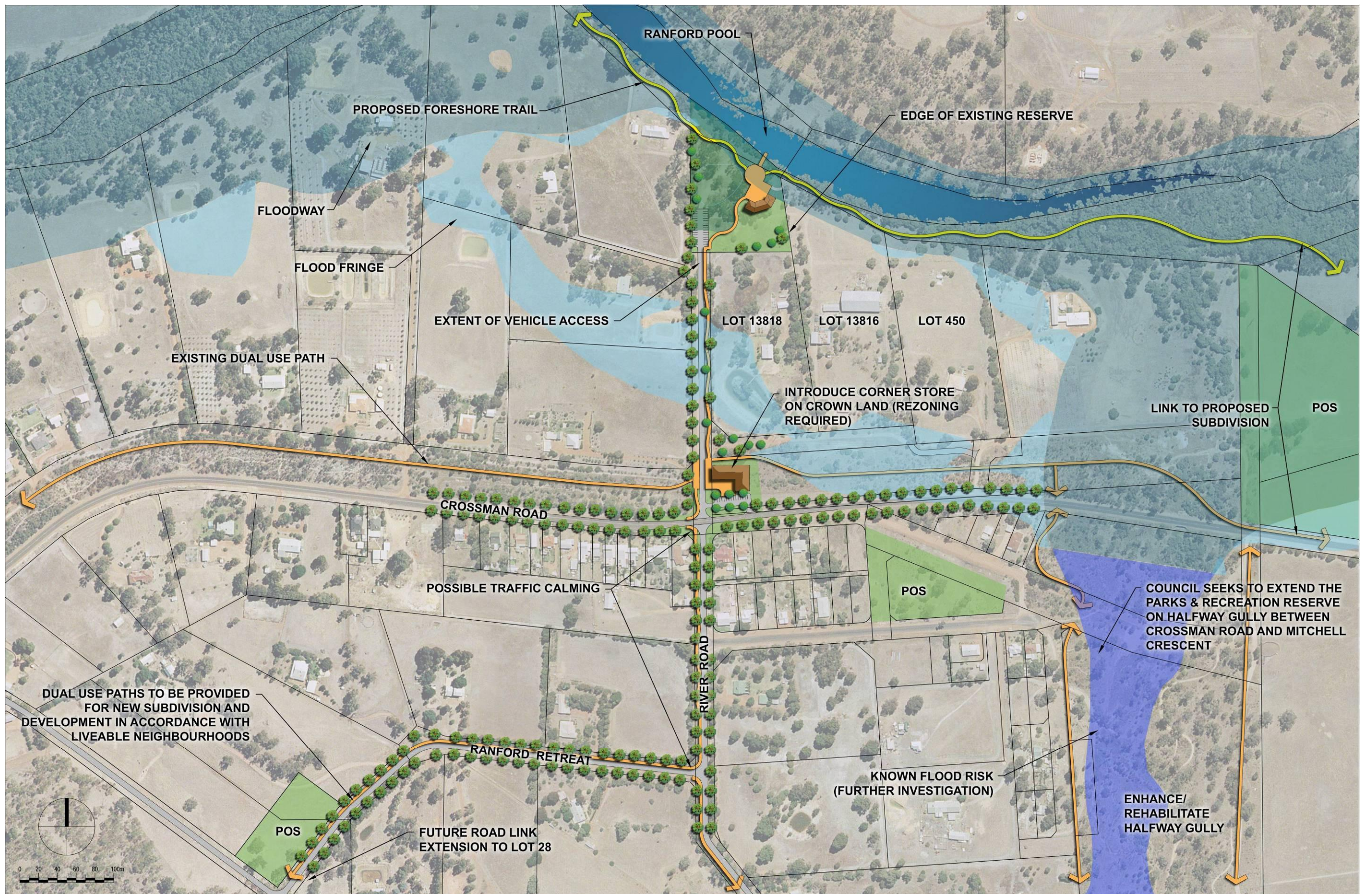


Figure 10: Proposed Ranford Townsite Improvements

5.6 Residential Land

As mentioned in Section 4, current subdivisions and scheme amendments that have been either lodged with the Shire or that are in planning are projected to accommodate almost all of the projected population growth within the Shire of Boddington over the medium to long term. Other sites, within areas set out within the development footprint of the Local Planning Strategy, will provide opportunities for different lifestyle opportunities and settings.

Based on the above, there is limited planning justification to extend the development footprint set out in the Local Planning Strategy and in this Strategy in the foreseeable future. Should subdivision/development be proposed outside of the defined footprint, which is inconsistent with the Local Planning Strategy, Strategy or Town Planning Scheme, the Council considers that land supply is an important consideration which needs to be appropriately justified by the proponent to the satisfaction of the Council and/or the Western Australian Planning Commission. However, within the defined development footprint for town site and rural living areas, set out in the Local Planning Strategy and the Strategy, the Council will not seek to dictate land supply. The Council considers that within these areas that decisions on land supply are for the market to determine.

The Local Planning Strategy and this Strategy provide opportunities for a wide range of lots sizes (typically between 300m² and 4 hectares in and around Boddington) and associated range of housing to accommodate diverse community needs. The Council supports assisting in the provision of a diversity of lots and housing to provide for the needs of the community and demographic changes over time. Proposed subdivision/development does however need to be appropriately located and suitably address environmental, servicing, heritage, landscape and other planning issues.

The Council expects that all new residential subdivisions will provide appropriate and safe pedestrian/cyclist and vehicle linkages to existing development. Should subdivision occur within the agreed development footprint that “leap frogs” undeveloped sites, the Council expects that the subdivider will provide required linkages and connections to the satisfaction of the Council.

The Council considers that social interaction and access to facilities for all users of the urban environment should be a focus of all new development. With good design, more people will actively use local streets, enhancing safety. Sustainable building design features should be considered in future developments, such as building orientation, retention of vegetation, storm water management and re-use, innovative architectural design and renewable energy and water use targets.

Subdivisions should comply with the provisions of Liveable Neighbourhoods and the 8 key elements:

1. Community design
2. Movement network
3. Lot layout
4. Public parkland
5. Urban water management

6. Utilities
7. Activity centres and employment
8. Schools

For large subdivisions and structure plans, the primary measure of compliance with Liveable neighbourhoods is Element 1. Smaller scale subdivision should comply with the most relevant elements.

In terms of residential densities, current lot sizes should be maintained throughout most of the town sites to maintain the rural character of the area. Densities of R10-20 should be maintained in residential areas, with higher densities based on connection to reticulated sewerage.

Small lot sizes of less than 300-400m² are not indicative of the existing rural town fabric and can be seen as bringing aspects of 'suburbia' to Boddington. One of the main attractions of Boddington is the open character of the town and the ability to raise a family in the town site with plenty of room.

Whilst noting the above, it is recognised that there is a need to provide a range of lot sizes and housing types in the area to provide for a range of lifestyle opportunities, to account for changing demographic profiles, increasing sustainability (including walking/cycling opportunities), making better use of land and assisting to address housing affordability. Accordingly, there should be some provision of residential densities greater than R20, such as to an R30 density, in appropriate locations close to the Boddington town centre, which can be appropriately serviced and which incorporate high building and landscaping design standards. The recommended maximum density in Boddington is suggested to be R40 on limited sites. R40 sites may be associated with an aged care complex or similar.

In time, the review of the Shire of Boddington Local Planning Scheme No. 2 will provide an opportunity to more holistically assess and determine residential densities and locations in Boddington and Ranford based on the Local Planning Strategy and the Boddington-Ranford Townsite Strategy. In the meantime, the Council seeks a more "holistic" approach to residential densities compared to considering a myriad of individual requests to rezone/recode small sites.

The Council has a clear preference for considering possible recodings for precincts compared to a "spot rezoning" for one property. Council's approach is to support future scheme amendment requests, based on consistency with the Strategy to cover multiple lots or a precinct compared to an individual lot, unless the site subject to the scheme amendment request is a considerable area or the applicant provides suitable justification for the proposal to the satisfaction of the Council. Practically, this would result in the Council declining scheme amendment requests for small sites and encouraging landowners/applicants to submit scheme amendment requests for larger areas based on logical boundaries.

5.7 Industrial Land

Currently there are two areas of expansion for industrial land in Boddington with one currently under construction and one subject to a scheme amendment to LPS2. The first is the subdivision of a large land parcel in the existing industrial area, and the second is a new industrial area adjacent and east of the WWTP on Gold Mine Road. These two subdivisions will create approximately 30 new industrial lots for Boddington. It is difficult to gauge the demand

for industrial land in Boddington due to the proximity of large urban centres such as Mandurah and Armadale/Perth. As such, the current planned expansion is likely to provide enough capacity for Boddington for the foreseeable future for industrial uses requiring small and medium sized lots and with low to moderate impacts.

If the demand for industrial lots was to out grow the current increase in capacity, the Council considers that the most appropriate location for a further expansion of industrial lots for industrial uses requiring small and medium sized lots and with low to moderate impacts is in close proximity to the new industrial estate planned on Gold Mine Road. The Local Planning Strategy identifies an area opposite the WWTP on the southern side of Gold Mine Road, near the BGM camp site. Either this area or an area adjacent to the WWTP on the northern side of Gold Mine Road is considered equally appropriate. The vegetation is somewhat degraded in these areas and they are within the WWTP buffer, effectively sterilising this land from most other land uses other than agriculture.

The other advantage of these two areas is that it maintains the industrial uses in an existing area, in close proximity to existing infrastructure and other industrial uses. The Council considers that the creation of a third industrial area in another location would be costly in terms of the duplication of services and infrastructure and loss of synergies that exist between different industrial uses serving predominately the same economic sector. As outlined below, the Council will however consider on its merits a possible new site to accommodate industrial development for uses that may require larger lots and/or greater buffers to surrounding dwelling and “sensitive uses”.

There may be a demand for large industrial lots for large manufacturers as lay down or assembly areas closer to the mine sites. The ability to amalgamate some of the smaller lots in the industrial estate on Gold Mine Road should be maintained if this need arises. Alternatively, given the changing nature of industrial development over a 20 year timeframe, the Council will consider on its merits a possible new site to accommodate industrial development for uses that may require larger lots and/or greater buffers to surrounding dwellings and “sensitive uses”. While no possible additional industrial site has been identified at this stage, and would be subject to numerous environmental, servicing/infrastructure, landscape and other planning considerations, the Council considers that key considerations with any proposals include:

- » avoiding key environmental assets including remnant vegetation and waterways;
- » avoiding areas containing strategic mineral resources;
- » the provision of an appropriate sized area of flat to gently sloping land;
- » access to sealed major roads with appropriate sight distances;
- » the provision of required services including power supplies;
- » the provision of appropriate buffers to off-site dwellings and existing uses off-site (with buffers to be provided by the proponent on the proponent’s site);
- » landscape protection and addressing landscape impact; and
- » addressing heritage considerations.

New industrial land uses, wherever located, should contain the impacts of their operations within their own site boundaries through appropriate siting of buildings, hours of operation and

noise attenuation measures. Appropriate buffers should also be established to control future development in close proximity to prevent incompatible land uses encroaching.

5.8 Rural Small Holding & Rural Residential Areas

5.8.1 Location

The Shire of Boddington Local Planning Strategy (LPS) which was adopted by the Council and endorsed by the Western Australian Planning Commission in 2007, identified broad areas deemed suitable for rural small holding and rural-residential land uses (see [Appendix M](#)). Whilst generally this land is still considered broadly suitable and the amount of land sufficient, there are various measures that will be required to be taken to address certain issues. Additionally, the Council will expect that any proponent will suitably justify land suitability and land capability of their proposal and demonstrate how it coordinates with existing and planned/anticipated development.

The main rural living growth areas are likely to be along the Hotham River both east and west from the two town sites and expansion northwards. It is important to note that excessive and unplanned rural small holding and rural residential development can have negative impacts, including the loss of productive agricultural land, declining rural character, poor land management leading to degradation and loss of biodiversity, and scattered communities without access to services. Rural small holding and rural residential development needs to be sustainable. This can be achieved by avoiding agricultural productive land, areas of high bush fire risk or environmental sensitivity, minimise potential for conflict with incompatible activities and only include land which is suitable for this type of development (such as topographically varied land, visually attractive and with distinctive environmental attributes).

The following criteria provide a broad framework for identifying land suitable for rural small holding and rural residential development:

- » Integration and connectivity to existing urban areas and land uses via safe and convenient vehicular, pedestrian and cyclist linkages;
- » Protection of natural resources;
- » Protection of environmental assets, areas and biodiversity;
- » Land capability, including appropriateness for wastewater disposal, building construction and road/vehicular access construction;
- » Addressing water management and possible flooding;
- » Fire management;
- » Landscape and conservation values (especially when viewed from the Boddington town centre, key public areas (such as river foreshores) and primary and secondary roads – as set out in the road hierarchy);
- » European and Aboriginal heritage values;
- » Provision of social infrastructure (as considered appropriate for the proposal by the Council);

- » Provision of appropriate physical infrastructure (which may require the subdivider/developer to make appropriate contributions to upgrade or provide appropriate infrastructure and/or facilities such as river crossings); and
- » Land use compatibility with surrounding agricultural practices.

Any development or subdivision will be required to comply with existing buffer areas for either mining or industrial land. Any proposals that are located within existing buffer areas will need to provide justification to the siting of new land uses within the Environmental Protection Agency's recommended buffer distances.

5.8.2 Design

Liveable Neighbourhood principles should be applied to rural small holding and rural residential use and development, where possible, to create liveable and sustainable neighbourhoods.

These principles include:

- » Subdivision layouts showing connectivity of proposed street system to allow for easy movement;
- » Community design, emphasising a strong sense of place through existing cultural heritage values, attractive built form and landscape character;
- » Environmentally friendly development that includes energy efficient lots, water conservation, storm water management, waste management and management of wildfire hazard;
- » Protection and enhancement of native habitat;
- » Incorporation of walking and cycling linkages and where relevant, horse riding linkages, especially in proximity to Hotham River; and
- » Internal road networks should be designed in such a way as to allow accommodation of future rural small holding and rural residential lots and also future connection to nearby major roads.

5.8.3 Other Considerations

The LPS identifies areas of 'landscape protection' within the Rural Small Holding and Rural Residential areas. The Council considers that there is a need to also protect the south-west and northern view shed areas from inappropriate subdivision and/or development. The south-west view shed is not expected to be subdivided/developed in the foreseeable future given the land is located within the bauxite mining buffer. The northern view shed is identified later in this report in Figure 11.

Additionally, the Council seeks to appropriate control the location, nature, density, scale of subdivision/development on key entries into Boddington and Ranford. Presently, the LPS does not include the northern view shed area as a landscape protection area and the Council, through this Strategy, considers it important to protect this hill slope from further development to ensure the retention of the natural visual amenity from the town site looking northwards.

Another consideration for this northern section of proposed Rural Small Holding and Rural Residential areas is the future industrial area proposed north of Gold Mine Road and its possible expansion, in time, in the vicinity of the waste water treatment plant. The land uses

within the proposed industrial area may require buffers that could prevent residential development in close proximity. The possible long term expansion of the industrial area needs to be taken into account in future planning of the area as this will bring the industrial uses closer to this potential Rural Small Holding and Rural Residential areas.

The Council notes that flooding will also be a major issue associated with the Rural Small Holding and Rural Residential areas along the banks of the Hotham River. Development will not be permitted in the floodway and will only be permitted with strict conditions in the flood fringe areas. Larger lot sizes should be given preference in these areas to accommodate for these restrictions (as identified in the LPS).

Subdivision applications and development applications in these Rural Small Holdings and Rural Residential areas also needs to address bush fire risk given that Boddington is located in an area characterised by long dry summers. Subdivision applications, and where appropriate development applications, in the Rural Small Holding and Rural Residential areas should be accompanied by a Bushfire Hazard Assessment that complies with requirements in *Development Control Policy 3.7 – Fire Planning (WAPC)*, and *Planning for Bushfire Protection (WAPC/FESA)*. The assessment should identify the fire hazard to the property(s) and also proposed fire management measures that may include, but not be limited to:

- » Covenants on certificates of title requiring landowners to provide a building protection zone around buildings;
- » Access arrangements for residents and emergency services;
- » Emergency water and power supply;
- » Natural barriers to prevent the spread of fires;
- » Siting of buildings and low fuel zones;
- » Provision of underground shelters; and
- » Provision of external roof and wall sprinkler systems.

5.9 Natural Environment

5.9.1 Remnant Vegetation

The Council considers that the protection of remnant vegetation is a high priority in the retention of biodiversity in the Boddington area. The biodiversity of the greater south west region has been recognised as globally significant due to the huge diversity of plants, animals and habitat types. One of Boddington's key attractions is the natural landscape and vegetation and the visual amenity and sense of place it provides to visitors and locals. The Boddington and Ranford town sites are situated along the banks of the Hotham River and are surrounded by rolling hills containing natural vegetation. Preserving this amenity is to preserve a significant part of Boddington's future.

The Council considers that there are opportunities to retain remnant vegetation on private property that should revolve around the concept of ecological linkages, or biodiversity corridors. The objective of ecological linkages is to connect natural areas with continuous corridors of native vegetation in ways that allow fauna and flora to move between these areas to access

resources and suitable habitat for survival and reproduction (WALGA, 2004). See Figure 11 for suggested ecological linkages.

These corridors should also extend to private land, which may require the development and provision of incentives to encourage private land conservation. In time, the development and adoption of a Local Government Biodiversity Strategy and formalisation of policies and processes can assist in conserving and enhancing ecological linkages. The development and adoption of a Local Government Biodiversity Strategy would also assist to in the assessment of subdivision/development proposals and construction activities that should assist in the protection of remnant vegetation. This may include provisions to restrict the clearing of remnant vegetation on private land, a requirement for biodiversity survey and ensuring building footprints utilise cleared land as a priority.

The Council recognises that management of these corridors should fall to a partnership between the local government, State Government and local conservation groups (e.g. Friends of the Reserves) for public land. Corridors on private land could either be managed by the landowners following specific guidelines, or through a partnership with local organisations to allow them to manage it. Funding for local organisations may come from the Council and also other government grants and programs. Directing money provided by the mines to the community would also assist in the management. In large subdivisions, developer contributions could be sought to specifically target the management of these linkages.

5.9.2 Open Space Enhancement

Figure 11 sets out the key public open space locations as well as environmental initiatives around the town sites of Boddington and Ranford. The trails depicted are indicative and are subject to detailed design and gaining necessary approvals. It is intended to provide a framework outlining how open space and environmental conservation within and around Boddington and Ranford may develop in the next 15-20 years. The implementation of this vision will typically occur through provisions and conditions associated with scheme amendments, assessment of subdivision applications and the creation of targeted structure plans or outline development plans that reflect the overall direction outlined in Figure 11. Landowners also have statutory responsibilities for various environmental matters including proposals to clear any vegetation.

The Council supports undertaking due diligence and required investigations to determine whether the management of the old town water supply dam should be transferred from the Water Corporation to the Shire to manage. The Council would only consider accepting managing of the dam where it is in a structurally sound state and the preparation/finalisation of a feasibility study (to determine, amongst matters, whether it is cost effective to maintain and develops a greater benefit than cost for the local community). Subject to undertaking required investigations, with outcomes/results to the satisfaction of the Council, the Council will consider accepting the management of the dam for the purpose of 'greening' the two town sites.

The dam has a 131 ML capacity and this water supply could be utilised to irrigate existing ovals, open space, local parks and streetscapes through both Boddington and Ranford. This would have the effect of enhancing the natural environment and visual amenity of the two towns, in particular in the hot, dry summer months, thus increasing the attractiveness of the

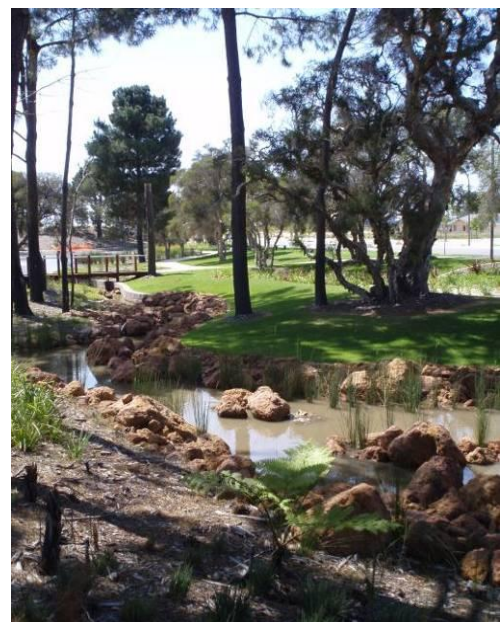
towns to both locals and visitors. It would also serve to reduce the demand on the scheme water supply for irrigation purposes.

The Council notes that degraded watercourses or flood ways provide opportunities for revegetation, extending and enhancing the existing town open space network. The generally open and degraded condition of minor watercourses or drainage ways can be rehabilitated with the aims of:

- » Maintaining and enhancing hydrological and ecological values;
- » Reducing surface water runoff from surrounding land;
- » Maintaining and improving water quality by reducing sediment, nutrient and pollutant loads in runoff from adjoining urban areas; and
- » Providing habitat and shelter for local fauna and reducing disturbance to fauna from surrounding development.

Some key actions to achieve these aims may include:

- » Plant floodway/open space areas which are identified for revegetation with local provenance native species;
- » Extend and expand new vegetation away from remnant vegetation areas to provide protection and to assist maintenance;
- » Establish a range of plant types within each area to provide treatments appropriate for the proposed use and management of the area;
- » In areas where visibility is important, such as floodways within public open spaces or roadway verges, clean trunked tree species may be appropriate (such as *Eucalyptus rudis* or *Eucalyptus camaldulensis* together with low growing grasses and sedges);
- » Trees with greater canopy density in wetter areas (could include *Melaleuca preissiana*, *Banksia littoralis*, *Melaleuca raphiophylla* and *Casuarina obesa*);



Existing water course within open space area (above) and example of an improved watercourse (right)

- » Within very wet areas of drainage lines, low growing rushes and sedges may be used (including *Isolepis nodosa*, *Lomandra brittaniae*, *Baumea* spp. and *Leptocarpus* spp);
- » Revegetation of these areas will enhance stream bank stabilisation and improve the environmental functions and values of the drainage line; and
- » Use appropriate native plant fertiliser and soil amendment (for water retention) together with mulch mats (following weed eradication) and staked tree guards for seedling protection.

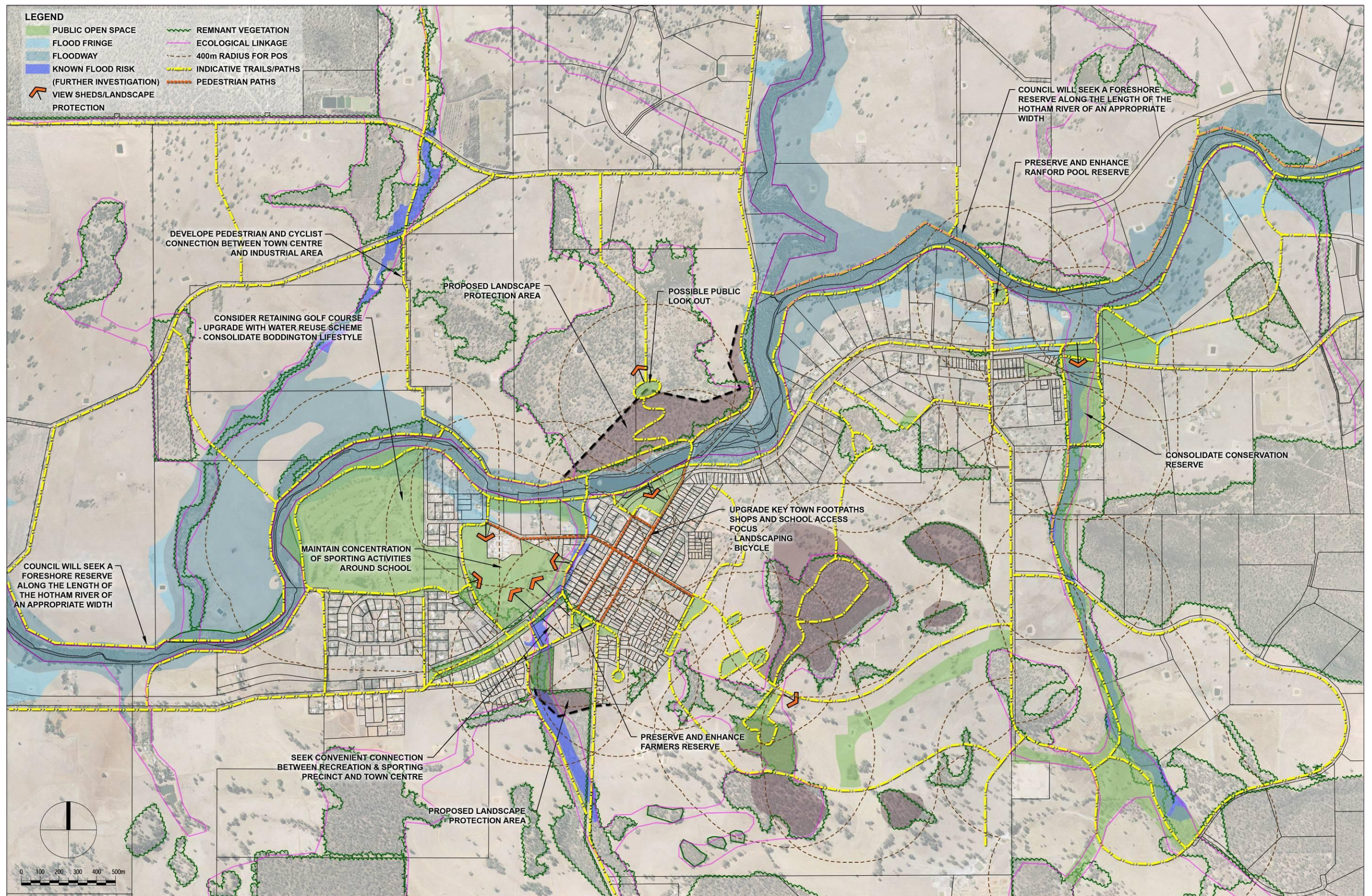


Figure 11: Public Open Space Strategy

5.9.3 Landscape Visual Protection

The Council seeks to ensure that visual protection of key landscape vistas and ‘gateways’ are suitably addressed especially when viewed from primary roads, the Boddington town centre and tourist areas such as the Hotham River foreshore. To achieve this, the Council seeks to appropriately control the location, nature, density, scale of development and subdivision. The protection of the northern and south western view sheds from any development is considered essential to retain the country ‘feel’ and visual amenity of the surrounding landscape.

Boddington is surrounded by higher country covered mostly in natural vegetation, providing appeal for locals and visitors. Being close to major centres, Boddington needs to strengthen its uniqueness and enhance its natural assets to increase its retention potential.



One aspect of the northern view shed to Mount Pleasant (Billygoat Hill)

South western view shed along Bannister Road



The possible tenure of land within the northern and south western view sheds will be separately considered by the Council. Given there are subdivision opportunities on land to the north of the Hotham River (on land forming part of Mount Pleasant – also known as “Billygoat Hill”), subject to addressing a range of planning considerations including landscape, fire management, environmental, servicing, vehicular, pedestrian and cyclist access, and given its proximity to the Boddington town site, the Council considers that the key view sheds may come into public management following a scheme amendment request or subdivision application.

The high elevation and quality natural vegetation found on the northern and south western view sheds provide a unique and aesthetically high value backdrop to the town. The prevention of

any development and land clearing within these two vistas is considered essential to maintaining this uniqueness.

Where development is already planned within the southern view shed (Lot 8016), set out in an endorsed structure plan, the natural vegetation should be protected and interconnected with walking trails leading to the top of the hill. The establishment of a public lookout and picnic area at the top of the hill is encouraged to allow public access to this prominent area that provides views over both Boddington and Ranford. If incorporated into a walking trail network, this would be a key attraction for visitors and tourists to view the two towns, including the natural landscape and Hotham River.

The Council will require appropriate design standards along key routes in the town sites and also at strategic entry points. These include Bannister-Marradong Road, Pollard Street, Farmers Avenue, Bannister Road and Crossman Road. Key entry points include the Memorial site area once visitors cross the bridge, the intersection of Farmers Avenue and Bannister-Marradong Road, and the intersection of River Road and Crossman Road in Ranford. Street frontages should be open, pedestrian friendly with attractive and open building frontages. The entry points should be emphasised with appropriate landscaping, signage or even public art pieces. The use of public art works will assist in creating interactive public spaces and emphasising areas of public focus.

The Council will seek for subdividers to prepare appropriate Building & Landscaping Guidelines to promote higher levels of sustainability, a sense of place and higher design standards which are appropriately supported by restrictive covenants, local planning policy or LPS2 provisions to ensure effective implementation.

The Council will require, as considered appropriate, proponents to prepare visual impact assessment in accordance with the WAPC's Visual Landscape Planning Manual. This Manual has been developed to address visual landscape in the planning process and provides guidelines for siting and design in relation to a range of landscape types and land uses. The Council will have due regard to this manual when assessing relevant applications and proposals.

5.9.4 Drainage

The Shire of Boddington's stormwater infrastructure is typically limited to a pit, pipe and open channel system. Older drainage does not incorporate stormwater detention. Generally, minor storm events are serviced by the pits and pipe system, conveying stormwater to dedicated discharge points, and the major storm events use road corridors and open channels to discharge to Hotham River. In comparison, new subdivisions typically have incorporated water sensitive urban design features in response to soil, slope and other considerations.

Various road reserves are relatively wide in areas and often include some form of drainage infrastructure. A number of roads are constructed to the natural surface grade and hence would not provide much assistance in the conveyance of major storm events. A number of areas are bare or contain little vegetation. With the presence of sandy, low fertile soils, sediment mobilisation can create a maintenance burden for stormwater pits, culverts and channels.

With the foreseeable increase in town development, the Council notes that significant impacts on the existing hydrology and drainage hydraulics of Boddington are envisaged and will need to

be appropriately managed. The requirements include that habitable levels are to be at least 0.5m above the 100 year ARI flood level.

It is recognised that increased development equates to an increase in impervious area, this in turn increases the speed and quantity of catchment runoff being serviced by drainage infrastructure. Without adequate management of this increase in stormwater, nuisance flooding is likely to occur within downstream areas of the town catchment. Accordingly, the Council will require that new subdivision and development must compensate its effect by providing attenuation of stormwater runoff to a predevelopment level, either at an allotment scale or large development scale.



Current road side drainage infrastructure



Example of roadside Bio-retention swale (www.wsud.org)

With new drainage infrastructure comes funding constraints with the implementation and on-going maintenance. Whilst new developments are subject to comprehensive developer contributions, changes to existing infrastructure are expected to occur over time as funding becomes available.

A Preliminary Salinity Situation Statement (GHD, 2008) has been completed for the Peel – Harvey Catchment Council (in partnership with the Department of Water) for the south west region and specifically the Hotham-Williams-Murray Catchment. The study found that an increase of up to 10% in average annual rainfall for the period 2004 - 2064 is possible based on the natural variation in rainfall within the catchment over the last 100 years. However a 10% reduction in rainfall is considered a likely (average) climate change scenario when considering outputs from CSIRO climate change modelling.

The impact that this rainfall variation is likely to have on stormwater drainage of Boddington is primarily associated with the design capacity of the towns existing infrastructure which may be compromised in high intensity low probability storm events (GHD, 2008).

The current layout of the town is of a low density with a relatively high degree of open space. This space can be better utilised in the management of the town's stormwater through:

- » The integration of Water Sensitive Urban Design (WSUD) in new developments and public open space can greatly improve a catchments hydrological performance and improve water quality. A number of WSUD design features can be easily implemented to attenuate the impact of new development and the town's growth. Some of these design approaches

include bio-retention systems and infiltration basins that focus on managing stormwater at its source;

- » Bio-retention systems can be augmented to existing open channels or swales, and can form the base within a detention structure, or can form rain gardens within allotments or public open space;
- » Infiltration basins can effectively manage runoff and improve recharge to the groundwater environment. These also can be implemented in an allotment or public open space;
- » The vegetation of earthen areas through the use of grasses and landscaping will reduce the likelihood of sediment transport throughout the catchment, also improving water quality to the Hotham River; and
- » Formalising the existing drainage paths and easements would improve the management and maintenance of drainage structures identifying any present problems and any need for upgrades.

5.10 Climate Change

The components of climate change that are likely to have the largest impact on Boddington and Ranford will possibly include rainfall and temperature variations, and large storm events. Reduced rainfall and/or increases in temperatures will impact on the Hotham River eco-system as well as the vegetation in and around the town sites. This has the potential to also affect tourism in the town sites, as the natural environment is one of the main drawcards for Boddington.

Changes in the frequency and ferocity of storm events will have the potential to influence the flood risks for land, property and people in close proximity to the Hotham River.

The Strategy has incorporated the follow mechanisms to assist in combating any possible impacts of climate change:

- » Maintaining remnant vegetation that has evolved to survive in extreme conditions;
- » Creation of ecological corridors to allow movement of flora and fauna and to maintain the biodiversity in the area;
- » Restriction of any development in the known floodway and flood fringe areas;
- » Upgrading of the stormwater drainage system and application of WSUD principles in new developments to cope with increased flows in storm events;
- » Utilising the old town dam as a water supply for the town sites;
- » Innovative and efficient housing design to ensure bushfire safety, increase energy and water self-sufficiency and to take advantage of the natural features of the land; and
- » Rehabilitation of minor watercourses or drainage ways with the aims of maintaining and enhancing hydrological and ecological values, reducing surface water runoff from surrounding land and providing habitat and shelter for local fauna and reducing disturbance to fauna from surrounding development.

5.11 Walking/Riding Trail Network

The Council supports an expansion and upgrading of the existing trail/path network connecting the two towns to each other and also to and through the surrounding areas. Where physically possible, trails should be dedicated multi-user trails, being able to accommodate a range of activities including horse riding, cycling and walking. An emphasis should be placed on a river bank trail between the two towns as this will help to reduce the potential for conflict between users on the current main trail.

5.12 Development Requirements

5.12.1 Subdivider/Developer Contributions

Various proposals in this Strategy will require contributions from subdividers/developers to assist the Shire in providing necessary infrastructure for the public domain. The Council will seek developer's contributions for community infrastructure, which is defined as 'the structures, systems and capacities which help communities function effectively' (WAPC, 2009). State Planning Policy 3.6 Development Contributions for Infrastructure outlines the principles and imposition of development contributions, with one of the key objectives focused on the promotion of efficient and effective provision of public infrastructure and facilities to meet the demands arising from new growth and development.

Developer contributions will be required, amongst matters and as appropriate to the application, to help establish streetscapes, other public space improvements, infrastructure upgrades, stormwater management initiatives and vegetation conservation efforts.

Consideration will also be needed to given by developers and subdividers to the Council's Planning Policy No. 5 Developer and Subdivider Contributions and Planning Policy No. 3 Urban Drainage Contribution.

5.12.2 Sustainable Development

The Council seeks to encourage all new development in the town sites and surrounding areas to display innovative and sustainable design. This sustainable subdivision and individual housing design is becoming increasingly common as a desirable outcome from local governments. This type of development may also increase the attractiveness of the town sites to visitors and prospective buyers in terms of the promotion of environmentally friendly outcomes for the towns.

The Council will consider the development of a Sustainability Framework to provide guidance for developers and the Shire alike in designing and assessing new environmentally sustainable and innovative urban development. A framework that includes objectives, criteria and performance indicators for the following categories could be implemented in the design and construction of new buildings in Boddington and Ranford to address matters such as:

- » Governance (leadership and management of sustainability practice);
- » Energy (renewable energy, energy use monitoring, efficiency);
- » Water (efficiency, water use monitoring, non-potable water supply);

- » Building Operations (ventilation, natural light, thermal comfort, refrigerants);
- » Materials & Waste (construction waste recycling, maximise green space);
- » Community (mixed use developments, universal access);
- » Transport (bicycle facilities, car parking); and
- » Economic Development (local economic re-generation, financial return).

The Council commits to taking the lead in promoting this type of framework by applying it to any new Council buildings, specifically the proposed new administration building near the Boddington Old School. In the proposed river side location, the Council will seek an innovative building that is designed incorporating the natural environment and river into the design, whilst also being a sustainable building. This would form the centre of the new proposed Civic Precinct at the main gateway to Boddington, presenting a strong presence to those entering the town.

6. Implementation Pathway

6.1 Overview

The Strategy sets out Council's vision and land use expectation for the Boddington and Ranford town sites over a 15-20 period. Implementation of the Strategy will progressively occur based on various factors including associated demands, financial feasibility and securing funding.

It is important that an implementation framework is considered and supported by the Council and the community to ensure the successful implementation of this Strategy over time as the towns grow. Consequently, the successful implementation of this Strategy will involve a staged approach with a focus on providing achievable and effective solutions in the short term, with a view to pursuing and implementing higher cost infrastructure solutions in the medium to long term. A key aspect of implementing the Strategy is through effective partnerships with the community, landowners, the business sector, the public sector and not-for-profit organisations.

The following recommendations are made to facilitate the implementation of the Strategy, however these may be made over a number of years as the need becomes apparent for required changes as the population of Boddington and Ranford grow.

6.2 Statutory Recommendations

The implementation of this Strategy will require, in part, modifications to Shire of Boddington Local Planning Scheme No. 2, or in the preparation of a new Local Planning Scheme No. 3, along with using other legislation, including:

1. The rezoning of properties to facilitate the expansion of the commercial area in the Boddington town centre.
2. The establishment of the commercial area in Ranford will require the rezoning of part of the railway reserve.
3. The establishment of a new park and playground area in Ranford will require the rezoning of Lot 53 Christie Street.
4. The future of Lot 62 Pollard Street, outside of the floodway, may require rezoning to facilitate the preferred use.
5. Introduction of development contribution plans and development contribution areas into the planning scheme as per State Planning Policy 3.6.
6. Review residential densities based on principles set out in Section 5.6.
7. Rezoning, new roads and/or road closures associated with land swaps if negotiations are successful.
8. Incorporate Special Control Areas into Local Planning Scheme No. 3 relating to identified flood risk areas and the mining bauxite buffer.
9. Consider incorporating Special Control Areas into Local Planning Scheme No. 3 relating to areas of key landscape significance.

6.3 Land Swaps/Acquisitions

The Shire of Boddington will need to initiate discussions with relevant land owners to facilitate the following land swap/acquisition proposals:

1. Lot 31 Pollard Street, in Boddington to facilitate the establishment of a new Child Care centre.
2. Lot 128 on the corner of George Street and Hotham Avenue, Boddington to facilitate the creation of an appropriate landscape entrance feature for the new medical/HACC centre.
3. Other land swaps/acquisitions may arise based on more detailed planning and/or as a result of new information/requirements.

6.4 Further Actions

The following actions are recommended to complement and form a base for the specific proposals outlined in this Strategy:

1. Undertake more detailed investigations and work in determining the preferred site, layout, design and cost to construct the Shire administration centre/Council Chamber on Shire Reserves 17428, 26566, 21600, 29622 (Shire reserved land that includes the Boddington Old School).
2. Apply to the State Government to modify the reserve/s purpose to accommodate the Shire administration centre/Council Chamber.
3. Fund or prepare Master Plans/Outline Development Plans to formalise the ultimate structure of the Recreation/Sporting and Civic/Heritage precincts.
4. Subject to the outcome of more detailed investigations and plans for the Recreation and Sporting Precinct, it may require the partial realignment of Club Drive and associated ceding of a portion of the Club Drive road reserve into the Recreation and Sporting Precinct.
5. Fund or prepare a District Water Management Strategy to enable the Shire to address existing drainage deficiencies & and make improvements to the landscaping, whilst establishing a new vision for new developments. This will provide opportunities for taking a whole of water cycle approach to development to give consideration to water conservation and reuse.
6. Undertake or commission a feasibility study/business case for the transfer of the management of the old supply dam from the Water Corporation to the Shire.
7. Subject to the results of the feasibility study/business case, prepare an Irrigation Strategy that incorporates the old town dam water supply for the irrigation and greening of reserves and playing fields throughout Boddington.
8. Arrange for the preparation of Building and Landscape Guidelines for both town sites to expand on existing design guidelines and provide a technical framework for all future townscape and streetscape improvement works.
9. Review and broaden the *Bannister Road Upgrade Study* to include streetscape improvements and implementation opportunities throughout the whole town site.

10. Develop or adopt a Sustainability Framework for the assessment of all new development and other planning proposals.
11. Monitor demands/trends and undertake an assessment for a possible industrial estate accommodating uses that require larger lots and/or greater buffers to “sensitive uses”.
12. Review/monitor education requirements and promote enhanced education being provided locally.
13. Lobby the State Government to upgrade enhanced water supplies to Ranford in the short term.
14. Finalise the bushfire hazard assessment for the municipality.
15. Undertake discussions with Main Roads Western Australia and other key stakeholders regarding the costs and benefits of a heavy haulage bypass for Boddington. Should there be greater benefits than costs, finalise an alignment, identify land requirements and seek funding.
16. Relocate the Shire Depot to land in Assay Terrace in the short term.
17. Progress discussions with emergency service providers regarding relocating their base from the site behind the Town Hall to the current Shire Depot site.
18. Identify, secure and construct public car parking in the Boddington town centre to be funded through developer cash-in-lieu payments.
19. Seek developer and subdivider contributions in accordance with State Government and Council policies, including towards upgrading river crossings to provide safe and convenient access for pedestrians, cyclists and motorists.
20. Undertake or fund a review of the Municipal Inventory.

7. References

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- GHD. 2008, *Report on Preliminary Salinity Situation Statement – Hotham Williams Murray Catchment*, 18th November 2008.
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Appendix A

Stakeholder Consultation 1 & 2 Outcomes



Boddington Ranford Townsite Strategy

Stakeholder Consultation Outcomes – Needs & Issues

18th & 19th November 2008 – Shire of Boddington Offices

Education & Youth – Lee Jones Hogg (High School Principal), Mark Hughes (President P&C), Peter Haas (Youth Centre Committee)

Mining:

- » Rapid mining based population growth - population could reach 7000-8000
- » Worsley and Newmont's infrastructure needs may never include Boddington – most maintenance work is sent to Mandurah
- » The outcomes of the projected expansion are exciting
- » The Riding Club want to relocate (not corroborated by the Riding Club)
- » Marradong production commencement (bauxite) in approx 2010 – minimum 60 houses will be required
- » Newmont production commencement in 2008/9 – 650 workforce (already have 450, rest by end of quarter)

School:

- » Half of the community wants to pull down old school building, the other half want it to stay
- » Is a private school going to come to town? Do we need provision for this?
- » The school has currently planned for an additional 150-200 students
- » There are currently 300 students from Kindergarten to Year 12
- » Years 11 & 12 are vocational and traineeships are also offered
- » Some parents would like the TEE run in the school
- » A senior high school will be required in 20 years, maybe a full TAFE facility, based on projected growth figures
- » The school is built on a low lying swamp area
- » During the day the ovals and courts are leased out
- » Parking and access for the school in the current growth plan is not satisfactory
- » The current car parking situation at the school is an issue – bus, car and children movements all happen at once, twice a day
- » A bus only road is a good option to alleviate potential risks
- » Some consideration of the relocation of the smaller oval to the eastern side of school, on riding area
- » Security is an issue at the school - fencing may be required, but it is not desirable



- » DET have a plan for 10 transportable to accommodate the overflow of primary school schools – these don't include toilet blocks or offices

TAFE:

- » TAFE currently operates out of the old school and to permanently shift their operations to the current school
- » TAFE are waiting for Newmont and Worsley to identify their requirements for traineeships
- » TAFE courses currently provided are based on computer skills and horticulture e.g. housewives learning computer skills – 5-10 people
- » TAFE is a marginal player within the regional infrastructure needs
- » 6 students are currently taught through TAFE – courses are funded by Newmont
- » Most of the TAFE activities that occurs in town happens in the new school as it has the facilities
- » If numbers grow, this may effect the efficiency of this collocation
- » TAFE want to build a big shed for metal fabrication, building construction courses and activity on an as needs basis, however cost is an issue
- » The TAFE is connected to Challenger TAFE in Peel, who have to sign for units of competency
- » The CY O'Conner TAFE in Northam meet the needs for heavy diesel maintenance
- » Collocation of Year 12 and TAFE is an option
- » A full TAFE facility in Boddington is unlikely due to proximity of multiple choices readily accessible in the region (Mandurah, Rockingham, Perth)

Recreation Centre

- » The planned new recreation centre could be the 'nerve centre' of town – currently planned for west of the current school playing fields near Club Dr
- » Locating some facilities in Ranford may be an option – two discrete communities
- » There is currently a submission to the State government for funds to engage consultants to design the new recreation centre
- » Football, cricket, the bowls club, soccer will all use it – collcation of all facilities at new centre

Ranford

- » Ranford has sewerage issues

Child Care

- » Boddington Bear is only child care centre in town and is basically a community day care centre – funded by Worsley
- » It is open 9am-3pm – this is an issue for everybody
- » If and when another child care centre is built, there may be a requirement at TAFE for training
- » The Shire is looking at locating a child care centre near the school as the Shire doesn't own land to locate anywhere else. The pool is only other land owned by Shire



Mining – Greg Robertson (Worsley), Liz Graham (Worsley), Jim Nelson (Worsley – Community Liaison Committee Chair), Annette Dix (BGM – Manager Social Responsibility), Steve Thompson (Shire of Boddington Planner)

Truck Movements:

- » There may be up to 20 road train movements a day on average through the townsite
- » Schedule will be based upon the safety of school children and will be monitored and changed if necessary
- » First run approx 4am-6am- 3 empty trucks
- » 9am-12pm - 3 loaded trucks
- » 4pm – 6pm - 3 empty trucks
- » The rest of the trips would occur at nighttime
- » This schedule is by no means confirmed and is an early estimate
- » A study on Main Street by Connell Wagner has been completed

Boddington Gold Mine:

- » There is a OHS requirement for employees working 12 hour shifts not to travel more than 1 hour for accommodation after their shift
- » Industrial area for contractors
- » The BGM mine has a planned for a life of 20 years minimum, which is exceptional for gold mines and indicates the significance of the size of the ore
- » BGM have a target of 65% of their workforce to live locally and would required approx 420 dwellings within 50km (within 5 years)
- » BGM would be responsible for generating 1142 new flow on jobs (all trades & services)– calculated as 1.7 new jobs for every 1 mining job (DOIR figures))
- » 65% of 1142 flow on jobs results in 740 dwellings (e.g. Boddington Crane Hire)
- » Examples of flow on jobs would be electrical services, metal fabrication, maintenance - crusher repairs, processing equipment
- » BGM offer an employment subsidy to locate close to the mine i.e. in Boddington
- » It is BGM's hope that Boddington will create a legitimate lifestyle choice for their employees in the future
- » Would require commercial space in town of approx 500m2 for an office, training, information and education centre

Worsley:

- » Worsley will require 20-50 houses within the next 3-5 years
- » Would require a small commercial space for training and meetings

Ranford:

- » A small commercial centre (e.g.a local deli) would serve Ranford well



- » Ranford creates lifestyle opportunities
- » The water supply needs upgrading before anymore significant development takes place, possibly through to Wandering
- » There is currently no sewer – its viability would need investigating
- » Ranford Pool is a popular reserve and should be upgraded into a family recreation area - kayaking, picnic etc,
- » The road to Ranford Pool should be sealed
- » The current walking trail on the river bank and combined walking & bike trail on the old railway reserve should be connected to Ranford Pool
- » There are restrictions on any future connections to the water mains east of Ranford town site placed by the Water Corporation
- » Short stay accommodation may be a possibility, as well as a small restaurant and bed & breakfast
- » The density threshold of the town site was questioned
- » The preservation of the reserve area immediately east of the town site was supported, with possible aboriginal uses for education/cultural centre in the future

Boddington:

- » The town will require approx 500 new dwellings within 5 years to cater for the mining expansion
- » Street parking within Boddington is an issue
- » Areas for commercial development need to be defined – does the current area have the ability to expand, or is a new area needed
- » According to one real estate agent, the average rent is \$750-\$1000pw in Boddington
- » A mix of block sizes should be encouraged
- » There is a need for a clearly defined commercial area
- » Where are the opportunities for the expansion of IGA?
- » A wider and more open main street should be considered for the transport of mining equipment – there should be no islands or roundabouts
- » Is there any potential for widening the main street?
- » Future planning should manage the available space for expansion – there are many vacant blocks at the moment in good locations
- » Is there a need for a cultural centre? Facilities should be collocated
- » The re-routing of the road around the back of the pool is a possibility
- » The attraction of visitors as opposed to just employees needs to be considered and the development of the town's tourism –a cinema is a possibility
- » Relocation of the pony club



Community & Recreation – Mark Shaw (Lions Club), Louise Cheney (Soccer Club), Phil Salmeri (Sports), Paul Martin (Golf Club), John Allert (Riding Club), Barb Yates (Tennis Club), Cr Greg Day (Shire of Boddington)

Riding Club:

- » The Boddington Riding Club occupies the land east of the school grounds
- » The Pony club is now defunct
- » The Riding club has approx 40 members, both social and riders
- » It has a large involvement with the annual Rodeo
- » The Riding club is trying to raise funds to create an all-weather venue
- » The school holds presentation nights there, the 4WD club also uses the venue
- » Other events include weddings, the Worsley Christmas function and private functions
- » The Peel Development Commission appointed a consultant to look at the riding trails throughout region
- » Two 40km temporary riding routes will be set up around the gold mines and Worsley mine
- » The Riding club don't have a lease

Boddington Rodeo:

- » The Boddington Lions Rodeo is the biggest in the State – over 3500 attended this year's
- » It is the single most important event in town and it involves the whole town
- » In its current location, everyone can walk to the rest of town for the additional events
- » It includes a shearing competition

Mining:

- » The main bridge and the main street will need ongoing maintenance with the increasing traffic – who will fund this?
- » Past and current trends suggest that the majority of mining employees will commute from Perth/Mandurah, not live locally

River:

- » Ranford Pool is a popular alternative to the swimming pool because of opening hours restrictions
- » There is up to half a metre of silt in the river in front of Boddington from the weir
- » It should be drained more often to increase its attractiveness for swimming and kayaking
- » The Boddington River Action Group controls weir locally, however DoW has ultimate control

Soccer Club:

- » Soccer is played at the school grounds and there has been talk of getting teams to Boddington to play on a weekly basis
- » This has not happened for 5 years



- » There are 68 full members of the club who travel to Mandurah to play
- » There are 22 children members (social), all from Boddington and they don't travel
- » The club was established in 2002 with 1 team, it now has 6 teams
- » There is a need for 2 rectangular pitches in town – one full size (60x100m) and one small size (50x70m)
- » The club is happy being located near the school
- » The soccer shed has been allowed next to the cricket shed
- » The current change room facilities are in desperate need of an upgrade

Recreation Centre:

- » The new recreation centre being located west of the big school oval is a possibility
- » There is provision for the tennis courts to move closer to this centre in the next 10 years
- » An application for funding has been made, and will hopefully be approved in May, for the design of centre
- » Provision for the expansion of the recreation centre and associated facilities will be made in the future as required
- » The relocation of the pool into this precinct near Club Dr is a possibility
- » A feasibility study for the recreation centre & other recreation activities has been completed by Mark Casserly
- » Walking trails were identified as the number one want from this study, along with mountain bike riding

Golf Course:

- » The Golf Club has 38 members
- » The water for the reticulation of the golf course and nearby sporting grounds could come from BGM possibly
- » The club is looking at fencing the course to restrict car access, but still allow pedestrian access as there has been problems with cars on the course in the past

Bowling Club:

- » The Bowling Club has 2 greens (one new) and approx 60 members, plus additional social members
- » The club hosts scroungers, social evenings and corporate bowls

Other Clubs:

- » AFL has 70 seniors, 60 juniors plus parents, and approx 45 in Auskick
- » The Tennis Club has 40 juniors, 45-50 seniors
- » The Cricket Club has approx 30 members
- » There is a Badminton Club
- » The Netball and Basketball Clubs have approx 100 members each



Youth:

- » There is a Youth centre at the old school run on Tuesday and Friday nights
- » Worsley pays for an assistant (recruitment is done through Worsley)
- » It is a place to watch videos, relax, play pool, watch TV, play air hockey
- » There is a Blue Light Disco every couple of months, one for the younger kids and one later for the older kids
- » Dance and drama classes area also held at the Old School
- » The Office of Crime Prevention happy with the current activities available
- » More playgrounds in parks are needed for young children

General:

- » The Old school has obtained a grant recently – approx \$350000
- » It's offices are currently full
- » 48 new homes have been built in Boddington in the last 18 months
- » The Shire have commissioned an engineer to assess the condition of the Town Hall
- » There is an opportunity to use the old town water supply for reticulation on grounds and parks
- » If the Shire pays \$1m to upgrade the wall to prevent it breaking then the Water Corporation will turn the use and management of the dam over to the Shire
- » David Juers of WC in Albany is the main contact

Commercial & Industrial – Earl Schreiber (Post Office), Gavin Cowcher (Hardware), Sheila Fenwick (President St Johns), Gary Sherry (Shire of Boddington CEO), Steve Thompson (Shire of Boddington Planner)

Parking/Traffic:

- » Street parking is an issue – there is sufficient spaces, however there are problems with the utilization of the parking spaces
- » For example, the pub has its own car park but its patrons park on the main street instead
- » Another restaurant is going to open in between the Post Office and motel, which will require additional parking spaces
- » The pressure will grow on George St in relation to traffic and parking in the future
- » It is the Council's intention to utilise Council property adjacent to the current medical centre and park for public parking
- » The Town Planning Scheme has provisions for 1 parking bay/40m² for new commercial developments
- » Significant traffic on Farmers Ave – marginal improvements in width possible
- » Suggestion of right angle parking on Forrest/George Streets to increase the number of bays – needs further investigation



- » The Shire would struggle to effectively police any parking restrictions that may be introduced
- » The expansion of the Shire staff would include a full time ranger
- » The Shire indicated that there would be a possible gradual acceptance of parking restrictions
- » 'Nibs' on streets with parking are needed to protect access to driveways from the streets
- » The possibility exists for a truck turn around bay on Pinjarra-Williams Rd just to the south of Boddington town site
- » Crossman Rd in Ranford is busy and there would be an issue with cars and children if a park/picnic area was further developed at Ranford Pool

Medical Centre:

- » The Council will sell the current doctors surgery to pay for new the medical centre to be located next to the hospital
- » The DoH transferred approx 4000m2 of land next to the hospital to the Shire for the new medical centre

Emergency Services:

- » St Johns Ambulance is currently located opposite the current medical centre – not sure of the ownership of the land
- » Presently, the emergency services (St Johns, Fire Brigade, SES) are grouped together near the old road board and town hall
- » The SES is next to the town hall – if the town hall is in use when there is an emergency, the SES vehicles have had difficulty exiting their building due to parked cars
- » St Johns can't be located within 100m of the hospital as they are not allowed to use their sirens within that distance
- » A possible relocation of all emergency services in the vicinity of the triangle of land near the intersection with Farmers & the main street, or the Shire depot
- » The cost and site geography are possible constraints to the relocation to this area
- » This would free valuable land in the heart of the town near the town hall for public parking and/or commercial uses
- » The Fire brigade building & shed is only 2 years old, however may possibly be relocate-able

Industry:

- » The Shire depot site has been identified as not being big enough for future needs – approx 3ha would be needed in the future
- » The expansion of the current industrial area and the development of the new industrial land near the treatment ponds will provide an additional 25 lots (5 in the existing area, 20 in the new area)
- » It was identified that 1-2 large lots may be needed for the heavy support industries for the two mines
- » Smaller businesses would serve both the mines and associated large industries



Commercial:

- » Watervale own multiple vacant blocks on the main street and the pub owns the vacant block next to the pub
- » The Old School is not allowed to operate a business if the same business is operating or will operate in town site
- » It is a large building that they struggle to fill with uses and it possibly takes tenants from the main commercial area because of cheaper rents
- » The Council is currently seeking funding to redevelopment the current Shire office site, or possibly the relocation to behind the Old School, however this would be more expensive
- » The corner sites at the intersection of the main street and Pollard St should have bigger, iconic buildings on them
- » The Arts Council building is owned by the Shire and the vacant block next door is used for arts festivals sometimes
- » Majority of the residents from Ranford currently take care of conveniences (post office, visiting the Shire office, shopping) when picking up kids from school in afternoon
- » The establishment of a small corner store in Ranford may reduce the amount of trips made into Boddington from Ranford, helping the parking problems
- » A residential component attached to the deli would increase the attractiveness of the business
- » There is a need for large commercial sites to be identified in the strategy for uses such as a service station
- » The laneways between the properties facing the main street and Johnstone St are a great asset from a commercial perspective
- » The pub currently has planning approval for 12 units, and is possibly looking at the refurbishment of the existing 4 units
- » The long term status of BP service station was questioned
- » The BP service station probably does better trade than the Gull service station

POS/Recreation:

- » More POS for kids is needed – Ranford Pool is a good opportunity
- » The Shire has a grant to upgrade the park on the corner of Farmers & Bannister Rd
- » The country near the old tip site is good for horses – POS areas could be developed along creek lines
- » The old tip site could be developed for horse related activities
- » The triangle of land in Ranford surrounded by Christie St & Burnett St is vested in the Council – it is currently zoned Residential (R10) and public open space is considered a more appropriate land use



Health Services – Marlene Waldock (Admin Hospital), Michael (Acting Health Service Manager), Dayle Manson (Home and Community Care Co-ordinator), Heather Salmeri (Community Health Nurse)

Hospital:

- » Boddington is a generally healthy and active community
- » The hospital is only allowed 5 nursing home type patients at one time
- » There are 16 beds in the hospital, approx 35 staff, including 12-15 medical staff
- » The hospital covers antibiotics, chest pains, recovery, dressings, general checks, and has no facilities to deliver babies
- » There is only one doctor in town, and he is the only person allowed to admit patients to hospital
- » More medical help is required and it is planned to employ a second doctor next year
- » Emergency care has doubled with the operation of the construction camp – the 2000 workers in the construction camp has doubled the pressure on hospital – mainly Accident and Emergency
- » Boddington comes under the Wheatbelt Health System - Paul Seats Director of Clinical Services in Narrogin
- » The hospital doesn't have operating mortuary – an upgrade is required on the existing decommissioned mortuary
- » The hospital has just completed an upgrade
- » Staff sometimes have to deal with emergencies without support from the doctor when he is not available – they rely on communication with Narrogin and Perth
- » It is advantageous for the new medical centre to be located next to the hospital
- » Hospital representatives were unsure of the timing of new medical centre and haven't seen the plans as yet

Aged/Community Care:

- » Home and Community Care will be attached to new medical centre along with the GP, Dental, Allied Health services
- » There is a need for pensioner aged care independent units as there is nowhere to rent currently
- » There is a need for 4 units now, and between 8-10 in future to cater for the expected growth
- » There is a possibility of a lifestyle village for the aged on the Council land behind the hospital
- » An aged care facility is required to relieve pressure on the hospital and will require separate staff from hospital so as not to decrease efficiency of the hospital

Boddington:

- » Boredom of teenagers is leading to antisocial behaviour and is a concern, especially drugs and alcohol
- » The number of teenagers in town is restively low due to popularity of boarding at other schools and these lower numbers possibly contributing to the boredom



- » The town needs a new supermarket with better quality products and greater variety as some people are beginning to shop out of town
- » Boddington has no butcher and no bakery
- » It was identified that there is no need for a fast food/takeaway restaurant in Boddington
- » There is currently an arrangement by the pub owner to bus the construction camp workers to and from the pub
- » There is a transient to the nature of the town's workings (proximity to Perth, shift workers)

Environment – Greg Marston (Boddington River Action Group), Robin Andersson (Friends of Reserves), Tyron Miley (Hotham LandCare), Roz Thompson (Friends of Reserves)

Mining:

- » The status of the construction camp once construction is complete was questioned – who can live there after construction is finished?
- » Participants questioned the status of the possible extension of the Worsley construction camp
- » Worsley may use the gold mine construction camp facilities

Ranford:

- » A shelter and bbq area were being constructed the next day at Ranford Pool
- » Some perceptions of Ranford Pool being underutilised
- » Upgrades needed include a dedicated parking area and the re-vegetation of the reserve
- » There is currently a walk trail along the river to Ranford Pool
- » Halfway Gully (the reserve east of the town) is sometimes used for truck parking – strategy needs to identify how to prevent the un-desirable use of the reserve
- » There are weed problems everywhere – they are sprayed with a focus on the railway reserve
- » There were no major objections to a corner store or the proposed location on the corner of Crossman Rd and the road to Ranford Pool

Planning:

- » The environmental groups are pushing for environmental planner/consultant to be employed at the Shire of Boddington
- » The participants believed that an Environmental Plan should be required by the Shire for all planning applications/ development plans
- » The Council is obtaining money from developers to contribute to the improvement in the town's drainage

Weir:

- » It was considered pointless draining the weir to remove the silt build up because of the increased runoff from the new subdivisions on the southern edge of town



- » The possibility of dumping the silt from the weir onto the old tip site if drained was raised
- » The re-filling of the weir is challenge is drained as it is reliant on rainfall and a poor winter rainfall would leave it empty for summer
- » A sustainable solution is needed – possibly using the silt on the golf course?

Reticulation/Reserves:

- » There is a problem with the quality of the water currently used on the school ovals as some bores are more salty than others
- » The Water Corporation has sent a letter regarding the old town supply dam
- » The old supply dam is an important resource and if it could be utilised it will take some pressure off the use of scheme water (for reticulation, dust suppression)
- » This water could be used for the general greening of the town
- » The current and future concentration of recreation activities should be maintained
- » Farmers Reserve and Blue Gum Reserve need to be retained and enhanced
- » There is the potential for the old railway reserve to be utilised as a multi use trail to through to Tullis Bridge
- » The Parks and Recreation reserve north of the existing industrial area is in private ownership and the Council don't want to take over ownership
- » The rezoning of this reserve to Rural Small Holdings is part of the omnibus Amendment 18

Industrial Land:

- » The new industrial area is one of the only areas away from the coastal regions that has the potential for acid sulphate soils if disturbed

Safety & Security – Earl Schreiber (SES), Sheila Fenwick (St Johns), Rod Pett (Ranger - Shire of Boddington), Jeff Gibbs (Bush Fire Brigades), Carmel Martin (Director Corporate Services - Shire of Boddington), Mick Sears (Officer in Charge – Police)

Mining:

- » The identified bauxite deposit in the region stretches to Brookton
- » The total construction workforce for BGM is 3600 people
- » The future expansion of the Worsley mine is expected to involve approx 500-700 extra construction workers

Police:

- » Road safety is currently the major issue for the police with recent increases in traffic – there have been 5 deaths associated with the construction camp and other long term injuries
- » Increases in traffic numbers also associated with tourists with Boddington being an ideal location for day trippers, especially on back roads



- » The police station on large block of land and has plenty of room for any future expansion needs
- » The police station is supposed to have 4 officers and there are currently 2 officers doing the work of 4
- » If they had 4 officers, this still would not be enough
- » There will be a need for approx 6 officers to accommodate the future growth
- » Assault and domestic violence are common issues
- » Additional officers (approx 20) from surrounding areas are brought in for any special events e.g. the rodeo

Emergency Services:

- » The existing Shire depot should be considered as an alternative location for the emergency services
- » The SES are prepared to move to a more user friendly location with new facilities, and are prepared to collocate with the other services as long as each service has a separate administration function
- » The Crossman Fire truck could be housed in Crossman as it is currently housed in private garage which is not ideal

Community Safety:

- » Improved street lighting is required near the high school and recreation precinct
- » Improved street signage is required
- » An informal neighbourhood watch function currently operates in the town through residents calling the police
- » The caravan park has only one road in and out and it is surrounded by the river and foreshore reserve – a second road out onto Pollard St is considered necessary from a fire safety point of view
- » Kalgoorlie has had problems with mining vehicles and right angle parking in relation to pedestrians due to the restricted vision of the larger vehicles
- » There has been a white ant problem in the past on the main bridge across the river

Boddington:

- » The Town Hall was built in late 50s/early 60s and deliberately not on the main street
- » The new industrial area will be used for lay down areas with heavy manufacturing to be done in Perth
- » There has been talk of extending the caravan park eastwards along the river towards the old school buildings
- » The caravan park (shire operated) and motel (12 rooms) (and associated ablutions) are currently at capacity all year round
- » There have been empty blocks in the town site for 40 years and Council rates should increase on blocks that stay vacant for long periods of time to force development



Boddington Ranford Townsite Strategy

Stakeholder Consultation Visit 2 – Preliminary Strategy

9th December 2008 – Shire of Boddington Offices

- » There will be approx 300 lots in the first stage of the subdivision of Lot 9016
- » The caravan park used to have dual direct access, however was problematic with 'hoons' – it was clarified that the proposed dual access for the caravan park was not direct access into the property but opening an access to the west of the caravan park access on Wurraming Ave
- » There was still concerns that the opening of this through road could adversely affect the residents on Wurraming Ave
- » There is an old proposal for the relocation of the Council building to the north of the RSL gardens and memorial area
- » There is an old plan for a railway line from Dwellingup through to Boddington - along Hakea St with a station to the west of the caravan park
- » Also associated with this proposal was the utilisation of old carriages for tourist accommodation to the rear of the proposed station.
- » The site for the proposed railway station is freehold land owned by the Shire and has been considered for subdivision in the past
- » Parking for the annual Rodeo is an issue and needs to be considered in any redevelopment of the school/recreation precinct
- » The view from the Community & Bowls Club onto the ovals may be compromised by the current positioning of the proposed new recreation centre building
- » Some concern was raised over the possibility of children having to cross the proposed car park to get to the northern oval.
- » The ultimate location of change room facilities is in a central location to all the facilities within the precinct
- » The possibility was raised of converting the northern oval into soccer pitches and relocating the oval to the eastern side of the school
- » The current and future use of the 'lake' to the south of the main oval was questioned – if the lake was removed, then it would present an opportunity to move the main oval southwards to provide more room between this oval and the northern oval for facilities
- » Consideration should be given to multiple change room facilities, with a larger 'main' block and smaller change rooms closer to other facilities
- » Future proposed changes to the school's western and eastern boundaries were noted
- » The realignment of Club Dr was suggested to move it westwards, between the current entrance to the ovals and the bend in the current alignment
- » It was noted that the riding club has new facilities (yards)



- » The viability of the town hall as a function venue was questioned once the new recreation centre is built
- » It was noted that there would be 20 additional truck movements a day through town, on top of current truck movements – raising the possibility of a bypass route for trucks
- » Improvements in the connection between Boddington and Ranford town sites were suggested, including improved lighting and street paths
- » The provision of sewerage is required to increase residential densities in Ranford
- » The current multi purpose trail between the two towns needs widening
- » Street lights should be considered on the corner of Crossman Rd and the access to Ranford Pool in Ranford if this corner is to be developed

Appendix B
Public Comment on Draft Strategy

Boddington Ranford Townsite Strategy - Report on Public Submissions

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GOVERNMENT AGENCIES & SERVICE AUTHORITIES SUBMISSIONS			
	Name and contact	Comments:	Recommended Action to Comments:
1	<p><i>Telstra</i> Forecasting & Area Planning Locked Bag 2525 Perth WA 6001</p>	<p>» No negative comments to make.</p>	<p>» Noted</p>
2	<p><i>Water Corporation</i> Great Southern Regional Office PO Box 915 Albany WA 6331</p>	<p>» No objection to the proposal however following comments should be incorporated into the documentation:</p> <ul style="list-style-type: none"> - There may be a requirement for existing Water Corporation infrastructure located in the vicinity of the planning area to be re-located in order to protect those facilities and to maintain an appropriate level of service to the Corporations customers. - There may be a requirement to upgrade Corporation infrastructure or to install new works in order to meet the additional demand that may be generated as a result of this proposal - The placement of street scaping such as trees, garden beds and furniture should be in accordance with the Utility Providers Code of Practice (for WA). 	<p>» Noted and various buffer requirements have been accommodated within the text where relevant.</p> <p>» Noted and possible upgrade measures are referenced in the text.</p> <p>» Noted and to be included in the text.</p>
3	<p><i>Department of Water</i> Adrian Parker Program Manager – Urban Water Management Kwinana Peel Region PO Box 332 Mandurah WA 6210 08 9550 4222</p>	<p>» In accordance with <i>Better Urban Water Management (WAPC, 2008)</i> the strategy should be accompanied by a District Water Management Strategy.</p> <p>» Future Town Planning Scheme Amendments, Local Structure Plan and/or Outline Development Plan are required to be supported by a Local Water Management Strategy</p> <p>» Subdivision applications shall be supported by an Urban Water Management Plan.</p> <p>» Proposed operations within the Boddington PDWSA should be referred to the Department for comment.</p> <p>» Future development should be guided by relevant Shire policies.</p>	<p>» Agreed, however not part of current project scope. A recommendation has been added to develop a DWMS.</p> <p>» Agreed, however not part of current project scope.</p> <p>» Shire to note.</p> <p>» Shire to note, DoW's Public Drinking Water Source Guidelines referenced in text.</p> <p>» Current Shire policies referenced in the text.</p>

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4	<p><i>Main Roads Western Australia</i> Colin Nicholls A/Road Corridor Planning Manager South West Region PO Box 5010 WA 6231 08 9725 5664</p>	<ul style="list-style-type: none"> » Notes that Main Roads are undertaking road widening on the Bannister-Marradong Road. » No comments to date. 	<ul style="list-style-type: none"> » Noted – previous studies were consulted during the Strategy preparation and various components included.
5	<p><i>Department of Mines and Petroleum</i> Warren Ormsby Mineral House 100 Plain Street East Perth WA 6004 08 9222 3571 Warren.ormsby@dmp.wa.gov.au</p>	<ul style="list-style-type: none"> » If Scheme Amendment No. 20 is not adopted, DMP requests that the 1200m mining buffer be extended to surround these additional bauxite resources to facilitate future mining. 	<ul style="list-style-type: none"> » Should the Minister grant final approval to Amendment No. 20, the Council will not modify the 1200 metre bauxite mining buffer as set out in the Local Planning Strategy. However, should the Minister not support Amendment No. 20, the Strategy will be modified to reflect the mining buffer as set out in Appendix L.
6	<p><i>FESA Operations</i> Grant Hansen (FESA Area Manager) Narrogin District 10 Williams Road Narrogin WA 6312 08 9881 3898</p>	<ul style="list-style-type: none"> » No comment » Local Government would be expected to apply a condition on any future subdivisions requiring compliance with WAPC policy DC 3.7, the associated Planning for Bushfire Protection document and AS 2419 – Fire Hydrant Installations. 	<ul style="list-style-type: none"> » Noted » Compliance of development with DC 3.7 already referenced in the text. » In 2010, the Shire will commission the preparation of bushfire hazard mapping for the municipality. As part of this, the investigations will identify bushfire prone areas as set out in the Australian Standard 3959 and in the Building Code of Australia. » Reference to detailed design requirements for individual developments not appropriate in this strategic document, Shire to note.
7	<p><i>Environmental Protection Agency</i> Colin Murray Director, Environmental Impact Assessment Division The Atrium Level 8, 168 St Georges Tce Perth, WA 6000 08 6467 5411</p>	<ul style="list-style-type: none"> » Does not appear to be any fatal environmental issues. » Suggests including an objective that includes the environmental values of the area. » Recommends that a greater portion of remnant vegetation be retained. » The EPA encourages the Shire to maintain and enhance ecological linkages and also to protect remnant vegetation » In reference to Appendix H, the EPA encourages the Shire to design subdivisions so that remnant vegetation is retained and proposed subdivision in areas which have been previously cleared. 	<ul style="list-style-type: none"> » Noted » Referenced in the 'vision' of the towns and in the planning considerations » Figure 11 encapsulates the majority of the visible large areas of remnant vegetation in the aerial photo » The proposed ecological linkages in Figure 11 encompass most of the remnant vegetation already. » The representations in Appendix H are existing amendments/subdivisions that this process has no control over in terms of design. Shire to note.

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		<ul style="list-style-type: none"> » EPA considers that the proposed changes in Figure 7 will not have a significant impact on the environment. » Supports the 'protection and enhancement of native wildlife.' This can be achieved through rehabilitation and the improvement and rehabilitation of ecological linkages. » Supports the approach to undertake a comprehensive fauna survey in areas where priority fauna have been recorded prior to development. » Shire needs to ensure that any proposals for areas with Aboriginal Heritage Sites comply with the requirements of the <i>Aboriginal Heritage Act 1972</i>. » The EPA recommends a suitable buffer be proposed for the Hotham River and any other watercourses within the Strategy area. This should include the retention and rehabilitation or riparian vegetation. » For generic buffer distances between industrial and sensitive land uses, refer to Guidance Statement No. 3. » The objectives to revegetate creek lines and other sensitive areas to improve water quality and health of the area is supported. » In the absence of reticulated sewerage, the EPA encourages the use of alternative treatment units over septic tanks. 	<ul style="list-style-type: none"> » Noted » Noted – the Strategy proposes ecological linkages and protection of remnant vegetation to facilitate this objective. » Noted – this is a requirement of the DEC and is referenced in the text. » Noted – this is a requirement of DIA and is referenced in the text. » This exists of sorts in the form of the recently adopted Planning Policy relating to development within the flood fringe and floodway, and the strategy maps reflect these areas. » Noted – document was consulted for generic buffer distances. » Noted » Agreed – Council supports the effective treatment and re-use of waste water.
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INDIVIDUAL SUBMISSIONS			
	Name and contact	Comments:	Recommended Action to Comments:
8	<p>Val Jones 6234 Pinjarra-Williams Road Boddington WA</p>	<ul style="list-style-type: none"> » Shire office should remain in its current location in the main street. » The foreshore area belongs to the people of the shire, not an office block. » Extend the caravan park instead or increase access to ratepayers to this area. » Keep the foreshore free of buildings. 	<ul style="list-style-type: none"> » Noted – the Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The relocation option was in an existing cleared area adjacent to the Old School oval, without affecting the existing pathway or access arrangements to the foreshore area. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council.
9	<p>Martin Richards <i>Impact Urban Design</i> PO Box 477 Dunsborough WA 6281</p> <p>On behalf of Barenco Pty Ltd, owner of: Lot 8016 Bannister-Marradong Road Boddington WA 6390</p>	<ul style="list-style-type: none"> » Concerned that the consultation process did not include the owners, or their representatives of Lot 8016. » The Draft Strategy Report should be modified to recognise the advanced planning status enjoyed by Lot 8016. » Site is appropriately zoned for the adoption of a structure plan and this has been done and endorsed by the WAPC. Subdivision approval for 232 lots has been issued. No legal procedures they are aware of. » Draft Strategy does not expand on how the 1000 lots were arrived at, nor does it provide any information on the status of these amendments nor when approvals will be issued. Any future application for rezoning should clearly demonstrate a realistic demand for the land use proposed and any such amendments should only be initiated where such demand is clearly evident. 	<ul style="list-style-type: none"> » The consultation was open to everyone and was advertised by the Shire. Direct consultation was not considered necessary due to the advanced stage of approvals and planning of the Lot. » Amend text to specifically acknowledge the 232 lots that have been approved. » Noted – amend text to reflect, take out reference to legal procedures. » The Strategy indicates that the number of future lots was derived from current subdivision designs. The timeframe for the approval of these subdivisions/amendments is unknown. » Agree that future applications for rezoning should demonstrate a realistic demand for the land use. » The road network in Fig 3 is the same as the Structure Plan, with the exception of a road link to Lot 28 Crossman

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		<ul style="list-style-type: none"> » Depiction of land uses and road connections shown in Figure 3 is inconsistent with adopted Structure Plan. » The central plateau portion shown as POS is inconsistent with the endorsed Structure Plan and is intended to be developed as rural-residential lots. This site will enjoy panoramic views of Boddington and is considered prime development land. This site being depicted as POS should be removed from Figure 3 and 11. » Some of the proposed trails are in steep, rocky areas of the site that are inappropriate for pedestrians and cyclists to traverse. Also have security and maintenance concerns being along the rear of future lots. » The owner has no objections to discussing the provision of an appropriate train/path system with the Shire and the network should be confined predominately to the proposed and approved road and POS systems. » Road link on Figures 3, 9 and 11 to Lot 28 Crossman Road is not considered suitable and has been removed from approved Structure Plans. » The designation of 'Urban Expansion Area' as the land use does not recognise the approved land use distribution in the Structure Plan. » Lot 8016 is not within the southern view shed and the plateau area in the central north portion of the lot proposed as POS is not readily visible from the town centre. 	<p>Road, and the land uses are consistent with the Local Planning Strategy – the intent of the Figure is to indicate broad land uses, not specific exact land uses.</p> <ul style="list-style-type: none"> » POS areas removed from Strategy. » The trails identified are indicative only and would not proceed without engagement with landowners. It is also envisaged that these trails would run along property boundaries and be fenced off. The proposed trails are also within remnant vegetation (within which the EPA would likely object to any clearing) and an ecological linkage that is encouraged to be maintained and not cleared for development, ensuring the trail is mostly out of sight. » Road link put in at Shire's request. » The 'Urban Expansion Area' is the designation in the current Local Planning Strategy and does reflect the intended land use as this lot represents the future expansion of the Boddington Townsite. » Large portion of the lot is visible from areas of the Townsite, especially along Pollard Street.
10	<p>Greg Robertson 99 River Road Boddington WA 6390</p>	<ul style="list-style-type: none"> » Shire offices should remain in their current location as: <ul style="list-style-type: none"> - is close to the CBD and there is expansion potential without segregation on the river bank; - avoid proposed alternative site being developed as anything other than recreational and nature reserve areas - enables Boddington Old School to be utilised to its full potential - offers potential for development of new or enlarged 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will

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		Youth Centre within Old School Reserve.	be further considered in detail by Council.
11	Ray and Beverly James crossmandexters@westnet.com.au	<ul style="list-style-type: none"> » Shire offices should remain in their present position. » Potential future weather and river flows due to climate change should rule of relocating close to the river. » Boddington Old School should not be demolished » Purchase the adjoining house for expansion as an alternative to relocating. » Library should be relocated back near the shire offices as its location in High School restricts use. 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council. » The proposed location for the Shire office is outside the 100 year floodway and flood fringe. » Only a small portion of the non-original buildings of the Old School were proposed to be demolished for this option. » The library will remain in its current location at the District High school in the foreseeable future. Any possible option to relocate could be assisted with the construction of a new shire administration centre and would need to consider matters including on-going resourcing and securing additional funding for staff.
12	Boddington River Action Group Greg Marston Chairman	<ul style="list-style-type: none"> » Prior to subdivision would like to see consideration given to environmental impacts on the rivers and land reserves. An environmental impact response, including mitigation measures is long overdue and should be prepared. » Oppose the proposal to allow infrastructure to be built on existing reserves in Ranford. There are enough instances of people illegally adopting adjacent reserves as an extension of their own property. » Oppose the relocation of the Shire to the Hotham River – the area should remain POS. » Oppose demolition of Boddington School – this would 	<ul style="list-style-type: none"> » The Strategy currently proposes various measures for the Shire to implement to consider environmental impacts to complement existing Shire and State policies and procedures. » The proposed infrastructure is small in nature and may never occur if the population at Ranford doesn't increase. It would occur under a legal rezoning or approval process and is different to illegal private use of reserves as commented. » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites

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		<p>remove a piece of the area's heritage, and remove accommodation for non-profit groups.</p> <ul style="list-style-type: none"> » Questions why the current Shire Office location wasn't included for comment with the two alternatives sites at the old Boddington School. » Boddington Town Hall should be retained. 	<p>considered to have advantages.</p> <ul style="list-style-type: none"> » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. <p>There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council.</p> <ul style="list-style-type: none"> » It is not proposed to demolish or alter the Town Hall.
13	<p>Kim & Natalie Matsen PO Box 157 Boddington WA 6390 08 9883 9302 matto@boardernet.com.au</p>	<ul style="list-style-type: none"> » Property owners of 95 Gold Mine Road, Boddington (30 acres). » Object to the proposed trail/path that runs north/south through the entire length of the property – property is already divided into small holdings and it is not practical and an invasion of privacy. » No objection to the trail/path along the Gold Mine Road. » Object the proposal for the conservation, future public open space and trails/paths that dissect the adjacent property on the Hotham Riverfront and along the Bannister Road for security, personal safety, fire hazard, maintenance, financial loss and privacy reasons. 	<ul style="list-style-type: none"> » The trails identified are indicative only and would not proceed without engagement with landowners. It is also envisaged that these trails would run along property boundaries and be fenced off. The proposed trail would also be within remnant vegetation (within which the EPA would likely object to any clearing) and an ecological linkage that is encouraged to be maintained and not cleared for development, ensuring the trail is mostly out of sight. » The conservation of this area was proposed due to its strategic location adjacent to the Townsite and also the steepness of the land. This land is not considered suitable for development from a physical landform perspective, and also from an environmental perspective.
14	<p>IGA Distribution 218 Bannister Road Canning Vale</p> <p>IGA Boddington owner: Mr Stewart.</p>	<ul style="list-style-type: none"> » Concern that proposed rezoning and sale of the existing council chambers could in effect result in adverse effects by dislocating services from the high street and forcing all services into one built form, rendering many of the existing businesses and premises redundant ensuring the demise of the high street retail component. » Propose the following amendments to the Townsite Strategy: <ul style="list-style-type: none"> - scale of proposed development should be of mixed use; - improved linkage between the main services of the town including the supermarket to have a pedestrian linkage; - proposed sale of existing council chambers have appropriation pending not to include uses that 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. The 'Civic Precinct' concept encourages pedestrian and vehicular linkages to the current Main Street environment. It also outlines the relocation of the Shire office building only and not other services. Retail services would still be concentrated along the Main Street. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council. » The scale of proposed development would be one storey in

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		<p>currently are available within the town; and</p> <ul style="list-style-type: none"> - any proposed development to encumber an economic impact study on existing business. <p>» There is no economic argument for a second supermarket.</p>	<p>nature for the most part and therefore single use, possibly apart from prominent corner sites. These limited sites could facilitate mixed use development.</p> <ul style="list-style-type: none"> » Excluding uses that already exist as part of the possible sale of the Shire office site is not supported. As the town grows in the future, current uses will need to expand, and in some cases duplicate, to serve the increased population and allow the economy to grow. » The provision of an economic impact study by developers on other businesses is not supported. Placing more onus on potential developers will not increase the attractiveness of Boddington for future development. Each developer would likely conduct their own modelling to ensure their development is viable within the town. » Agree that currently a second supermarket could not be supported. However if the forecasted growth is fully realised, then the option requires consideration.
15	<p>Whelans PO Box 99 Mount Hawthorn WA 6915 08 9208 0111</p> <p>On behalf of IGA Distribution and Boddington IGA</p>	<ul style="list-style-type: none"> » Concern that growth may not be as high as expected and retail space proposed by the Strategy will be overestimated. » Main Street form of development should be maintained and encouraged. » Amalgamation of lots occupied by Shire offices will result in a 'big box' development which will detract from the town centre streetscape and function. » Additional retail use zoned land will remain undeveloped and blight the streetscape. » IGA Boddington is unlikely to be relocated to the Shire office considering the planned investment and upgrading. » Significant thought should be given to mixed use medium density development on the shire office site. » Request that Strategy be changed to state that the Shire office site will be sold as individual lots for mixed use office, retail and residential land uses. 	<ul style="list-style-type: none"> » Proposed commercial rezonings are based on current forecasts. This would need revising in the future as growth occurs and forecasts reviewed. The main purpose of the Strategy is to outline where this growth should occur. Actual growth may not reflect exactly the amount in the Strategy. » Agreed – the Strategy recommends the enhancement of the Main Street form of development. » This development can be avoided if appropriate design guidelines/policy is put into place. » Not all commercial zoned land will be rezoned at once – it should only be rezoned as the population and demand grows. » Text to be amended to remove reference to IGA relocation. » If referring to residential, significant research would be needed to confirm any demand for mixed use residential development in a regional town. » The future of the Shire office site is not certain, and the Strategy only suggests options for its future. Without clear direction from the Shire, this cannot be accommodated.

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16	J.L.Gibbs PO Box 3 Boddington WA	<ul style="list-style-type: none"> » Selection of land on Murray Location 707 for conservation is not acceptable. » The hill is high fire risk and walks and viewing areas to the top is dangerous. » Walk trails are not possible across private land. » Ensure future planning documents are sent to the correct postal address as they are received after the event. 	<ul style="list-style-type: none"> » The trails identified are indicative only and would not proceed without engagement with landowners. It is also envisaged that these trails would run along property boundaries and be fenced off. Many of the proposed trails would also be within remnant vegetation (within which the EPA would likely object to any clearing) and ecological linkages that are encouraged to be maintained and not cleared for development. » Shire to note.
17	R & R North 1153 Crossman Road Boddington WA 6390	<ul style="list-style-type: none"> » Shire offices should remain at corner of Bannister Road and Forrest Street and be expanded at this location. » Boddington Old School buildings and grounds should be retained. » River foreshore reserve should remain as an environmental /nature reserve. 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages.
18	Fiona Schofield 407 Morts Road Boddington WA 6390	<ul style="list-style-type: none"> » Boddington Town Hall remains and current building improved. » Shop at Ranford not permitted in any current Crown/Public Reserves » Darnmining/Ranford Pool reserve to be maintained within its current boundaries. 	<ul style="list-style-type: none"> » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council.
19	Elizabeth Hoek RMB 559A Boddington WA 6390	<ul style="list-style-type: none"> » Wuraming Ave to remain as is. » Eco tourism to be encouraged. 	<ul style="list-style-type: none"> » Only a small portion of the non-original buildings of the Old School were proposed to be demolished for this option. » The relocation option was in an existing cleared area adjacent to the Old School oval, without affecting the existing pathway or access arrangements to the foreshore area.
20	B.M. Torrent 15 Prussian Way Boddington WA 6390		<ul style="list-style-type: none"> » The Strategy retains the Town Hall in its current location. » The proposed infrastructure in Ranford is small in nature and may never occur if the population at Ranford doesn't increase. It would occur under a legal rezoning and approval process.
21	Marion Eleanor Torrent 15 Prussian Way Boddington WA 6390 08 9883 8139		<ul style="list-style-type: none"> » The expansion of the Ranford Pool reserve is to be removed from the Strategy. » The Council supports Wuraming Avenue remaining a cul-de-sac near Pollard Street. » The Strategy encourages nature based tourism and eco-tourism for Boddington.

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22	<p>Mike Torrent 15 Prussian Way Boddington WA 6390</p>	<ul style="list-style-type: none"> » Ranford Pool foreshore to be upgraded to include in/out step access. » Forget the reserves as a site for a shopping precinct, buy out Don Roney. » Use medical centre as a resource for office upgrade, do not use the foreshore. 	<ul style="list-style-type: none"> » General upgrades are proposed for Ranford Pool. » The site on the corner of Crossman Road/River Road is the preferred location for a potential small commercial development in Ranford given its central and convenient location. » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option, including use of other Shire properties in close proximity. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council.
23	<p>Brenden Metcalf "Hotham River Cottage" 9132 Albany Highway Boddington WA 6390</p>	<ul style="list-style-type: none"> » Shire offices should be retained in current location. » Boddington Old School would be retained in its entirety. » Boddington Town Hall should remain and be upgraded. » River Foreshore Reserve should remain in its current state. » Shop at Ranford is not necessary when there are current facilities available in the main Boddington Townsite. » Darmining/Ranford Pool Reserve should be maintained with current boundaries. 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council. » Only a small portion of the non-original buildings of the Old School were proposed to be demolished for this option. » The Strategy retains the Town Hall in its current location. » The relocation option was in an existing cleared area adjacent to the Old School oval, without affecting the existing pathway or access arrangements to the foreshore area. » The proposed shop at Ranford would be a small corner deli for day-to-day needs of the Ranford residents. It should also

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			<p>be noted that this development will not take place without an increased demand within Ranford. It will also address concerns over traffic within the Main Street of Boddington.</p> <ul style="list-style-type: none"> » The expansion of the Ranford Pool reserve is to be removed from the Strategy.
24	Nicola Harman 13 Tannin Place Ranford WA	<ul style="list-style-type: none"> » Concern over land swap for Lot 13816: <ul style="list-style-type: none"> - Will worsen property damage; and - Will hinder plans for use of the land for perennial fruit and nit trees/grazing livestock. » There is no provision for toilets » Will the Shire bear responsibility for hospitalisation and damages that occur from people swimming at the Ranford Pool? » Will the Shire retain the trees or the pond at the proposed car park in the POS? They provide habitat and roosting spots for 4 frog species and 100 – 200 white tailed black cockatoos. » Were not informed of the possible land swap by the Shire – had to hear about it from a neighbour. 	<ul style="list-style-type: none"> » The expansion of the Ranford Pool reserve is to be removed from the Strategy. » Ranford Pool is currently used for swimming by the community. Swimming here would be no different to swimming at the weir. » The Strategy proposed to retain the trees in the current car park area. » The expansion of the Ranford Pool reserve is to be removed from the Strategy.
25	Tim Hussey 13 Tannin Place Ranford WA	<ul style="list-style-type: none"> » Concern over the conversion of the river boundary land to public space – will make it impossible to keep unwanted trespassers out. » Does not want the piece of land at the front of the property that is being offered. The riverside piece is prime land and would outprice that at the front of the property. The lifestyle aspect of the river was a reason for purchasing the block. 	<ul style="list-style-type: none"> » The expansion of the Ranford Pool reserve is to be removed from the Strategy.
26	Sandra Gordon 64 Hotham Ave Boddington WA 6390	<ul style="list-style-type: none"> » Offices should not be built on the river banks or surrounding areas. They should remain in the centre of town. » Not many would benefit from the river views from the shire offices. 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration

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			<p>centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council.</p> <ul style="list-style-type: none"> » If the Shire offices were to be relocated, then the intention of the Strategy is to develop a Civic and Cultural Precinct that would attract residents and visitors alike to various functions and activities on the river bank.
27	D & G Garrity 44 Crossman Road Boddington WA 6390	<ul style="list-style-type: none"> » Shire offices should remain in their current location. » How will the Townsite Strategy affect rates? 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council. » Ultimately the question of Shire rates is one for the Shire, however many of the proposals and provisions in the Strategy would be funded by developers, or at least receive contributions from developers.
28	Jan Kelsall 1 Nichols Place Boddington WA 6390	<ul style="list-style-type: none"> » Boddington Old School should be retained entirely. » Shire offices should remain in their current location. » Bring the library back to the main street. 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council. » Only a small portion of the non-original buildings of the Old School were proposed to be demolished for this option. » The library will remain in its current location at the District High school in the foreseeable future. Any possible option to relocate could be assisted with the construction of a new shire administration centre and would need to consider

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			matters including on-going resourcing and securing additional funding for staff.
29	John Stuart IGA Boddington 36 Bannister Road Boddington WA 6390	<ul style="list-style-type: none"> » What will be placed in the location of the shire offices if they were relocated? Concerned that a supermarket would be placed there. » Concern of financial costs associated with relocating to a new store. » Concern over deli style outlet proposed at Ranford which would make the IGA store unprofitable. » Feel a development with shops that would compliment the main street and face towards the supermarket with parking at the front would be the best option. » Believe proposed parking is in the wrong location and should be moved so that access can be obtained from Bannister Road and not the rear laneway. » Suggest implementing speed restrictions on Main Street and redirecting heavy haulage around the town. 	<ul style="list-style-type: none"> » The provision of a second supermarket on the current Shire office site (if it was to be relocated) would only occur if there was a viable economic demand for it as the town grows. Being such a prominent site, it lends itself to a prominent building for Boddington, of a commercial/retail nature. » The proposed shop at Ranford would be a small corner deli for day-to-day needs of the Ranford residents. It should also be noted that this development will not take place without an increased demand within Ranford. » The introduction of rear parking areas using the laneway is preferred as it would increase the amount of off-street parking and also maintain the amenity and 'country feel' of the main street. There would still be on-street parking as currently exists. Access to the rear parking from Bannister Road could be considered. » Bannister Road is currently undergoing some enhancement work. » The possibility of a bypass for Boddington is discussed in the Strategy which indicates that ultimately the Council is supportive of further investigations into the benefit of a bypass for the town.
30	Ros Thomson 115 Kalimna Way Boddington WA 6390	<ul style="list-style-type: none"> » Shire offices should remain in their current location. » Boddington Old School should be retained entirely. » The river foreshore reserve should be retained as an environmental/nature reserve. 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council. » Only a small portion of the non-original buildings of the Old

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			<p>School were proposed to be demolished for this option.</p> <ul style="list-style-type: none"> » The relocation option was in an existing cleared area adjacent to the Old School oval, without affecting the existing pathway or access arrangements to the foreshore area.
31	<p>Anne & Andrew McLeavy 59 Fairway Place Boddington WA 6390</p>	<ul style="list-style-type: none"> » Shire offices should remain in their current location. » The Town Hall should be retained and improved. » The Boddington Old School should be fully retained and improved. » Main Street should be beautified. » No shop should be placed in Ranford. 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council. » The Strategy retains the Town Hall in its current location » Bannister Road is currently undergoing some enhancement work. » The proposed shop at Ranford would be a small corner deli for day-to-day needs of the Ranford residents. It should also be noted that this development will not take place without an increased demand within Ranford.
32	<p>Mr & Mrs Ross Matsen 1288 Bannister Road Boddington WA 6390</p>	<ul style="list-style-type: none"> » Was not aware of any proposed planning that would affect their property. 	<ul style="list-style-type: none"> » Mr & Mrs Matsen have met with the Shire's Consultant Planner
33	<p>Colin and Elaine Hendrickson 2 Farmers Ave Boddington WA 6390</p>	<ul style="list-style-type: none"> » Does not support the movement of the shire offices from the town centre. 	<ul style="list-style-type: none"> » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council.

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34	Kenneth, Elizabeth & Marnie Orr, Alexander McKee	<ul style="list-style-type: none"> » Creation of a strategic plan designed to guide integrated and appropriately sustainable town site development is to be applauded. » The current level of utilisation of commercial entitles in Boddington is unlikely to be sustained for some time following the full commissioning of the Gold Mine. » The permanent workforce for this development is unlikely to be fully housed in Boddington. » When children go to school outside the district, the majority of parental purchasing needs are met outside of the town. This reality combined with a low level of commitment to shop locally challenges the commercially sustainable growth and development of retail businesses in Boddington. » The Purchase by owner users of new housing will help determine likely trends for business growth. » The current location of the caravan park is of considerable benefit to food outlets in Boddington and relocation would impact turnover. Proximity to the recreation areas has also been a bonus. » At current turnover levels, gross redevelopment or relocation of the IGA store would result in overcapitalisation to non sustainable levels. The current site has ample room to accommodate even 1000sqm. There is further opportunity to build towards and behind the bank in the future. » It seems unlikely that the Council could realise much more than \$1.5m for the current Administration building site given the IGA sold for \$1m in July this year. Redevelopment of the current Shire site is a more financially viable option and which could better showcase the rebranded Boddington. » It is difficult to conceive of a new building on the Old School grounds being able to achieve a visual synergy with the Old School buildings. » The current visual corridor along Johnstone St is quite 	<ul style="list-style-type: none"> » Noted » Increased development would not occur until the demand exists. » The Strategy aims to improve the retention of the mining workforce and their families through the improvements proposed to increase to attractiveness of Boddington. » Increased development would not occur until the demand exists. It is envisaged that once the population grows and proposals within the Strategy are implemented, this will change over time. » Noted » Noted. The Council will consider various options relating to the caravan park in the coming months including its preferred size including considering the future use of Lot 62 Pollard Street. There are opportunities for landowners/developers to seek planning approval for an additional caravan park/s within the municipality. » The current IGA owners are planning a redevelopment/ expansion of their site and an increase in the range of products. » The Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » The Council's preferred location to develop the administration centre is in the vicinity of the BOS on reserved land which is vested with the Shire. » There are different options for locating the administration
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Boddington Ranford Townsite Strategy - Report on Public Submissions

February 2010

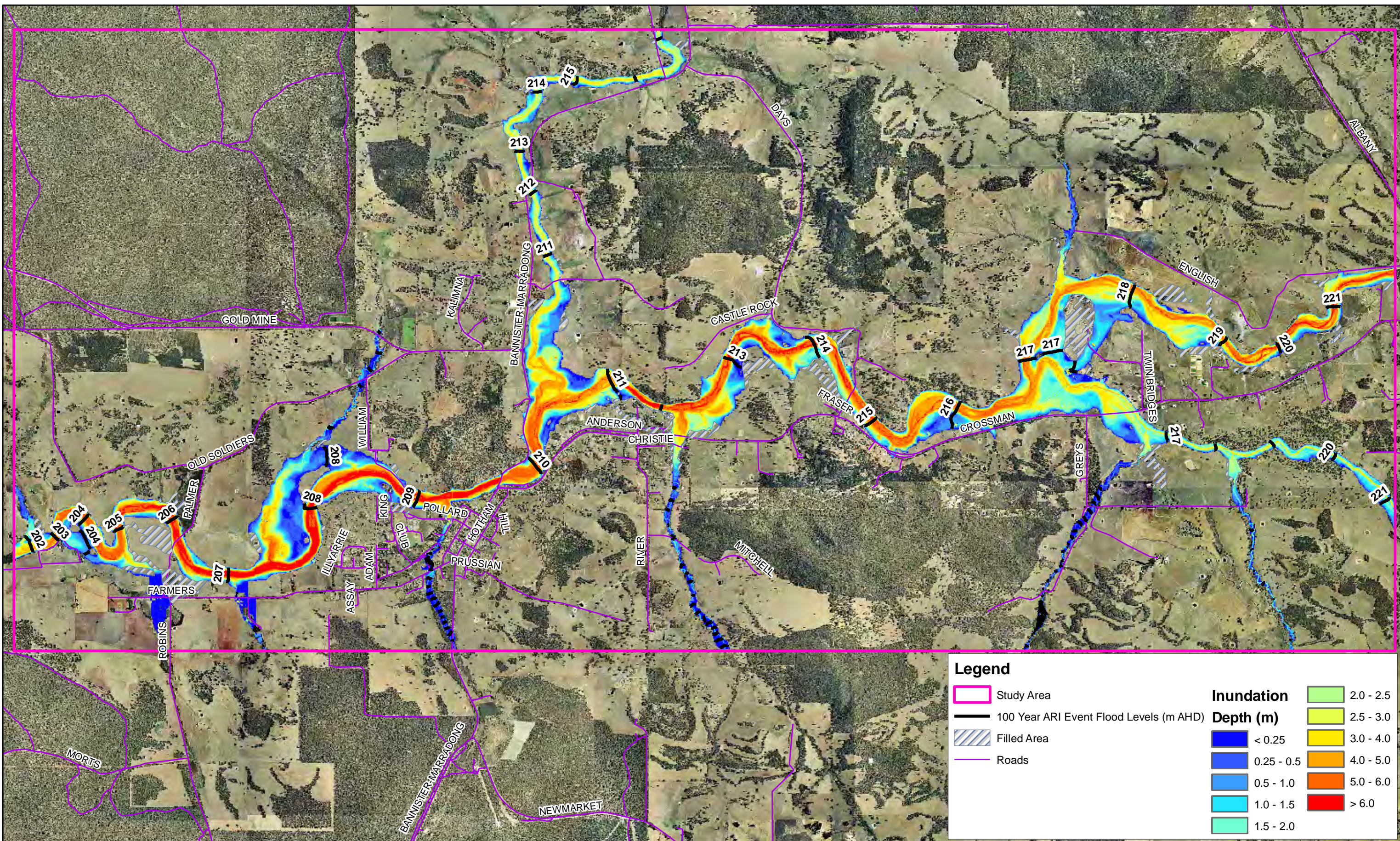
		<p>appealing with the presence of native flora in front of the Old School.</p> <ul style="list-style-type: none"> » Would the erection of new buildings on the proposed site negatively impact the local eco system, riparian habitat and the weir? » A new civic precinct can be equally developed on the Shire owned Bannister Road sites due to the central location. A strong sense of place exists in the current location and boost people traffic in the 'CBD'. » The existing heritage and cultural area of the Old Road Board, Arts Centre, Hall and Old school and foreshore can be integrated with purpose built walkways and interpretive signage to raise the profile of the area. » The proposed to encourage parking off Pepper Tree Lane is a sound way to overcome the risk associated with main street vehicle entries and contemporaneously enhance the visual aesthetic of the Main Street and Johnstone St future developments. » The new recreation centre proposal is unlikely to attract sustainable usage if large sums are raised to fund building the whole facility at once time. A staged approach would appear more prudent to avoid unrealistic charges for usage being levied. 	<p>centre in the Civic & Heritage Precinct and these options will be further considered in detail by Council.</p> <ul style="list-style-type: none"> » Whilst any new building will most probably not look exactly the same as the Old School buildings, complimentary and harmonising design can be achieved through the implementation of appropriate design measures in both the architectural design and colour and material choices. » The Strategy proposed the retention of this area of vegetation. Further, more detailed environmental surveys would be required prior to any development. » Agreed, the Strategy presented an alternative option for the location of the Shire office, however still presented the redevelopment of the current site as an option. Both sites considered to have advantages. » Agreed – this was the intention of the Strategy and the development of a Civic and Cultural Precinct. » Noted » This proposal has been initiated by the Shire and is separate to the Strategy process. The proposal has been integrated into the Strategy to ensure integrated future development.
35	<p>Jon Burgess Director <i>Burgess Design Group</i> 351 Newcastle St Northbridge WA 6003</p> <p>Lots 1,2 & 3 Crossman Road</p>	<ul style="list-style-type: none"> » Strategy does not recognise that up to 50% of the workforce associated with the BGM is not expected to live in Boddington. » Development of the recreation node and Ranford and other benefits flowing on from general growth and development shall assist in attracting and retaining residents, however propose greater flexibility in the provision of lot choice rather than a stringent application of State policy. » Area is designated for lots no less than 1 ha. There is a gap in the market for lots below 1ha. Suggest allowance on lots less than 1ha to offer and attract a different market. 	<ul style="list-style-type: none"> » Strategy does recognise that the current objective to get workforces to live locally is not entirely successful currently. One of the objectives of the Strategy is to provide the circumstances to attract more people to live locally. » Agree – the current planned subdivisions provide a range of lot sizes in various locations around Boddington. » Strategy didn't address this at this location as it already has an approved plan for the development of these sites.

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		<ul style="list-style-type: none"> » Offset the costs of currently unaffordable or delayed infrastructure upgrades by increasing lot yields in identified areas, i.e. improving cost sharing. » Enhance and help sustain social and commercial infrastructure by increasing the number of dwellings within walking/cycling distance to identified nodes. » Protect the long term retention of agricultural land by ensuring that long term population projections and full variety of rural style housing choice can be accommodated within already defined sites. » Delete onerous requirements such as additional development contributions, conservation contributions or performance measures unless offset by clearly defined incentives, such as additional subdivision potential and reductions to minimum lot sizes. » Modify sections 6.1, 6.2 and 6.3 of the draft Strategy to address the mechanisms for considering variations. 	<ul style="list-style-type: none"> » Increased lot yields could only occur in suitable identified locations. » There are not going to be many 'nodes' in a town like Boddington where there is a dominant Main Street development and rural residential type development. There are POS nodes however indicated on Figure 11. » The Strategy indicates that development should occur in currently identified growth areas in the Strategy and also the Local Planning Strategy before any other areas. » Developer contributions are standard practice and there is now a State Planning Policy to this effect. Conservation contributions are designed to improve the protection of the remanent vegetation in the area, to improve ecological linkages and to provide measurable information regarding the effects of development on the environment. » Proposed performance measures are to removed from the Strategy. » The EPA would not likely support any further clearing of remnant vegetation in the area.
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Appendix C
SKM 100 Year ARI Event Mapping



BODDINGTON FLOODPLAIN MANAGEMENT STUDY

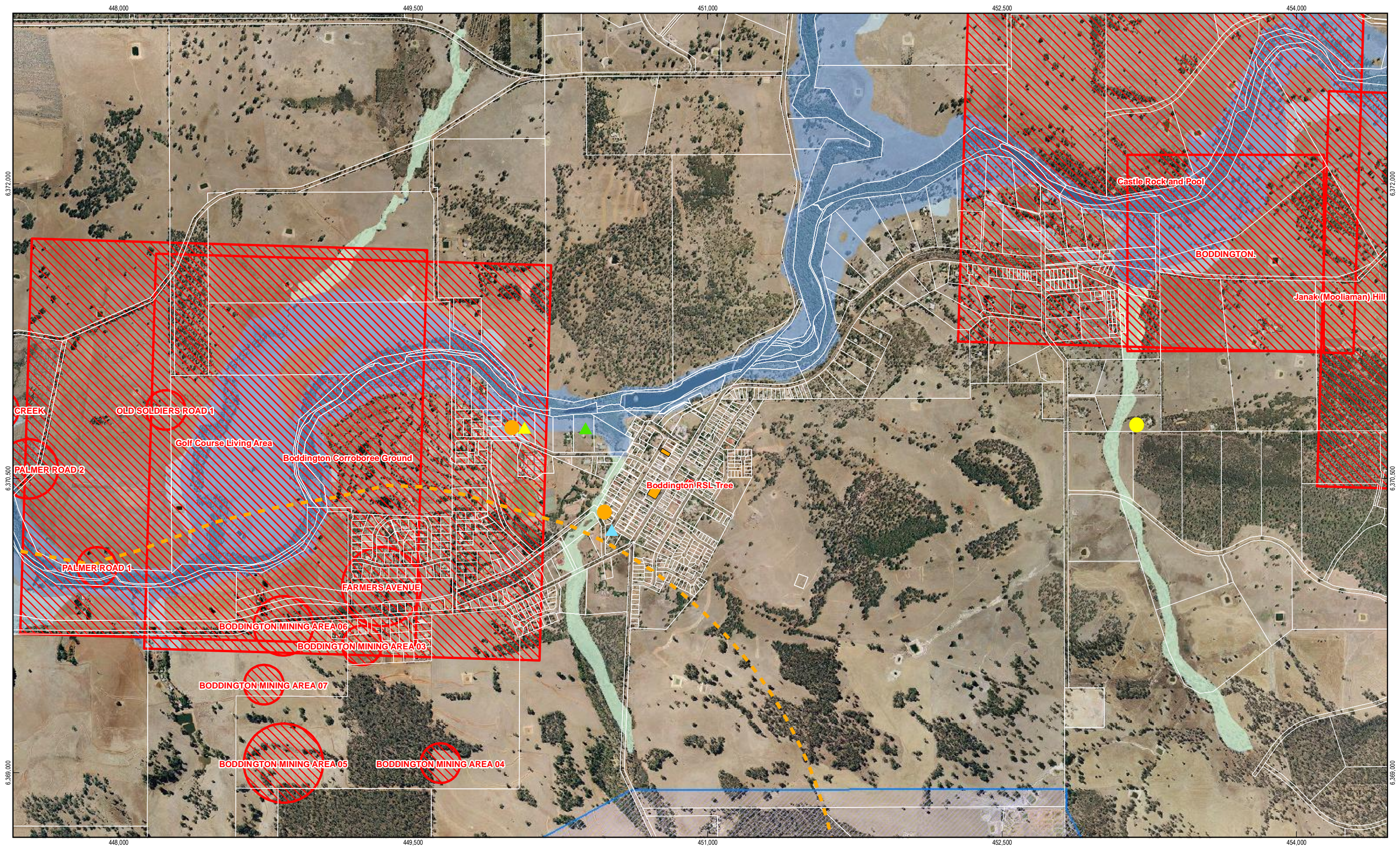
Figure E-1 100 Year ARI Flood Event Inundation Map
Developed Conditions



Author: Sarah Gosling
Date: 03/07/09
Job No: QE09456



Appendix D
Environmental & Heritage Issues



1:17,500 (at A3)



LEGEND

- Cadastre - Landgate - 20081016
- Mining Buffer - GHD - 20090402
- Heritage Buildings - GHD - 20090225
- Registered Aboriginal Sites - DIA - 20080721
- Flood Fringe - DOW - 20081204
- Floodway - DOW - 20081204
- Known Flood Risk (Further Investigation) - GHD - 20090710
- Unallocated Public Drinking Water Source Area - Landgate
- Declared Rare and Priority Flora - DEC - 20090710**
- Priority 2
- Priority 3
- Priority 4
- Declared Rare Fauna - DEC - 20090710**
- Priority 4
- Vulnerable



CLIENTS | PEOPLE | PERFORMANCE



Shire of Boddington
Boddington Ranford Townsite
Strategy

Job Number | 61/23158
Revision | A
Date | 17 MAR 2010

**Environmental & Heritage
Issues
Appendix D**

Appendix E

Department of Mines & Petroleum Advice



Your ref: ADM 0248
Our ref: A1395/200801
Enquiries: Warren Ormsby - Ph 08 9222 3571 Fax 9222 3633
Email: warren.ormsby@dmp.wa.gov.au

Chief Executive Officer
Shire of Boddington
PO Box 4
BODDINGTON WA 6390

Dear Sir/Madam

DRAFT BODDINGTON-RANFORD TOWNSITE STRATEGY AND DRAFT PLANNING POLICY NO. 10

Thank you for your letter dated 24 August 2009 seeking comment on the above.

The Geological Survey of Western Australia has assessed this proposal on behalf of the Department of Mines and Petroleum (DMP) with respect to access to mineral resources.

As discussed in this department's response to Scheme Amendment No. 20, new bauxite resources exist immediately to the west of the Strategy area. If Scheme Amendment No. 20 is not adopted, DMP requests that the 1200 m mining buffer be extended to surround these additional bauxite resources to facilitate future mining. This would affect the northwestern corner of the Strategy area (see attached map), but would not encroach upon the Boddington townsite. The additional buffer will not be required if Scheme Amendment No. 20 is adopted as proposed.

Yours sincerely

TG Tim Griffin
EXECUTIVE DIRECTOR
GEOLOGICAL SURVEY WESTERN AUSTRALIA

16 October 2009

002013.Warren.Ormsby.doc - Perth

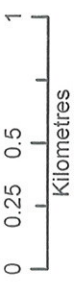
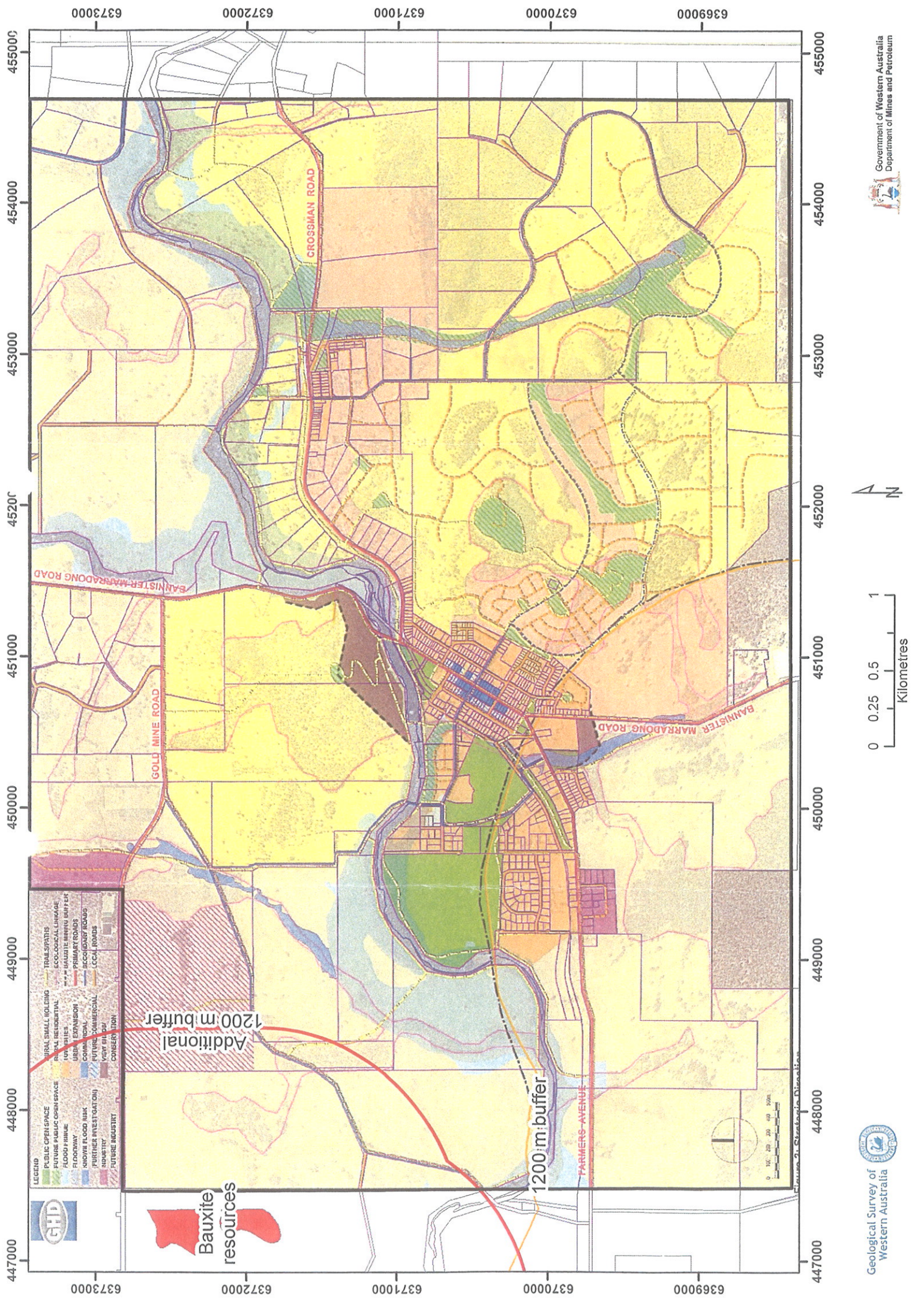
SHIRE OF
BODDINGTON
RECEIVED

26 OCT 2009

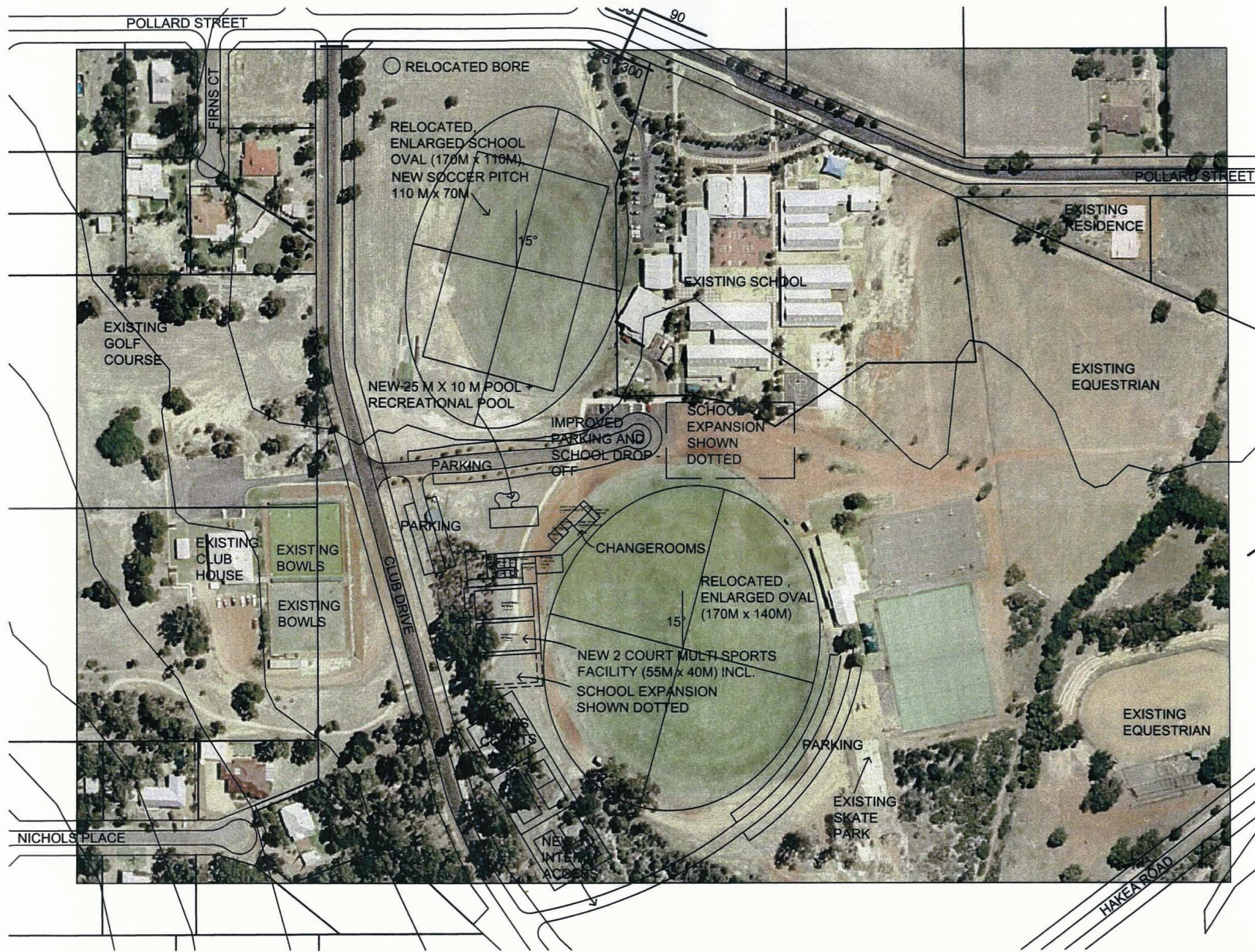
Distribute to:

- DCS
- EA
- WS
- MEMO/BS
- TPC
- ACC
- ENG
- Librarian
- S/POOL MGR
- C/PARK
- SFO
- SPM

File No ADM 0223



Appendix F
Proposed Recreation Centre Layout

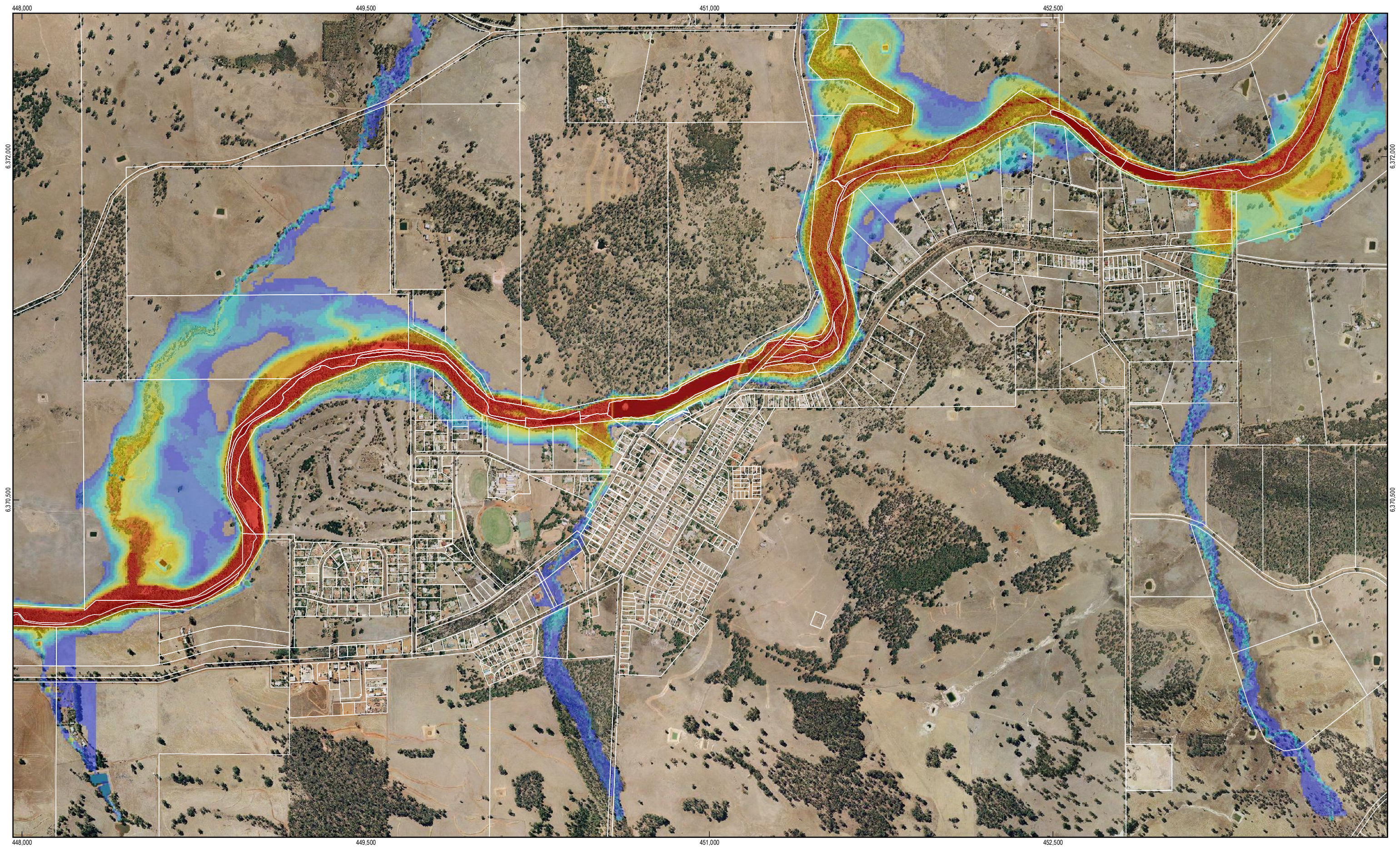


0m 10m 20m 30m 40m 50m
 1:2000 SCALE @ A3 SIZE

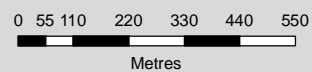
BODDINGTON SPORT AND RECREATIONAL FACILITIES
OPTION G
 06/05/08

MCDONALD JONES
 ARCHITECTS PTY LTD

Appendix G
100 Year ARI Event Inundation Depths



1:15,000 (at A3)



Map Projection: Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia (GDA)
Grid: Map Grid of Australia 1994, Zone 50



LEGEND

▭ Cadastre - Landgate - 20081016

Inundation Depths (m) - DoW - 20090212

< 0.25	0.25 - 0.5	0.5 - 1.0	1.0 - 1.5	1.5 - 2.0	2.0 - 2.5	2.5 - 3.0	3.0 - 3.5	3.5 - 4.0	4.0 - 4.5	4.5 - 5.1	5.0 - 5.5	5.5 - 6.0
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CLIENTS | PEOPLE | PERFORMANCE



Shire of Boddington
Boddington Ranford Townsite
Strategy

**100 Year ARI Event
Inundation Depths**

Job Number	61/23158
Revision	A
Date	15 MAR 2010

Appendix G

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Data source: Data Custodian, Data Set Name/Title, Version/Date. Created by: S.Jeffrey

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Appendix H
DoW Public Drinking Water Source
Guidelines

Water Quality Protection Note

Land use compatibility in Public Drinking Water Source Areas

Purpose

The Department of Environment (DoE) is responsible for managing and protecting the State's water resources. This note provides advice on the acceptability of land uses and activities within specific catchments that are the water source for schemes supplying cities and towns. These catchments are termed Public Drinking Water Source Areas (PDWSAs) and they require comprehensive water resource quality and land planning protection measures to ensure the ongoing availability of a 'safe, good quality drinking water' supply to protect the health of consumers for now and into the future. This note supports the DoEs Public Drinking Water Resource Policy (July 2004).

The note also forms an integral part of the Western Australian Planning Commission's *Statement of Planning Policy No. 2.7- Public Drinking Water Source Policy* 2003 (relevant to approximately 140 existing PDWSAs in Western Australia) prepared by the Department for Planning and Infrastructure under Section 5AA of the *Town Planning and Development Act 1928*. It is also intended to support the proposed Statement of Planning Policy for *Water Resources* designed to guide planning decisions in future PDWSAs. This note should be used by Local Government when developing local planning strategies, structure plans and town planning schemes. It should also be used in the assessment of subdivision and other development applications. The note will also assist the development of formal guidelines on land use activities in PDWSA prepared in liaison with key stakeholders such as the Water Corporation, Department of Health, Department of Conservation and Land Management, Department of Agriculture, Department of Industry and Resources, Department for Planning and Infrastructure and local government.

A review of this note may occur within 12 months (depending on feedback) to reflect DoE's policy position (which is influenced by public consultation undertaken for PDWSAs), advances in technology or land use activity standards, and Government decisions made concerning drinking water quality protection. This note may not consider all the circumstances that exist for planning strategies, plans and schemes across the State. Accordingly, changes to this note will only be considered if they apply broadly across the State. Other means of addressing localised special circumstances may be employed and the DoE will assist in achieving this outcome provided those changes do not place the PDWSA at a higher contamination risk.

Scope

This note provides the DoE's position on a range of land uses assessed against the Department's water quality protection strategy and management objectives within PDWSAs. Where a specific land use has not been covered in the accompanying tables, it should be referred to the Department's Water Source Protection Branch for assessment and a written response concerning its acceptability or any necessary water resource protection measures.

Public Drinking Water Source Area in Western Australia is the collective description for:

- Underground Water Pollution Control Areas,
- Water Reserves, and
- Catchment Areas,

declared under the *Metropolitan Water Supply, Sewerage and Drainage Act 1909* or the *Country Areas Water Supply Act 1947*.

This note is intended to complement the statutory role and policy of State and local government authorities, but it does not override Government policy or the need for proponents to fulfil their legal responsibilities for land use planning, and environmental, health, building or other necessary approvals.

PDWSA protection framework

The protection of PDWSAs relies on statutory measures available in water resource management and land use planning legislation. The DoE policy for the protection of PDWSAs includes three risk management based priority classification areas and two types of protection zones. The priority classification areas and protection zones are determined via specific Drinking Water Source Protection Plans (DWSPP) that are prepared in consultation with State government agencies, landowners, local government, and key industry and community stakeholders. Where a fully consulted DWSPP does not exist for a PDWSA, the DoE initially prepares Drinking Water Source Protection Assessment (DWSPA) documents to reflect readily available information for use in land use planning assessments and decision making.

Priority classification areas

Priority 1 (P1) classification areas are managed to ensure that there is **no degradation** of the drinking water source by preventing the development of potentially harmful activities in these areas. The guiding principle is **risk avoidance**. This is the most stringent priority classification for drinking water sources. P1 areas normally encompass land owned or managed by State agencies, but may include private land that is strategically significant to the protection of the drinking water source (e.g. land immediately adjacent to a reservoir). Most land uses create some risk to water quality and are therefore defined as “**Incompatible**” in P1 areas.

Priority 2 (P2) classification areas are managed to ensure that there is **no increased risk** of water source contamination/ pollution. For P2 areas, the guiding principle is **risk minimisation**. These areas include established low-risk land development (e.g. low intensity rural activity). Some development is allowed within P2 areas for land uses that are defined as either “**Compatible with conditions**” or “**Acceptable**”.

Priority 3 (P3) classification areas are defined to **manage the risk of pollution** to the water source from catchment activities. Protection of P3 areas is mainly achieved through guided or regulated environmental (risk) management for land use activities. P3 areas are declared over land where water supply sources co-exist with other land uses such as residential, commercial and light industrial development. Land uses considered to have significant pollution potential are nonetheless opposed or constrained.

Wellhead and reservoir protection zones

In addition to the three Priority Classification Areas, specific protection zones are defined to protect drinking water sources from contamination in the immediate vicinity of water extraction facilities. Within these zones by-laws may prohibit, restrict or approve defined land uses and activities to prevent water source contamination or pollution. Special conditions, such as restrictions on storage and use of chemicals, may apply within these zones. The legislation is currently being reviewed to simplify and enhance the protection of public drinking water sources.

Wellhead protection zones (WHPZ) are used to protect underground sources of drinking water. They are circular (unless information is available to determine a different shape), with a radius of 500 metres in P1 areas, and 300 metres in P2 and P3 areas. WHPZ do not extend outside PDWSA boundaries. Reservoir protection zones (or ‘**prohibited zones**’ as they are called in the by-laws) consist of a statutory 2 kilometre wide buffer area around the top water level of storage reservoirs in the Perth water supply area, and include the reservoir water-body. The reservoir protection zones (RPZ) apply over Crown land and prohibit public access to prevent contamination (physical, chemical and biological) of the source water. RPZ do not extend outside PDWSA boundaries. The DoE is currently considering a provision for RPZ buffer areas of less than 2 kilometres, and creation of consistent by-laws for country and Perth PDWSAs.

Special protection measures apply in WHPZ and RPZ (prohibited zones) as described in the By-laws under the *Metropolitan Water Supply, Sewerage and Drainage Act 1909* and the *Country Areas Water Supply Act 1947*.

The determination of priority classification areas or protection zones over land in a PDWSA is based on:

- the strategic importance of the land or water source,
- the local planning scheme zoning,
- form of land tenure, and
- existing approved land uses/activities.

The land use tables in this protection note directly apply to the three types of priority classification areas identified in DWSP or agreed in specific *Land Use and Water Management Strategy* documents. Currently there are 45 DWSPs available to guide land use planning decisions in PDWSAs, and (nearly 100) others are in development. In the absence of a DWSP, the DoE recommends that planning decisions within any gazetted or proposed PDWSA are guided by DWSPA documents (where they exist) and the **'potential'** priority classification area or protection zone status of a proposal identified using **Diagram 1: Assessment of potential priority classification areas and protection zones** (overleaf).

Compatibility of land uses within PDWSAs

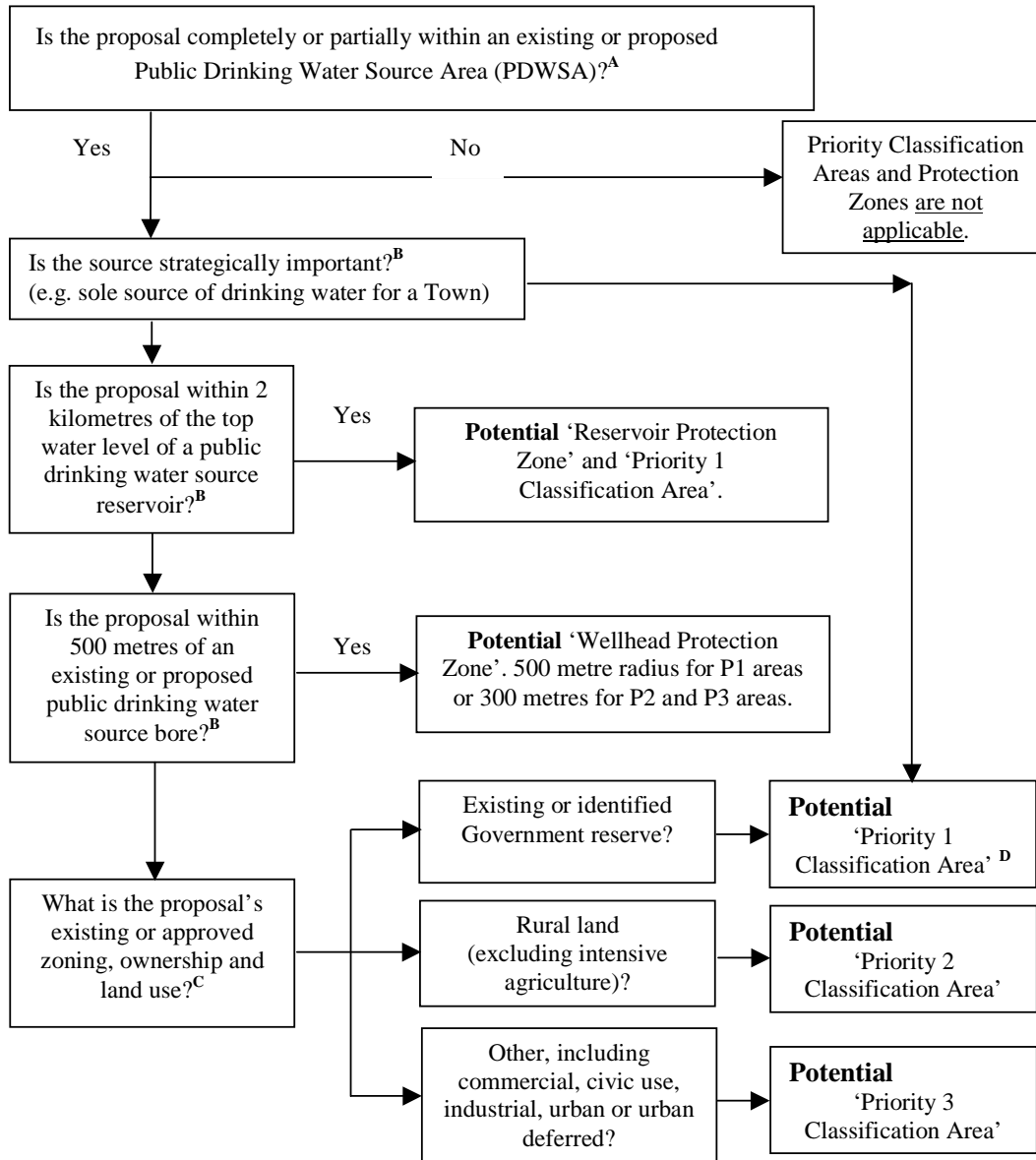
The tables in this note have been prepared for use by local governments, State planners and other agencies as a basis for regulating land use within PDWSAs. The note complements the Western Australian Planning Commission's *Statement of Planning Policy Number 2.7 (June 2003) Public Drinking Water Sources*. These tables define land uses in terms of their compatibility with the sustainable use of the drinking water source. They promote a priority for protection of the environmental value: 'drinking water' within a PDWSA over other values that may exist. The three definitions used are **'Incompatible'**, **'Compatible with conditions'** and **'Acceptable'**. In previous versions of this note the definitions were 'Incompatible', 'Conditional' and 'Compatible'.

The DoE recognises that there may be special circumstances which may occasionally result in an **'Incompatible'** land use receiving approval. Where planning decisions result in this outcome it is important for project proponents to have demonstrated an overriding community benefit and that the land use will not increase the risk of contamination to the PDWSA. The DoE expects to have significant, early involvement in planning decisions of this nature to maximise the protection of the drinking water resource. It should be noted that where a water source is the sole supply for a community, or has a particularly high strategic value for the supply of drinking water, then it would be difficult to understand how that source might be put at any risk of contamination.

Detailed information on water quality protection issues and recommended best management practices for **'Compatible with conditions'** land uses are being developed in approved environmental policy, codes of practice, management guidelines and water quality protection notes. These documents, along with the most recent version of this note, can be found on the DoE Internet site <http://www.environment.wa.gov.au>. Information on land use and development regulation within PDWSAs can also be obtained from DoE's regional offices.

The DoE's Water Source Protection Branch, presently located in East Perth, is custodian of this water quality protection note and will provide detailed advice on its application and coordinate any suggested amendments.

Diagram 1: Assessment of potential priority classification areas and protection zones



Legend

- A. The location of PDWSAs can be found in DoE's Drinking Water Source Protection Assessments and Plans or through your regional DoE office, Local Government office, Water Corporation or from the Department for Planning and Infrastructure.
- B. Strategically significant sources and potential contamination from land uses close to drinking water reservoirs or abstraction bores are considered first, due to these involving the highest risk of contamination reaching consumers.
- C. Current zoning or land use information is available from your Local Government office.
- D. Government land is protected to achieve the highest level of safety for drinking water in all parts of a catchment through a Priority 1 classification, wherever this is reasonable and practicable.

Existing approved land uses

Many land uses covered in this note may have been legally established prior to establishment/ gazettal of the PDWSA or modern protection measures being required. The DoE policy is that existing approved land uses/ activities can continue at their presently approved level, provided they operate lawfully. Where necessary, negotiations may be arranged with land owners to acquire property rights in P1 source protection areas. Where practical, this agency will also negotiate with the operators of existing 'Incompatible', or 'Compatible with conditions' activities to implement environmental management practices that minimise risks to water sources.

Proposed land uses

After reading this protection note, please view the DoE Internet site and/ or contact your nearest DoE Regional Office for advice on the location of PDWSAs, priority classification areas, and reservoir or wellhead protection zones. You may discuss with DoE staff any proposed land use activities that may affect water resources. The early identification of water resource protection issues in development stages of land use planning proposals is recommended in both the June 2003 *Statement of Planning Policy for Public Drinking Water Sources* and proposed *Water Resources Policy* by the Western Australian Planning Commission.

Definition of terms used in the following tables

'Acceptable' (equivalent to 'compatible' in previous version of this note)- means the land use is accepted by DoE as not likely to harm the drinking water source, and is consistent with the management objectives of that priority classification. The adoption of best practice environmental management methods for new proposals to protect water quality is expected. Existing land users are also encouraged to adopt best practice environmental management methods to help protect water quality. These land uses generally do not need referral to the DoE.

'Compatible with conditions' (equivalent to 'conditional' in previous version of this note) - means the land use is likely to be accepted by DoE as not likely to harm the drinking water source, (and is consistent with the management objectives of the priority classification) provided best environmental management practices are used. This may result in the application of 'specific conditions' (via the planning or environmental approval processes) that must be complied with to ensure the water quality objective of the priority area is maintained.

Land uses described as 'Compatible with conditions' need ONLY to be referred to DoE for assessment and a written response if the activity does not follow recommendations endorsed by DoE such as those made in policy, environmental management guidelines, protection notes; Ministerial Conditions, Works Approvals, Licenses or agreements (e.g. a 'Memorandum of Understanding' developed between any Local Government and DoE).

'Incompatible'- means the land use is UNACCEPTABLE to DoE as it does not meet the management objectives of the priority classification area. DoE will normally oppose approval of these land uses through the planning decision making process and under legislation administered by DoE. If planning decisions are made to approve these land uses (e.g. as a consequence of a planning appeals process), then DoE should be advised of that decision and have been directly involved in providing advice to the planning decision makers on water quality protection issues. It should be noted that contentious proposals may be referred to the EPA for Environmental Impact Assessment under the *Environmental Protection Act 1986*.

'Extensive'- means limited additional inputs beyond those supplied by nature are required to support the land use, e.g. for agriculture- animal feed supplements only during seasonal dry periods, or during the final preparation of stock for the market.

'Intensive'- means regular additional inputs are required to support the desired land use, e.g. for agriculture- irrigation, fertilisers, pesticides, or non-forage animal feeding dominates.

Interpretation of land use recommendations for planning schemes and development approvals

When using the following land use compatibility tables to guide planning schemes and development approval decisions, the following relationships should be used:

- a) Where the table identifies a land use as ‘**Acceptable**’, this use is permitted by DoE within that priority classification area. It may be identified as a ‘**P**’ (permitted) use in a scheme, providing the use complies with the relevant development standards and requirements of the planning scheme.
- b) Where the table identifies a use as ‘**Compatible with conditions**’, this use should be a discretionary use within the priority classification area and should be identified as either a ‘**D**’ or ‘**A**’ (after special notice) use in the scheme. Proposals for ‘**Compatible with conditions**’ uses should **ONLY** be referred to DoE for assessment and response if they do not meet existing agency policy, guidelines or protection note measures, unless prior agreement has been made between a specific local government and DoE on alternative measures.
- c) Relevant environmental management guidelines, codes of practice, water quality protection notes or agreements should be used in the first instance to define DoE's position on any land-use and limit the need to refer proposals to the DoE. Where these do not exist, site specific advice may be provided by the DoE.
- d) Where the table identifies a use as ‘**Incompatible**’, that use should not be permitted within that priority source protection area, and should be identified as an ‘**X**’ (unacceptable use) in the scheme.

Where the table does not include a proposed land use that could affect water quality, that use should be considered to be ‘**Incompatible**’ until the proponent can demonstrate that it meets the drinking water quality protection objective of the designated priority classification area. Specific advice on the proposed land use should be obtained from the DoE’s Water Source Protection Branch.

If the land use planning approval process supports a proposal that is inconsistent with this water quality protection note, then DoE Water Source Protection Branch should be advised of this situation and the reasons for that decision. This advice will trigger DoE’s assessment of the significance/ consequence of that decision to the drinking water source and the outcome will be considered in future strategies for water quality protection, and in the periodic review and update of this note. A means to ensure the DoE’s effective early involvement with such cases is currently being developed.

Tables defining compatibility of various land uses within PDWSA

It is important to note that this table provides the DoE’s recommended compatibility of land uses for the current zoning of land. It must not be used to support rezoning of land to provide for more intensive land uses. For example, although P3 areas provide for high density urban development when the land is already zoned Urban or Urban deferred, this Table must not be read to justify a zoning change within P3 areas to allow for high density urbanisation of rural zoned land.

Model Scheme Text (MST) land uses are shown in **bold** in the first column. Definitions covered in the MST (see note 23) can also be found in the *Town Planning Amendment Regulations 1999*.

Model Scheme Text & interpreted type of land use	P1 areas	P2 areas	P3 areas
Agriculture– extensive			
- pastoral leases	Compatible with conditions	Acceptable	Acceptable
- floriculture (non irrigated), stock grazing (excluding pastoral leases) and broad hectare cropping,	Incompatible	Compatible with conditions (see notes 11, 12)	Acceptable
Agriculture- intensive			
- aquaculture (fish, plants and crustaceans)	Incompatible	Compatible with conditions	Compatible with conditions
- orchards; production nurseries– potted plants; viticulture– wine and table grapes	Incompatible	Compatible with conditions	Acceptable
- floriculture; market gardens (see note 24); turf farms	Incompatible	Incompatible	Compatible with conditions
- hydroponic plant growing	Incompatible	Compatible with conditions	Compatible with conditions
- plant nurseries / garden centres	Incompatible	Compatible with conditions (see note 2)	Acceptable
Agro-forestry	Incompatible	Compatible with conditions	Acceptable
Amusement parlour	Incompatible	Incompatible	Acceptable (see note 1)
Animal establishment			
- animal saleyards and stockyards (see note 13)	Incompatible	Compatible with conditions (see note 2)	Compatible with conditions (see note 2)
- apiaries	Compatible with conditions	Acceptable	Acceptable
- catteries	Incompatible	Acceptable	Acceptable
- dairy sheds	Incompatible	Compatible with conditions (see notes 2, 3, 12)	Compatible with conditions (see note 3)
- dog kennels	Incompatible	Compatible with conditions	Compatible with conditions
- equestrian centres (see note 17)	Incompatible	Incompatible	Acceptable
- feedlots, intensive outdoor livestock holding	Incompatible	Incompatible	Compatible with conditions
- stables (see note 18)	Incompatible	Compatible with conditions	Acceptable
Animal husbandry- intensive			
- piggeries	Incompatible	Incompatible	Incompatible
- poultry farming - housed	Incompatible	Compatible with conditions	Compatible with conditions
Bed and breakfast (accommodating a maximum of 6 guests)	Compatible with conditions (see notes 6, 16)	Acceptable (see note 23)	Acceptable
- farm stay accommodation, rural chalets)	Compatible with conditions (see notes 6, 16)	Compatible with conditions (see note 4)	Acceptable
Betting agency	Incompatible	Compatible with conditions (see note 2)	Acceptable (see note 1)
Caravan park	Incompatible	Incompatible	Compatible with conditions (see note 1)
Caretakers dwelling	Compatible with conditions (see note 2)	Compatible with conditions	Acceptable
Car park	Incompatible	Compatible with conditions (see note 2)	Acceptable

Model Scheme Text & interpreted type of land use	P1 areas	P2 areas	P3 areas
Cemeteries	Incompatible	Incompatible	Compatible with conditions
Child care premises	Incompatible	Compatible with conditions (see note 2)	Acceptable (see note 1)
Cinema/ theatre	Incompatible	Incompatible	Acceptable (see note 1)
Civic use	Incompatible	Compatible with conditions (see note 2)	Acceptable (see note 1)
Club premises			
- sporting or recreation clubs	Incompatible	Compatible with conditions	Acceptable (see note 1)
- health centres	Incompatible	Incompatible	Acceptable (see note 1)
Community purpose			
- community halls	Incompatible	Compatible with conditions (see note 2)	Acceptable
- irrigated golf courses or recreational parks	Incompatible	Incompatible	Compatible with conditions (see note 11)
- motor-sports (permanent racing facilities)	Incompatible	Incompatible	Compatible with conditions
- public swimming pools/ aquatic centres	Incompatible	Incompatible	Compatible with conditions
- rifle ranges	Incompatible	Compatible with conditions	Acceptable
Consulting rooms	Incompatible	Compatible with conditions (see note 2)	Acceptable (see note 1)
Convenience store	Incompatible	Compatible with conditions (see note 2)	Acceptable (see note 1)
Corrective institution	Incompatible	Incompatible	Compatible with conditions (see note 1)
Educational establishment			
- community education centres, scientific research institution	Compatible with conditions (see note 2)	Compatible with conditions (see note 2)	Acceptable (see note 1)
- primary / secondary schools, tertiary education facilities	Incompatible	Incompatible	Acceptable (see note 1)
Exhibition centre	Incompatible	Incompatible	Acceptable (see note 1)
Family day care	Incompatible	Acceptable (see note 19)	Acceptable (see note 1)
Fast food outlet	Incompatible	Incompatible	Acceptable (see note 1)
Forestry (native forest/ silviculture/ tree farming)	Compatible with conditions (see note 11)	Compatible with conditions (see note 11)	Acceptable
Fuel depot (storage/ transfer)	Incompatible	Incompatible	Compatible with conditions
Funeral parlour	Incompatible	Incompatible	Acceptable (see note 1)
Home business	Incompatible	Acceptable (see note 20)	Acceptable (see note 1)
Home occupation	Compatible with conditions (see note 15)	Acceptable (see note 21)	Acceptable (see note 1)

Model Scheme Text & interpreted type of land use	P1 areas	P2 areas	P3 areas
Home office	Compatible with conditions (see note 15)	Acceptable	Acceptable
Home store	Incompatible	Compatible with conditions	Acceptable (see note 1)
Hospital	Incompatible	Incompatible	Compatible with conditions (see note 1)
Hotel (includes hotels, hostels, resorts)	Incompatible	Incompatible	Acceptable (see note 1)
Industry			
- abattoirs	Incompatible	Incompatible	Incompatible
- cottage	Compatible with conditions	Compatible with conditions	Acceptable
- drinking water treatment plant	Compatible with conditions	Compatible with conditions	Compatible with conditions
- extractive, includes construction/ mining camps (see note 10)	Compatible with conditions	Compatible with conditions	Compatible with conditions
- food processing, dairy product factories, breweries	Incompatible	Incompatible	Compatible with conditions (see note 1)
- general (chemical manufacture/ formulation, dry cleaners, dye works, laboratories, photo-processors)	Incompatible	Incompatible	Compatible with conditions (see note 1)
- general (metal production/ finishing, pesticide operator depots, heavy or energy industry, petroleum refineries)	Incompatible	Incompatible	Incompatible
- general (concrete batching, cement products, fertiliser manufacture/ bulk storage, wrecking)	Incompatible	Incompatible	Compatible with conditions
- general (mineral processing)	Incompatible	Incompatible	Compatible with conditions (see note 9)
- light industry	Incompatible	Incompatible	Compatible with conditions (see note 1)
- milk transfer depots	Incompatible	Incompatible	Compatible with conditions
- mining (includes mineral and energy exploration, oil or gas extraction / decontamination for transport)	Compatible with conditions (see note 9)	Compatible with conditions (see note 9)	Compatible with conditions (see note 9)
- mining (tailings dams)	Incompatible	Incompatible	Compatible with conditions (see note 9)
- mining (includes construction/ mining camps), (see note 10)	Compatible with conditions	Compatible with conditions	Compatible with conditions
- rural (animal product rendering works, tanneries, wool scours)	Incompatible	Incompatible	Incompatible
- rural (farm supply centres, manure stockpiling/ processing facilities)	Incompatible	Compatible with conditions (see note 2)	Compatible with conditions
- rural (forestry products processing– chip mills, pulp/ paper, timber preservation, wood/ fibre works, composting/ soil blending - commercial)	Incompatible	Incompatible	Compatible with conditions
- service industry	Incompatible	Incompatible	Compatible with conditions
Landfill (solid waste disposal)			
- class I (refer also to 'Storage - used tyres' advice)	Incompatible	Incompatible	Compatible with conditions
- class II or III	Incompatible	Incompatible	Incompatible
- class IV or V	Incompatible	Incompatible	Incompatible
Lunch bar	Incompatible	Compatible with conditions (see note 2)	Acceptable (see note 1)

Model Scheme Text & interpreted type of land use	P1 areas	P2 areas	P3 areas
Major transport infrastructure (roads, railways)	Incompatible	Compatible with conditions (see note 14)	Acceptable
Marina (includes boat moorings and servicing)	Incompatible	Incompatible	Compatible with conditions
Marine filling station (boat fuelling)	Incompatible	Incompatible	Compatible with conditions
Market (food; general produce; second-hand goods)	Incompatible	Incompatible	Acceptable (see note 1)
Medical centre	Incompatible	Incompatible	Acceptable (see note 1)
Motel	Incompatible	Incompatible	Acceptable (see note 1)
Motor vehicle, boat or caravan sales (sales yards)	Incompatible	Incompatible	Acceptable (see note 1)
Motor vehicle repair	Incompatible	Incompatible	Compatible with conditions
Motor vehicle wash	Incompatible	Incompatible	Compatible with conditions
National and regional parks and nature reserves	Acceptable	Acceptable	Acceptable
Night club	Incompatible	Incompatible	Acceptable (see note 1)
Office	Incompatible	Compatible with conditions	Acceptable (see note 1)
Park home park	Incompatible	Incompatible	Compatible with conditions (see note 1)
Place of worship	Incompatible	Incompatible	Acceptable (see note 1)
Plantation	Compatible with conditions (see note 11)	Compatible with conditions (see note 11)	Acceptable
Reception centre	Incompatible	Incompatible	Acceptable (see note 1)
Recreation – private (within non-designated recreation areas on Crown land)	Incompatible	Incompatible	Acceptable
Residential building			
- house	Compatible with conditions (see note 16)	Acceptable (see note 4)	Acceptable (see note 1)
- group dwellings (aged and dependent persons)	Incompatible	Incompatible	Acceptable (see note 1)
Restaurant	Incompatible	Incompatible	Acceptable (see note 1)
Restricted premises (adult interests)	Incompatible	Incompatible	Acceptable (see note 1)
Rural pursuit	See Agriculture, Animal establishment or husbandry		
Service station (includes aircraft, automotive repairs, boats, mechanical plant, service stations at transport and municipal works depots)	Incompatible	Incompatible	Compatible with conditions (refer to note 1)
Shop	Incompatible	Compatible with conditions (see note 2)	Acceptable (see note 1)
Showroom	Incompatible	Incompatible	Acceptable (see note 1)
Storage			
- used tyres (see note 22)	Incompatible	Incompatible	Incompatible

Model Scheme Text & interpreted type of land use	P1 areas	P2 areas	P3 areas
- chemical storage in under ground tanks	Incompatible	Incompatible	Compatible with conditions
- chemical storage in above ground tanks	Incompatible	Compatible with conditions	Compatible with conditions
Tavern	Incompatible	Incompatible	Acceptable (see note 1)
Telecommunications infrastructure	Compatible with conditions	Compatible with conditions	Compatible with conditions
Toilet blocks and change rooms	Compatible with conditions (see note 2)	Compatible with conditions	Acceptable
Trade display	Incompatible	Incompatible	Acceptable (see note 1)
Veterinary centre	Incompatible	Compatible with conditions (see note 2)	Compatible with conditions (see note 1)
Warehouse	Incompatible	Compatible with conditions (see note 2)	Compatible with conditions (see note 1)
Waste transfer station (includes recycling depots)	Incompatible	Incompatible	Compatible with conditions
Wastewater infrastructure			
- sewerage – gravity sewers	Incompatible	Incompatible	Acceptable
- sewerage – pressure mains	Incompatible	Compatible with conditions	Acceptable
- sewer pump stations	Incompatible	Compatible with conditions	Compatible with conditions
- treatment plants, wastewater disposal to land	Incompatible	Incompatible	Compatible with conditions
- wastewater injection into the ground (see note 25)	Incompatible	Incompatible	Incompatible
Water treatment plants (drinking)	See Industry		
Winery (includes wine tasting facilities)	Incompatible	Compatible with conditions (see notes 3 & 5)	Compatible with conditions (see note 3)

Table recommending compatibility of land subdivision within PDWSA:Note - This table reflects the recommended size of a subdivision based on the existing zoning and the priority classification area status of land. It should be noted that Town Planning Scheme provisions for specific zones and reserves will take precedent over the following recommended lot sizes.

Form of subdivision (specific to current zoning)	P1 areas	P2 areas	P3 areas
Rural subdivision			
- to a lot size of 4 hectares or greater	Incompatible	Acceptable	Acceptable
- to a lot size less than 4 hectares	Incompatible	Incompatible	Incompatible
Special rural subdivision			
- to a lot size of 2 hectares or greater	Incompatible	Compatible with conditions (see notes 7 & 8)	Compatible with conditions (see note 8)
- to a lot size between 1 and 2 hectares	Incompatible	Incompatible	Compatible with conditions (see notes 7 & 8)
- to a lot size less than 1 hectare	Incompatible	Incompatible	Compatible with conditions (see note 7)
Urban subdivision	Incompatible	Incompatible	Acceptable (see note 1)
Industrial subdivision	Incompatible	Incompatible	Acceptable (see note 1)

Explanatory notes related to land uses described the tables:

The following notes provide interpretive information based on the scale or type of development described in the preceding tables. They do not list all the conditions that could apply to any activity or development.

1. Must be connected to deep sewerage, except where exemptions apply under State Government Sewerage Policy. The Policy recognises that sewer connection may be impractical in some areas. Under these circumstances maximum wastewater loadings (based on people/ hectare) apply linked to the management Priority of the site.
2. The land use is normally incompatible, but may be conditionally approved where this facility is consistent with approved State and local government planning strategies or schemes.
3. The land use must incorporate best environmental management practices compatible with the management strategy for the designated priority area defined in the relevant source protection plan.
4. In Priority 2 areas: conditions may apply to density of dwellings (i.e. hectares per dwelling).
5. Size of the grape crush shall not exceed 500 tonnes per year.
6. May be approved if occupancy is of equivalent size to a single dwelling household (i.e. less than 10 people– defined by capacity of a septic tank based on-site wastewater treatment system).
7. An average, rather than minimum, lot size may be accepted if the proponent can demonstrate that the water quality objectives of the source protection area are met, and caveats/memorials are placed on titles of specified blocks stating that further subdivision shall not occur.
8. Lots should only be created where land capability assessment shows that effective on-site soakage of treated wastewater can be achieved. Conditions apply to siting of wastewater disposal systems in areas with poor land drainage and/ or a shallow depth to groundwater, animals are held or fertiliser is applied. Alternative wastewater treatment systems, where approved by the Department of Health, may be accepted with ongoing maintenance requirements.
9. Conditions are likely to be placed via a Department of Industry and Resources mineral tenement lease, and / or as a result of Minister for the Environment’s approval after an Environmental Impact Assessment.
10. Conditions apply to the storage of fuels and chemicals, the depth of excavation related to the water table and rehabilitation criteria. Underground fuel or chemical storage tanks are prohibited via DoE by-laws in Priority 1 and 2 areas within Underground Water Pollution Control Areas.
11. Conditions apply to regulate fertiliser and pesticide application.
12. Can be approved if animal stocking levels (animals per hectare, guided by the Department of Agriculture’s stocking rate guidelines) are consistent with the priority source protection area objectives.
13. This does not include stockyards occasionally used on farms or pastoral leases for animal husbandry.
14. Conditions may be imposed to cover design, construction of infrastructure and the types of goods.
15. May only be approved if *Home Occupation* relates to an existing residence.
16. Limited to one residential building per property.
17. Includes land or buildings dominantly used for the showing, competition or training of horses, and riding schools.
18. Includes any land, building or structure used for equine (e.g. horses, asses, mules and donkeys) housing, keeping and feeding and associated activities.
19. In accordance with *Community Services (Child Care) Regulations 1988: A child care service provided to a child in a private dwelling in a family of or domestic environment. No more than 5 children of pre-school age and no more than 7 children under 12 years old, including the children of the licensee or permit holder.*

20. No more than 2 employees, and the home business occupies an area up to 50 square metres. Compatible if only an office/ administrative business (i.e. overnight parking of only one commercial vehicle, no refuelling or repair/ maintenance of business vehicles, and no activities involving on-site use storage or disposal of chemicals or process wastewater).
21. Employees shall be members of the household, and the home business occupies an area of up to 20 square metres. No provision for refuelling, repair or maintenance of commercial/ business vehicles or on-site use or storage of chemicals.
22. Used tyre use, storage and disposal are subject to *Used Tyre Regulations 1996*, administered by the this agency.
23. As defined in the *Model Scheme Text (1997)* or the *Residential Design Codes of Western Australia (2002)* prepared by the Western Australian Planning Commission, and covering local government planning schemes.
24. Applies to the commercial production of horticultural crops e.g. vegetables, flowers and fruit crops grown in contact with the ground. Does not apply to cereal or oil seed crops, perennials e.g. orchards, vineyards, nuts; or any crop grown separate from contact with soils in the natural environment e.g. hydroponics.
25. The use of recycled (reclaimed) water to address the diminishing level of scheme water supply in Western Australia is currently being investigated by Government. The social, environmental, health and economic issues related to this option are significant and need to be further progressed before its applicability in PDWSA is reconsidered.

More information or feedback

More information about recommended best management practices is available in Environmental Management Guidelines and Water Quality Protection Notes for some of the listed land uses. These are available on DoE's Internet site <http://drinkingwater.environment.wa.gov.au> or by contacting DoE regional offices.

We welcome your comments on this note. The note will be updated from time to time as feedback is received or land-use activity standards change. If you wish to discuss this note, please contact DoE Water Source Protection Branch at the Hyatt Centre in East Perth. Phone: (08) 9278 0300 (business hours); Fax: (08) 9278 0585; or E-mail: use {feedback} section at DoE Internet address <http://www.environment.wa.gov.au> citing the topic and version.



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Appendix I
Municipal Inventory (2000)

TABLE 1
SUMMARY LISTING OF ALL PLACES REVIEWED IN DESCENDING ORDER BASED ON THE ITEM NUMBER

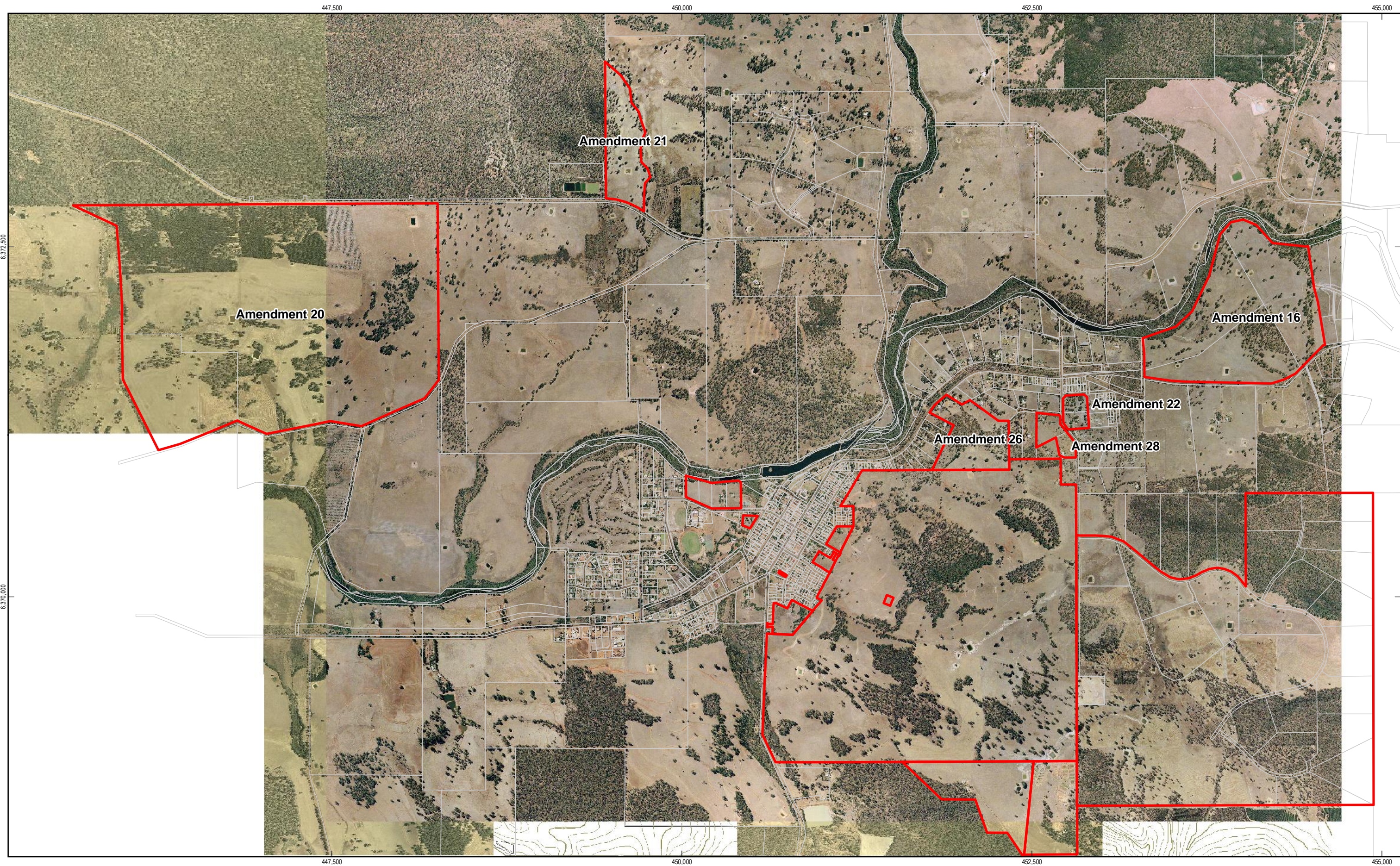
REFERENCE NUMBER	PLACE NAME	ADDRESS	CT VOL/ROL	LOT LOCN	AESTH VAL	HIST VAL	SCI VAL	SOC VAL	RAR VAL	REP VAL	M'g. Category
B01	Dilyan's Grave		8641/12	Res. 21924 Loc. 1381	2	6	2	6	6	7	5
B02	Marradong Hall	Pinjarra-Williams Rd	71095	Res. 2943	site only						5
B03	Boddington Hotel	Bannister Rd		W. Loc. 101	4	6	1	6	4	5	2
B04	Marradong Road Board Office (fmr)	Johnston St	401/13	Res. 14666 Lot 13	5	7	1	5	6	6	1
B05	St Alban's Church and Marradong Cemetery	Pinjarra-Williams Rd		Res. 322 Res. 27061	6	7	3	6	7	6	1
B06	Red Hill Homestead	Williams Rd		W. Loc. 47	3	6	1	5	5	4	2
B07	Springfield	Pinjarra-Williams Rd		W. Loc. 54	2	3	1	3	4	4	3
B08	Long Gully Bridge	Long Gully Rd Murray River			6	6	3	5	6	6	1-2
B09	Moline Homestead and property	Pinjarra-Williams Rd		Lot 82	3	7	3	5	5	5	1-2
B10	Railway Line Precinct	Boddington to Dwellingup			2	6	4	3	4	5	2
B11	Police Station (fmr)	Boddington Caravan Park		Res. 14963 Lot 85	4	5	1	2	2	4	3
B12	Farmer's Crossing (railway siding stopping place)	Farmers Ave 94 mile, 60 chain stop from Pinjarra		Railway Reserve	4	6	1	3	5	5	2
B13	Farmer's River Crossing (footbridge)	Palmer Rd			2	5	1	4	2	3	5

REFERENCE NUMBER	PLACE NAME	ADDRESS	CT	LOT	ABSTH	HIST	SCI	SOC	RAR	REP	M'gt Category
			VOL/FOL	LOCN	VAL	VAL	VAL	VAL	VAL	VAL	
B14	Shepherd's Hut	Boddington			site only						5
B15	Hillside Homestead			W. Loc. 91	site only						5
B16	Hotham River Homestead	Boddington		W. Loc. 92	6	6	2	2	6	6	1-2
B17	George's House	Boddington			3	4	1	2	3	3	3
B18	Hope Cottage	Farmer's Ave			3	4	1	2	3	3	3
B19	Wayside Cottage	Boddington			site only						5
B20	Tentholme (fmr Teacher's House)				3	5	1	2	4	4	3
B21	Hotham River School	Palmer's Rd		W. Loc 10827 Res. 12404	site only						5
B22	Marradong School	Finjarr-Williams Rd		W. Loc. 11399 Res. 14322	site only						5
B23	Boddington District High School (fmr)	Bannister Rd (cnr Wuraming Ave)		Res. 17428 Lots 61, 94, 155 & 161	6	6	1	6	5	6	1-2
B24	Boddington Hall	Johnstone St		Res. 22392 Lot 15	5	5	1	7	5	6	2
B25	Boddington District Hospital	53-65 Hotham Ave		Res. 22386 W. Loc. 1385	5	7	4	3	5	6	2
B26	RSL Hall	58 Hotham Ave		Lot 141	3	4	1	4	3	3	4
B27	George Charlton's House	19 Bannister Rd		Lot 19	5	4	1	2	4	4	3
B28	Shop Precinct	Bannister Rd			5	5	1	4	3	4	3
B29	St James CoFE Church Hall	Hill St			3	4	1	4	3	3	4

REFERENCE NUMBER	PLACE NAME	ADDRESS	CT	LOT	AESTH VAL	HIST VAL	SCI VAL	SOC VAL	RAR VAL	REP VAL	M/gt Category
B30	Infant Health Clinic	Bannister Rd			site						4/2
B31	Hall's Cottage	27 Johnstone St		Lot 3	4	6	1	4	3	3	3
B32	Laura Hotel	Pinjara-Williams Rd		W. Loc. 17	site only						5
B33	Tullis Mill	2.4km west of Tullis Siding			site only						5
B34	Tullis Bridge	Hotham River Siding Rd (nth) Moors Rd (sth)			5	6	4	2	4	5	2
B35	Mooliaman's Tank	Crossman Rd			4	4	2	1	3	4	4
B36	Mooliaman's Reserve	Crossman Rd			site only						5
B37	Industrial Extracts Office	3 Tannin Pl		W. Loc. 13816	4	6	3	2	6	5	2
B38	A. H. Gordon & Sons Timber Mill	off Hotham Ave			2	4	3	1	4	4	4
B39	Gordon's Peg Factory	Hotham Ave			2	5	2	1	4	3	4
B40	Stagbower's Mill	off Hill St			site only						5
B41	Jack Hare's Grave	1km south of Boddington		Res. 14978 W. Lc 10936	2	6	2	6	7	7	5
B42	Pine Plantation	Tuleno Rd			site only						5
B43	First Meeting of Road Board	Pinjara-Williams Rd			site only			6			5
B44	Jannah Tree	Moort's Rd		W. Loc. 5134	5						5

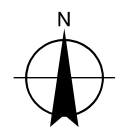
Appendix J

Current Amendments & Key Subdivisions



1:25,000 (at A3)
 0 100 200 400 600 800
 Meters

Map Projection: Transverse Mercator
 Horizontal Datum: Geocentric Datum of Australia 1994
 Grid: Map Grid of Australia, Zone 50



LEGEND

Current Amendments & Key Subdivisions - GHD - 20090316

Cadastre - Landgate - 20081016



Shire of Boddington
 Boddington Ranford Townsite Strategy

Current Amendments & Key Subdivisions

Job Number	6123158
Revision	A
Date	17 March 2010

Appendix J

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Appendix K
Pollard Street Parking Options



Option 1 – Parallel Parking



Option 2 – 30° Parking





Option 3 – 45° Parking



Option 4 – 90° Parking



Appendix L
Bannister Road Upgrade Study -
Appearance

8. Appearance

8.1 Existing conditions

8.1.1 Context

The Shire of Boddington is characterised by a combination of informal rural landscapes and riverine vegetation communities associated with the Hotham River. The town centre features a mix of commercial and residential properties based around the spine of Bannister Road. This road is a major transport route and is wide enough to accommodate the large trucks associated with the local mining and farming industries.

The northern entry experience to the town begins upon crossing the Hotham River. The sense of arrival is characterised by a series of natural elements including rocky outcrops, undulating hills and the Hotham River.

The wide main street imparts a rural character and provides a sense of exposure. The openness allows clear views of the surrounding farmland to the south and undulating hills to the north.

The southern entry to the town centre is defined by the intersection of Farmers Avenue and Bannister Road. The area is characterised by cleared farmland and a stand of established Jarrah and Marri trees.

Further south the landscape is characterised by flood plain woodlands to the west and farmland to the east of the road.

Plate 1: Northern entry



Plate 2: Main Street – Bannister Road



Plate 3: Southern Entry



Plate 4: Flood plain woodlands on Bannister Marradong Road



8.1.2 Vegetation

The natural vegetation communities surrounding the town include *Eucalyptus wandoo* woodland and *Eucalyptus marginata* (Jarrah) open forest and *Corymbia calophylla* (Marri) open forest. The Hotham River valley features stands of *Eucalyptus rudis*, *Melaleuca sp.* and *Hypocalymma augustifolium* (White Myrtle)

The town centre contains a number of public open spaces. These feature a mixture of indigenous and exotic species, including:

Trees

- *Acacia baileyana*
- *Acacia acuminata*
- *Callitris preissii*
- *Casaurina obesa*
- *Eucalyptus astringens*
- *Eucalyptus calophylla*
- *Eucalyptus camaldulensis*
- *Eucalyptus citriodora*
- *Eucalyptus cladocalyx*
- *Eucalyptus patens*
- *Eucalyptus marginiata*
- *Eucalyptus rudis*
- *Eucalyptus torquata*
- *Eucalyptus wandoo*
- *Liquidambar styraciflua*
- *Melaleuca raphiophylla*

Plate 5: Existing vegetation



Shrubs

- *Banksia blechnifolia*
- *Eremophila nivea*
- *Grevillea sp.*
- *Petunia sp.*
- *Rosa sp.*
- *Xanthorrhoea sp.*

Plate 6: Existing shrubs



Street trees are a combination of two non-endemic species. An established avenue of *Lophostemon confertus* runs from the northern entry to the intersection of Forrest Street and Bannister Road and an avenue of *Magnolia grandiflora* continues from this point to the southern entry of the town.

Plate 7: Existing street trees



8.1.3 Streetscape features

Lighting

The current street lighting palette is standard Western Power luminaires and outreaches attached to existing power poles.

Feature pole top luminaires have been installed in Ken Austic Square as pedestrian lighting.

External furniture

Bin enclosures have recently been installed in the main street, parks and tourist bay, and are in good condition.

Bench seating is limited to the parks. They are proprietary aluminium slated seats and are in good condition.

Plate 8: Existing external furniture



A number of picnic shelters are located throughout the town. These differ widely in design, materials and condition.

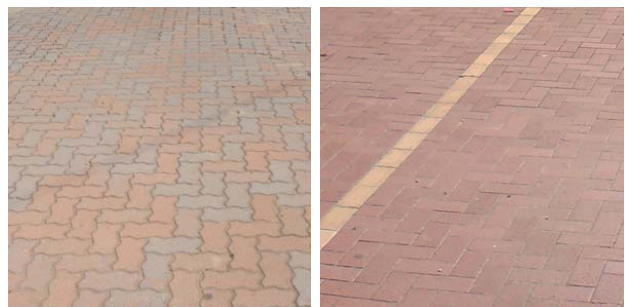
Plate 9: Existing picnic shelters



Paving

Footpaths to Bannister Road are paved with interlocking clay brick pavers. This paving is noticeably faded and stained. An area of feature paving extends from Ken Austic Square into the streetscape. Crushed bauxite paving is used around a small number of garden beds and trees.

Plate 10: Existing paving treatments



Playgrounds

Playgrounds located within the town centre are furnished with proprietary play equipment items and are in good condition.

Plate 11: Existing playground equipment



Artwork

The bucking horse sculpture located in the tourist information bay was donated by the mining companies to the Shire in recognition of the annual rodeo.

The Cor-Ten steel 'silhouette' artworks located near Lions Weir reference the railway workers from the early 1900's.

Metal sculptures of a motor bike, man and emu are located in the Old School grounds. These works, as well as the colourful painted fence on Wuraming Avenue and the murals near Lions Weir indicate a strong sense of community.

Plate 12: Existing public artwork



8.1.4 Key destinations

The following places have been identified as key destinations in the town of Boddington:

- Tourist information bay
- Old school (used as Tourist Centre)
- Old bakery craft and antique store
- Boddington Hotel
- Service stations
- Farmers Reserve
- River Park
- Lions Weir

Plate 13: Existing key destinations



8.2 Site character preservation

The number of submissions for redevelopment in the town centre and residential areas has caused concern amongst the community. Recognising this concern, the Shire of Boddington held a workshop, allowing the community to make comment on the Draft Boddington Town Centre Design Guidelines. The Shire incorporated this input into the draft guidelines and released the Boddington Town Centre Design Guidelines (BTCDG) in 2007

'The uncertainty of being able to maintain the character and lifestyle of the town was considered a significant concern of the community.'

This recognises the importance to the community of retaining the town's existing character. The consultant team has acknowledged this in preparing the recommendations for the upgrade of the town centre.

8.3 Recommendations

It is recommended the town centre be upgraded to improve the safety, legibility and accessibility of the site. Any changes to the current landscape should be respectful of the existing town character as well as the cultural heritage and natural environment. Recommendations for the Bannister Road streetscape include:

- Clearly define entry environments to create a distinctive and memorable entry and departure experience
- Create tourist nodes that can be visually identified as attractive destinations
- Create a 'green' aesthetic within the town centre by adding to the existing vegetation and enhancing the existing public open space on Bannister Road
- Create a unified streetscape by establishing design guidelines
- Use the sites natural and cultural environment as a source of inspiration for furniture, materials and vegetation
- Interpret the cultural heritage of the area through integrated artworks
- Create a stronger connection between the town centre and its surrounding natural assets

8.3.1 Entry and departure experience

The northern and southern entries should mark an obvious transition from the surrounding environment to the main street. Entries should be designed to enhance the unique local character and showcase the town in a distinctive and memorable way. This will help to define the town centre of Boddington.

Northern Entry

The northern entry is the more significant entry as most traffic will be coming from Perth.

The north entry should reference the natural environment to the north of the town including the hills and river. Additionally the proposed plant species should reference the local vegetation community. It is proposed the following design elements be used for the northern entry:

- Contrasting foliage and seasonal colour for understorey planting.
- The use of grass trees to punctuate and draw the eye along the main street.
- High contrast painted bands to poles in colours which reference the natural environment.
- The accentuation of depth of field using contrast in form, texture, colour and spacing.
- Under pruning and up-lighting of existing key tree specimens.
- Subtle mounding to accentuate planting and capture storm water runoff.
- Feature paving treatments in materials which reference the river environment.
- High contrast paving bands to medians.
- Infill planting to foreground to match existing vegetation.
- Planting to draw attention to existing site features.
- Subtle mounding to accentuate planting and capture storm water runoff.

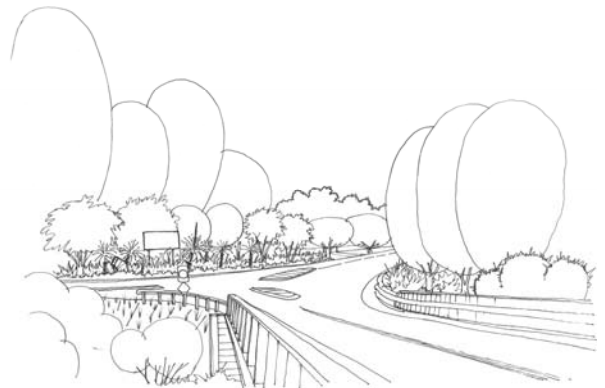
Figure 8: Northern entry location



Plate 14: Existing northern entry environment



Figure 9: Proposed northern entry environment

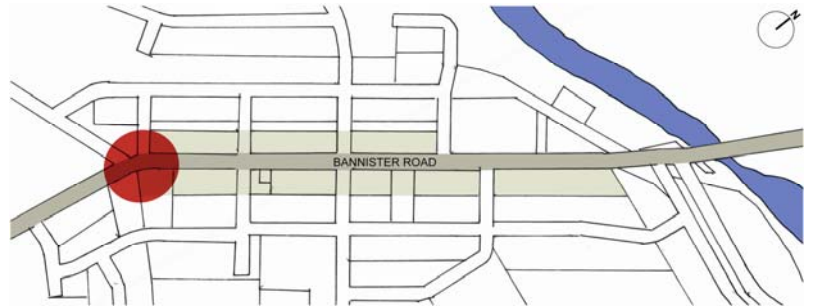


Southern Entry

The southern entry is less significant. It

should relate to the northern entry using a similar design rationale to create a coherent entry and departure experience. Additionally proposed plant species should relate to the flood plain and woodland environment.

Figure 10: Southern entry location



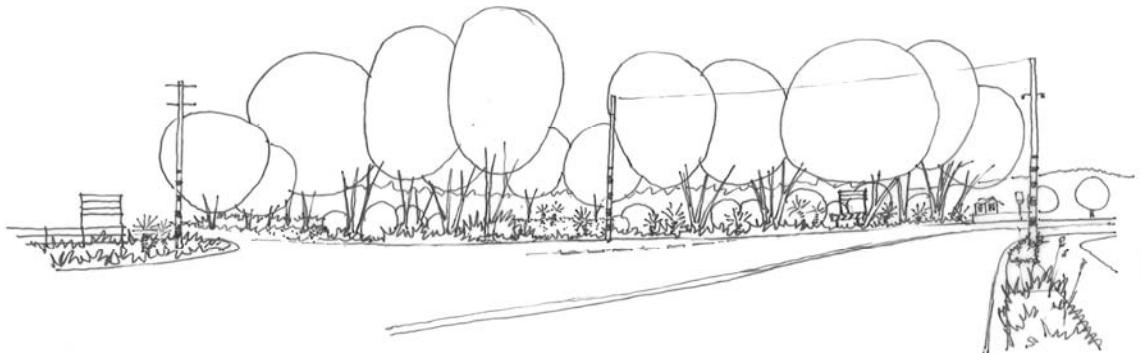
It is proposed the following design elements be used for the southern entry:

- Contrasting foliage and seasonal colour for understorey planting
- The use of grass trees to punctuate and draw the eye along the main street
- High contrast painted bands to poles in colours which reference the flood plain and woodland environment
- The accentuation of depth of field using contrast in form, texture, colour and spacing
- Under pruning and up-lighting of existing key tree specimens
- Subtle mounding to accentuate planting and capture storm water runoff
- Feature paving treatments

Plate 15: Existing southern entry environment



Figure 11: Proposed southern entry location



8.3.2 Tourist Nodes

At present there is little

emphasis on encouraging tourists to stop and enjoy the town. Key destinations should be enhanced to create distinctive tourist nodes. The use of landscape elements can assist in achieving this objective, including:

- Contrasting paving materials
- High density feature planting
- Upgrades to street furniture and amenities.

Figure 12: Existing tourist destinations



8.3.3 Public Open Space

Vegetation for each public open space must be selected to reflect the local character and complement the existing vegetation communities.

Figure 13: Existing Public open space



There is a significant opportunity for the improvement of River Park. Species used in the upgrade of this landscape should be sensitive to the naturally occurring *Eucalyptus rudis* woodland. Maximising the use of this natural asset will encourage use by local visitors and tourists.

Farmers Reserve has a mixture of established Jarrah and Marri trees. Shrub species associated with this forest community include *Boronia crenulata* and *Hibbertia commulata*.

Central Park will require a more formalised approach to design. However, the plant palette will still include endemic and indigenous species to complement the existing stand of Jarrah trees.

8.3.4 Streetscape continuity

The visitor experience of the town needs to provide a feeling of continuity. Achieving uniformity along Bannister Road will distinguish it from its surrounding context and assist in maintaining and enhancing the existing site character. This will create a more enjoyable experience for both pedestrians and road-users. A sense of continuity can be achieved through unifying the following elements:

- vegetation
- materials
- street furniture
- lighting
- paving

8.3.5 Vegetation palette

Plant species provide an aesthetic and ecological link between the town centre to the greater landscape. The selected plant palette will be based on the existing Schedule of Recommended Plants

(*Boddington Town Centre Design Guidelines 2007*). Species endemic to the Shire of Boddington should be used where possible. Refer to Appendix E for a list of recommended plant species.

Streetscape

A limited street tree species palette is recommended to maintain a visual hierarchy for traffic and pedestrian routes. This will enhance legibility throughout the town site.

The existing avenue of *Lophostemon* and *Magnolia* trees should be preserved and maintained. Any proposed trees should complement these existing species. The selected species should provide shade to pedestrian paths and on-street car parking. Where appropriate, street trees should be located to provide framing of vistas.

As illustrated in Figure 14 and Figure 15, street trees will be installed in planted 'nibs' between on-street car bays. This will visually narrow the existing wide road to create a sense of enclosure and encourage the slow of vehicular traffic. Medium to tall clean-stemmed trees, capable of being progressively under-pruned should be used in conjunction with low groundcovers to maintain sightlines and address security issues.

Groundcover species are to be consistent along the length of the streetscape. This will visually unite the differing street tree species and help the streetscape to read as a whole. Where appropriate, planted areas should be replace hard paved surfaces to address issues of surface runoff and heat absorption.

Figure 14: Smaller trees to planted nibs to reinforce existing streetscape

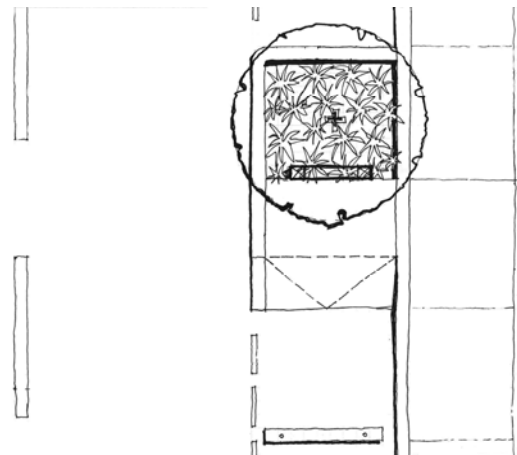
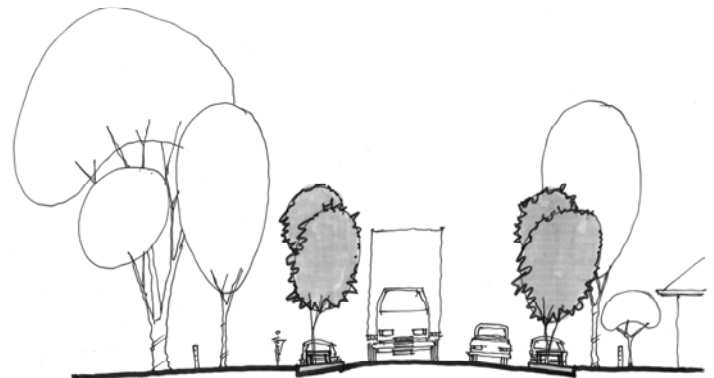


Figure 15: Vertical canopies to limit road interference



Public Open Space

Vegetation for each public open space must be selected to reflect the local character and complement the existing vegetation.

The River Park planting should include species associated with *Eucalyptus rudis* woodland. A significant opportunity exists for the improvement of the Hotham River edge of this park. Maximising the use of this natural asset will encourage use by local visitors and tourists.

Farmers Reserve has a mixture of established Jarrah and Marri trees. Shrub species associated with this forest community include *Boronia crenulata* and *Hibbertia commulata*.

Central Park will require a more formalised approach to design. However, the plant palette will still include endemic and indigenous species to complement the existing stand of Jarrah trees.

8.3.6 Material palette

It is recommended that a consistent materials palette be implemented across the site to create a unified streetscape. Where appropriate, this palette will include local and recycled materials. In line with the BTCDG, colours and materials should reference the local natural and built environment.

Suggested material palette includes:

- Jarrah – references the surrounding vegetation community and rural environment
- Crushed bauxite – references the locally occurring geology
- Granite – references the surrounding rocky outcrops
- Cor-Ten steel – references the rural environment and agricultural heritage

Plate 16: Material palette examples



8.3.7 External furniture

The street furniture palette should maintain a cohesive visual aesthetic and complement the existing character of the site. Selected furniture should also be durable and low-maintenance. Identifying the area of highest pedestrian activity will help to establish where street furnishings are needed most. These areas include:

- the intersection of Forrest Street and Bannister Road
- prominent tourist nodes
- parks
- town centre streetscape

The proposed street furniture should reference locally occurring materials, as outlined in the material palette, and be designed to enhance the existing character of the site. Such designs may include jarrah bollards and wheel stops recalling the surrounding rural fences.

Plate 17: External furniture examples



8.3.8 Lighting

Proposed lighting for Bannister Road should address three distinct situations to enhance the townscape experience:

- street/car park lighting
- pedestrian lighting
- feature lighting

The existing street lighting is attached to power transmission poles. It is proposed that the existing regime be retained and no additional poles be introduced until underground power is established to the length of Bannister Road. As and when this occurs, the street lighting is to be replaced with galvanised steel outreach pole street lighting.

Pole-top lighting should be included along major pedestrian routes and in public open spaces where night-time pedestrian activity is desirable. The pole and luminaires in this situation would be of a higher standard than that of street lighting, and be of a scale appropriate to their location.

The inclusion of a pedestrian lighting scheme will increase the both the security and usability of public spaces.

Feature lighting should be used to draw attention to specific locations and features, such as artworks or entry environments. Up-lighting to key tree specimens and architectural forms will enliven the night-time visitor experience.

It is recommended that solar power be incorporated into the lighting scheme where appropriate to promote sustainability in the community.

Plate 18: Examples of uplighting to key features



8.3.9 Paving and walls

Unifying the streetscape paving treatment will assist in defining the town centre.

It is proposed that the existing Bannister Road pedestrian paving be replaced with larger exposed aggregate concrete unit pavers. The use of a larger unit will properly address the scale of the wide streetscape. Concrete aggregates should reference local materials such as granite and bauxite. Aggregate mixes and concrete colour can be varied throughout the landscape to highlight key destinations.

In situ concrete paving should be used in areas with lower public exposure. The use of colours and aggregates complementary to those used in unit paving will provide visual cohesion between high and low exposure areas.

Tactile and directional unit pavers are to be installed to meet Australian Standards.

Plate 19: Paving treatment examples



Loose paving types such as cracked bauxite gravel should be limited to areas of low pedestrian use. This paving type is ideal for use as a contrasting material in the entry environments.

The use of seating and retaining walls within public open spaces can help to define spaces and enhance the character of the site. Masonry walls should be composed of locally-derived materials such as granite and 'coffee rock. These walls should be used in high-exposure areas to maximise value for expenditure.

It is recommended Bannister Road is resealed to achieve a uniform finish to the road surface.

8.3.10 Playgrounds

The proposed playgrounds should be standard proprietary equipment to comply with Australian playground standards (AS 4685 - 2004).

The installation of timber playgrounds elements is preferable to complement the existing rural character. Colour selections should reference the local environment.

Plate 20: Standard playground equipment examples



8.3.11 Public art

The proposed Boddington Artworks should:

- reference the cultural and natural elements of the site to enhance the town identity
- maximise visual impact
- complement the existing artworks, architecture and landscape
- provide interpretation of the European and Aboriginal heritage
- involve community participation in the creation process where appropriate

The integration of artworks will enhance the streetscape experience and identify Bannister Road as the town centre.

To achieve this, artwork should be located in:

- public open spaces
- the main streetscape
- entry environments
- tourist nodes

Differences in location allow for the works of varying scale, form and materials. This approach adds interest and variety to the streetscape experience.

Plate 21: Artwork examples



8.3.12 Drainage and irrigation

'An approach is required that maximises on-site use of water.' (regarding catchment management and drainage), Shire of Boddington Local Planning Strategy September 2007.

Collection and recycling of storm water plays an important role developing sustainability initiatives in the town of Boddington. An opportunity exists to retain and recycle runoff from hard and paved surfaces. Integration of storm water flow paths and water sensitive design techniques will reduce financial commitment required for drainage infrastructure and help to achieve a more balanced water cycle.

The main objectives for the recycling and collection of storm water are:

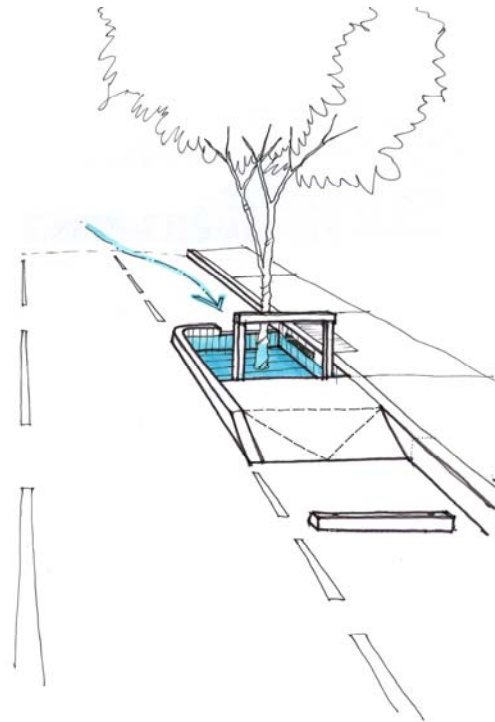
- minimise negative impacts on the Hotham River

- minimise, if not eliminate, the use of scheme and bore irrigation
- maximise the use of on-site water
- create a sense of connection to the riverine environment

Achieving these objectives will require the adoption of several water treatment measures including:

- swales to collect storm water runoff
- open irrigation systems to direct water on to street planting (refer to Figure 16)
- utilisation of existing irrigation systems and tanker watering where appropriate

Figure 16: Utilise storm water as street nib irrigation. Side entry pit integrated to dispose of overflow into piped drainage system



8.4 Maintenance

It is essential that a maintenance program and establishment irrigation costs are included in the landscape budget from the outset. All landscaped areas visible from public areas/streets are to be maintained in a tidy and healthy state. In order to keep maintenance costs low, the following recommendations should be adhered to when planning soft landscaped areas:

- Mulch all planted surfaces to a minimum depth of 75mm. This will reduce weed growth and evaporation from the soil surface.
- Incorporate stockpiled site topsoil into all planted areas prior to planting. This will increase the nutrient level and water retention properties of the soil.
- Avoid the use of turf. Native ground cover species can be used as a substitute to turf where appropriate.
- Modify the microclimate through the arrangement of landscape elements such as trees, shrubs, landforms and structures to create external environments which are protected from temperature extremes and harsh windy conditions.
- Group plants with similar water requirements to help prevent over watering of drought tolerant species.
- Finish planting beds 50mm below paved surfaces to create a water reservoir.
- Slope ground surfaces and paved areas towards planting areas. Ensure paving edges are detailed to allow runoff into planting beds.
- Avoid directing large volumes of water over steep embankments or slopes where erosion may occur.
- Provide shallow, dished areas around individual plants to trap rainfall and runoff for infiltration into garden beds.

- Regularly maintain mulches and eliminate irrigation spill-over to achieve minimum water requirements and avoid runoff of irrigation water.
- Install stone pitching to steep embankments to trap water and reduce erosion. Plant between pitching stones.
- Uphold and enhance the established character of the site whilst achieving maximum value for expenditure on maintenance services.
- Foster cooperation between maintenance contractors and the local council and community to develop, manage, operate and enhance community facilities and services.
- Maintain an aesthetically pleasing, healthy and safe environment.

8.4.1 Contractors Report

Maintenance contractors shall submit a monthly report to ensure that regular maintenance is provided. This report will detail all maintenance actions performed and any accidents or damages that may have occurred during the maintenance liability period.

8.5 Underground power

Overhead power lines currently run along the eastern side of Bannister Road. The lines also cross the road at multiple locations, to provide street light and property connections on the western side of Bannister Road. The type of power line, poles, and street lighting system is shown in Photo 8.

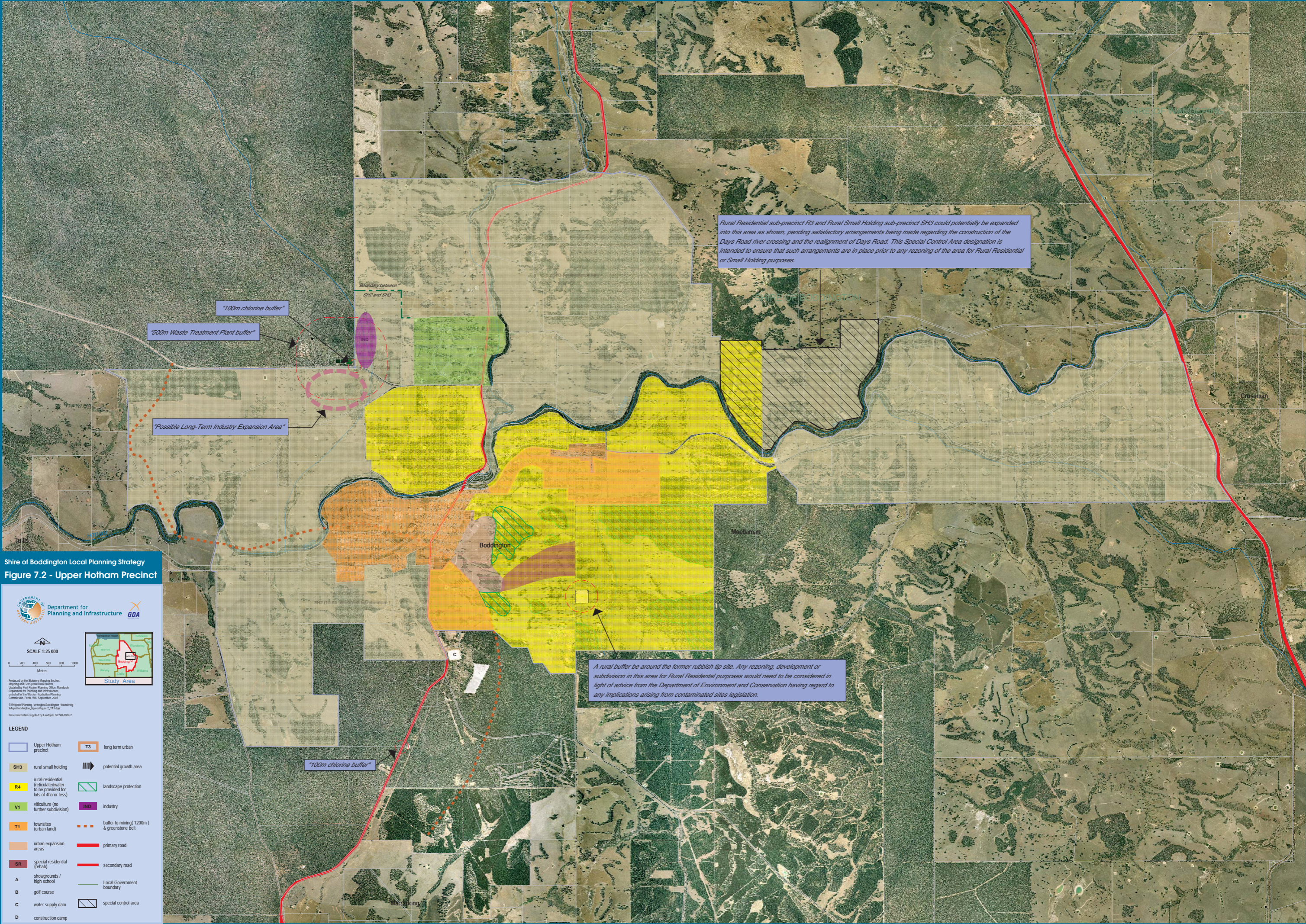
Photo 8: Overhead power lines



The day to day height of the overhead lines can prohibit the flow of some truck movements along Bannister Road. Currently, high loads require Western Power to temporarily raise lines that traverse Bannister Road. An associated cost to the transportation process is incurred. With the redevelopment of the Boddington Gold Mine, the transportation of these high dimensioned loads may become more common.

The lines are not aesthetically pleasing. During the consultation process, stakeholders expressed a negative view regarding the look of the lines. The improved aesthetics associated with underground lines is demonstrated in Figure 17, which shows the before and after views of the process in Hampton Street, Bridgetown WA.

Appendix M
Local Planning Strategy Map



Rural Residential sub-precinct R3 and Rural Small Holding sub-precinct SH3 could potentially be expanded into this area as shown, pending satisfactory arrangements being made regarding the construction of the Days Road river crossing and the realignment of Days Road. This Special Control Area designation is intended to ensure that such arrangements are in place prior to any rezoning of the area for Rural Residential or Small Holding purposes.

A rural buffer be around the former rubbish tip site. Any rezoning, development or subdivision in this area for Rural Residential purposes would need to be considered in light of advice from the Department of Environment and Conservation having regard to any implications arising from contaminated sites legislation.

Shire of Boddington Local Planning Strategy
Figure 7.2 - Upper Hotham Precinct

SCALE 1:25 000

 0 200 400 600 800 1000

 Metres

 Study Area

Produced by the Statutory Mapping Section, Mapping and Geographical Data Branch, Department for Planning and Infrastructure, Member of the Western Australian Planning Commission, Perth, WA, September 2007

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Base information supplied by Landgate G1.2.00.2007.2

LEGEND

Upper Hotham precinct	T3 long term urban
SH3 rural small holding	potential growth area
R4 rural residential (reticulated water to be provided for lots of 4ha or less)	landscape protection
V1 viticulture (no further subdivision)	industry
T1 townships (urban land)	buffer to mining (1200m) & greenstone belt
urban expansion areas	primary road
SR special residential (rehab)	secondary road
A showgrounds / high school	Local Government boundary
B golf course	special control area
C water supply dam	
D construction camp	

Appendix N
List of Abbreviations

ABS	Australian Bureau of Statistics
ARI	Average Recurrence Interval
BGM	Boddington Gold Mine
BOS	Boddington Old School
HACC	Home and Community Care
LPS	Shire of Boddington Local Planning Strategy
LPS2	Shire of Boddington Local Planning Scheme No. 2
PDWSA	Public Drinking Water Source Area
POS	Public Open Space
SES	State Emergency Services
SKM	Sinclair Knight Merz
WAPC	Western Australian Planning Commission
WWTP	Waste Water Treatment Plant

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