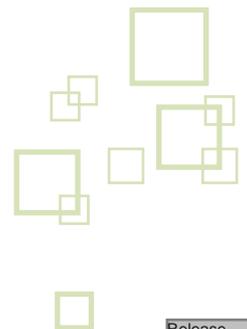


Surat Basin Regional Planning Framework

A framework for a prosperous and sustainable community

An initiative of the Surat Basin Future Directions Statement

July 2011



Release

Surat Basin Regional Planning Framework

Prepared by the Honourable Paul Lucas MP, Deputy Premier and Attorney-General, Minister for Local Government and Special Minister of State.

With assistance from the Department of Local Government and Planning.

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A copy of the Surat Basin Regional Planning Framework is available for viewing at most council chambers, libraries and customer service centres within the local government areas of Toowoomba, Western Downs and Maranoa.

A CD-ROM or hard copy is available free from the Department of Local Government and Planning offices in Toowoomba, Bundaberg and Brisbane.

Department of Local Government and Planning offices:

- Toowoomba – 128 Margaret Street, Toowoomba
- Bundaberg – Level 1, 7 Takalvan Street, Bundaberg
- Brisbane – shop front, 63 George Street, Brisbane.

Release

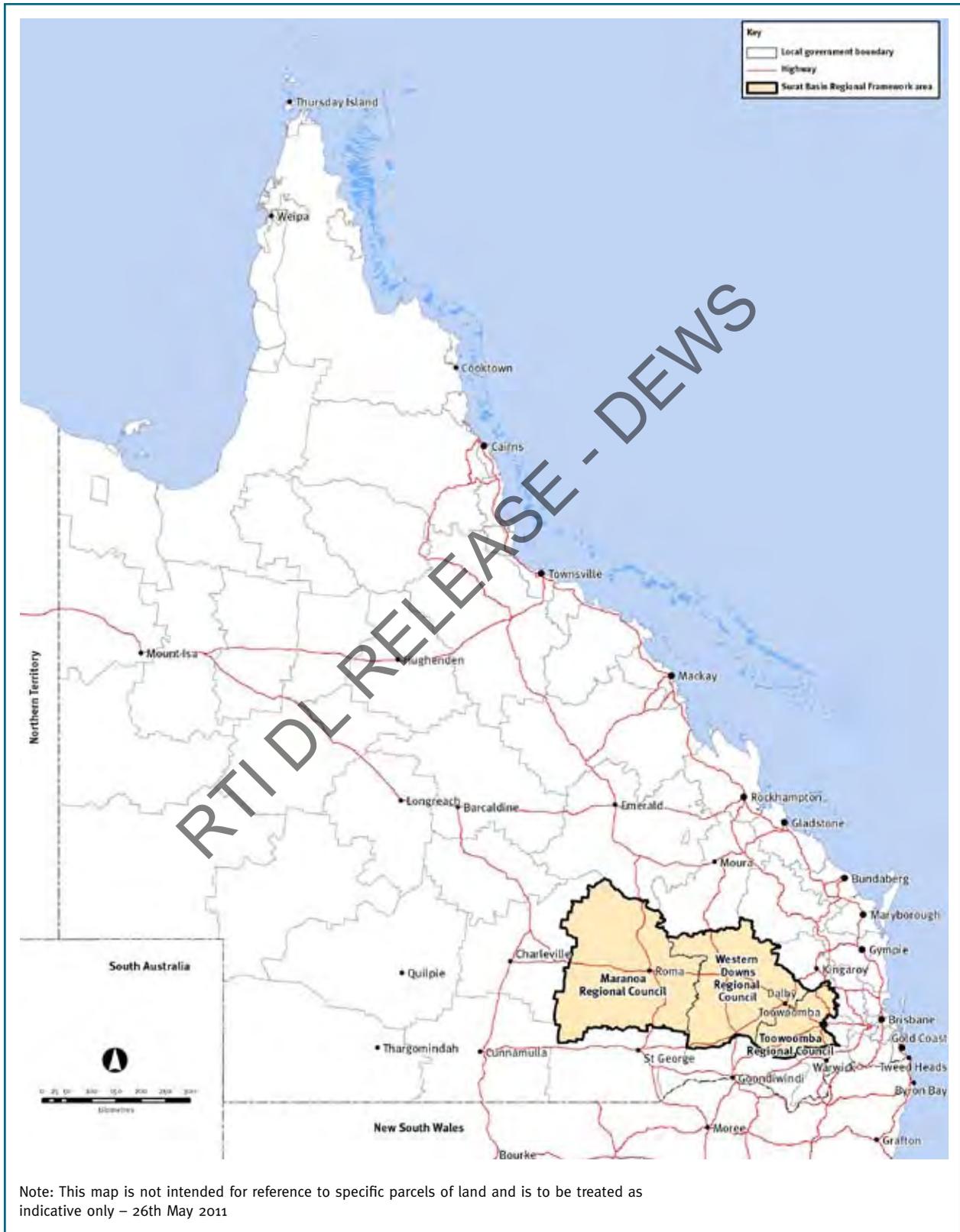


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Map 1 – Queensland context





PART A – Introduction

Purpose

The purpose of the Surat Basin Regional Planning Framework (SBRPF) is to sustainably manage regional growth in the Surat Basin area. This is done by setting directions and establishing principles to inform future decision-making and policy relevant to the Surat Basin.

The SBRPF aims to inform and align the federal, state and local government strategic planning agendas and regional policies responsible for land-use planning, service delivery and infrastructure provision within the Surat Basin as it encounters and responds to strong resource sector growth.

Effect

The SBRPF is a regional planning instrument that will inform the review and preparation of existing and future statutory regional plans and other planning policy, and inform the development of a statewide infrastructure plan. It will also be used by the Queensland Government in the review of local government planning schemes, and for the assessment of environmental impact statements for major projects in the area.

While not a statutory instrument, the SBRPF articulates the state's interests in the region and will influence local government planning schemes under the *Sustainable Planning Act 2009*, and community plans under the *Local Government Act 2009*. The Local Government (Finance, Plans and Reporting) Regulation 2009 stipulates that a local government must identify local and regional issues that affect, or may in the future affect, the local government area. Consequently, there is a strong relationship between the SBRPF, local government planning schemes and community plans.

The SBRPF is a key tool of Qplan – Queensland's planning, development and building system. Qplan is an integrated and logical planning system with a clear relationship between each level of planning, from state right through to individual homes. Strategic land-use decisions are made at the state and regional level, making town and site level planning easier. This integrated approach provides clarity about how communities will grow and how decisions are made.

Figure 1 illustrates how the SBRPF, and various other plans, programs and legislation relate to the state, region, town, local area and street level.

Figure 1 – My street. Our state

Legislative and policy framework		Strategic outcomes and deliverables	Infrastructure
Toward Q2, <i>Sustainable Planning Act 2009</i>	Our state	Queensland Infrastructure Plan	State infrastructure plans and priorities
<i>Surat Basin Regional Planning Framework, South East Queensland Regional Plan</i>	Our region	Integrated regional transport plans	Regional infrastructure delivery programs
<i>Local Government Act 2009, Queensland Planning Provisions</i>	My town	Local government planning schemes and community plans	Local infrastructure planning and delivery programs
<i>State Development Public Works and Organisation Act 1971, Petroleum Act 1923</i>	My local area	Local area plans	Neighbourhood infrastructure programs, location specific infrastructure
<i>Building Act 1975, Plumbing and Drainage Act 2002, IDAS</i>	My street	Smart eDA, Risk Smart	Site-specific standards of service



Study area

Overview

The Surat Basin is one of Australia's largest, and relatively untapped, energy resource areas, covering a geological area of approximately 300 000 square kilometres. It extends from central southern Queensland to central northern New South Wales.

For the purposes of this framework, the area referred to as the Surat Basin encompasses the Maranoa, Toowoomba and Western Downs regional council areas, which span 110 000 square kilometres across southern Queensland (Map 2).

The study area covers parts of the Darling Downs and parts of the regional planning areas contained within the *South East Queensland Regional Plan 2009–2031* and the *Maranoa–Balonne Regional Plan*.

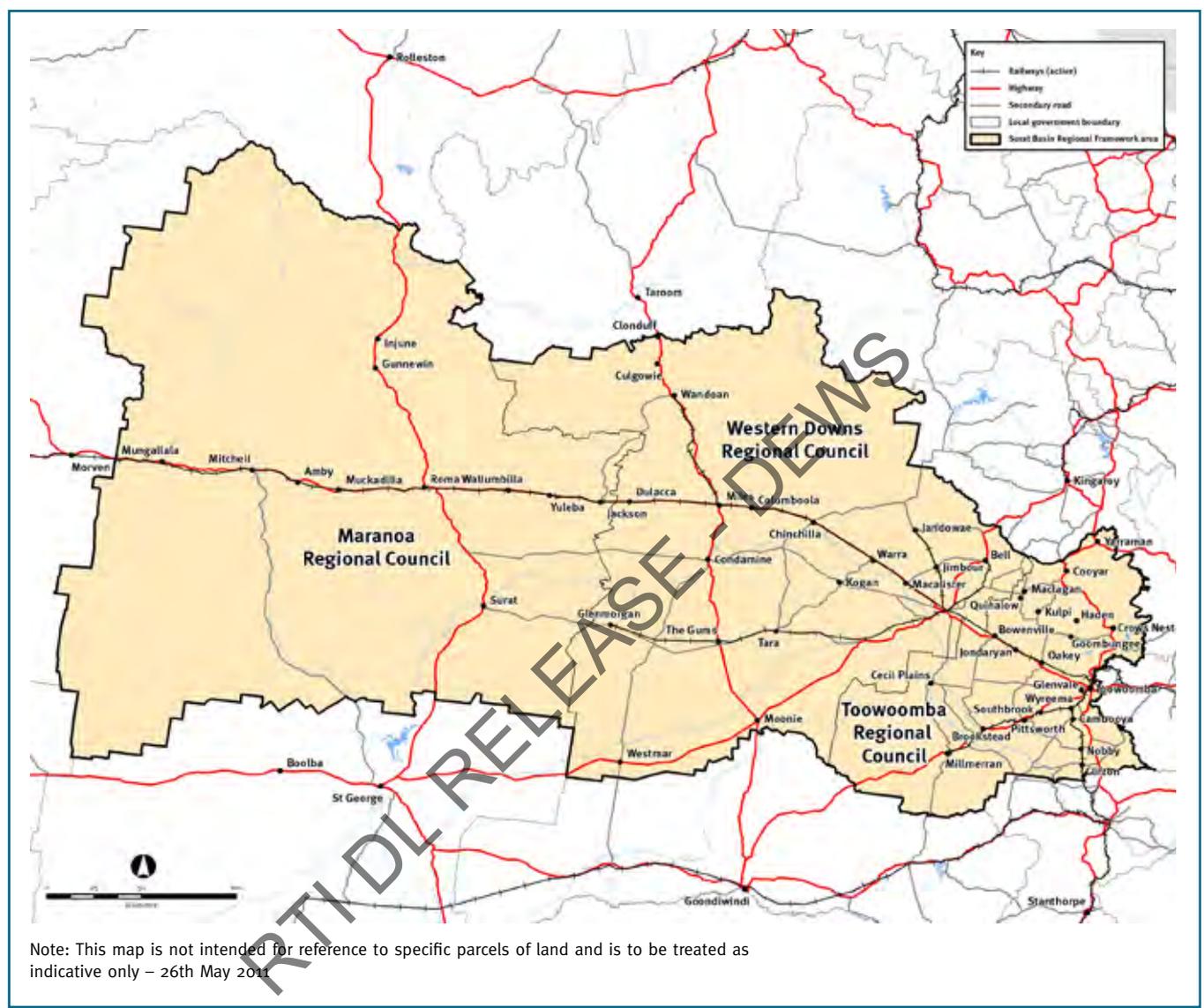
At 30 June 2010, the Surat Basin was home to an estimated 207 500 people. The area is supported by a well established network of regional centres and smaller townships, which offer a range of employment opportunities and essential services including health, education and community services. The sense of community in the Surat Basin is strong and has been a significant factor in the communities' ability to adapt and grow through testing periods such as drought and flood events.

The environmental qualities of the Surat Basin include open grasslands and dense softwood scrubs, and important natural areas protected as voluntary nature reserves and national parks. The area also includes major land catchments and naturally occurring wetland springs sustained by the Great Artesian Basin.

This vast area supports a range of primary production activities, as well as resource and energy industries. These industries use the road and rail networks that transverse the area and support the strong economic and social links with communities in the west. They also link the rural lands of the South West and Darling Downs with the highly urbanised areas and strategic port facilities on the east coast.



Map 2 – Surat Basin study area



Note: This map is not intended for reference to specific parcels of land and is to be treated as indicative only – 26th May 2011



Balancing priorities

The Surat Basin is renowned for agriculture and quality food production, and energy resources for both domestic and international consumption. These sectors represent the foundations of both population and economic growth, and are vital in securing the quality of life within local and regional communities such as those found in the Surat Basin.

The Queensland Government strongly values and supports these sectors in the Surat Basin as key economic drivers of the state. Its priority is to ensure that economic and population growth occurs in a sustainable manner. Accelerated growth of the resource sector must not disadvantage the food and agriculture sector, the environment or the communities' health and wellbeing.

Resource capacity

While the Surat Basin has, and will retain, a strong and traditional agricultural foundation, it also contains more than six billion tonnes of proven thermal coal reserves which are largely undeveloped and suitable for power generation, both domestically and abroad.

The area also has significant reserves of coal seam gas (CSG). CSG is predominantly methane gas, which is also suitable for domestic power generation and export to international markets as liquefied natural gas (LNG).

As at June 2009, the Surat Basin's proved and probable total CSG reserves were 18 249 petajoules. To put this in perspective, only 46 petajoules of CSG were extracted in the Surat Basin that year.

Background

Planning for growth

Lessons learned from other regional areas within Australia and internationally suggest that rapid growth in mining activity can result in significant environmental, social and economic impacts on local communities. To reduce this impact, a collaborative and proactive planning response and supporting programs are needed to sustainably manage growth.

One of the key steps in effective planning is determining stakeholder expectations for the future and exploring the opportunities and challenges that may enhance or impede the ability to meet those expectations.

For the Surat Basin, the level of impact on the community and the type of challenges it will be facing will be directly influenced by the intensity of growth in the resource sector.

Predicting growth

The Surat Basin will experience rapid growth over the next 30 years in the mining and gas sector due to increasing domestic and international demand for energy resources.

However, it is difficult to accurately predict levels of resource demand. Consumption of thermal coal and CSG for power generation and material production will fluctuate with global economic conditions and the emergence of innovative and cleaner technology for energy production may also impact on demand.

The productive capacities of proposed mining and gas development projects in the Surat Basin are difficult to accurately determine. Major infrastructure and resource development proposals require rigorous assessment by the Queensland Government, which may ultimately lead to some proposed projects not proceeding.

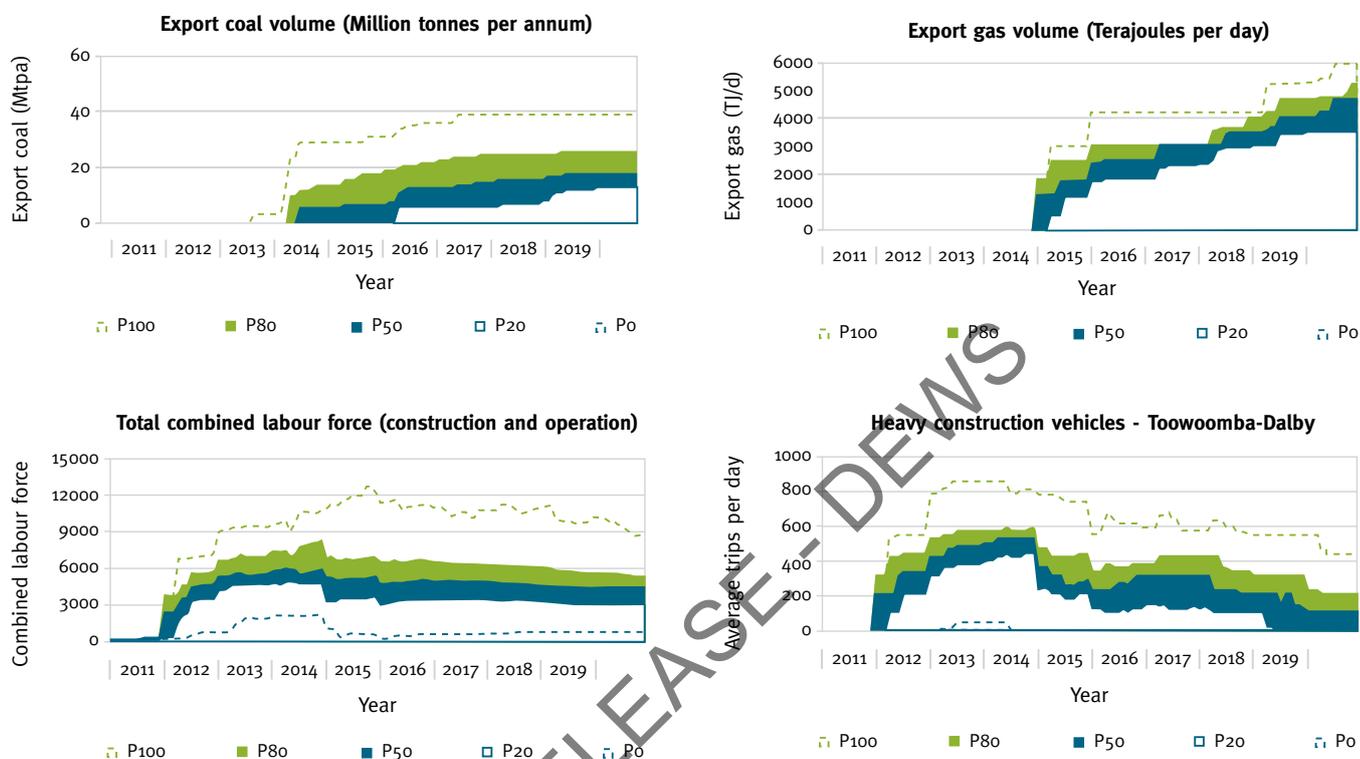
However, complex modelling has provided a range of possible growth scenarios that can be used to help plan for land use and infrastructure.

Based on medium-level scenarios for potential resource development, the modelling outputs, illustrated in Figure 2, suggest the production of coal and CSG is expected to increase dramatically from 2011 to 2020. This resource production and the associated industries will require a substantial labour force, contributing significantly to the Surat Basin's expected average annual employment growth of 3.7 per cent to 2031.

While there is uncertainty surrounding the timing and scale of the resource sector projects, even the lower probable outcome projections for export volumes and labour force will place substantial pressure on local and regional infrastructure.

The likely impacts of growth in the Surat Basin will extend past its boundaries, affecting all of southern Queensland, particularly Central Queensland and Gladstone, the remainder of the Darling Downs, South West Queensland and South East Queensland.

Figure 2 – Projected resource sector activity in the Surat Basin (2011–2020)



Note: This assessment is based on modelling that incorporates information available at the time. The information includes project specific information, market information, infrastructure capacity and resource constraints. The analysis generates 1000 possible futures based on the information available. The different ‘P’ values represent different levels of probability of an outcome being reached based on a multivariable analysis (Monte Carlo) of possible futures. For example, the P20 line reflects the line of values at which 20 per cent of the possible futures are below that line. *Source: Evans and Peck – December 2010.*

Challenges facing the community

By examining the likely resource sector growth scenarios, it is possible to understand the challenges that are likely to face communities in the area. These include:

- managing the sustainable use of renewable and non-renewable resources
- managing the cyclical nature of the mining sector in a way that complements other industry sectors
- protecting the natural environment
- positioning the Surat Basin to take advantage of renewable energy resources
- encouraging economic diversity to maintain balanced growth, especially in agriculture
- providing social and economic opportunities to encourage people to remain in, and return to, the area
- meeting growing energy and water demands
- managing potential long-term population decline in the non-mining parts of the region
- adapting to impacts of oil dependency
- preparing for, and adapting to, the impacts of climate change
- attracting and retaining skilled workers and residents
- providing opportunities for young people who have traditionally migrated to large urban centres
- developing strategic guidance for infrastructure provision
- providing essential services to smaller towns and centres.



Surat Basin Future Directions Statement

On 4 March 2010, in response to resource sector growth and the challenges facing communities in the region, the Queensland Government released the *Surat Basin Future Directions Statement* (SBFDS). The SBFDS aims to coordinate and focus the efforts of government agencies and regional stakeholders in establishing key policy initiatives to ensure sustainable growth in the Surat Basin.

The SBFDS establishes a collaborative framework for the Queensland Government, community and industry to work together to anticipate and prepare for the projected rapid growth in the Surat Basin.

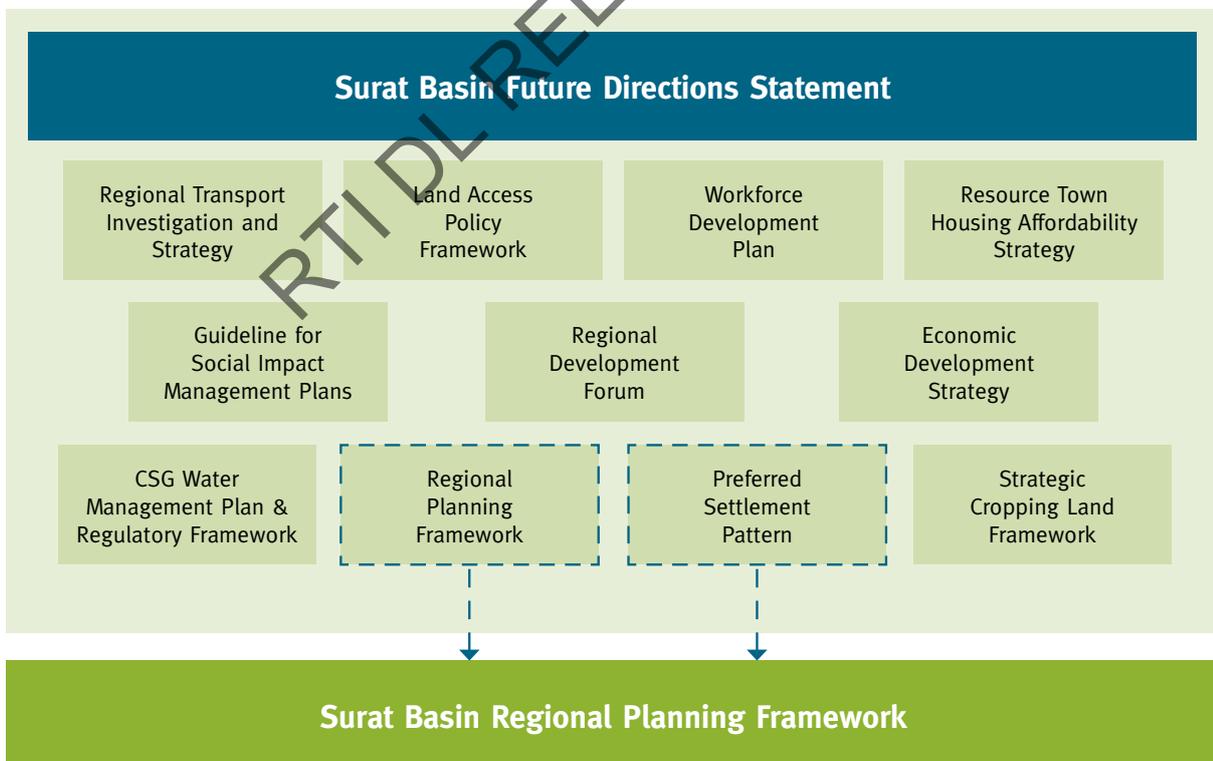
The SBFDS identifies a range of initiatives to address the major challenges facing the Surat Basin (Figure 3). Two of the headline initiatives — Regional Planning Framework and Preferred Settlement Pattern — are included in the SBRPF.

Draft Surat Basin Regional Planning Framework

In developing the draft SBRPF, the Queensland Government consulted a diverse range of stakeholders, including community and environmental groups, industry representatives, local governments and state government agencies.

The draft SBRPF was advertised and released for public review from 5 November 2010 to 17 December 2010. All submissions that were received as a result of consultation were rigorously assessed and played an important role in developing this document. A consultation report detailing the themes of the submissions and the response was released concurrently with the SBRPF and can be found at www.dlpg.qld.gov.au/suratframework.

Figure 3 – Headline initiatives of the *Surat Basin Future Directions Statement*



The Surat Basin Regional Planning Framework

Structure

Part A – Introduction

The introduction provides the purpose and context of the framework. It highlights the pressures from projected growth, challenges facing the region and the reasons for a collaborative and proactive approach in planning for sustainable growth.

Part B – Regional vision

The regional vision defines the desired future for the Surat Basin. It reflects the expectations of the community, industry, regional stakeholders and local and state governments that were captured during consultation.

Part C – Key themes

The key themes explore the aspirational statements found in the regional vision and identify the key areas that require strategic direction to support sustainable growth.

Part D – Settlement pattern

The settlement pattern spatially represents the preferred locations for residential, service and industrial growth. The settlement pattern includes narratives that describe the strategic intentions of each local government area, including their roles in terms of population growth, service provision, employment, infrastructure, housing and community services.

Separate narratives are also provided to describe the interrelationship with surrounding southern and central Queensland regions.

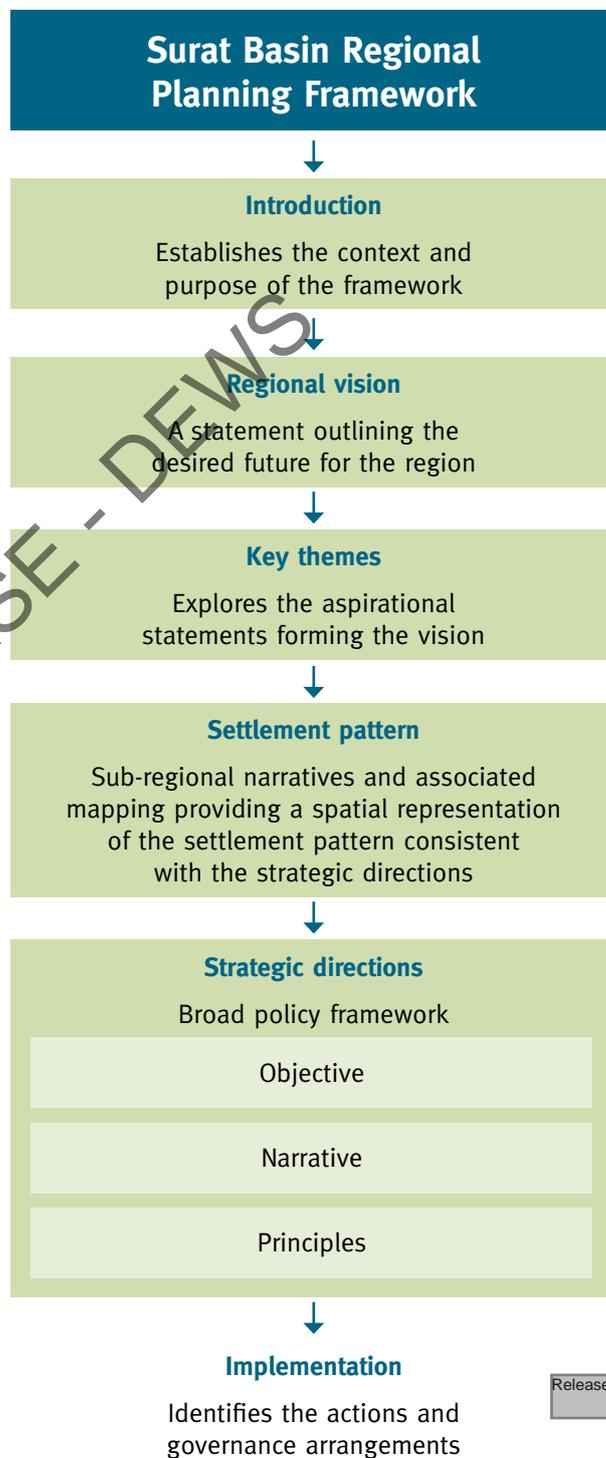
Part E – Strategic directions

The strategic directions provide the policy framework and establish key objectives built on the values, strengths and challenges of the region, and provide the principles needed to fulfil each objective.

Part F – Implementation

The implementation section outlines the actions and governance arrangements to deliver on the outcomes of the SBRPF.

Figure 4 – Structure of the Surat Regional Planning Framework



Release



PART B – Regional vision

The Surat Basin's prosperity is driven by a strong sense of community, recognition of its rich and diverse environment, and the long-term sustainable management of its natural resources.

The area's social values and environmental wealth will be secured and balanced with opportunities for strong economic growth. The opportunities generated by both the agricultural and emerging energy industries will be captured to enhance the Surat Basin's resilience to economic variability, enhance service delivery and advance the communities' early response to the potential effects of climate change.

Healthy and liveable communities will work together with regional partners, adapt positively to the pressures of rapid growth, and maintain and enhance their cultural identities.

The Surat Basin will encounter significant growth driven by domestic and international demand for its extensive deposits of thermal coal and associated coal seam gas (CGS). While the area has a strong and traditional agricultural foundation, and has attracted energy resource sector investment during the last century, projections indicate the Surat Basin will experience unprecedented resource sector growth over the next three decades, potentially leading to major changes in demands on the region's infrastructure and services.

Resource sector growth is characterised by significant peaks and troughs from fluctuating commodity prices affected by global economic conditions. This creates challenges for both planning for and managing impacts on communities which are influenced either directly or indirectly by the resource sector.

Protecting the Surat Basin's natural environment from the impacts of intensive resource and agricultural activity will play a fundamental role in sustainable growth management. Any practice presenting an unacceptable risk to the environmental health of the Surat Basin will not be supported.

Quality of life in the Surat Basin is a key value which must be protected and enhanced to meet the expectations of both existing and future residents. This includes the provision of quality health, education and other community services, as well as improvements in recreation and other services – specifically to retain young people and young families within the area.

The Surat Basin Regional Planning Framework (SBRPF) recognises existing strengths and values of the area and identifies opportunities for positive growth, while minimising potential negative impacts resulting from change. By being responsive and understanding the direction of change, the stakeholders of the Surat Basin and all tiers of government can act pre-emptively to maximise associated benefits. This will include capturing the economic opportunities generated by the resource sector to strengthen local and regional economies. Responsiveness to change will also require openness to innovation and involving the local community in the decision-making process.

The Surat Basin has many distinct advantages, including a well-established framework of communities and inter-regional connections to major services and ports. Towns of the Surat Basin have extensive urban services and capacity to accommodate growth and any opportunities that arise. These attributes are pivotal to future decision-making and to informing funding priorities and location of additional services and infrastructure.

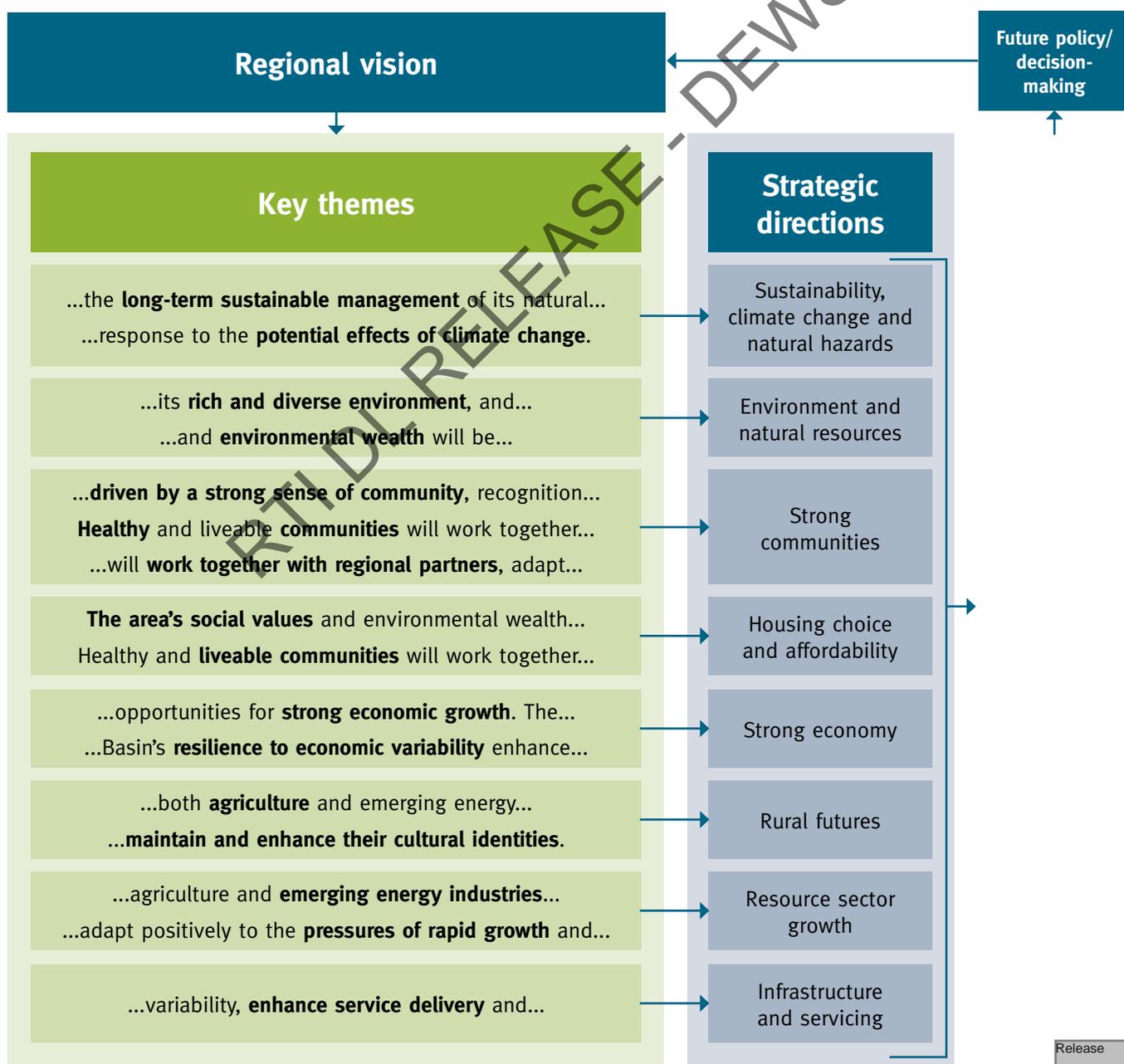
Anticipated growth generated from resources in the Surat Basin goes well beyond Toowoomba, Western Downs and Maranoa regional council areas. It has implications for the entire state, but particularly the southern half of Queensland and parts of northern New South Wales. Growth in the Surat Basin will need to be supported by high quality and high capacity transport routes to key strategic port facilities such as those in Gladstone and Brisbane.

Achieving the regional vision

The regional vision was established following consultation with various stakeholders in the Surat Basin. It includes a series of statements which reflect stakeholder intentions and aspirations for the region. To achieve the regional vision, each one of these statements must be comprehensively addressed. To do this effectively, the statements have been grouped by themes, which are then expressed in the SBRPF as strategic directions.

The strategic directions provide the policy framework for addressing challenges and harnessing strengths and opportunities. To achieve the regional vision, the key principles of the strategic directions will be used to inform and align future policy, programs and decision-making that affect land-use, infrastructure and service delivery within the Surat Basin. This process is outlined in Figure 5.

Figure 5 – Achieving the regional vision



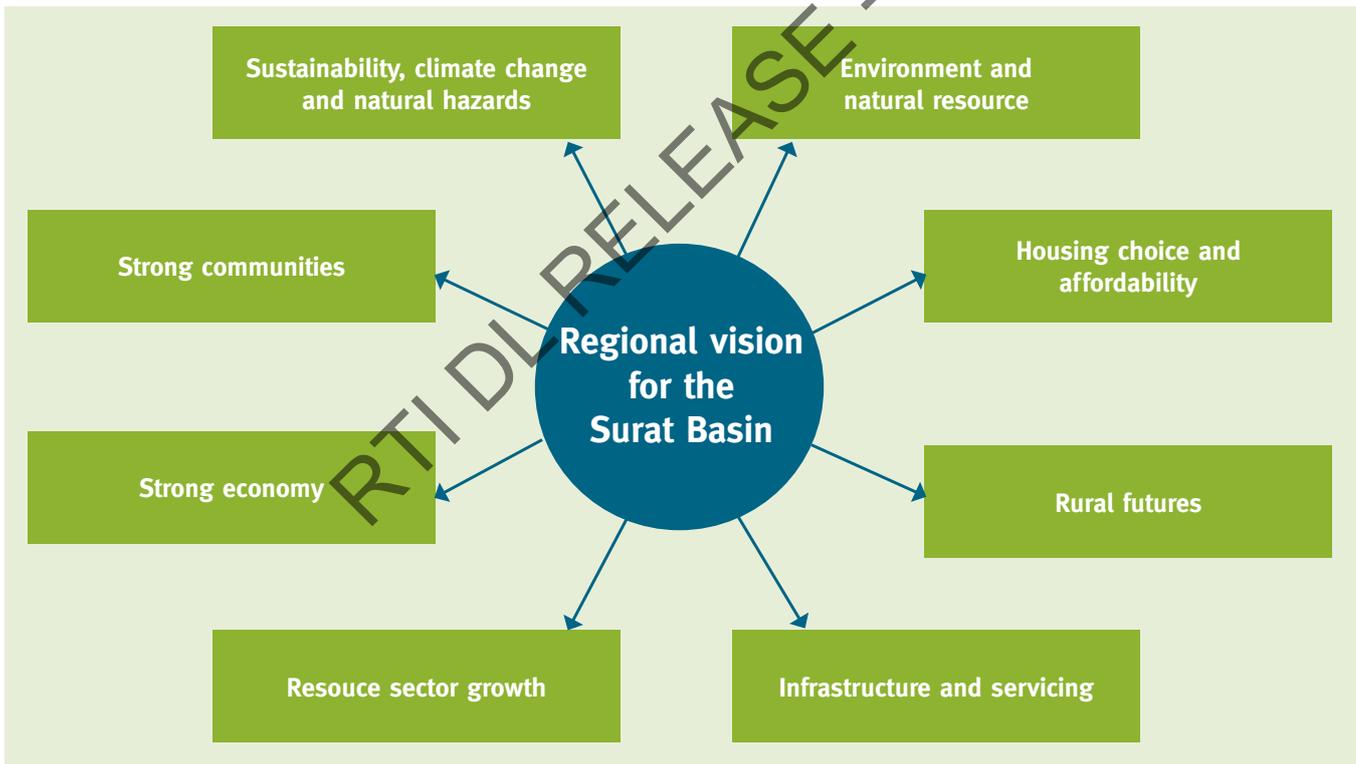
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PART C – Key themes

The key themes explore the statements contained within the regional vision. These themes represent the strategic directions needed to underpin sustainable growth.

Figure 6 – Key themes of the Surat Basin Regional Planning Framework





Sustainability, climate change and natural hazards

Regional sustainability refers to a community's capacity to maintain its environmental, economic, cultural and social values in the long-term. The Surat Basin, like all energy resource provinces, has a range of complex issues and competing values which require coordinated regional management. The projected impacts of climate change will also have significant implications for regional sustainability.

Adaptation strategies will underpin the communities' long-term resilience to the anticipated effects of climate change. There will also be a need to embrace innovative and cleaner technology to reduce greenhouse gas emissions from major industries, particularly domestic power generation.

Natural hazards, particularly flooding and bushfires, will continue to threaten communities in the Surat Basin. While the intensity and frequency of these natural hazards may increase with climate variability, communities will continue to develop greater capacities to build resilience to the impacts.

Environment and natural resources

The environment and natural resources of the Surat Basin include ecosystems and high-value biodiversity, productive agricultural soils, mineral and energy resource deposits, air and fresh water systems, and landscape amenity.

These natural assets are experiencing escalating pressures from economic and population growth, including increased resource sector activity, intensive agricultural practices, encroachment of urban and rural development, climate variability and water vulnerability.

Environmental protection, through an effective regulatory and planning response, and the sustainable management of the region's natural resources, are critical in securing a healthy and liveable Surat Basin that will benefit current and future generations.

Strong communities

A strong community is healthy, inclusive, safe and progressive. It is sustained by adequate community services, infrastructure and affordable housing options that meet the changing needs of its residents and visitors.

Enhancing the robust communities that characterise the Surat Basin will be a major factor in achieving sustainable growth. This will require building on their adaptive and resilient qualities, and their capacity to actively engage and seek resolution on matters that impact on their way of life.

The strength of these communities will be a driving force behind sustainable growth in the region, and will continue to be supported in their endeavours to protect their cultural identities.

Housing choice and affordability

Housing affordability issues emerge where there is sustained dwelling demand that outstrips supply. The absence of sufficient and diverse dwelling stock for residents and workers in the Surat Basin will impact on the region's ability to meet growth demands and cater for a sustainable workforce.

The availability of a variety of housing styles and tenures in the lead-up to periods of rapid population expansion is critical for the Surat Basin. It will require a range of well located and designed dwelling options for permanent and short-term residents, including traditional family homes, single living quarters and temporary and rental accommodation.

Ensuring appropriate planning and land-use decisions for future residential communities are made early will reduce the risk of housing shortfalls. This will also prevent higher than market rents and property prices, which reduce affordability.

Strong economy

A strong regional economy builds on existing economic strengths, captures emerging opportunities and seeks innovative ways to diversify and expand service capability.

The strong industries found in the Surat Basin have increased regional stability and provided opportunities for skill development, employment and business expansion and will play a vital role in sustaining regional growth.

A critical management issue for the Surat Basin economy will be maintaining an appropriate balance between its two primary economic drivers — energy resources and agriculture. These sectors are equally important in securing the long-term prosperity of the Surat Basin, driving the Queensland economy and enhancing the quality of life for communities well outside the area.

Retaining skilled workers, especially in primary production, will be necessary to ensure the future is well guarded against loss of the traditional industries which play a major role in shaping the Surat Basin's cultural identity.



Rural futures

Rural areas support many communities, businesses and industries which play a pivotal role in the economic stability and growth of Queensland.

The rural communities in the Surat Basin have robust local economies, support healthy and inclusive lifestyles, and have an extraordinary capability to adapt and thrive under pressure. While the rural areas in the Surat Basin are likely to experience increasing pressure from growth in the resource industry, effective planning will ensure its rural industries and businesses are protected and able to grow, and its communities benefit.

The rural communities which have played a key role in shaping the Surat Basin's cultural identity will continue to be supported by necessary infrastructure and services to improve their productive capacities, capture opportunities for value-adding in emerging markets, and improve their resilience to climate variability and natural disasters.

Resource sector growth

Resource development refers to the mining of coal or mineral deposits, or the extraction of natural gas or oil, which are generally used in power generation or for material production. The resource sector in the Surat Basin, which is a major economic driver of the Queensland and national economy, is primarily focused on coal and CSG deposits.

Growth in this sector will require regionally significant and enabling infrastructure to increase its export capacity to meet expanding international demand. While this growth will bolster local economies and provide new and diverse business and employment opportunities, the increased non-resident workforce will place considerable pressure on local infrastructure, accommodation and services. This growth will require proactive planning at all levels to reduce the impact on existing communities.

Resource sector growth must embrace the broader communities' expectations for a safe, healthy and prosperous region by addressing all impacts on the natural environment and social wellbeing of the Surat Basin residents.

Infrastructure and servicing

Growing communities require an increased level of service and infrastructure, including roads, public transport, water, sewerage, electricity, telecommunications and serviceable land. There is also a requirement to invest in regionally significant infrastructure and services that enable growth and long-term efficiency of major industries.

Growth in the Surat Basin is significant to the prosperity of the broader region and the state. The state recognises, through the *Queensland Regionalisation Strategy* and the *Queensland Infrastructure Plan*, the need to maximise opportunities to promote regional prosperity hand in hand with effective investment in infrastructure.

The Surat Basin's local and regional infrastructure will benefit communities by supporting economic development and contributing to safe environments. Infrastructure must be well-planned and sequenced, be delivered in a cost-effective manner and be responsive to emerging priorities and changing demands of communities.

The safe and efficient movement of people and commodities across the Surat Basin will be a key challenge that will require coordinated planning and early identification of the constraints impeding service performance.



PART D – Settlement pattern

Introduction

The settlement pattern provides a spatial description of the future location of activities, services and infrastructure across the Surat Basin area, as well as implications for surrounding local government areas and regions. This is achieved through a series of narratives and supporting maps. Narratives are provided for each local government area in the Surat Basin and additional narratives outline the area's relationship with adjacent regions and other parts of southern Queensland.

The settlement pattern narrative provides further detail on what the directions mean for each local government area and particular towns. This includes where residential and industrial growth will be directed, where major services will be enhanced and the projected impacts of resource sector growth, including projected populations. The narrative also summarises key issues relevant to particular locations and identifies where further monitoring and investigations may be required.

Settlement pattern summary

The existing settlement pattern of the Surat Basin is heavily influenced by landscape features, the location of well-established regional transport networks, access to water and proximity to high quality agricultural land. The original settlements established along the Warrego Highway have become the major towns servicing the Surat Basin.

The proposed settlement pattern of the Surat Basin supports and enhances the existing network of communities and major towns by highlighting them as the primary locations for future urban growth and service delivery.

The role of the Surat Basin's towns as regional and district centres for rural services will be secured and enhanced. Depending on the proximity to resource sector activities, these towns will be required to respond to additional demands on community and social services, and industrial land supply to support associated activities and supply chain opportunities.

While growth will be focused in major towns, appropriate forms and scale of development will be supported in smaller communities where it can be demonstrated that it improves employment self-containment, encourages compact settlement, maximises the use of existing urban networks, diversifies the economy and improves the long-term sustainability of services to the local community.

West

The western end of the Surat Basin is serviced predominantly by Roma. Approximately half of the resident population live in the township, with the majority of the remaining population dispersed within a network of smaller towns and rural communities. Roma is the primary commercial hub with a strong economic base and will continue to be a dominant location for servicing the surrounding rural industry and major gas industry developments.

Given the regional economy is influenced by coal seam gas (CSG) assets, Roma will also serve as the preferred location for both permanent and temporary residential accommodation within the western Surat Basin. Its well-established gas and oil industry, rural industry services, urban services including a range of retail and professional businesses, land availability and access to regular air services will ensure it remains a strong regional centre servicing the western Surat Basin.



Central

The central area of the Surat Basin provides a mix of traditional agriculture and emerging industries. Settlement across this area is focused in the towns of Dalby, Chinchilla, Miles and other smaller townships. Dalby will continue to be the major centre for central Surat Basin, providing a high level of retail, commercial and industrial services to surrounding residents and businesses. It also has the capacity to accommodate the majority of projected residential growth pressures within the central Surat Basin area.

Dalby will provide opportunities for temporary accommodation. However, due to the proximity requirements and operational arrangements of resource industries, it is likely many of these will be located on, or within close proximity to, resource sites. The secondary centres of Chinchilla and Miles will support the towns of Dalby and Roma in accommodating district level growth, including significant levels of residential development and industrial land. Both of these communities will continue to experience demand for services, accommodation and particularly industrial land due to their proximity to proposed gas and mining activities and access arrangements.

East

The eastern area is dominated by Toowoomba and the surrounding rich grazing and farming land of the eastern Darling Downs. Toowoomba is the principal centre within the Surat Basin; however, its position at the top of the Great Dividing Range has made both road and rail transport between Toowoomba and the ports on the coast a significant challenge. Many of the towns in this part of the Surat Basin, including Oakey, Crows Nest and Pittsworth, play a role in supporting and servicing surrounding rural areas and have the potential to accommodate growth associated with the resource sector.

Toowoomba's urban area will continue as the primary provider of health, education and professional services. It will also capture the majority of the anticipated growth in the east, although some of this demand will be shared among satellite urban centres and localities such as Highfields, Kingsthorpe, Wyreema and Westbrook. Toowoomba will capture a significant portion of resource-related services and a share of the drive-in/drive-out (DIDO) workforce employed in mining and gas activities, particularly in the eastern Surat Basin. The scale of activity supported in Toowoomba will continue to see it as a major location for growth, but this growth will not be solely reliant on the resource sector.



1 Surat Basin – local government areas

1.1 Toowoomba

Toowoomba LGA	
Population 2010 ¹	162 057 people
Indicative planning population 2031 ¹	228 461 people (40.1 per cent increase on 2009, compared to Queensland's 39.0 per cent projected increase)
Towns and regional centres	Estimated population 2010²
Toowoomba urban area	106 743 people
Highfields	8494 people
Oakey	3964 people
Pittsworth	2839 people
Crows Nest	1592 people
Kingsthorpe	1723 people
Millmerran	1348 people
Key locations for growth	
Residential	Primary locations – Toowoomba urban area (broadhectare and infill), Highfields Other – Oakey, Pittsworth, Westbrook, Crows Nest, Millmerran, Clifton
Services	Primary service centre – Toowoomba urban area Other – Oakey, Pittsworth, Crows Nest, Millmerran, Clifton
Industrial	Primary locations – Charlton Wellcamp, Toowoomba urban area (west side of city) Other – Oakey
Key infrastructure	
Existing	Brisbane – Toowoomba water supply pipeline
Proposed	Toowoomba Bypass, inland standard gauge railway, Gowrie to Grandchester rail link, Western Rail Line upgrading, Charlton Wellcamp multimodal transport hub planning, Warrego Highway upgrading, upgrade of various highways and other major roads

¹ Office of Economic and Statistical Research (OESR) *Population and housing profile*, Toowoomba Regional Council, April 2010

² OESR estimated resident population (ERP) by urban centre and locality

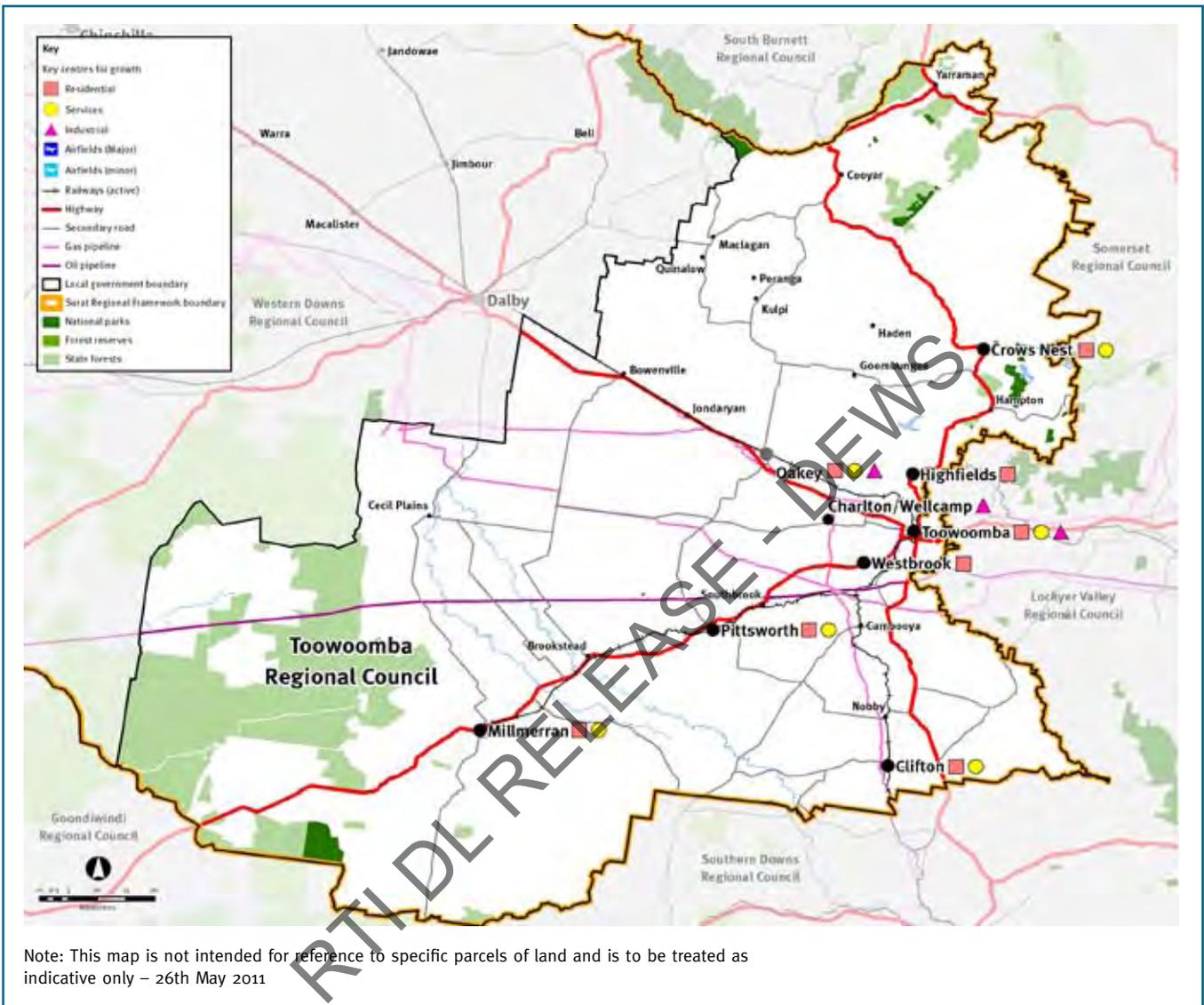
Background

The Local Government Area (LGA) of Toowoomba is located 125 kilometres west of Brisbane and covers an area of 12 950 square kilometres, encompassing both the eastern edge of the Surat Basin and the rich grazing and farming land of the Darling Downs. The city of Toowoomba is the principal centre within the Surat Basin and is located at the junction of the Warrego, New England and Gore highways, linking it to Brisbane, Melbourne and Darwin. While its direct access to the inter-regional transport network firmly establishes it as a key regional transport hub, the Great Dividing Range is a major constraint to the efficient movement of goods and resources to the ports on the eastern coast.

Toowoomba has a history based on agriculture, with many towns, such as Oakey, Pittsworth, Crows Nest, Millmerran, Jondaryan, Cambooya and Clifton, playing a role in supporting and servicing surrounding rural areas. Agricultural production commenced in the region in the 1840s and was dominated by sheep. However, the last 170 years have seen significant changes and diversification, with livestock slaughtering now the highest value rural production class, followed by cropping and livestock products.



Map 3 – Toowoomba Regional Council





The LGA has a history of moderate, yet steady population growth. This trend is predicted to continue and strengthen in the future, with the resource and energy sectors in the Surat Basin province generating regional growth. The other areas of opportunity for the region include fibre composite advanced manufacturing, food processing, agribusiness, aviation and defence.

The Toowoomba urban area is the principal service centre in Toowoomba and is the economic and commercial hub of the Darling Downs and Queensland's south west region. Regional service centres, such as Crows Nest, Oakey, Pittsworth and Clifton, provide a range of community services, retail and agriculture related services which support the various communities. Toowoomba's industries include manufacturing, health and community services, retail, agriculture and government administration and defence.

Growth opportunities and key challenges

Growth in Toowoomba is heavily influenced by growth in South East Queensland, and the rest of the Darling Downs and South West. Toowoomba's regional centre role will be further strengthened by growth in the Surat Basin, catering for business and commercial services associated with the resource and agriculture sectors. The further development of knowledge and technology based services is likely to provide additional long-term growth opportunities, taking advantage of links to the resource sector.

Tourism plays a significant role in supporting local economic growth and providing employment opportunities. Lifestyle, affordability and the proximity to Brisbane and the eastern coast increasingly attract people to Toowoomba, and its emergence as a location for conferences and business events has strengthened its position in South East Queensland. Its diverse communities and a multitude of annual festivals generate positive effects for short-term accommodation, retail industry and numerous service providers.

The growth potential of the Surat Basin and the strong influence of Toowoomba as the region's primary urban centre, combined with demographic change, present a range of planning challenges for the Toowoomba district.

The majority of the anticipated population growth in the Darling Downs and Toowoomba will occur within the Toowoomba Statistical District, within which 81 per cent of Toowoomba's population currently resides. This area includes the Toowoomba urban area and satellite urban centres such as Highfields, Kingsthorpe, Wyreema and Westbrook.

The western and south-western urban edges of Toowoomba, in particular the Westbrook area, are expected to support significant population growth through broadhectare development. Westbrook has been designated as an

Identified Growth Area under the *South East Queensland Regional Plan 2009–2031* and further planning will define the area's boundaries and suitability for residential development.

However, a more compact urban form for Toowoomba is required, particularly in and around the central business district (CBD) to maximise infrastructure efficiencies and provide greater access to housing choice, community services and facilities, employment and transport options. There are also growth opportunities in other local centres such as Pittsworth, Oakey, Crows Nest, Millmerran and Clifton.

The proportion and location of rural residential development surrounding Toowoomba's urban area has significant implications for growth management and infrastructure provision. Accommodating the expected need for housing diversity, particularly age-appropriate housing, is a challenge that will need to be addressed in future planning decisions.

The construction of a Toowoomba Bypass is pivotal to the growth of Toowoomba and the Darling Downs more broadly. The \$1.75 billion Toowoomba Bypass project, including a new range crossing to bypass the urban area, is integral to expanding the region and Australia's productive capacity. The bypass will improve the inland transport route linking Melbourne, Brisbane and Darwin and will provide significant regional benefits. The bypass will also support the longer-term development of the Surat Basin and the south-west of the state.

Economy and employment

The Toowoomba area has a strong economy fostering diverse business opportunities, innovation and a thriving export capability. Toowoomba's major industries include manufacturing, health and community services, government administration and defence, wholesale trade, retail trade, education and agriculture.

The Toowoomba urban area is the primary economic and commercial centre in the Surat Basin and offers a broad and growing economic base which provides a range of employment opportunities. There are three regional service centres (Oakey, Pittsworth and Clifton) and five secondary service centres (Crows Nest, Highfields, Yarraman, Goombungee and Millmerran), as well as numerous minor service centres and townships within the Toowoomba area.

The total working population of Toowoomba LGA was 64 751 persons in 2006, and the largest industry employer was health care and social assistance (12.0 per cent) followed by manufacturing (11.8 per cent), retail trade (11.6 per cent) and education and training (9.6 per cent). Like population growth, employment growth is anticipated to be concentrated in the Toowoomba urban area.



As the principal centre for the Darling Downs and South West of Queensland, Toowoomba also plays a major role in the provision of retail, commercial and industrial land and services, servicing a large area in Queensland and part of northern New South Wales.

The provision of sufficient industrial land supply, including opportunities for industrial infill within close proximity to the Toowoomba urban area, is pivotal to expanding its role as the key rural and construction industry centre, and transport and logistics hub for southern Queensland, west of the Great Divide. Toowoomba already contains a significant proportion of mining services firms supporting coal mines in the eastern and western Darling Downs, plus limited gas industry servicing firms supporting the Surat Basin gas fields. Its location and maturity as a city is likely to see more companies establish to service the broader region. However, this will be impacted on by levels of accessibility and associated improvements in air, road and rail routes and connections linking Toowoomba to national networks.

The Charlton Wellcamp Enterprise Area, located 13 kilometres west of Toowoomba, is anticipated to meet most of the projected industrial land needs for Toowoomba and the eastern portion of the Surat Basin. It has the potential to become a regionally significant industrial area servicing the whole of the Surat Basin, particularly in relation to transportation and logistics, construction materials, manufacturing and supply, and general industry. However, to ensure this area can accommodate projected demands, the land will need to be protected from the encroachment of conflicting uses, particularly residential and rural residential development.

Oakey has a well-established but relatively small industrial area, primarily catering for the surrounding rural industry. There is also a major cattle abattoir and small gas-fired power station within close proximity to the town. The town does have a significant amount of zoned, but undeveloped, industrial land which has the potential to accommodate further rural-focused industry and service activities, and limited mining services.

Residential

In 2010, the estimated resident population of Toowoomba was 162 057 people. The area's population is expected to grow to 228 461 people by 2031, which equates to an average annual growth rate of approximately 1.6 per cent.

Proximity to the CBD, scenic amenity, service provision and affordability are considered the key drivers for growth surrounding the Toowoomba urban area. These drivers point toward continued growth, mainly to the north and south of the city along the escarpment of the Great Dividing Range.

Expansion of the Toowoomba urban area will be restricted in the long term by the topographical constraints of the Toowoomba Range to the east, land-use constraints, including good quality agricultural land and existing rural residential and industrial development, to the west, and rural residential development to the south.

The area has a good supply of residential land that is supported by existing infrastructure or capable of being serviced in the medium to long term. However, the ability of that land to cater for growth is heavily dependent on the land supply being supplemented by the uptake of infill opportunities, particularly in and close by the CBD.

Population projections for the majority of the LGA outside the Toowoomba Statistical District, particularly the western parts, indicate no to low population growth. Limited growth could be affected by resource sector growth but will be heavily dependent on the final location of any future mines and associated activities.

The majority of the population increase projected to 2031 is anticipated to occur in the Toowoomba–Highfields area, with the balance distributed between other towns, primarily Oakey and Pittsworth. Existing land zoned for residential development has the potential to accommodate approximately two-thirds of the projected growth with the remaining third to be accommodated through urban infill.

Toowoomba's urban area residential land supply needs in the long term will therefore be met through growth in the nearby urban settlements of Kingsthorpe, Highfields and Gowrie, and appropriate lands adjacent to the Toowoomba urban area such as Westbrook. In the short- to medium-term, the key areas for growth will be Glenvale, Darling Heights, Drayton, Highfields, Oakey and Pittsworth.

The existing dwelling stock is dominated by low density detached dwellings, although this will change over the coming years, with a significant increase in supply of small lots and higher density housing. This is due to projected reduction in household sizes as a result of the ageing population, but also smaller family units, lower marriage rates and higher divorce and separation rates. Also, the cost of land, while generally low in Toowoomba, is anticipated to increase as a result of increasing development costs and economic changes. This will primarily come from mining sector growth, which will attract a high proportion of contract and temporary workers who are more likely to increase demand for short-term accommodation.



Infrastructure

With the completion of the water supply pipeline between Brisbane and Toowoomba in 2010, the most significant regional infrastructure projects are now the Toowoomba Bypass and the inland standard gauge railway. Both of these projects have major implications for Toowoomba and the Surat Basin.

The Toowoomba Bypass is highly significant for addressing a number of existing road network inefficiencies which have had a substantial impact on the regional transport network and will significantly influence future development patterns. The bypass also has significant implications for the transport needs of the Surat Basin, with the movement of materials by road being hampered by the existing road system through the Toowoomba urban area and the Toowoomba Range crossing.

The inland standard gauge railway is particularly important to the development of the Charlton Wellcamp Enterprise Area and the transport hub at its northern end, which will cater for projected industrial land demands and connectivity to the national rail network.

Community services

Toowoomba maintains a strong focus on protecting and enhancing the values and identity of its local communities, and provides a high level of service to meet the diverse needs of its citizens. The Toowoomba district boasts a comprehensive range of health and allied community services which, as well as providing essential services to the community, form an important element of the regional economy.

The concentration of services and employment opportunities, mainly within and around the Toowoomba urban area, as well as demographic and socioeconomic trends, will affect the long-term sustainability of some towns in the district. Holistic planning approaches, combined with decisive and specific policy interventions, need to be developed to address concerns about the sustainability of the area.

The Toowoomba area has a very high standard and range of education services, including the University of Southern Queensland, Southern Queensland Institute of TAFE and various state and private schools servicing Queensland and northern New South Wales. In 2010, there were 60 government schools and 26 non-government schools servicing the Toowoomba district.

There are three public hospital facilities in the area — the Toowoomba Hospital, Millmerran Health Service and Oakey Hospital. There are also a range of associated allied health services. There are also two large private hospitals in the Toowoomba urban area, as well as several smaller private hospitals and additional aged care facilities.

Government and not-for-profit community organisations provide a broad range of human and social services focused on the needs and issues related to various sections of the Toowoomba's population. Agencies oriented to community safety and emergency response provide services at a community-wide level.

Maintaining appropriate service levels within smaller communities in the Toowoomba LGA is an important challenge in creating a sustainable region.



1.2 Western Downs

Western Downs LGA	
Population 2010 ¹	32 071 people
Indicative planning population 2031 ¹	36 793 people (14.7 per cent increase on 2010, compared to Queensland's 39.0 per cent projected increase)
Towns and regional centres	Estimated population 2010²
Dalby	11 097 people
Chinchilla	4445 people
Miles	1259 people
Tara	807 people
Wandoan	420 people
Key locations for growth	
Residential	Primary locations – Dalby, Chinchilla Other – Miles, Wandoan
Services	Primary service centre – Dalby District level – Chinchilla, Miles, Tara
Industrial	Primary locations – Dalby District level – Chinchilla, Miles Potential specialist location – Wandoan
Key infrastructure	
Proposed	Surat Basin Rail Project, Warrego Highway upgrade, upgrade of Leichhardt Highway and other highways, Western Rail Line upgrading, Miles–Wandoan feeder rail link upgrading, upgrade of other major roads

¹ OESR *Population and housing profile*, Western Downs Regional Council, April 2010

² OESR ERP by urban centre and locality

Background

The Western Downs LGA is located approximately 200 kilometres west of Brisbane, has an area of approximately 38 000 square kilometres, and represents the central section of the Surat Basin. The area contains a mix of traditional and emerging industries in a rural environment which is experiencing strong economic growth. In 2010, the area's population was approximately 32 000 people.

European settlement of the area commenced in the 1840s, with vast sheep and cattle livestock underpinning the development of a strong rural economy. Evolving from a strategic location along early trade routes, townships were established providing rural trade and essential services. The existing settlement of the Western Downs is focused in and around the towns of Dalby, Chinchilla, Miles, Jandowae, Tara and Wandoan. While the rural population is not experiencing substantial growth,

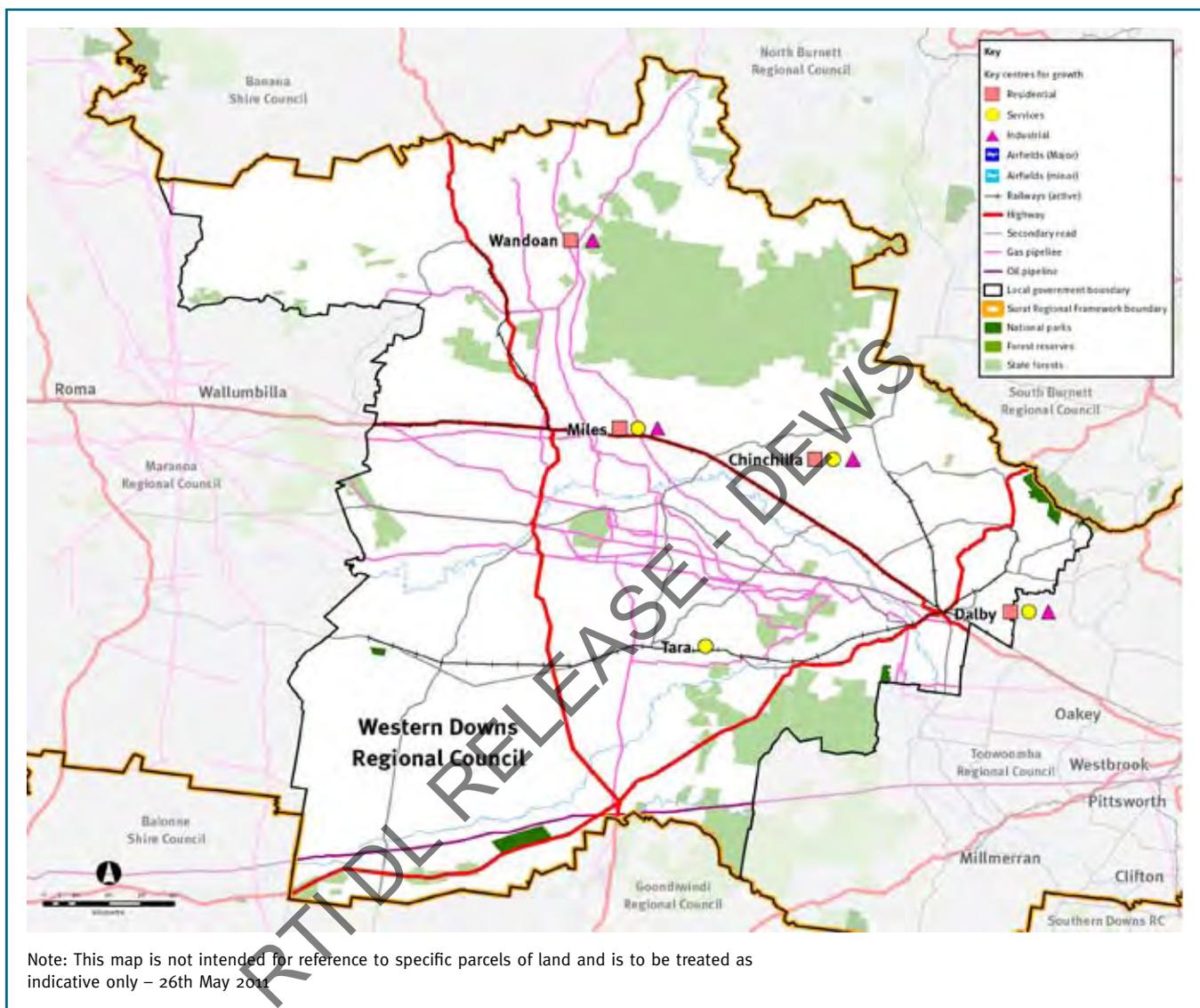
Dalby, Chinchilla and Miles are growing rapidly in response to the emerging demands of the resource sector.

The towns are principally focused on agricultural production, with emerging industries which will strengthen their established economic base. Dalby and Chinchilla will function as regional centres, supported by continued growth in population and industry. Similarly, other towns in the area will strengthen their roles as local and district centres by capturing opportunities generated by resource sector growth.

The communities of the Western Downs are resilient, strong and share healthy relationships with other communities within the Surat Basin. This will enable them to positively adapt and benefit from growth in the resource sector.



Map 4 – Western Downs Regional Council





Growth opportunities and key challenges

The existing industrial strengths of the Western Downs assist in its capacity to actively connect with major developments at all levels of the supply chain. Industrial strength, coupled with existing agriculture, manufacturing and construction industries, will generate future opportunities to expand and diversify the Western Downs economy. However, this will require the establishment of business, management and marketing plans across all functional areas, including finance, health, safety and human resources, to identify and capture opportunities as they arise.

These opportunities have had a substantial impact on the Western Downs' gross regional product (GRP) which has exceeded Queensland's percentage growth in recent years, driven by increased mining and construction activity. Dalby's and Chinchilla's growth indicates these two towns are the primary beneficiaries of extractive resources activity in the area.

Small companies operating in smaller townships and some of the more remote areas of the district will also continue to drive innovation to respond to changing needs. As fewer people take up agricultural roles in small rural communities and their surrounds, the transfer of knowledge and innovation, and skill retention, will be critical to the long-term survival of the agricultural industry.

Partnerships between groups such as the Chambers of Commerce and Western Downs Regional Council will continue to support and drive growth through business development, specifically assisting business relationships, breaking down major project supply chains for the benefit of small business, and promoting the long-term value of agriculture industries.

Infrastructure

Transport, water and telecommunication infrastructure are vital to the district's development.

Upgrading the regional transport system, including the development of critical rail infrastructure such as the Western and Moura rail connection, will be vital to enable the development and growth of the resource and energy sectors, and particularly to increase the export potential of the district's natural assets. Upgrading the Warrego Highway to reflect the volume of heavy traffic accessing the Surat Basin through the eastern gateway at Dalby is vital to increasing the safety of motorists and movement of resources to port.

Key intra-regional roads, such as the Warrego Highway west of Dalby, Kogan–Condamine Road and town connectors, will also need to be reviewed to assist in connecting development of the Surat Basin gas fields to existing and future export facilities in Gladstone. Of particular importance is the upgrade of narrow bridges and roads, which are becoming increasingly dangerous due to increased traffic volume, particularly with heavy vehicles moving equipment.

The emerging industries are driving workforce demand, with construction and operations requiring a bigger workforce and industry-specific skills. Impacts of fly-in/fly-out (FIFO) and drive-in/drive-out (DIDO) camps also require further evaluation, including their proximity to existing communities and availability of company and public transport options. It is expected in the Western Downs that Tara, Wandoan, Jandowae, Condamine, Kogan and other small communities in the midst of the coal and gas field development will face increasing pressure on essential services, impacting on the capacity of these small towns to offset high growth taking place in the larger centres of Chinchilla, Dalby and Miles.

All levels of government will continue to work together in the future to facilitate informed planning and implementation to ensure the sustainability of industry development and cohabitation of mining and agriculture. Connection with global markets and improved telecommunications accessibility has the potential to stimulate the entire economy. Clustering, joint venture partnerships and improved networking will be critical to enabling local industry to grow as a result of the massive investment being undertaken through the region.

Health, utilities and social infrastructure will also need to be monitored and managed to respond to the impacts of a rapidly growing population. Miles and Dalby hospitals have undergone multi-million dollar upgrades in the last three years, improving service delivery and patient care. The area's ageing population, like the rest of the country, is growing. This places further pressure on the regional centres of Dalby, Chinchilla and Miles, with a greater number of aged people selling their properties and moving to these regional centres to take advantage of better health services, while maintaining a connection with their community.

Economy and employment

Mining, agriculture, construction and manufacturing are key industries in the Western Downs, with exponential growth occurring in mining as development in the Surat Basin increases. These industries are predominantly highly skilled in nature, which is contributing to a regional skills shortage, particularly in trades. With an unemployment rate of below two per cent in 2010, the attraction of both skilled and unskilled labour from outside the district will be necessary.



Dalby is the dominant location in the east of the Surat Basin for rural industry services, servicing the well-established agricultural sector in the eastern and western Darling Downs. Sufficient land will be required to accommodate projected growth, as well as the demand generated by the town's increasing role as a major location for servicing gas field development and industrial activities, including manufacturing and power generation supply providers.

Major industrial projects are creating clear strengths within major towns in the Western Downs. Dalby has recently seen the development of Australia's first grain-to-ethanol biorefinery using recycled water in its production process, processing over 200 000 tonne of sorghum annually.

The Western Downs Waste Management Facility in Dalby will replace ageing landfill infrastructure. Council is also considering options for redevelopment of the Dalby Saleyards, with one of these options being to replace the existing facility with a purpose-built saleyard, proposed to be in proximity to the waste management facility on the western side of town.

Dalby's population grew by 2.3 per cent during the year to June 2010. This is expected to decrease to 0.7 per cent annually between 2010 and 2031. It also had GRP growth of 18 per cent in the 2008 financial year, approximately double Queensland's growth for the same period.

Chinchilla is located in the heart of the Surat Basin and is closely linked with ongoing gas field development and agriculture. Chinchilla has experienced the highest growth of any town in the district, experiencing significant population growth of 4.8 per cent during 2009–10 and supporting approximately 20 per cent of the district's labour force in 2009. The unemployment rate, which is well under two per cent, is attributed to the rise in employment opportunities in the gas fields. Chinchilla had GRP growth of 22.3 per cent in the 2008 financial year, the highest district growth in the Western Downs.

Chinchilla has established itself as a secondary location for gas industry services in the Surat Basin. This is in addition to accommodating a number of rural industry services surrounding the township. With a limited supply of land identified within Chinchilla for industrial purposes, further investigations are required to ensure the ability of the town to accommodate projected growth, particularly for mining services.

Miles is a potential transport hub, using its location on the crossroads of the Leichhardt and Warrego highways and the junction of the Western rail system, expected to connect through Wandoan to the Moura rail system for the purpose of exporting coal. The population of the Murilla-Wandoan area, which includes Miles, is currently stable with minimal population change during 2009–10.

The Murilla area alone is expected to average one per cent per annum through to 2031 — the largest average annual population increase in the Western Downs. Miles holds approximately 14 per cent of the district's labour force, with a low unemployment rate, which is also attributed to the rise in employment opportunities with gas and coal. Miles and Wandoan had GRP growth of 15.2 per cent in 2008–09, significant growth compared to previous years.

Miles is undergoing change, with major infrastructure projects being delivered in close proximity to the town, including the Condamine Power Station, which provides electricity to the National Electricity Market. While Miles is yet to experience a significant increase in demand for industrial land, its central location, established levels of urban services and proximity to proposed mining and gas activities are likely to see this change significantly in the future. Currently, it contains a small intermodal transport hub for bulk grains and bulk fuel supplies, a timber mill and other small-scale industrial activities. However, if it is to play a major role in providing for industrial land demands generated by the resource sector within the eastern Surat Basin, further industrial land will need to be identified and made available in the medium- to long-term.

Wandoan, located 70 kilometres north of Miles, has the potential to become a secondary location for mining services in the eastern Surat Basin due to its proximity to a number of proposed coal mines in the area. Further investigations may be required to ensure sufficient local industrial land supply to accommodate projected demands for the medium- to long-term.

Tara is the only major centre south of the Warrego Highway in the Western Downs, located halfway between the Leichhardt and Moonie highways. In recent years, Tara has experienced a declining population. However, projections of the district's population indicate small average annual growth of 0.2 per cent through to 2031. In 2009, just over 10 per cent of the district's labour force lived in Tara. Unemployment of three per cent is higher than anywhere else in the Western Downs, attributed to Tara's late entry to the employment benefits of coal seam gas (CSG) exploration. Tara had the lowest GRP growth for the district at 8.3 per cent.

Residential

The population of Western Downs was 32 071 people at June 2010, and experienced 1.9 per cent growth during 2009–10. Facilitating approvals for appropriate development, access to land and housing affordability are key considerations moving forward.



Residential growth will be focused within established communities, with the existing or potential capacity to accommodate permanent and temporary growth. This will occur primarily in Dalby, followed by Chinchilla and Miles. Chinchilla has already experienced significant growth due to its central location and availability of residential land. Both Chinchilla and Miles will continue to capture growth due to their proximity to proposed mining activities in the Western Downs. These two towns will also be the focus for locating temporary work camps and other temporary accommodation, taking advantage of established urban service networks and accessibility to likely future mining and exploration activities.

Subdivisions, estates and town camps are increasing pressure on utilities, requiring expensive upgrades or redevelopment. Miles is currently undergoing significant growth pressures, with development applications received throughout 2010 set to effectively double the number of houses in the town and place pressure on essential utilities. This pressure is being replicated in Dalby and Chinchilla. Investment in sewerage treatment and water infrastructure will require more innovative responses by local government, in collaboration with the state government and the resource sector.

Smaller towns in close proximity to proposed mining activities, such as Wandoan, are also likely to experience significant growth pressures. However, dependent on the types of mining activities undertaken, pressures may fluctuate significantly, and include a large proportion of demand generated by the need to temporarily accommodate work camps. This will need to be monitored and well planned to ensure levels of service and liveability within these communities are not reduced, and affordable housing stock is available to residents not employed in the resource sector. Ensuring that growth in these smaller towns is consolidated and focused in areas adjoining existing development will be essential for providing cost-effective and sequenced infrastructure, and minimising the social and economic impacts on existing towns. In addition, priority should be given to the location of larger and longer term work camps within larger communities such as Dalby, Chinchilla and Miles.

Further residential growth opportunities in other small towns and communities in the Western Downs will be supported. However, to assist in their long-term sustainability and community cohesion, further residential development will be subject to additional demand generated by local employment growth.

The resource sector will be the major driver for residential growth in the Western Downs. Due to the cyclical nature of mining, including the differing demands created during the exploration, construction, management and close-down stages, capacity in many of the towns could be seen as

sufficient to meet long-term demands. However, the impacts of a potentially volatile global market, with commencement or conclusion of major construction projects creating an under or over supply and therefore placing pressure on local towns, needs to be carefully considered. This will require regular monitoring and management by all levels of government.

Community services

Western Downs is well serviced by education, training, health and social services. There are numerous state and private education options throughout the district, particularly in Dalby. Each of the major towns of Dalby, Chinchilla, Miles and Tara has secondary education facilities, with private education options in the larger centres of Dalby and Chinchilla. Primary school-aged children are also well catered for, with all towns having primary schools, with some small schools also in more remote areas. TAFE is accessible in the larger communities. However, the cost of services to smaller populations generally means that residents outside Dalby and Chinchilla are required to travel.

The University of Southern Queensland has an ongoing relationship with the Western Downs, and there are also many other tertiary institutions based in South East Queensland that use expertise and facilities across the Western Downs to further learning outcomes. These existing interactions will be expanded over time through greater partnerships with the resource sector to advance innovation through local research and implementation of pilot technology.

Health facilities are in good condition throughout the area, with Miles and Dalby hospitals having both undergone multi-million dollar upgrades, enabling them to service existing populations. Population pressures will need to be considered in planning for future health services. This includes the impacts of emerging industries on emergency health services due to the remote location of activities and their associated risks. Further development is ongoing, and services which are not available in the district are provided for in Toowoomba and Brisbane.

Residents are supported by many high quality sporting and recreational facilities located within the district. While service clubs maintain their existence in the area, membership is declining.

Government support for emerging industries will have some ramifications for community services, potentially generating capital expenditure and higher levels of service delivery. Private and public investment associated with industry development may also contribute to well-planned and defined community service objectives.



1.3 Maranoa

Maranoa LGA	
Population 2010 ¹	13 369 people
Indicative planning population 2031 ¹	14 791 people (10.6 per cent increase on 2010, compared to Queensland's 39.0 per cent projected increase)
Towns and regional centres	Estimated population 2010²
Roma	6524 people
Mitchell	1027 people
Surat	462 people
Injune	374 people
Key locations for growth	
Residential	Primary locations – Roma Other – Mitchell, Wallumbilla and Injune
Services	Primary service centre – Roma District level – Mitchell and Injune
Industrial	Primary locations – Roma Specialist – Wallumbilla (gas hub) Other – Injune
Key infrastructure	
Proposed	Roma Airport upgrade, Warrego Highway upgrade, Roma heavy vehicle bypass, upgrade of Carnarvon Highway and other major roads

¹ OESR *Population and housing profile*, Maranoa Regional Council, April 2010

² OESR ERP by urban centre and locality

Background

The Maranoa LGA represents the western end of the Surat Basin study area, and is located 480 kilometres to the west of Brisbane, covering 58 700 square kilometres.

While the LGA covers a vast geographical area, its resident population is relatively small, consisting of approximately 13 400 people in 2010, with around half residing in the major centre of Roma. The majority of the remaining population is dispersed and supported by a network of smaller towns and rural communities. The towns of Surat, Mitchell and Injune are located along the Carnarvon and Warrego highways, which are the Maranoa's primary road networks, linking it with the broader Queensland road system, the Central West and northern New South Wales.

The Maranoa has a robust economy, buoyed by significant agricultural and coal seam gas (CSG) assets which will continue to attract investment and create opportunities for employment, enhance the district's economic competitiveness and strengthen regional relationships.

The area's population is expected to continue growing at an average of 0.5 per cent annually toward 2031. However, the fly-in/fly-out (FIFO) transient employment being driven by growth in the resource sector is expected to produce temporary and fluctuating impacts on the area's infrastructure, local economies and social structure.

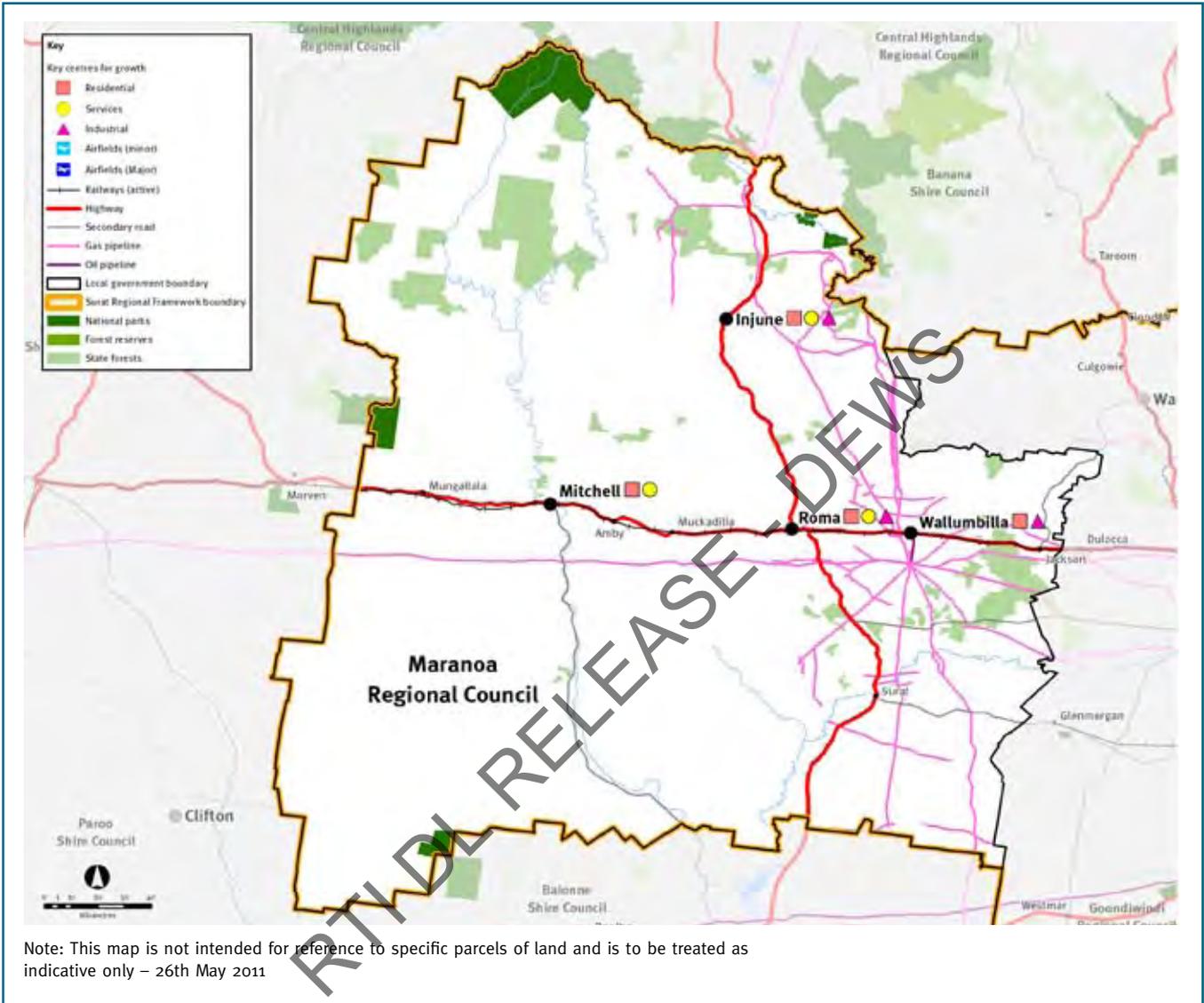
Growth opportunities and key challenges

Growth in the Maranoa will be driven primarily by CSG extraction, agriculture, forestry and tourism. There are also opportunities to diversify and align the manufacturing sector to capture supply chain opportunities stemming from the agriculture and resource sectors.

The extent of CSG resources across the LGA will continue to attract exploratory activity and development of resource sector services. This will prompt further investigation for the use of CSG water, which may also have the potential to support other industries, such as horticulture.



Map 5 – Maranoa Regional Council





As the resource sector and associated activities expand, local communities will require a greater range of essential infrastructure and services, allowing them to adapt to increased local demand. Additional residential development and health services will be required to support communities, which in turn will attract a greater non-mining and skilled workforce.

The planned \$11 million upgrade of the Roma Airport, which connects Roma with Brisbane, Charleville and St George, will facilitate greater accessibility to the Surat Basin by permitting larger aircraft to transport an increasing number of passengers to the district. Greater airport capacity and improved facilities will also support the growing tourist market, although the majority of regional tourism is road based.

With an increase in population and projected increase in the transient workforce, the communities of the Maranoa will have to overcome challenges ranging from housing availability and affordability, skills and labour shortages, increasing demands on infrastructure and essential services, maintenance of existing infrastructure and industrial land availability.

Economy and employment

The Maranoa has a strong and dedicated workforce, providing for a robust labour market which has seen the area's GRP grow by an average 15.2 per cent over the last four years. The labour force has grown steadily, while the district's unemployment rate has declined from 2.1 per cent to 2.0 per cent through 2008 to 2010, performing comparatively well against Queensland's average.

Roma is the Maranoa's primary commercial hub, with a strong economic base. It possesses a diverse economy and excellent infrastructure. It is the birth place of Australia's oil and gas industry and home to the largest cattle selling centre in the southern hemisphere.

Located on the crossroads of the Warrego and Carnarvon highways, Roma is highly accessible, and offers a range of retail and professional businesses, which service the local and broader regional communities. It also has a number of meeting and conference facilities supporting business in the district.

Roma will continue to be the dominant location for services supporting the gas industry, particularly for localised projects and those within the Cooper and Eromanga basins. It will also continue to be the major provider of industrial land in the western Surat Basin, including accommodating regionally significant rural industry facilities such as the Roma Saleyards, timber mills, feed stock mills, livestock freight depots and a major bulk grains terminal. To retain this role, a diverse range of industrial lands will be provided to cater for the differing needs of each sector, and will be protected from incompatible uses that would threaten the long-term viability of the industrial operations.

Mitchell is the major commercial centre for the western part of the Maranoa, including the adjoining townships of Amby and Mungallala. Located 90 kilometres west of Roma along the Warrego Highway, Mitchell offers a broad range of local retail, commercial and professional services. Industrial land supply in the township will need to be monitored to ensure it can continue to cater for local demand in the long-term.

Surat is located 80 kilometres to the south of Roma along the Carnarvon Highway, on the Great Inland Way—a strategic tourism drive route spanning 2700 kilometres from Sydney to Cairns. Historically, Surat was the site of a Cobb & Co changing station, which has been preserved by the Surat community and forms the centre of the community's cultural hub.

Injune is a thriving township located 90 kilometres north of Roma at the base of the Carnarvon Range. It has an excellent water supply, provides a variety of local businesses and services for local residents, and has a growing local CSG industry.

Wallumbilla is located 40 kilometres east of Roma and has limited retail and commercial premises, rural supply services, cultural and educational facilities, and sport and recreation activities. The Wallumbilla Gas Hub, which is located 12 kilometres to the south, is a junction for a number of major gas transmission pipelines and contains major gas compression plants, other above ground gas pipeline facilities and associated operations offices. It is projected that the hub will continue to grow and has the potential to become a specialised industrial precinct over time. The Wallumbilla township may also benefit from its proximity to the gas hub and access to regional road and rail networks, accommodating further industrial activities associated with the gas industry.

Residential

The Maranoa district had a population of 13 369 people at June 2010, with a projected annual growth rate of 0.5 per cent to 2031. The district's projected stable growth will be driven by the resource and energy sectors, which will continue to provide further employment opportunities and attract a significant temporary workforce. The temporary migration of workers will apply additional pressure to an already limited housing stock, potentially affecting rental affordability in the district.

However, housing in the Maranoa is relatively affordable in comparison to other major Queensland regional cities and metropolitan Brisbane. The district offers a range of housing stock and the measure of affordability is reflected in the relatively high level of home ownership.



Roma will be the predominant location for both permanent and temporary residential accommodation within the western area of the Surat Basin. Its location advantages, well-established community networks, existing levels of service, land availability and access to regular air services have made it the focal point for residential and service activities in the past and this will continue well into the future. Roma will be given priority in determining the location of temporary accommodation for resource activities occurring within a 60 minute drive of the township.

Roma's role as the major residential centre will require the delivery of diverse and affordable housing to accommodate demand. A range of initiatives and involvement by all levels of government and the resource sector will be required to provide a timely and comprehensive response to residential demand and associated issues.

Towns such as Wallumbilla and Injune will also benefit from increasing demand for residential development, due to their proximity to CSG activities. However, further residential growth will need to take into account the capacity of each community to accommodate growth in relation to services, housing affordability and impacts on community cohesion, and to minimise the impacts of fluctuating demand on long-term servicing and land values.

Infrastructure

Planning and developing an adequate network of infrastructure is essential to sustain the Maranoa's growth and enhance its liveability. The area is serviced with modern infrastructure, although the expansion of the resource and energy sector will require further investment to ensure the safe and efficient movement of people and commodities.

The Maranoa's electricity networks are connected to the national electricity grid. There are approximately 35 gas industry firms in the district, including three gas producers currently located in Roma. The gas network offers a cost-effective gas supply to residents and businesses, and both electricity supply and the reticulated gas supply are capable of supporting additional growth.

Roma is a significant rural industry service centre for the Maranoa district. It includes a number of large rural industrial activities such as timber mills, a feed stock mill, livestock freight depots, a major bulk grains terminal and the Roma Saleyards, which is one of Australia's largest selling centres and a key piece of regional industry infrastructure.

The provision of water to the district's agricultural and resource sectors is sourced primarily from the Great Artesian Basin, which has a storage capacity of 64 900 million megalitres, making it one of the largest artesian basins in the world. There are also opportunities stemming from the significant reserves of water produced as a by-product in CSG extraction.

The Maranoa is supported by a well-established inter-regional transport network, including the Warrego and Carnarvon highways, which offer strong connections to adjoining regions. The extensive network is pivotal to the Surat Basin's economic growth, it links Brisbane with Darwin via the Warrego Highway, and northern centres of Rockhampton and Cairns and southern centres in New South Wales and Victoria via the Carnarvon Highway.

Community services

The Maranoa offers a range of modern and specialist medical and allied health professional services. The Roma Health Service offers an extensive range of specialist services, a nursing home and allied health professionals.

High quality health care services are also available throughout the district through a range of service facilities and visiting professional networks. A range of quality aged care facilities and services are also available, ranging from accredited nursing home centres, retirement villages and community care services.

In addition to a comprehensive range of state government services, Maranoa Regional Council also offers a range of social development and community care services through the Roma Neighbourhood Centre.

Educational facilities in the Maranoa are of a high standard and include the Southern Queensland Institute of TAFE, which provides technical and further education, as well as vocational training. The Maranoa also has a vibrant arts culture, enhanced by the communities' active participation in arts and cultural groups.

The district offers a diverse range of sporting and recreational activities, which play a critical role in community development and social interaction. In recognition of the vital role that sport and recreation plays in the wellbeing of the community, the local government has undertaken extensive community consultation in developing a Regional Sport and Recreation Plan, which aims to identify the future development and management needs, opportunities and priorities for sport and recreation throughout the Maranoa.



2 Southern Queensland

Southern Queensland includes a diverse range of communities and environments, extending from the arid inland areas on the western borders with South Australia and the Northern Territory, to highly urbanised areas on the east coast. It includes Brisbane, Gold Coast and the Sunshine Coast, which are the biggest cities in the state. It has an extensive road and rail network which transverses the area from east to west, linking the rural lands of the South West and Darling Downs with the major cities and ports on the east coast.

The Surat Basin is located in the heart of southern Queensland, and has strong economic and social links with the communities it services to the west and the higher level services provided to the east.

2.1 South East Queensland

Western Corridor

The Western Corridor, located between Brisbane and Toowoomba, has substantial capacity, infrastructure investment and service capability to support strong residential and employment growth. This includes sufficient industrial and residential land capacity to accommodate a significant proportion of the high levels of growth projected for South East Queensland. It is also located on the corridor linking the Surat Basin to the air and port facilities of Brisbane.

Its location and capacity to accommodate growth, and the state's commitment to providing infrastructure to the area, are already resulting in higher levels of growth in the Western Corridor. These positive attributes may also result in the corridor capturing resource sector services and fly-in/fly-out (FIFO) employees from the Surat Basin. Access to rail freight services, proximity to port facilities and diverse industrial land supplies may also result in major resource sector service providers basing themselves in the Western Corridor.

However, the capacity for the Western Corridor to capture growth linked to activity in the Surat Basin will be significantly influenced by the quality of road and rail freight connections—in particular, the upgrading of the range crossing and freight corridors through the urban area of Toowoomba. It will also be influenced by the ability of Gladstone to compete for these activities.

Brisbane

Brisbane provides a range of services to the Surat Basin, as well as the remainder of the state. It is the state's hub for commerce, accommodating large financial and professional sectors, and headquarters for various state government agencies. It is the primary provider of tertiary and specialist health and education services, and also home to the Australia TradeCoast, providing sea and air port access to national and international markets.

Communities and businesses in the Surat Basin will continue to rely on Brisbane for these services. However, as growth continues in the area, the accessibility of these services will become more important. This will need to be taken into account when considering management and upgrades of transport networks between the two regions.

Brisbane currently accommodates several state and national headquarters for resource companies operating or exploring in the Surat Basin. The city is likely to continue to attract these businesses due to the ability to co-locate with specialised financial, professional and legal services within central Brisbane.

As Brisbane continues to experience strong population growth supported by high quality education and training services, it is likely that employment opportunities emerging through resource sector growth in the Surat Basin will attract skilled workers from within Brisbane. The Brisbane Airport, which provides daily flights into the Surat Basin, will continue to support this trend.

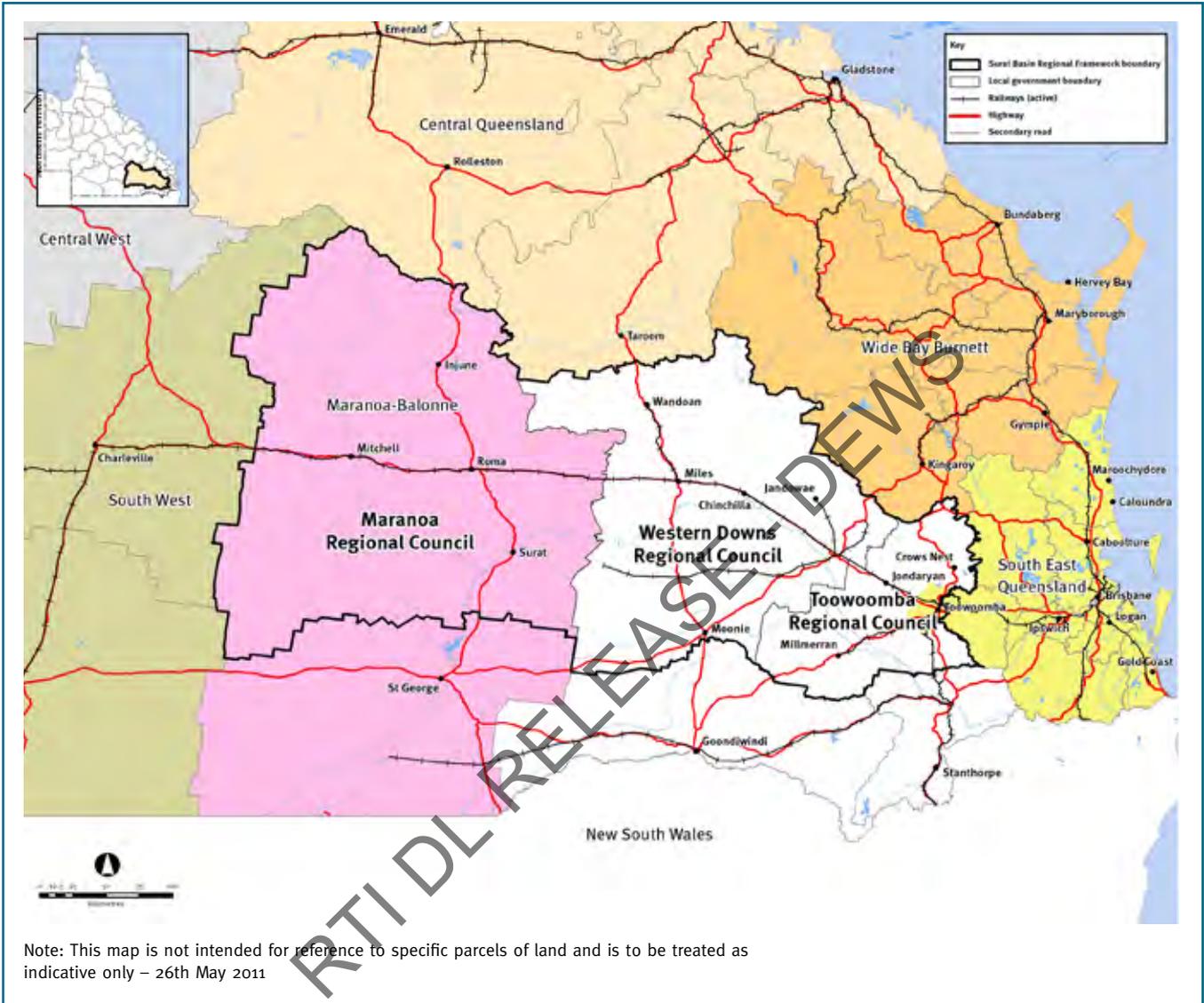
Use of the Port of Brisbane to import and export materials for operations in the Surat Basin will be limited by road and rail freight capacity. This includes the near capacity rail network operating through urban areas of Brisbane.

Gold Coast and Sunshine Coast

Both the Gold and Sunshine Coasts have experienced high levels of growth generated by people looking to establish themselves in a coastal location with ready access to city level services and employment. Both coasts have commercial airports providing access to national routes, as well as limited international routes from the Gold Coast. They also benefit from being within an hour's drive of Brisbane. These same traits are likely to see a significant number of FIFO employees from the Surat Basin locating themselves on the Gold or Sunshine Coasts.



Map 6 – Southern Queensland





With increasing residential demand on the Gold and Sunshine Coasts, housing affordability is already a significant issue and will be exacerbated by further demand generated from the Surat Basin and other resource areas. This will need to be monitored to determine additional impacts on coast communities. In addition, opportunities to attract FIFO to other areas capable of addressing demand will need to be used. This will spread growth across southern Queensland, and could also include promoting residential growth in the Western Corridor and major centres in the Wide Bay Burnett region.

2.2 Central Queensland

Central Queensland has several key attributes which have already led to significant benefits for the region from the existing and projected growth in the Surat Basin. Most of the benefits identified to date are within and around Gladstone, with its port facilities to be the focus for the preparation and export of materials and gas from the Surat Basin. However, other opportunities and challenges arise within both the Gladstone Regional Council area and Banana Shire as a result of proximity to mining activities and the development of major infrastructure connections between the Surat Basin and the Port of Gladstone.

Banana

The Banana Shire is located adjacent to the Western Downs and has several communities that are intrinsically linked with the Surat Basin in relation to employment and services. It also has rail, road and pipeline corridors linking the Surat Basin to the Port of Gladstone. The shire, which has been a major crossroad for rural Queensland since 1820, is serviced by the Leichardt, Burnett and Dawson highways, and has aerodrome facilities located at Thangool and Taroom which provide direct links to Brisbane.

Coal mining, beef production, power generation and dryland and irrigated cropping are the shire's leading industries. There are also extensive undeveloped coal and mineral deposits in Theodore, Moura and Baralba, which will allow diversification of the economy.

Banana's population has been declining steadily at an average of 0.4 per cent per annum from 1981 to 2006. However, economic growth in the north of the Surat Basin, and its focus on Gladstone, will build on the industrial developments within the shire, leading to projected steady growth of three to five per cent over the next 10 years.

The towns which are expected to experience the greatest growth from the development of the Surat Basin will be Biloela and Taroom, and to a lesser extent, the towns of Banana and Moura. Theodore will experience growth from the development in the Surat Basin; however, flood constraints affecting the town may limit opportunities.

Biloela is the main service centre in the Banana Shire and provides a high quality of life for residents. Growth in the resource sector of the Surat and Bowen basins has the potential to enhance Biloela's service capacity, attracting industry and residential development and providing opportunities for further training and skills development.

Taroom is expected to become a major junction point for liquefied natural gas (LNG), providing opportunities to establish itself as a service centre for LNG transmission. Taroom also has suitable land for further heavy industry activities if required, and urban development to support industry growth.

With growth in the Surat Basin, a major challenge for the shire will be the uncertainty regarding the type and location of development, where permanent staff will reside and how transport will need to be arranged. The road network through the shire will need to be maintained to cater for increasing demand, including transporting materials to and from mining activities in the Surat Basin.

Further use of rail freight services will be considered to help reduce heavy transport on state and local roads. The construction of the Surat Basin Rail Project would alleviate pressure and enable high capacity transport of coal to the Port of Gladstone for export.

Upgrading is scheduled for the Thangool Aerodrome to accommodate larger aircraft to complement the regional aerodromes of Roma and Toowoomba. The Taroom Aerodrome is also scheduled for an upgrade, which will provide a strategic link to the north-eastern area of the Surat Basin, including Wandoan.

Gladstone

Gladstone is located 600 kilometres north of Brisbane and 400 kilometres from Dalby, on the eastern coast of central Queensland. It will be a key location for the development of the Surat Basin due to the basin's strong reliance on sea port facilities which provide access to international markets.

The well-established mining industry is the primary economic driver within the Gladstone region, contributing to half of its annual economic growth. The other major industries sustaining growth include manufacturing, engineering and industrial services, food and agribusiness, and tourism.



The opportunities generated by growth in the Surat Basin for Gladstone are extensive, as it establishes itself as the strategic hub for the preparation and export of materials. Further investigations are required to ensure wider opportunities are captured and the demands of new industries, including workforce numbers and skills, can be met.

The Queensland LNG industry is a multi-billion dollar export industry centred on CSG reserves in the Surat and Bowen basins. This industry has the potential to create thousands of jobs in the Warrego, Maranoa and Central Coalfields regions and Gladstone.

As a new industry for Queensland, the state government has been working with proponents over a number of years to establish an appropriate planning regime, including establishing pipeline corridors in the Gladstone region. In 2009, the state government committed to securing a corridor for a gas 'super highway', which will accommodate gas pipelines transporting CSG from the Surat and Bowen basins to the Gladstone State Development Area for processing LNG.

The Port of Gladstone is Queensland's largest multi-commodity deep access port, catering for a wide range of shipping operations along a 20 kilometre foreshore. It was responsible for a throughput of approximately 76 million tonnes during 2007–08.

The Surat Basin Rail Project will connect the Surat Basin with the port facilities in Gladstone. The Surat Basin's coal will be a key driver of expenditure enabling the port authorities to expand and diversify their facilities at the port to increase its operations and export capacity.

2.3 South West

The South West region is located to the west of the Surat Basin area, covering 230 000 square kilometres, and includes the shires of Bulloo, Murweh, Paroo and Quilpie. Communities in the South West use a range of services and transport networks that cross the Surat Basin. The South West also has a significant and well established resource sector, which is connected to markets in the east by pipelines through the Surat Basin.

The South West is part of Australia's arid inland, with sparse population densities outside towns and centres. The remoteness of the region, along with limited access to transport networks, creates challenges for both residents and service providers. One of these challenges is the strong reliance on services and transport networks within the Surat Basin.

In the South West, Charleville acts as a hub for the delivery of services to the outlying centres of Cunnamulla, Quilpie and Thargomindah. It also has strong service links to Roma, Toowoomba and Brisbane.

Maintaining returns from the region's traditional economic products of live sheep and cattle, along with goat and kangaroo meat products, is dependent on the continued availability of competitively priced transport options. The completion of a regional transport needs study, currently being prepared, will identify infrastructure and service priorities for the region's transport sector. However, the rural sector is required to compete with the resource sector for access to key transport options, particularly rail.

South West towns and the grazing sector are dependent on water supplies from the Great Artesian Basin. Appropriate managing and monitoring of CSG extraction and associated water from the Surat Basin will be required to ensure the long-term sustainability of the Great Artesian Basin.

2.4 Maranoa–Balonne

The Maranoa–Balonne region comprises the Maranoa and Balonne shires, with the Maranoa Shire included in the Surat Basin study area. The natural resources of the Surat Basin, and the associated opportunities and challenges, span across the southern border of the Maranoa, and therefore the SBRPF will be of significance to the whole of the Maranoa–Balonne region.

In addition, the SBRPF has used both the policies and ongoing consultation resulting from the *Maranoa–Balonne Regional Plan* to inform its content and direction.

Balonne

The Balonne Shire has an area of 31 130 square kilometres and is located directly south of Maranoa Shire. The shire's economy is largely rural based, and is sustained by industries including cotton, sheep and wool, grain crops, wild game harvesting, fruit and vegetable production, and beef and cattle. There is potential to diversify the economy through capturing opportunities to develop the district's oil, coal and CSG deposits.



St George, with a population of approximately 2500 people, is the primary rural centre within the Balonne Shire, and serves as the main administrative and business centre. St George is a valuable agricultural production area and has strong primary production links with the Goondiwindi and Southern Downs regions. The shire includes a network of smaller towns that support rural industry, including Dirranbandi, Bollon, Thallon, Mungindi and Hebel, which have strong ties with Toowoomba for its administrative, health and financial services.

Grain production continues to expand within the shire due to the size, capacity and location of the Thallon Grain Reveal Depot. Horticulture is another leading industry, which is growing rapidly due to the local production of table grapes. Tourism is also a significant source of revenue for the shire, and is projected to grow considerably.

The shire's largest employment sector is agriculture, which accounts for 36.1 per cent of employment. Cotton growing accounted for 60 per cent of the value of agricultural production, making it the leading industry in the shire.

A challenge facing Balonne's agricultural industries includes potential conflict and competition from the emerging resource industries in Maranoa and the Western Downs — particularly the retention of a skilled work force and an increased demand for infrastructure and freight, which may restrict the transportation of cattle and grain out of the Balonne area.

The impacts of resource sector growth on Balonne's infrastructure network will be a focus in the review of the *Maranoa–Balonne Regional Plan*.

2.5 Darling Downs

The Surat Basin study area includes the northern half of the Darling Downs, comprising the Western Downs and Toowoomba regional council areas. The remainder of the area consists of lands within the Southern Downs and Goondiwindi regional council areas, which will also be affected by growth within the Surat Basin.

Southern Downs

The Southern Downs are located to the south-east of the Surat Basin study area, approximately 150 kilometres from Brisbane. The Southern Downs adjoins the New South Wales border to the south and the Toowoomba district to the north. The Southern Downs LGA served a population of 35 996 people at 30 June 2010, and covers an area of approximately 7120 square kilometres.

The two main towns of Warwick and Stanthorpe provide a comprehensive range of retail, commercial and community facilities, as well as being the main employment centres. Each centre plays a major role in the retail, commercial and industrial networks of the area, serving a catchment that extends into northern New South Wales and west towards Goondiwindi.

A diverse range of small towns and villages play an important role in providing local education, business and retail services to surrounding residential and rural populations.

The economy of the region is dependent on agriculture, which is worth in excess of \$220 million to the region annually and employs almost 16 per cent of the workforce. There is also a strong, diverse and growing manufacturing sector, with 10 per cent of the workforce involved in servicing local, national and international markets. This has the potential to capitalise on growth generated from within the Surat Basin.

Employment opportunities, lifestyle, affordability and proximity to South East Queensland will play a significant part in attracting new families to the Southern Downs.

Goondiwindi

The Goondiwindi region is located approximately 200 kilometres from Brisbane and directly south of the Surat Basin. The region adjoins the New South Wales border to its south and the Western Downs and Toowoomba districts to the north. The Goondiwindi LGA had a population of 11 413 people at 30 June 2010, and covers an area of approximately 19 300 square kilometres.

The three larger towns of Goondiwindi, Inglewood and Texas are the primary hubs supporting a number of diverse communities in the region, while Yelarbon, Toobeah, Bungunya and Talwood also play important roles in the economic and social wellbeing of rural residents. Goondiwindi has been identified as a primary transport hub, with five state and national highways converging at the town.

The area is heavily reliant on water from the Murray–Darling Basin for irrigation to support the district's diverse agricultural activities. Grain and cotton are predominantly produced in the western areas, with wool, beef and pork also produced across the region.



The mining resources of the Surat Basin extend into the Goondiwindi area, providing further opportunities for local economic growth, particularly in and around the town of Goondiwindi. The town has sufficient urban infrastructure and services to support residential growth and employment generated by the resource sector; however, this will need to be monitored and appropriately managed to minimise potential implications relating to levels of service and housing affordability.

In order to cater for anticipated growth in the town of Goondiwindi, the local government has planned for a new sewerage treatment plant, together with water supply scheme augmentation.

2.6 Wide Bay Burnett

The Wide Bay Burnett region adjoins the Surat Basin to the north-east, with North and South Burnett regional councils in close proximity to the basin. The region's population was 293 455 people at 30 June 2010, with the majority of the population residing in the coastal regions of Bundaberg and Fraser Coast.

The key economic drivers of the region include agriculture, tourism, construction and retail, with emerging industries such as aviation, advanced manufacturing, marine industry and knowledge-intensive industries envisioned to diversify the region's future economic base.

While the mineral and extractive resource industry plays a significant role in the economy of the Wide Bay Burnett region, the region is not currently experiencing, and is unlikely to experience, a resources boom on the scale of the Surat Basin.

However, the relationship between the Wide Bay Burnett region and the Surat Basin is likely to grow closer, with the region providing additional labour and a potential coastal base for FIFO workers, and to a smaller extent, DIDO employees working in the Surat Basin. Kingaroy is the major centre in the South Burnett district which will cater for substantial regional growth and ultimately benefit from its proximity and access to the Surat Basin.

The unemployment rate in the Wide Bay Burnett is significantly higher than that of the Surat Basin, providing a potential labour supply, as well as opportunities to develop skills using education and training services within the region. In addition, the region has two high quality airports capable of transporting FIFO employees from resource sector jobs in the Surat Basin to Bundaberg, Hervey Bay and surrounding rural and coastal communities.

Access to more affordable residential land in close proximity to the coast, and in proximity to the high level services provided in towns such as Hervey Bay, Bundaberg and Maryborough, will give the region an advantage in attracting families with a wage-earner employed in the Surat Basin.

The existing and planned road and rail network does not favour significant direct benefits for the Wide Bay Burnett region via the transportation and export of materials from the Surat Basin. Instead the networks will focus activity to the ports of Brisbane and Gladstone. However, as pressure continues to grow on the Port of Gladstone to cater for demands generated by the Surat Basin, the Port of Bundaberg may be able to position itself as an alternative port for non-resource sector trade.



PART E – Strategic directions

1 Sustainability, climate change and natural hazards

1.1 Sustainability

Objective

Ensure growth in the Surat Basin enhances the quality of life for all communities, generates local and regional prosperity, and maintains opportunities for future generations, while providing high levels of environmental protection.

Overview

The Surat Basin will change significantly over the next decade, providing both opportunities and challenges for the region. It is essential that the long-term sustainability of the Surat Basin underpins all future decisions to ensure that change results in positive outcomes for all communities and the environment.

A sustainable planning framework is necessary to ensure all values of the Surat Basin are preserved and enhanced as the region encounters the pressure of strong resource sector growth.

Strengths and opportunities

Proactive and well-informed policy will take into account all environmental, economic, social and cultural considerations, and will continue to guide the delivery of ecologically sustainable outcomes for the Surat Basin.

The preparation and review of new and existing policy will be undertaken in accordance with the Queensland framework for ecologically sustainable decision-making to ensure regional sustainability remains a key policy objective.

The framework comprises:

- integrated and long-term decision-making — incorporating long- and short-term environmental, economic and social considerations into decision-making
- inter-generational equity — ensuring the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations
- intra-generational equity — ensuring a fair share of resources and opportunity among present generations
- conserving biological diversity and ecological integrity— protecting the variety of all life forms, their genetic diversity and the ecosystem of which they form a part, recognising the various services they provide to humans as well as their intrinsic value
- internalising environmental costs — ensuring the true costs and life-cycle costs (incurred from when inputs are produced through to waste disposal) of protecting and restoring environmental damage are reflected in the price of a produce or service
- engaged governance — ensuring broad community involvement in decisions and actions that affect people.

Challenges

The Surat Basin's inland climate and geology, relatively low population and dispersed settlement pattern presents a special set of challenges for its diverse communities.

Key challenges facing the sustainability of the region are complex, and will require collaborative and robust planning, adaptive management and constant monitoring to guide sustainable growth. Some of the key challenges include balancing environmental health and economic development, maintaining the region's long-term productive capacity, and ensuring the communities' future needs are identified early in order to ensure the cost-effective and timely provision of infrastructure and services.



Other challenges that must be addressed include managing the competition between strategic cropping land and other activities, such as mining and gas exploration, urban development, and to a lesser extent, carbon plantations. Managing the impact on social services from fluctuating and temporary workforces, and ensuring the Surat Basin remains a socially viable and attractive place for community growth and skill development, are also significant issues.

It is important that the environmental and social costs associated with growth are measured. This must be done while recognising the potential local impacts that may arise from fluctuating activity in the mining and gas industry, particularly from relocation or departure.

Way forward

Sustainable growth for the Surat Basin requires collaboration and action from the community, industry and all levels of government. The establishment of regional sustainability targets is necessary, and will require input from an engaged public and the support of government and the resource sector.

These targets will be used to inform policy, guide regional development and inform the preferred future settlement pattern within the Surat Basin.

Principles

The following principles will assist the Surat Basin communities in achieving the strategic direction for sustainability:

1. The Queensland framework for ecologically sustainable decision-making is used to ensure ecologically sustainable development.
2. Urban activities are consolidated to ensure quality of life is maintained and growth occurs in a sustainable manner.
3. A culture of communication is facilitated between all levels of government, industry, stakeholders and the community. These groups will work collaboratively to develop regional sustainability targets for inclusion in future regional and local planning documents and land-use decisions.

1.2 Climate change

Objective

Increase the industries' and communities' ability to reduce greenhouse gas emissions and adapt to the projected effects of climate change.

Overview

The Surat Basin community, like all Queensland communities, is becoming increasingly concerned about climate change and its anticipated impacts. Climate change is occurring due to increasing concentrations of greenhouse gases in the atmosphere. This trend is expected to exacerbate variable weather patterns. The projected impacts of climate change, both on the economy and liveability, will provide challenges for the region.

Strengths and opportunities

The resources of the Surat Basin present major opportunities to deliver reductions in greenhouse gases through the use of abundant solar energy and vast coal seam gas (CSG) reserves.

As a result of the *Queensland Renewable Energy Plan*, significant investment has been directed toward investigating and developing solar thermal and solar photovoltaic energy plants in the Surat Basin. Solar development within the area is expected to produce a substantial proportion of the state's electricity in coming years — electricity that otherwise would have been generated by carbon-rich fuels.

The Surat Basin's CSG reserves are currently used for electricity generation, and produce approximately 50 per cent less greenhouse gas emissions than conventional coal-fired electricity. The extent of CSG reserves will continue to attract investment in emerging and innovative energy-based technologies, and support the growing global demand for liquefied natural gas (LNG). In 2007, the global demand for LNG was 165 million tonnes per annum. By 2015, the global demand is estimated to reach between 245 and 340 million tonnes per annum.

In addition to opportunities for cleaner power generation within the Surat Basin, an important part of the strategy to address climate change in the area will depend on the community's attitude and awareness of the issue, and its willingness to support a change toward cleaner energy and embrace the need to reduce greenhouse gases.

Rural landholders in the Surat Basin may have new opportunities through carbon sequestration and agricultural abatement. Emerging carbon markets will enable landholders to earn tradeable carbon offsets by increasing the amount of carbon in the landscape through measures such as planting trees, retaining eligible regrowth vegetation, and adopting more sustainable agricultural practices.

Challenges

It is important that government policy responds appropriately to changing climate patterns. Anticipated climate changes for the Surat Basin include increased temperatures, decreased total rainfall, changes in extreme rainfall and increased severity of droughts. These changes are likely to affect local communities and rural industries — particularly agricultural production. The Surat Basin will also need to prepare for the long-term impacts of climate change, particularly the availability of water.

In February 2011, the Commonwealth Government announced the broad framework for its proposed emissions trading scheme, commencing with a price on carbon. As the Commonwealth provides further details, the Queensland Government will carefully consider the implications and opportunities for Queensland households, communities and industries. A price on carbon will provide a market incentive for reducing emissions from existing industries, as well as supporting renewable energy projects.

The prevalence of emissions from intensive resource industries means the region will face long-term challenges arising from any future initiatives or global action to mitigate emissions. It is also possible that these initiatives could generate new economic opportunities through carbon pricing, which would support growth in markets for CSG, power generation and renewable energy.

Way forward

Toward Q2: Tomorrow's Queensland sets a target to cut Queensland's household carbon footprint by one-third by reducing waste, fuel and electricity use by the year 2020. There are many ways that planning and development in the Surat Basin will help to achieve this target. The focus will be on ensuring efficient settlement patterns, transport networks and building design.

Regional climate change actions for the Surat Basin will also be influenced by statewide initiatives and policies, including the Queensland Government's *ClimateQ* and *ClimateSmart 2050* strategy, and future climate change initiatives of the Commonwealth Government.

ClimateQ: toward a greener Queensland presents policies and outlines investments to ensure Queensland remains at the forefront of the national climate change response. The Queensland Government's *ClimateSmart 2050* strategy commits Queensland to play its part in reducing national greenhouse gas emissions to 60 per cent of 2000 levels by 2050.

This strategy includes a range of initiatives across all sectors to reduce greenhouse gas emissions and adapt to climate change impacts. The strategy also supports use of renewable energy technologies, carbon offsets and improvements in energy and fuel efficiency.

The development of the CSG–LNG industry, in conjunction with the emissions from established industries in the Surat Basin, will increase the total amount of greenhouse gas emissions from the region. Emissions from CSG and related LNG projects are managed through the detailed environmental impact statement process.

The Queensland Government commissioned a comprehensive assessment of the ability of the landscapes and agricultural systems to sequester carbon. In May 2010, the Queensland Government decided to implement a range of initiatives to optimise carbon sequestration outcomes from the state's rural landscape and carbon market opportunities for Queensland landholders. The government has also taken measures to protect high-value agriculture land from large-scale carbon forestry.





Principles

The following principles will assist the Surat Basin communities in achieving the strategic direction for climate change:

1. Planning, development, land management and other planning decisions incorporate measures to reduce greenhouse gas emissions.
2. Energy efficiency for new development is improved and greenhouse gas emissions from electricity use are reduced through the use of demand-management technologies.
3. The local provision and integration of renewable energy and low-emissions technology is increased in areas identified for future growth.
4. The siting and arrangement of land uses and infrastructure are responsive to the projected impacts of climate change.
5. The efficiency of water use, in particular its re-use, storage and transport, is improved to reduce greenhouse gas emissions.
6. Low emission technologies are supported to transition local industries to a low-carbon future.
7. The retention and planting of trees and other vegetation in appropriate locations provides opportunities for increased storage of carbon.
8. Appropriate land-management practices are used to increase sustainability and amenity outcomes.
9. Greenhouse gas emissions from waste are minimised.
10. Opportunities to capture and re-use landfill gas are maximised.

1.3 Natural hazards

Objective

Increase the resilience of communities, development, critical infrastructure, economic sectors and the natural environment to natural hazards, including the projected impacts of climate change.

Overview

The Surat Basin's topography and natural environment make it highly susceptible to the impacts of natural hazards, particularly flooding. Throughout history, the region has experienced many natural events which have shaped the settlement pattern and impacted on the communities' quality and way of life. The impacts from flooding and bushfires,

in particular, have resulted in severe property damage, reduced economic productivity and loss of life.

Understanding and responding to natural hazard risk is pivotal to increasing resilience while accommodating further growth and preparing for the projected impacts of climate change.

Strengths and opportunities

Through exposure to natural hazards and developing an understanding of the risks generated, communities that settled in the region have been required to adapt and refine their settlement pattern and building design to reduce localised flood inundation and the loss of livestock and property to bushfires.

While natural hazards continue to impact on communities in the region, the lessons learned from historical experience and the availability of increased data collection and analysis mean the existing Surat Basin communities have an increasing advantage in dealing with the impacts of natural hazards. New and evolving technology has also seen the development of more accurate studies of flood catchments, water storage capacities and flow rates, as well as bushfire modelling and improved geotechnical assessment of land stability to inform future planning decisions.

Challenges

Despite historical knowledge and new technology, it is impossible to accurately predict when a natural hazard, and the extent of its damage, will occur. It is expected as the projected impacts of climate change are experienced, the Surat Basin communities will continue to encounter more prevalent and extensive natural disasters in the region.

While all new development is constructed to achieve reasonable levels of flood immunity and to avoid threats of bushfire and landslide, older developments that were not regulated by current standards remain at greater risk from these threats.

The social impacts of natural hazards, such as widespread flooding of a scale experienced in recent years, has been devastating. Loss of property, income and damage to critical infrastructure can take years to repair or replace. However, it is loss of life that has the biggest affect on communities. While regulations have been developed to protect people and property from these disasters, the sheer scale of some natural hazard events makes it impossible to eliminate all risk.

The Surat Basin's vast primary production activities, such as agriculture and grazing, as well as coal mining activities, will continue to endure the impacts of natural hazards. The economic ramifications from loss of production in these sectors are enormous, with impacts affecting small business and local supply routes, as well as interrupting operations of major export industries and associated transport infrastructure.



Way forward

The impacts of natural hazards in the Surat Basin have increased the communities' awareness of the risks and reinforced the need for practical planning solutions and effective disaster management plans. These events have strengthened community knowledge and instilled in them a heightened level of vigilance in preparing and responding to these events.

The long-term survival of Surat Basin communities from the impacts of natural hazards relies on their ability, with assistance of all levels of government, to adapt to potentially more severe events as a result of climate change, and find practical and cost-effective measures to enhance their social, environmental and economic resilience.

The Queensland Government is committed to developing practical tools to help plan for natural hazards in a changing climate. The recently completed *Inland Flooding Study* was a joint initiative between the Queensland Government and Local Government Association of Queensland to provide clearer advice on how local government should factor climate change into flood studies.

The study recommends that a five per cent increase in rainfall intensity per degree of global warming (the climate change factor) be incorporated into flood studies. The study also:

- recommends temperatures and timeframes for applying the climate change factor
- provides a model code for assessing development in flood-prone areas (taking account of climate change).

The climate change factor is provided as an interim response while the Australian Rainfall and Runoff (AR&R) manual is being reviewed. The AR&R, which does not currently include climate change considerations, is the pre-eminent source of information to inform flood risk-assessment and infrastructure design.

Regional climate summaries have also been developed and are contained in *ClimateQ: toward a greener Queensland*. The regional climate summaries offer more localised information for planning and allows decision-makers to better determine climate risks as they apply to Queensland regional planning areas. They include information on historic weather as well as the potential impact of climate change on extreme weather events such as rainfall variability, heatwaves and severe storm activity.

Principles

The following principles will assist the Surat Basin communities in achieving the strategic direction for natural hazards:

1. Further development is avoided in areas with a high exposure to natural hazards.
2. Risk from natural hazards is reduced through adaptive planning and building responses.
3. Vulnerability to the impacts of flooding, bushfires, landslides and severe storms and winds are minimised.
4. Development is avoided where its location or form may unreasonably increase flood risk elsewhere.
5. Alterations to natural systems, such as natural flow regimes and floodplain connectivity, are minimised by effective management of riparian environments to reduce risk.



2 Environment and natural resources

Objective

A healthy and resilient natural environment is protected, maintained and restored to sustainably support the region's biodiversity, ecosystem services and natural resources, enhancing the communities' lifestyle and economic prosperity across the Surat Basin.

Overview

The Surat Basin includes a wealth of environmental values and key natural assets. It encompasses the bioregions of the Southern Brigalow Belt, the Mulga Lands and a small portion of the South East Queensland Bioregion. The area contains a range of landscapes and vegetation communities, from dense softwood scrubs to open woodlands and open native grasslands.

Key areas containing biodiversity values are mapped within the Surat Basin as areas of ecological significance (Map 7). The long-term sustainability of the natural environment is ultimately dependent on a collaborative approach between the community, industry and all levels of government that will protect and enhance the natural values.

Map 7 – Ecological values





Strengths and opportunities

While much of the area has been extensively cleared for agriculture, it still contains significant areas of native vegetation. These areas provide important habitat for a range of native flora and fauna, including significant species such as the Yakka skink, Brigalow scaly-foot legless lizard, Dunmall's snake and the Ooline and shiny-leafed ironbark trees.

National parks and state forests are spread across the Surat Basin, and contain important intact examples of the region's biodiversity. State forest areas, such as the Barakula and Dunmore state forests (currently managed for cypress timber resources) contain habitat for a number of rare and threatened species. The region's biodiversity is presently inadequately represented in protected areas under the *Nature Conservation Act 1992*. As part of the statewide forest process, the future management of state forests in the Surat Basin is being reviewed with the intention of identifying forests for transfer to protected areas. Well-known protected areas in the region include Bunya Mountains National Park and Southwood National Park. Other important natural areas on freehold land are protected as voluntary nature refuges.

The Surat Basin area includes portions of three major inland catchments including the Condamine–Balonne, Border and Moonie rivers, plus the three coastal catchments of Brisbane, Burnett and the Fitzroy–Dawson. The Condamine, Balonne, Moonie and Border rivers are part of the Murray–Darling river system. The Condamine and lower Balonne floodplains are highly developed for agriculture, with consequential impacts on water flows and quality.

The wetlands of the Surat Basin provide habitat for a vast range of plants and animals, and are vital for the survival of many threatened species. Wetlands also play a valuable role in the absorption and slow release of floodwater, and filtering of excess sediment and nutrients.

The Condamine–Balonne river basin is home to nationally important wetlands such as Lake Broadwater, the Gums lagoon, Balonne river floodplain and a number of salt lakes and claypans.

Groundwater extraction needs to be carefully controlled and regularly monitored to ensure impacts on groundwater flows to springs do not compromise their natural value. Regular monitoring to establish changes in spring flows also must be undertaken. Threats to the Great Artesian Basin spring wetlands can be reduced by developing appropriate land and mining management strategies.

The groundwater resources of the area are significant and extensively developed. They are comprised of aquifers of the Great Artesian Basin, as well as fractured and alluvial systems. Groundwater supports a range of water supply purposes, including irrigation, commercial, industrial, aquaculture, stock and domestic use.

Challenges

The environmental challenges for the Surat Basin are headlined by the requirement to effectively manage the impact of the mining and gas industry and other resource extraction activities. Other key challenges include maintaining aquifer production and water quality, protecting water courses and future water access, managing CSG water and maintaining riparian areas.

The protection of natural water and catchments from degradation and inappropriate use is a key challenge, particularly as water extraction from coal seams is essential for coal seam gas (CSG) production. The Queensland Government recognises that protecting the quality and access of groundwater resources is vital for the livelihood of communities and agriculture in many areas. Tough new laws are being introduced to protect landholder's groundwater supplies and the local environment from any impacts of CSG activities. The new laws will apply to current and future projects, and will require evaluation and strict management of the impacts of water extraction from the CSG process on bores, aquifers and springs.

The Queensland Government has also committed to introducing an adaptive management environmental approval regime. This will ensure regulation responds to what is happening on the ground and that the environment is protected, even in unforeseen circumstances. Adaptive management also allows for best practice environmental management to be implemented as technologies develop over time.

Urban water availability is a constraint to growth in many communities across the Surat Basin. During recent droughts, water supplies (especially from surface water sources) were significantly reduced for communities, including Dalby and many small locations across the Darling Downs. Communities substantially reliant on groundwater, such as Roma, did not experience these water shortages. However, greater monitoring and understanding of the region's groundwater sources is required in order to better quantify the capacity of these resources. The potential impacts of climate change also needs to be incorporated into projections of future water availability and use across all sectors.

Ensuring the protection of the biodiversity and ecological processes is a key issue within the Surat Basin. Cumulative impacts on natural systems arising from multiple developments must be assessed, and where identified, these impacts must be mitigated.



Air and noise emitting activities, particularly from those industries associated with the development and operation of emerging resource industries (such as CSG extraction and processing) should be planned, designed and constructed to maintain and protect the health and wellbeing of communities, individuals and ecosystems.

Secondary impacts may also result from the expansion of the resource sector and associated growth in the area. This may include impacts from new residential development on water quality, and the impacts of a temporary population who will need to be made aware of resource management issues in the area, for example, the spread of weed seed via increased traffic from mining and gas industry exploration activities.

Way forward

Effectively managing the expansion of mining, gas drilling and exploration activities will be critical in maintaining and protecting the Surat Basin's natural environment and agricultural areas. However, this activity will also provide considerable investment into the area, which can be used to help manage the quality of the regional environment.

The Murray–Darling Basin Authority (MDBA), established by the Australian Government, is currently developing the Murray–Darling Basin Plan as required under the *Water Act 2007*. On 8 October 2010, the MDBA released the *Guide to the proposed basin plan* for consultation, with extensive work still to be undertaken to develop a finalised plan.

The Murray–Darling Basin Plan seeks to protect and restore the key environmental assets, which are essential to the life of the rivers and their surrounding landscapes, and the cultural values of the communities which depend on the Murray–Darling's water resources. When completed, the Murray–Darling Basin Plan is intended to provide a framework for setting environmentally sustainable limits on the amount of surface water and groundwater that can be taken from the Surat Basin. The likely social and economic impacts of restrictive water use for Surat Basin's town and community water supplies, irrigation, rural and energy-based industries, floodplain harvesting, and interception activities such as farm dams and forestry plantations have been considered in the development and consultation of the Murray–Darling Basin Plan.

The Queensland Government has completed water resource plans for the Condamine–Balonne and Moonie catchments and the Great Artesian Basin. These plans demonstrate that, as a result of historic allocations, a substantial proportion of surface water has been allocated for consumptive uses. The Murray–Darling Basin Plan may require substantial cuts and changes to rules about when water can be taken from water resources.

The Murray–Darling Basin Plan will also include a water quality and salinity management plan, which has implications for management of CSG water. It is essential to align Queensland's water resource plans with the Murray–Darling Basin Plan to ensure CSG operations meet the requirements of the *Environment Protection (Water) Policy 2009*, especially in regard to wastewater management.

Extracting CSG involves the extraction of significant volumes of water from gas-bearing strata. The Queensland Water Commission and state government are undertaking investigations into the potential impacts that extracting this water could have, including consideration of water quality and possible impacts on other ground aquifers.

Under Queensland's CSG regulatory and management framework, an adaptive management regime will apply to allow progressive improvement in the understanding and mitigation of impacts, including cumulative impacts.

The two natural resource management (NRM) plans covering the Surat Basin and prepared by the Queensland Murray–Darling Committee and Condamine Alliance, help direct investment into priority NRM issues. In the context of the issues relevant to the Surat Basin, regional NRM plans outline regional resource condition targets which include:

- maintaining soil condition
- maintaining productivity of high value soils
- ensuring no net loss of native vegetation
- maintaining and restoring the region's rivers and waterways to a healthy state
- developing best current recommended practice for a range of industries.



The state government has developed a state planning policy to address industry air quality and noise issues. The *State Planning Policy for Air, Noise and Hazardous Materials* aims to ensure appropriate buffer distances between polluting industries and sensitive uses, appropriate location of new development and, where necessary, separation of land zoned for industrial uses from land zoned for sensitive uses.

The state government has also released *State Planning Policy for Healthy Waters*. This policy aims to ensure that development for urban purposes, including community infrastructure, is planned, designed, constructed and operated to manage stormwater and wastewater in ways that protect the environmental values identified in the *Environmental Protection (Water) Policy 2009*.

Principles

The following principles will assist the Surat Basin communities in achieving the strategic direction for environment and natural resources:

1. The natural environment is protected, managed and enhanced to support Surat Basin's biodiversity and natural ecosystems by:
 - a) locating urban development outside areas of high ecological significance to avoid impacts on ecological values
 - b) ensuring urban development, that is adjacent to areas of high ecological significance, avoids adverse impacts on the ecological values
 - c) ensuring urban development in, or adjacent to, areas of general ecological significance avoids impacts on ecological values or, where this is not possible, minimises adverse impacts on ecological values
 - d) protecting, managing and enhancing the condition, extent, diversity and connectivity of the region's natural areas to maintain the ecological integrity and processes that are necessary for biodiversity to be resilient to climate change and other threats.
2. Landscapes of natural, cultural, social and economic value within the region are identified, protected and managed to meet current and future community and environmental needs.
3. Regional natural resources and primary production areas are sustainably managed and protected from incompatible development.
4. A sufficient supply of natural resources is available for future use.
5. The extraction, processing and transportation of natural resources minimises adverse impacts on the community and the environment.
6. The availability of renewable resources and opportunities for integration with existing and emerging industries are recognised.
7. Water sensitive urban design principles are incorporated into new development.
8. The treatment and re-use of CSG water is continually investigated and comprehensively addresses all potential impacts on social and environmental values.
9. The environmental values of groundwater are protected and an adaptive and appropriate approach to groundwater management is implemented.
10. Decisions regarding CSG development are consistent with the requirements of the *Environmental Protection (Water) Policy 2009*.
11. Water in the region is managed on a sustainable and total water cycle basis to provide sufficient quantity and quality of water for consumptive uses, while protecting biological diversity and the function and health of ecosystems, including their resilience to the effects of climate change.
12. Inland catchments and naturally occurring wetland springs are managed, enhanced and protected from degradation and inappropriate use.
13. Noise and air pollution-emitting industries are located away from sensitive uses (e.g. houses, schools, hospitals), and vice versa.



3 Strong communities

Objective

Communities in the Surat Basin will be healthy, resilient, cohesive and sustainable, with adequate community services and infrastructure to meet the changing needs of residents, and support the character, identity and liveability of the area.

Overview

The communities of the Surat Basin are facing change, driven largely by major developments in the resource and energy sectors. To enable the continued development of the resource-rich Surat Basin, communities must be strong and able to positively adapt to changes.

A strong Surat Basin community will be the foundation on which all other opportunities are built. Planning for growth must be guided by understanding the strengths, limitations and desires of the socially and culturally diverse communities of the area.

To facilitate timely development of the Surat Basin and instil greater community confidence in how this development may occur, planning instruments must address the cumulative impacts of growth and provide sufficient clarity on how to address key social and community issues.

Strengths and opportunities

The Surat Basin has a proud Indigenous and European cultural heritage and history. The area comprises numerous Indigenous groups, each having a strong relationship to country. The cultural and environmental heritage of the region has influenced the strong community identity and rural lifestyle that is valued highly among local communities and visitors to the region.

The historic built environment within the Surat Basin, which includes heritage-listed places, as well as heritage and character areas, has played an important role in shaping the area's identity. These urban and rural places are a tangible link to the past, and provide important and irreplaceable evidence of the historical development of the Surat Basin.

While it is important to retain and enhance community identity and cohesion, it is also essential to integrate new residents, workers and their families into the community, and protect marginalised and vulnerable community members.

Healthy and sustainable communities will be maintained and supported by the provision of adequate community services, such as health, education and emergency services and facilities. Supporting community organisations in local areas will provide essential services and community activities, and will help build volunteer capacity and community cohesion and resilience.

Living in a healthy and attractive natural environment can improve quality of life. Providing and maintaining quality and accessible open space areas will support the recreational needs of communities, while also strengthening opportunities for tourism.

Challenges

Maintaining liveable communities will be essential to ensuring that towns in the Surat Basin can attract and retain a higher proportion of workers and their families as permanent residents. This will drive flow-on benefits for social and economic resilience and community vibrancy. A resilient community takes intentional action to enhance the personal and collective capacity of its residents, and responds to and influences the course of social and economic change.

Improved planning along with effective and efficient delivery of adequate community services and infrastructure (such as a reliable supply of water) are central to meeting changing community needs. An increase in the fly-in/fly-out (FIFO) and drive-in/drive-out (DIDO) workforces to service industry development means that future planning must be responsive to both the needs of resident and non-resident populations. Focused community engagement will provide information around this planning process.





The high proportion of temporary workers means that work camps are an increasing feature of resource communities. The location of these work camps has implications for community cohesion. There is a strong community aspiration to attract and retain a workforce within local areas. Further consideration on the impact of temporary workers' accommodation, particularly those located in or near established areas and where exempt from local planning scheme assessments, will be required.

Way forward

Community awareness and engagement remains the most effective tool for the community, industry and government to understand each other's needs and desires and address the impacts of change. It will also be important for communities to encourage a regional culture of lifelong learning so that skills and knowledge of rural issues and practices can be passed to future generations.

Acknowledging the lessons learned by other high growth resource and power generation industry areas in Queensland will also assist in planning for a sustainable future for the Surat Basin communities.

The key lessons include:

- the importance of maintaining healthy and liveable communities
- identifying community vulnerabilities and building adaptive capacity to assist in managing social and economic change
- enhancing the social assessment of resource development projects, including the impact of project workforce accommodation strategies on the social and economic sustainability of communities, including the local housing market.

Also, heritage places are an important and highly valued feature of established urban and rural environments. They enhance regional identity and contribute to a vibrant lifestyle. Conservation of heritage places and their integration within new and evolving communities is a critical aspect of sustainable planning and development.

Principles

The following principles will assist the Surat Basin communities in achieving the strategic direction for strong communities:

1. Cumulative impacts of growth on local communities are identified and inform social planning.
2. Local government community plans aid in planning and maintaining sustainable communities.
3. Temporary accommodation is well planned and minimises impacts on established communities.
4. A variety of community engagement approaches are promoted. This may include information sharing, consultation and active participation in decision-making, which build connections and improve coordination between all levels of government, community, industry and stakeholders.
5. Reliable and current demographic data and population projections are available and used to inform planning for, and delivery of, regional services and infrastructure.
6. Population composition and distribution are monitored on a regular basis, with FIFO and DIDO workforces actively identified and considered.
7. Community organisations are supported in the region to increase their capacity to provide appropriate services to the community.
8. Adequate social services are provided to meet community needs, such as childcare and early learning facilities.
9. Traditional Owners and Indigenous groups are inclusively and appropriately consulted regarding land and resource planning, processes and decisions.
10. The knowledge, innovations and practices of Indigenous communities are respected, preserved and maintained to promote understanding of Indigenous culture and heritage.
11. Cultural heritage significance is not compromised by development in, or adjacent to, Indigenous cultural heritage places.
12. Traditional Owner access to traditional land is increased, and Indigenous involvement in the management of traditional land is strengthened.
13. Heritage buildings and sites are well maintained and not lost through neglect, and under-used places are encouraged for re-use for compatible purposes.
14. Historic character and heritage values are conserved through an integrated and balanced approach to managing the impact of development on heritage places.
15. Housing, infrastructure development and planning measures meet best-practice guidelines and incorporate measures for healthy design.
16. Baseline indicators and data collection assists in the continued monitoring of community health and well-being.
17. Enhanced wellbeing and preventing ill health are key elements of future decision-making.



4 Housing choice and affordability

Objective

Respond to the growing and diverse demands of each community, including affordability, through the provision of sufficient residential land supply and a range of accommodation within the towns of the Surat Basin.

Overview

Housing affordability remains a nationwide challenge. For areas such as the Surat Basin, the issue is exacerbated due to rapid economic development and significant demographic movement.

The Surat Basin is likely to continue to experience strong demand, with fluctuating peaks for particular types of accommodation. This will be led by demand from temporary construction workers associated with resource industry developments, permanent resource industry workers, and key service industry workers and their families.

Strengths and opportunities

The availability of affordable and appropriate types of housing to meet different household needs is necessary for individual well-being and social cohesion, and to minimise the potential displacement of the most vulnerable sectors of the community.

A range of housing options will be required in each town to cater for different needs, demographics and price requirements, as well as demands from new and temporary residents drawn to the area as a result of the resource industry. While the region as a whole faces the prospect of strong housing demand, some centres such as Roma have been managing the demand placed on housing and accommodation by the resources industry sector for some years. In response to demand, the Roma community has developed a range of housing stock that caters for diverse needs.

The Surat Basin has adequate land available for residential development. Ensuring existing and future dwelling stock remains affordable is a challenge currently being addressed. In 2008, the federal government released its *National Rental Affordability Scheme*, offering financial incentives to develop affordable rental accommodation in areas of demand. Chinchilla and Toowoomba have numerous housing proposals afforded by this scheme.

In July 2010, the Queensland Government declared a 20 hectare Urban Development Area in Roma. Development of this area by the Urban Land Development Authority (ULDA) will assist in reducing local housing pressures by bringing surplus government land to the market quickly and delivering a diversity of housing to suit the needs of the growing community.

The ULDA has also developed a draft guideline which outlines an approach for planning and design of proposals for non-resident worker accommodation. This draft guideline encourages innovative and high quality development outcomes and provides guidance for the interpretation and application of interim land use plans and development schemes.

In the Maranoa district, the state and local governments are seeking to facilitate the provision and management of social and affordable housing for permanent residents through the Rural Housing Service Centre. Considerable opportunities exist for local government and developers to work in partnership with the not-for-profit housing sector to increase the quantity of affordable housing in the Surat Basin.





Challenges

The level of growth projected for the Surat Basin will have a significant impact on housing demand across various parts of the region. Due to the increased resource activity and the associated workforce, demands will be placed on housing that is usually available for community members not benefiting directly from economic growth. This will need to be taken into account in future planning for residential land supply and the type of housing stock delivered in the Surat Basin.

A wide range of factors are affecting the affordability of housing within the Surat Basin, most notably supply and demand. While there is adequate land supply available for residential development, a key challenge is ensuring its timely release to cater for a growing permanent population and temporary workforce.

The demand for housing and accommodation is affected by a variety of factors — including consumer preference, diverse household needs, economic circumstances, cost and availability of finance, and construction and infrastructure costs — which all contribute to the challenge of providing affordable housing. The peaks and troughs of development in the resource sector and uncertainty of projects is another underlying challenge which affects the attractiveness of housing investment in the Surat Basin.

Furthermore, in a market-based economy, rents and house and land prices often rise faster than incomes. This leads to lower income permanent residents being forced out of the region or to smaller outlying centres to access more affordable housing. This contributes to social isolation and loss of localised skills.

Way forward

All levels of government, industry and the housing and development sector are responsible for addressing housing affordability in the Surat Basin. Together, they must continue to develop partnerships with the private and not-for-profit sectors to leverage funds for building and managing new affordable housing.

Identifying and providing land and infrastructure and identifying opportunities for infill development for new residential development, are essential tasks for reducing the impact of increased housing demand. The process for identifying new land for residential purposes will continue to involve the community to ensure social needs and community expectations are adequately addressed.

Furthermore, sustainable building design will be encouraged in new developments to prolong building life, reduce construction costs and increase energy efficiency.

Principles

The following principles will assist the Surat Basin communities in achieving the strategic direction for housing choice and affordability:

1. Housing and accommodation options are diverse, affordable and able to meet the changing demographic and economic needs of the region.
2. Cumulative impacts of resource projects on the housing market are collaboratively addressed by industry, and local and state governments.
3. Strategies necessary to address cumulative impacts are informed by various mechanisms including social impact assessment and management plans, regional plans and other statutory planning tools.
4. Affordable housing is facilitated by sufficient land and the consideration of factors that contribute to affordability, such as access to transport, design, infrastructure costs and energy use.
5. Residential development is supported by the timely and efficient provision of associated infrastructure.
6. Temporary worker accommodation is located appropriately, taking into account its:
 - a) nature
 - b) duration
 - c) potential economic benefits
 - d) impacts on social integration and community cohesion.
7. Temporary worker accommodation no longer required is re-used as part of sustainable communities.
8. Temporary worker accommodation is designed and built to a high standard, so as to integrate appropriately with the local community.
9. Not-for-profit housing providers are provided with opportunities to expand the supply of affordable housing.
10. Supply and demand for affordable housing is considered when determining the disposal or redevelopment of government property and surplus land.
11. Sustainable building design and energy efficiency initiatives are explored to reduce the cost of construction and living.
12. A culture of collaboration is facilitated between all levels of government, industry, stakeholders, not-for-profit housing providers and community to supply affordable housing and rental accommodation.



5 Strong economy

Objective

A diverse, resilient and sustainable economy, building on the Surat Basin's established economic strengths and emerging economic opportunities, supporting investment and employment in all sectors and using innovation and collaboration to capture growth.

Overview

The Surat Basin has some of Queensland's most diverse agriculture assets and an abundance of coal, gas and other resource deposits. Over the past five years, the Surat Basin has experienced solid economic and population growth, driven by diversification from the area's historically agricultural-based economy to coal and coal seam gas (CSG) exploration and development.

With the majority of resource development yet to come online in the region, there is an expectation the Surat Basin will see some of the largest resource development in Australia.

The key industry sectors of the Surat Basin include:

- **agriculture and forestry**, which has underpinned the area's economy for decades due to vast productive land and the areas access to water and fertile soils
- **energy development**, which is driven by the Surat Basin's estimated 6.4 billion tonnes of known coal reserves and 18 289 petajoules of CSG
- **food processing and value-adding opportunities**, which are driven by primary production
- **metal-based manufacturing**, which is influenced by the mining sector
- **education and training**, which is seeing an increased demand for post-school education to support the provision of skilled workers in specialised areas
- **public administration and safety**, which includes local and state government sectors and the defence force
- **transport and warehousing**, which has been driven so far by the agricultural and forestry sectors and will continue to grow with the emergence of the resource sector
- **tourism**, which is a thriving industry driven by regional festivals and events, impressive landscapes and iconic environmental assets
- **emerging industries**, which are seeking to capture opportunities in renewable energy.

Strengths and opportunities

The Surat Basin has a unique mix of locational and geographic attributes and existing industry characteristics which can be leveraged to enhance economic development. These assets are valuable for the area's investment potential.

Diverse and productive agricultural lands

The Surat Basin has some of Queensland's most diverse agricultural land, which has traditionally been used in grain production, sheep and beef production, intensive livestock, and some horticulture and broadacre cropping activity. The major agricultural field crop products include wheat, barley, sorghum, sunflower, soy beans and cotton.

Livestock production is primarily beef, but also includes wool, sheep, pork and poultry products. Intensive livestock industries (namely beef and pork) are concentrated in the region, and based around local feed grain supply and proximity to markets. The Surat Basin's livestock industry is supported by the Roma Saleyard, which is the largest cattle selling centre in the southern hemisphere. Timber is a significant industry within the Maranoa district.

It is the diversity of the agricultural land and climate that has seen the Surat Basin become a major agriculture production hub, able to sustain a strong and diverse agricultural supply chain. The proximity to markets and transport and availability of natural resources such as water and soil, have made this area attractive to producers. It is recognised that agriculture will remain an extremely important industry sector in the region's economy during and beyond developments in the energy sector.





Abundant energy resources

The Surat Basin is one of Australia's largest and relatively untouched energy resource areas, with over 20 per cent of Queensland's coal deposits and an estimated 65 per cent of Queensland's CSG.

Currently coal and gas from the area is being used for power generation, with more than 12 million tonnes of coal exported from the region during the year 2007–08. Coal and gas exports to international markets are predicted to grow substantially over the coming years.

The coal mining industry is also likely to grow significantly, with current proposals for the major expansion of production to support increasing export markets. The growth is likely to be led by a mix of medium and large coal mining proposals located in the centre of the Surat Basin — to the north and east of Miles, and west of Wandoan.

The Surat Basin also has the ability to become a key player in the renewable energy and the environmental services sectors. These sectors are likely to become increasingly important over the next 20 years and beyond.

Existing transport infrastructure

The Surat Basin is linked to South East Queensland by major road, rail and airport infrastructure, which is used for a high level of freight activity and passenger travel to and from the region. However, there are issues surrounding the quality and capacity of these networks to meet current and future growth expectations.

Information and communication technology

Improved telecommunication infrastructure will be required to meet the needs of the expanding industries and growing communities in the Surat Basin. Providing improved opportunities for industries and businesses to increase their exposure and connect with global markets will enable the Surat Basin to improve economic development and achieve greater regional stability.

Education assets

The University of Southern Queensland and Southern Queensland Institute of TAFE are major education assets, located in Toowoomba and servicing the broader region. The region also has other specialised training assets for the agriculture sector such as the Australian Agricultural College campus located in Dalby. There are over 275 primary schools and 75 secondary schools located throughout the Surat Basin, and numerous boarding schools found in Toowoomba.

Health and community infrastructure

Major hospitals, aged care, diagnostics and allied health infrastructure and services are well represented in the area. These facilities are important to support sustainable population growth and economic development.

Defence assets

The Department of Defence is a significant employment generator and provides considerable economic stimulus to the Surat Basin. It has a number of bases, training areas and ranges located in Surat Basin, such as the Army Aviation Centre and its associated properties at Oakey, Borneo Barracks at Cabarlah, Milne Bay Barracks in Toowoomba, and the Dalby and Roma training depots.

Existing industry clusters and supply chains

Existing industry clusters located in the Surat Basin include food and beverage manufacturing, resource industries and supporting services. These industries have established significant supply chain capability and capacity.

Water assets

The Surat Basin has significant groundwater assets, including the Great Artesian Basin, Condamine Alluvium and Toowoomba Basalts, which supply irrigation for stock and domestic and industry use in the region. The Surat Basin spans the catchments of Brisbane, Condamine–Balonne, Border, Moonie, Dawson and Burnett rivers. Being at the headwaters of the Murray–Darling Basin and the Fitzroy–Dawson Basin highlights the integral role the area plays, not only in sustaining the Surat Basin's water resource activities, but also in contributing to two of the major river systems of Australia.

Climate and environment

The diversity of climate and the unique combination of environmental assets (water, land, soil, geographical location, and biodiversity of flora and fauna) is a strategic asset that has been traditionally leveraged across a wide variety of production activities, particularly the agriculture sector.

Challenges

A key challenge confronting the region and all levels of government is being able to capture economic opportunities generated by resource sector development at a local level. This is exacerbated where gaps exist between supply chain demands from mining and gas industry operations and the capacity for local and regional economies to accommodate the demands. This initially results in the import of goods and services. However, this should lead to early recognition of gaps and identification of opportunities for local business, industry or investors to capitalise on resource sector growth through local replacement and value adding.



The development of the Surat Basin's energy sector has already affected the employment environment across the region. Currently, the area is experiencing some of the lowest unemployment rates in Australia, with skill shortages existing in many sectors. Growth has significantly affected the type of skills required in the area. The size and skills composition of the workforce will also vary markedly at different points of resource sector development.

As seen in regional mining areas across Queensland, other industries are likely to suffer shortages in skilled labour as workers are drawn in by the higher salaries on offer in the mining industry. In particular, local service businesses, rural industries and local government are likely to be the most affected by skills shortages.

Way forward

The Queensland Government, in partnership with local governments and existing businesses, is committed to assisting communities and businesses to maximise future economic opportunities. Attracting private sector investment from outside the Surat Basin is also integral to generating new jobs, servicing an expanding population, and recruiting new skills.

The Surat Basin communities are very adaptive to change and extremely resourceful. The area will remain competitive through the increased uptake and support for business innovation and research and development. Developing or attracting businesses to meet gaps in the supply chains of the energy sector will also present new opportunities for communities in the area.

Regional and industry bodies, local governments and other support mechanisms will need to provide strong leadership by creating a positive environment that strives for excellence, promotes opportunities and embraces success.

A flexible workforce will be required to respond to anticipated peaks in demand. Developing a skilled workforce requires knowledge of existing and emerging needs, the capacity of business to attract and retain workers, and the need to ensure equitable access to training facilities and services.

Principles

The following principles will assist the Surat Basin communities in achieving the strategic direction for strong economy:

1. Employment and business investment diversification is encouraged within each community.

2. The local and regional economies take advantage of opportunities from mining and energy industries.
3. Suitable infrastructure and facilities to service existing towns and centres is provided to encourage economic and employment growth in the region.
4. Appropriate industrial land is identified in advance and provided to accommodate resource sector support industries.
5. Encroachment of development does not prevent or reduce the productive or operational capacities of existing development.
6. All levels of government, industry and community are engaged to determine demand for skills, infrastructure and services to better inform planning.
7. The Surat Basin is promoted as an attractive and prosperous place to conduct business.
8. The provision and uptake of local training and education, including opportunities for Indigenous participation, is expanded to increase the capacity of existing business and capture opportunities in emerging industries.
9. A cooperative and coordinated approach to tourism is fostered, including the support of local Indigenous tourism and business enterprises.
10. A culture of innovation is fostered within business, government and the community that encourages best practice, research and development.
11. An environment that encourages job creation and flexible working arrangements is created and supported.



6 Rural futures

Objective

Rural communities are strong and viable, with sustainable economies contributing to the health, wealth, liveability and character of the Surat Basin.

Overview

The rural sector in the Surat Basin underpins the existing economy, including many of the towns in the region. It is a major contributor to Queensland's economy through the existing agriculture, forestry and food processing sectors.

The area is favourable for agriculture and food production due to climatic and soil conditions. There is also good access to domestic and international markets, access to large numbers of livestock bred within the region as well as other parts of the state, local saleyards, including the state's largest selling centre at Roma, and good access to road transport and value-adding facilities.

Strengths and opportunities

The Surat Basin's major agricultural field crop products include wheat, barley, sorghum, sunflower, soy beans and cotton. Livestock production is primarily beef, but also includes wool, sheep, pork, milk and poultry products. Intensive livestock industries are concentrated in the region and based around local feed grain supply and proximity to markets.

Demand for agriculture and food products from the area is set to grow in coming decades as regional, national and international markets expand. The sector has remained resilient through prolonged droughts. It has demonstrated its ability to withstand short-term volatility and generate increasing wealth over the longer term by responding to market opportunities.

Agricultural activity will continue in the Surat Basin beyond the life of resource extraction. Therefore, planning and infrastructure development to support industry growth, adaptation to climate change and access to skilled labour are all components of supporting rural futures.

Challenges

An increase in gas and mining and associated exploration has resulted in greater conflict between the agriculture and mining sectors. Both sectors are integral to the future of the Surat Basin, and neither should be compromised to advance the other.

It will be important to maintain good quality agricultural land in order to preserve the state's present and future agricultural production capacity and the established economic, environmental and social fabric of the region.

It will also be important to establish fair land access arrangements for the resource industry to agricultural properties. This will require monitoring and management to minimise impacts on rural operations. This will not only improve relationships between operators in both sectors, but will help to protect the livelihood of agriculturalists and various rural communities.

Reliable and cost-effective transport infrastructure to support rural industries will be required, as rural producers compete with the resource sector for access to limited rail transport.

In addition, the projected influence of climate change on the Surat Basin is a major challenge for the agricultural sector. Recent predictions by the Queensland Office of Climate Change indicate that the area will experience higher temperatures, increased evaporation and decreased rainfall in the coming decades. As a result, agricultural production and associated land management strategies will need to adapt to, and where appropriate, mitigate the likely impacts of climate change.

The regular availability of a good quality water supply underpins many rural communities and industries in the Surat Basin. However, a history of prolonged drought periods and uncertainty regarding the regional impacts of climate change on water flow and supplies highlight the need for the development of adaptive water management regimes. New technologies, such as the re-use of treated coal seam gas (CSG) water for rural production, commercial activities and power generation (including renewable energy), will attract significant interest in the coming years.

As with all Queensland communities, the rural future of the Surat Basin is at risk from pests and weeds. These threats cost Queensland an estimated \$600 million annually and have significant impacts on primary industries, natural ecosystems and human and animal health. This threat will require monitoring and ongoing investment toward promoting awareness and new and innovative ways to mitigate the impact.

Way forward

Maintaining the future of rural communities depends on strong, resilient industries and liveable communities that are adaptive and cohesive. This includes retaining rural and community identities, as well as embracing cultural, technological and demographic changes and opportunities.



Due to the cyclical nature of both rural and resource industries, it is important that the region maximises opportunities as they arise in both sectors and accommodates a range of activities to develop a more robust and diversified regional economy.

Ongoing access to water for production and to maintain natural systems depends on the protection of both natural systems (wetlands, watercourses and aquifers) and maintenance of water supply infrastructure. Planning and decision-making for activities that impact on water assets must consider ecological sustainability as a key priority. This includes comprehensive planning, monitoring and management of extractive industries within close proximity to the region's water sources.

Prosperous rural futures require healthy and prosperous communities, towns and centres. For example, enhancing rural towns by supporting economic growth will enhance the viability of local and surrounding communities through increased residential populations comprising a range of family types and age groups.

In turn, this will support the long-term viability of services and further enhance economic and employment diversity. This includes promoting the local processing and packaging of agricultural goods, and other value-adding industries which will enhance regional and local economies.

Principles

The following principles will assist the Surat Basin communities in achieving the strategic direction for rural futures:

1. Rural industries are strengthened through expanding their market access, increasing their adaptability and productivity, and capturing value-adding opportunities.
2. The significant and increasing role of rural areas and rural landholders is respected in the planning process.
3. Rural areas are conserved and managed to enhance their ongoing contribution to the local, regional and broader economy.
4. The long-term prosperity and sustainability of primary production is achieved while maintaining environmental values.
5. Agricultural research, extension services and the agribusiness sector are supported.
6. Rural communities continue to have access to surface water and groundwater resources.
7. Surface water and groundwater resources are used by rural communities in a sustainable manner which maintains aquatic ecosystems and protects environmental values.
8. New technologies are facilitated to reduce impacts on the rural environment. This includes the re-use of treated CSG water for rural production, commercial activities and power generation, including renewable energy.
9. Exotic and introduced pests, weeds and diseases are prevented, managed and monitored through the combined efforts of government, industry and communities.
10. Rural communities are healthy and productive, and benefit from regional growth through their participation in the planning and development of the Surat Basin.
11. Rural communities are encouraged to identify, celebrate and capitalise on their attributes and characteristics.
12. The interdependence of urban and rural communities is enhanced.



7 Resource sector growth

Objective

The resource sector will contribute to the sustainability of the Surat Basin's economy, liveability and social capacity, and address its impacts on local communities and the natural environment.

Overview

The resource and energy sectors have the potential to substantially strengthen the Surat Basin economy over the next 50 years or more. These sectors cover the CSG industry, coal mining, power generation (including renewable energy) and potentially, the coal-based chemical industry.

The resource sector will attract significant public and private investment toward key infrastructure and resource development. This will generate short, medium and long-term employment opportunities and accelerate population growth.

Strengths and opportunities

The Surat Basin has the majority of the Queensland's known coal seam gas (CSG) reserves and significant thermal coal reserves.

The CSG industry's proposed expansion to supply gas to LNG plants located in Gladstone is currently the main new economic driver in the Surat Basin. The development of CSG to supply the domestic gas market and construction of new power stations has already contributed significantly to the economies of local communities across the Surat Basin. It is anticipated that, as investment decisions are made in the near future for current LNG plant proposals, further clarity will be provided in relation to the scope and impacts of CSG development on the Surat Basin.

The thermal coal mining industry is likely to grow significantly in the region, with current proposals for major expansion to support increasing export markets. The growth is expected to be led by a mix of medium and large coal mining proposals located in the centre of the region — to the north and east of Miles, and west of Wandoan.

Major coal mines are proposed, with increased export volumes through the Port of Gladstone. Critical decisions on development approval and investment are expected over the next few years. Should these resource developments happen on any significant scale, they will have a considerable impact on infrastructure development, supply chain activity and on the community and environment.

In the interim, a number of scenarios have been prepared to generate population and employment forecasts based on coal and CSG production forecasts.

In addition, continuing demand for CSG in the Surat Basin for the power generation industry supports the state government's *Energy Strategy* for gas-fired power stations to account for 18 per cent of power generation capacity by 2020.

As demand increases on the nation's power grid, further opportunities will arise for the expansion of the power generation industry in the Surat Basin. Opportunities for the area are enhanced by the availability of coal and CSG, direct connection to the national power grid, proximity to the growing populations of South East Queensland and other regional centres along the Queensland coast, and access to abundant natural energy sources.

The Surat Basin's climate and power grid network provide opportunities for the development of natural energy developments, including solar and wind energy, bio-fuel production (from forestry, animal and other waste products) and geothermal energy.

Growth in the resource and energy sectors will provide many flow-on opportunities for the Surat Basin communities. There will be demand for a greater level of service, particularly within towns close to resource activity. Local businesses may need to expand and diversify to cater for increased retail and commercial trade, and social and recreational services for the resource workforce. There will also be opportunities for local industries to capitalise on the industrial needs of the resource sector, such as increased employment and skills development in support services and value-adding industries.

Challenges

The expanding resource sector will result in conflicts with other objectives for the Surat Basin, including other economic sectors, differing community aspirations and the natural environment. State and local government, the resource and agricultural sectors, and other key stakeholders will be required to identify and address these conflicts and work with the community to minimise impacts and ensure the Surat Basin's long-term prosperity.

The growth of the resource sector will attract an increased number of people working and living in the area, adding pressure on the availability of affordable housing, community facilities and local infrastructure.

Demand for skilled and unskilled labour is expected to continue to increase as new resource developments occur. Many of the major developments have stated their intention to use a fly-in/fly-out (FIFO) and drive-in/drive-out (DIDO) workforce, especially during the construction phase of development.



Temporary worker accommodation camps to support resource projects, if not appropriately planned, located or managed, can have adverse impacts on local government services such as community services, water, sewerage, waste management and roads. The location and impacts of these camps in proximity to established areas must be thoroughly assessed to ensure there is adequate service capacity, local commercial impacts are addressed and impacts on community cohesion can be appropriately managed.

The providers of temporary accommodation have an important role in the planning and delivery of this form of accommodation and contributing to the planning of local communities. These providers must work closely with local government to ensure approval processes are informed and the outcome is a positive contribution to the local area.

Way forward

While the extent and composition of the resource sector in the Surat Basin is yet to be determined, it is clear that it will be a major factor influencing the future of the region. Consequently, comprehensive planning and management of the resource sector will be required to ensure individual communities and the region as a whole benefit in the long-term. Monitoring and evaluation of the impacts of resource industry growth will be essential to inform the planning and delivery of additional infrastructure, services, commerce and residential activity.

As the coal and CSG sectors grow, investment in innovative technology will increase. New and efficient methods of resource extraction, processing and transportation are likely to be pursued to reduce costs and to capture opportunities not currently possible with existing industrial technology. Over the coming years, there may be potential for technologies such as above-ground coal gasification to be explored, as well as the safe and best use of CSG water for uses including power plant cooling, horticulture or agricultural irrigation.

The Surat Basin's access to abundant natural energy sources, such as solar, wind and geothermal, will continue to attract investment toward renewable energy initiatives such as those identified within the *Queensland Renewable Energy Plan*. The *Queensland Renewable Energy Plan* has identified the Surat Basin as a potential Renewable Energy Priority Zone due to its proximity to the transmission network, and the state's high demand for electricity.

Principles

The following principles will assist the Surat Basin communities in achieving the strategic direction for resource sector growth:

1. Cooperative and effective working partnerships across the resource sector, associated industries and the community are established and maintained.
2. The continued investment in coal, gas and renewable power generation and transmission capacity is encouraged.
3. All existing and proposed coal and CSG development is regulated and monitored to ensure the Surat Basin's communities and environment are not harmed.
4. Innovative and renewable energy technologies are fostered, planned and developed.
5. The use of treated CSG water is facilitated by the resource sector.
6. Local government and the providers of temporary accommodation maintain effective communication.
7. The impacts of a FIFO and DIDO workforce on the communities are managed appropriately.
8. Infrastructure necessary to enable resource sector growth is appropriately located and, where possible, provides the maximum benefit to the community.
9. Local skilled workforces are developed to take advantage of the opportunities in the mining and energy industries, including associated supply chain opportunities.



8 Infrastructure and servicing

Objective

Plan, coordinate and deliver safe and efficient regional and local infrastructure networks and services to support the changing social, economic and environmental health needs of the Surat Basin.

Overview

The Surat Basin's infrastructure network underpins all social and economic development in the region. The provision of well-planned, efficient and cost-effective infrastructure and services is essential to meeting the communities' expectations and future demands generated by growth.

An efficient network will improve the quality of life for residents by relieving pressure on existing services and enhancing local business performance, and will enable the expansion of capabilities of major industries.

The high level of demand and dispersed settlement pattern of the Surat Basin provides many challenges to the delivery of an efficient and well-maintained infrastructure network.

Strengths and opportunities

The Surat Basin is serviced by an extensive infrastructure network that is experiencing significant pressure from the increased demands associated with the initial phases of growth generated by the resource sector. The growth projections for the Surat Basin will continue to compound the issues associated with road and rail system performance. In response, a significant government commitment toward infrastructure rehabilitation and upgrading to support industry, to ensure the safe and efficient movement of people and commodities, and to maintain a liveable and attractive community is in place and will need to plan for longer term demands.

There are numerous highways and other major roads servicing the Surat Basin — the Warrego and Gore highways and the Surat Development Road running primarily east to west; and the Carnarvon, Moonie, Leichhardt and New England highways running north to south. There are also two main rail lines running east to west and north to south, primarily used for the transport of the Surat Basin's agricultural produce and coal.

The main airports in the Surat Basin are located in Toowoomba and Roma for light aircraft, while Oakey military airport can handle medium-sized aircraft, although it is generally used for military purposes only. There are also 11 other identified airstrips located in the Surat Basin region capable of catering to light aircraft.

Both the Roma and Toowoomba airports have been identified for upgrades, primarily to improve safety, and to assist the potential growth of the area in the short term. It is understood that mining companies may wish to develop local airstrips to service fly-in/fly-out (FIFO) mining operations. The Toowoomba Regional Council has intentions of developing a larger regional airport in the medium term to cater for inter-regional and interstate jet services. Locations currently under consideration include the Oakey military airport and land in the Wyreema area.

The state government is currently working with the National Broadband Network Company to ensure Queensland benefits from the earliest delivery of improved broadband.

Water resources are generally quite limited across the region, but severe supply constraints have been rectified in Toowoomba by the construction of a major pipeline from the Wivenhoe Dam. CSG water will bring new opportunities, which must be thoroughly investigated to ensure the environment and communities are not put at risk.

The abundance of energy resources and the distribution network within the Surat Basin has resulted in the emergence of the area as a major energy generation precinct, and it will continue to attract significant investment toward renewable energy development.

Planning is currently being undertaken for infrastructure and services within the Surat Basin, including:

- Surat Basin Regional Transport System Study
- Toowoomba Subregional Transport Study
- Roma Heavy Vehicle Bypass Study
- Solar Flagship Program for renewable energy
- Melbourne–Brisbane Inland Rail Alignment Study
- various planning for upgrading of the Western Rail Line and feeder link from Miles to Wandoan
- various link and layout planning for roads in the region, including the Warrego Highway
- a review of the Toowoomba Bypass Business Case
- South West Transport and Freight Study.

Challenges

The increasing demands of mining and resource activity on transport infrastructure within the Surat Basin are already evident. The demands on the rail network generated by the shipment of coal is nearing capacity, with further growth in the rail network heavily influenced by the geographical limitations of the Great Dividing Range and moving freight through the city of Brisbane. As a result, much of the region's agricultural production has been displaced to road transport, and projected demands on the rail network exceed existing capacity.



As the Port of Brisbane also has limitations with respect to handling significantly more potential coal cargo, development of coal resources in the region will be constrained. Effectively, the massive coal resources of the region cannot be developed until the Surat Basin rail line between Wandoan and Banana is constructed in order to facilitate exports via the Port of Gladstone. This will facilitate mining projects around Wandoan and Taroom, but potential coal resources between Miles and Toowoomba will only be developed if the western rail line is significantly upgraded and the feeder link between Miles and Wandoan is reconstructed.

Bulk minerals such as coal will primarily be transported by rail to the port of Gladstone and, to a lesser extent, Brisbane. However, the road system is responsible for carrying almost all of the industry inputs of materials, plant, equipment, pipes, petroleum and explosives, as well as the service vehicles, workers and their families, and the movement of the general population. The road network will continue to experience significant pressure from growth in the resource sector. This occurs not just as a result of strong traffic growth, but also a high proportion of heavy and over-dimensional vehicles and fatigue-related safety issues.

Transport using the Warrego Highway through the Toowoomba urban area and the range section will be significantly constrained, unless a number of improvements are made. This will bring forward pressure for the planned Toowoomba Bypass project.

While the resources and energy-generation industry sectors will have a dramatic impact on development in the region and infrastructure demand, infrastructure planning and service provision must adequately cater for all industry sectors and communities. Flow-on effects will generate demand that will generally exceed the initial direct project impacts. Growth in other sectors, coupled with strong population growth, will require significant infrastructure investment.

The coal seam gas (CSG) and power-generation industries are also expected to have a substantial impact on local landfills with construction and demolition waste, as well as commercial and industrial waste. These landfills are designed and operated as unstaffed facilities, and are not capable of managing the very large volumes of waste likely to be generated.

Capacity constraints and other performance issues on regional rail, airport and road networks, and connectivity to key ports such as Gladstone and Brisbane, are recognised as issues that will negatively impact on the growth potential of the Surat Basin and the Queensland economy. In regard to the road network, there are substantial issues with road capacity through Toowoomba and between Toowoomba and Dalby, road condition (specifically pavement deterioration), road width and associated aspects of safety. Substantial investment from various sources will be required to address these issues.

Anticipated growth in the Surat Basin will also increase demand on existing local urban infrastructure networks and services. Therefore, it is important to identify existing and planned urban infrastructure capacity, plan for its optimum use and development, and minimise the need for further costly expansion. This is linked to determining a sustainable settlement pattern and subsequent investment in communities to help reduce the carbon footprint and contribute to a healthy lifestyle. Nevertheless, while good planning can mitigate demand and encourage efficiency, it is clear that urban growth will create significant demand for new infrastructure investment.

The anticipated increase in demand on water supply by new urban and industrial development, mining and rural industries will also require coordinated planning and management across the region. This includes taking into account the diverse and varying demands on water catchments and the limitations on water resources in the Murray–Darling Basin and the Great Artesian Basin.

Way forward

Population growth and the rapid development of the resource industry is placing increased pressure on existing infrastructure, requiring a comprehensive response involving all users. This will require a shared responsibility between government and industry in the planning, funding and delivery of infrastructure.

In addition, new infrastructure generated by demand from the resource sector will need to be planned to also benefit other sectors of the community in the short, medium and long-term.





Consequently, all levels of government will work with affected industries and communities to identify key actions required to enhance the regional transport network. The state government has committed to the expansion of Roma and Toowoomba airports to improve safety and accessibility to the west of the area.

Further action will be required to increase the capacity of other parts of the transport network. This includes the Surat Basin rail line, the western rail line and Wandoan feeder line, as well as improvements to the Warrego Highway, including relieving of the bottleneck of passing through Toowoomba and negotiating the Great Dividing Range between Toowoomba and Withcott. Lastly, in the medium-term, a regional airport is required that is capable of inter-regional and interstate services capable of accommodating larger aircraft.

Infrastructure, such as roads, rail and telecommunications, are catalysts for economic growth, and are pivotal to accommodating additional demands generated by the resource sector. Social infrastructure such as health services, fire and ambulance facilities, access to community services, skills, knowledge and the strength of local relationships and networks, is essential to the viability of economic growth in the longer term. Expansion of the range of infrastructure is necessary for the Surat Basin's communities to accommodate and benefit from anticipated growth.

Improving the assessment of cumulative impacts of proposed developments, particularly the resource sector, will inform government of projected infrastructure and service demands. This will inform more effective infrastructure planning and prioritisation, and investigation of effective funding arrangements.

Public transport and local pedestrian routes will also play a bigger role in planning in communities such as Toowoomba, especially as oil vulnerability becomes more apparent and local transport networks are increasingly affected by traffic congestion.

Principles

The following principles will assist the Surat Basin communities in achieving the strategic direction for infrastructure and servicing:

1. Planning and delivery of infrastructure services at regional, subregional and local levels is coordinated and integrated.
2. Growth is supported by efficient and effective infrastructure.
3. The delivery of infrastructure is coordinated and prioritised through collaborative planning and innovative joint funding approaches.

4. Current and future infrastructure sites and corridors are identified, protected and managed.
5. All communities are provided with acceptable standards of modern, reliable, accessible and affordable information and communication services.
6. Waste and associated environmental impacts are minimised through holistic management to avoid, re-use and recycle waste and to promote energy recovery.
7. Social infrastructure is appropriately planned and located and is responsive to demographic change.
8. Demand for infrastructure is managed and mitigated through integrated land-use planning and investment in non-infrastructure alternatives.
9. Preferred airport locations are identified to accommodate the air transport needs of resource projects.
10. Local transport planning caters for well-connected and highly accessible pedestrian and public transport networks to deal with future impacts of oil vulnerability and traffic congestion.
11. An integrated multimodal transport system is economically efficient and meets the social, environmental and safety objectives of the industry and communities.
12. The incremental development of transport infrastructure and services, together with appropriate links between land use and spatial development planning measures, network infrastructure management and operations, are catered for in a transport strategy which serves all industry, business and the community.
13. Economic growth is enhanced through the prioritisation of infrastructure which supports employment activities in all sectors of the economy.
14. Major enabling infrastructure projects which are critical to future regional economic development are advocated, planned and facilitated.
15. The impact, including the cumulative impacts of major development projects on the transport system is managed through planning and coordination management, and contributions to infrastructure maintenance, upgrading and road use management.



PART F – Implementation

Implementation

The Surat Basin Regional Planning Framework (SBRPF) establishes the basis for better planning, management and development in the Surat Basin. It further articulates the state's interest, and must therefore be considered in all future policy responses within the Surat Basin.

The value of the SBRPF will be largely determined by how successfully its principles are supported and implemented within future planning products and decision-making affecting the Surat Basin, particularly:

- regional planning activities, including the future review of the *Maranoa–Balonne Regional Plan* and the *South East Queensland Regional Plan 2009–2031*, and the development of a regional plan for the Darling Downs
- local government planning schemes and community plans
- assessment of environmental impact statements for major projects within the Surat Basin
- development and review of natural resource management plans, regional economic strategies, integrated regional transport plans and other regional instruments.

The principles of the SBRPF will also guide and inform other delivery mechanisms affecting growth in the Surat Basin. Figure 7 shows the relationship between the SBRPF and some of the key delivery mechanisms.

The implementation of the SBRPF will occur with the cooperation and involvement of all levels of government, non-government organisations, the private sector and the community.

Roles and responsibilities

The Department of Local Government and Planning will work collaboratively with other Queensland Government agencies, local governments and regional stakeholders to facilitate and coordinate the implementation of the SBRPF.

Oversight for the implementation of the SBRPF will be coordinated by the Department of Local Government and Planning. Implementation progress will be reported to the planning Minister and relevant regional planning forums, including the Maranoa–Balonne Regional Planning Committee.

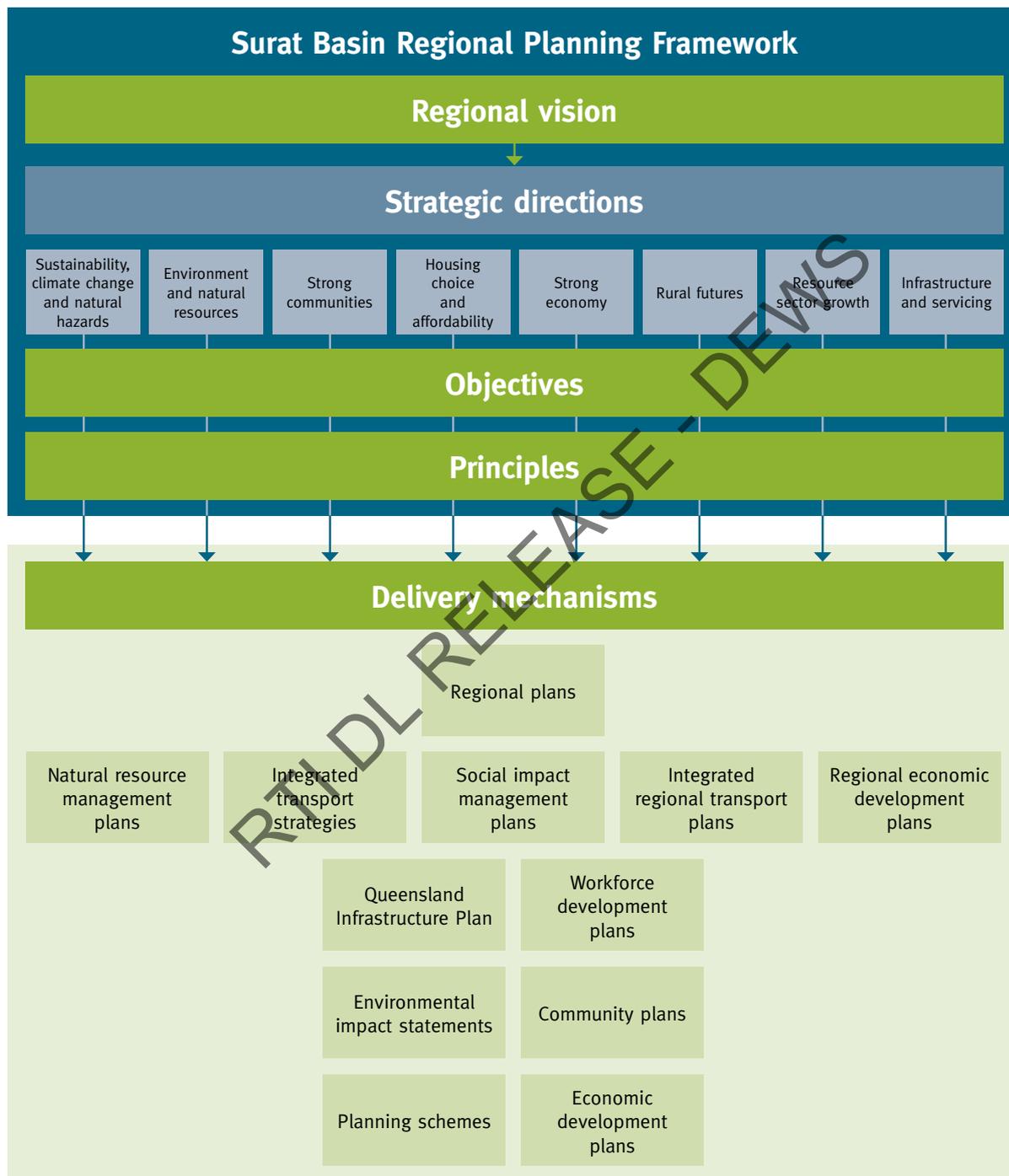
The rights and responsibilities of individual departments, authorities and bodies are to be respected and retained, including the responsibility for development, resourcing and funding of programs within their respective portfolio interests. However, greater coordination of these programs with other policy interests under the SBRPF will be supported.

Review process

The state government is committed to the rollout of regional plans across Queensland and regularly undertakes reviews. It is not intended that the SBRPF will be reviewed, as it will be replaced through the revision of the *Maranoa–Balonne Regional Plan* and the *South East Queensland Regional Plan 2009–2031*, and the development of a Darling Downs regional plan.

Timing for the review of the *Maranoa–Balonne Regional Plan* and the development of a regional plan for the Darling Downs is yet to be confirmed.

Figure 7 – Delivery of the Surat Basin Regional Planning Framework





PART G – References

Preparation

The SBRPF has been developed with advice from relevant state departments, local governments and key stakeholders prior to and following the draft consultation period (5 November 2010 and 17 December 2010).

The key stakeholders included:

- Department of Communities
- Department of Education and Training
- Department of Employment, Economic Development and Innovation
- Department of Environment and Resource Management
- Department of Local Government and Planning
- Department of the Premier and Cabinet
- Department of Transport and Main Roads
- Queensland Health
- Queensland Police
- Queensland Treasury
- local governments, including:
 - Toowoomba Regional Council
 - Western Downs Regional Council
 - Maranoa Regional Council
 - Balonne Shire Council
 - Banana Shire Council
 - Goondiwindi Regional Council
 - Southern Downs Regional Council
- industry and community representatives.

Acknowledgments

The SBRPF is the result of contributions from a wide range of government and stakeholder groups and the community. Although it is not possible to list all of these contributors individually, their assistance is acknowledged and appreciated.

The contributions of the following groups are acknowledged:

- regional interest groups
- state agencies
- local government
- industry and community representatives.

Bibliography

Australian Government, Murray–Darling Basin Authority website, 2010, viewed 15 October 2010, www.mbda.gov.au

Australian Woolshed, *Bunya Mountains*, 2010, viewed 10 August 2010, www.auswoolshed.com.au/bunya-mountains.html

Darbas et al., *Surat Basin Scoping Study – Enhancing regional and community capacity for mining and energy driven regional economic development*, CSIRO, 2008.

Dalby Biorefinery, viewed 31 August 2010, www.dalbybiorefinery.com.au/default.htm

Dalby Biorefinery, *Grain contracts*, viewed 31 August 2010, www.dalbybiorefinery.com.au/contracts.htm

Evans and Peck, *Major projects in the Surat Basin – Assessment model report*, draft report for the Department of Employment, Economic Development and Innovation, Brisbane, 2010.

Golder Associates Pty Ltd, *Coal Seam Gas Field Component for Environmental Impact Statement, QGC Groundwater Study Surat Basin, Queensland*, Report No. 087633050 016 R Rev2, June 2009.



- Lawrence Consulting, *Western Downs Regional LGA Economic & Demographic Profile 2009*, Toowoomba, December 2009.
- McLennan Magasanik Associates, *Queensland LNG Industry Viability and Economic Impact Study*, final report to the Department of Infrastructure and Planning, May 2009 – cited in Australia Pacific LNG Project EIS March 2010.
- Murilla Shire Council, *Miles Intermodal Freight Hub Options Study*, Miles, March 2001.
- PSA Consulting, *Surat Basin Industrial Lands Survey and Future Sites Investigation Study*, draft report prepared for the Queensland Government, Department of Infrastructure and Planning, Industrial Land Analysis and Planning Branch, Brisbane, 2010.
- Queensland Government and Local Government Association of Queensland, *Final report of the joint Queensland Government and Local Government Association of Queensland Inland Flood Study*, Department of Environment and Resource Management, Brisbane, October 2010.
- Queensland Government, *Central West Queensland Regional Plan*, Department of Infrastructure and Planning, Brisbane, 2009.
- Queensland Government, *ClimateQ: toward a greener Queensland*, Department of Environment and Resource Management, Brisbane, 2009.
- Queensland Government, *Maranoa–Balonne Regional Plan*, Department of Infrastructure and Planning, Brisbane, 2009.
- Queensland Government, *Prospects for Queensland Primary Industries*, Department of Employment, Economic Development and Innovation, 2011.
- Queensland Government, *South East Queensland Regional Plan 2009–2031*, Department of Infrastructure and Planning, Brisbane, 2009
- Queensland Government, (2009), *South West Regional Plan*, Department of Infrastructure and Planning, Brisbane.
- Queensland Government, Department of Environment and Resource Management website, 2010, www.derm.qld.gov.au
- Queensland Government, Draft Wide Bay Burnett Regional Plan, Department of Infrastructure and Planning, Brisbane, 2010.
- Queensland Government, *Protecting Queensland's Strategic Cropping Land: A policy framework*, Department of Environment and Resource Management, Brisbane, 2010.
- Queensland Government, *Queensland Regional Profiles*, Southern Downs Region, Office of Economic and Statistical Research, Queensland Treasury, Brisbane, 2010.
- Queensland Government, *Regional Updates – Central Queensland Exploration and New Developments*, Department of Employment, Economic Development and Innovation (Mines and Energy), Brisbane, 2010.
- Queensland Government, *Surat Basin Future Directions Statement*, Department of Employment, Economic Development and Innovation, Brisbane, 2010.
- Queensland Government, *Surat Basin Workforce Development Plan*, Department of Education and Training, 2011.
- Queensland Government, *Queensland Renewable Energy Plan*, Department of Employment, Economic Development and Innovation, 2009.
- Resource and Land Management Services, *Callide Infrastructure Corridor Study*, investigation report prepared for the Department of Infrastructure and Planning, Brisbane, 2009.
- The University of Queensland, *Cumulative impacts: A good practice guideline for the Australian coal industry*, 2010.
- The University of Queensland, *Procuring from SMEs in local communities: A good practice guide for the Australian mining, oil and gas sectors*, 2010.
- Western Downs Regional Council, *Western Downs Business Capability Study*, Dalby, December 2009.
- Western Downs Regional Council, *Saleyards of the Western Downs*, Dalby, November 2009.

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Bungil Shire Council Planning Scheme



2006

Integrated Planning Act

PLANNING SCHEME FOR BUNGIL SHIRE COUNCIL AREA

Adoption

The local government of Bungil adopted this planning scheme on 24 November 2006.

Commencement

The Planning Scheme took effect on 1 December 2006.

State Planning Policies

The Minister for Local Government and Planning has identified the following State Planning Policies as having been appropriately reflected in the planning scheme:

1. State Planning Policy 1/92 – Development and Conservation of Agricultural Land (on lots greater than 1000ha in the rural zone); and
2. State Planning Policy 1/02 - Development in the Vicinity of Certain Airports and Aviation Facilities.
3. State Planning Policy 1/03 – Mitigating the Adverse Impacts of Flood, Bushfire and Landslide, except for Flood assessment provisions

Approval to adopt this planning scheme is conditional upon the continued operation and effect of:

1. The Integrated Development Assessment System triggers for Department of Main Roads matters; and
2. Flood assessment provisions State Planning Policy 1/03 – Mitigating the Adverse Impacts of Flood, Bushfire and Landslide;
3. Buffer Area and Separation distance provisions (on lots less than 1000ha in the rural zone), Planning Guidelines: *Separating Agricultural and Residential land Uses* - State Planning Policy 1/92 Development and Conservation of Agricultural Land.

This is to certify that this is a true and correct copy to the Bungil Shire Planning Scheme adopted on 24 November 2006 and commenced on 1 December 2006.

Signed



Leon Love
Chief Executive Officer

Dated 1 December 2006

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PART 1 - INTRODUCTION

Division 1 - Relationship to Integrated Planning Act

1.1 Purpose of Planning Scheme

In accordance with the *Integrated Planning Act 1997 (IPA)*, the local government for the Shire of Bungil has prepared this planning scheme as a framework for managing development in a way that advances the purpose of the IPA¹ by: –

- (a) Identifying assessable and self-assessable development; and
- (b) Identifying outcomes sought to be achieved in the local government area as the context for assessing development.

1.2 Planning Scheme Functions as Part of IDAS

The planning scheme functions as part of IDAS² and must be read together with the IPA.

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¹ Under IPA, section 1.2.1, the purpose of the IPA is to seek to achieve ecological sustainability by (a) coordinating and integrating planning at the local, regional and State levels; (b) managing the process by which development occurs; and (c) managing the effects of development on the environment (including managing the use of premises).

² IDAS – Integrated development assessment system – is the system detailed in Chapter 3 of the IPA for integrating State and Local government assessment processes for development.

Division 2 - Strategic Framework

1.3 Preliminary

- (1) This division reflects the desired environmental outcomes and summarises the approach taken by the planning scheme to achieve the desired environmental outcomes.
- (2) This division does not have a role in development assessment under the planning scheme.

1.4 Strategic Framework

The summary of the effects of parts 4, 5 and 6 of the planning scheme is as follows:

- (1) Residential uses, businesses, industries and community recreation uses are:
 - (a) primarily located in or adjoining the established areas of Injune and Muckadilla;
 - (b) only located away from established areas if they cannot be practically located in the towns due to their nature, scale, effects or necessary relationship to other activities, natural features or infrastructure;
 - (c) lots are reconfigured as necessary to suitably accommodate appropriate uses and associated works.
- (2) The town of Injune is the main business and community centre in the local government area.
- (3) Residential uses have:
 - (a) houses on separate allotments;
 - (b) lot sizes within the established areas with a minimum of 800m² with a preferred range of 800m² to 1,200m²;
 - (c) a minimum lot size of 4,000m² and a maximum lot size of two (2) hectares within the rural residential precinct is required to establish a dwelling.
- (4) Rural industries, timber production and extractive uses are located within the rural area to take advantage of the economic potential of the area's natural resources.
- (5) All new uses and works are to be located, designed and managed in ways that maximise the efficiency of the town infrastructure, and compatibility with other uses, works, cultural heritage features and natural or cultural resources.
- (6) Building and other works meet basic standards for health, safety and amenity.
- (7) Uses not requiring good quality agricultural land to support economic activity are located away from such land unless a site has particular features that make it desirable for the use and those features are not available on other land.
- (8) Tourist facilities are located where necessary to take advantage of the economic potential of the local government area.

1.5 Zoning Maps

Maps in the Appendices represent the broad settlement pattern intended for the local government area.

The Open Space and Recreation and Rural Residential precincts are not an urban use for the purpose of Vegetation Management exemptions under Schedule 8 of the Integrated Planning Act.

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Division 3 - Planning Scheme Structural Elements

1.6 Local government area divided into two zones

- (1) The planning scheme divides the local government area into two (2) zones that cover the entire local government area:
 - (a) The Town Zone identified on Planning Scheme Maps (Planning Scheme Maps P2 Town Plan Zone - Injune and P3 Town Plan Zone - Muckadilla).
 - (b) The Rural Zone identified on Planning Scheme Maps (Planning Scheme Maps P1 Whole of Shire – Rural Zone, P2 Town Plan Zone - Injune and P3 Town Plan Zone - Muckadilla).
- (2) The Town Zone incorporates preferred use areas shown as precincts on Planning Scheme Maps P2 Town Plan Zone – Injune and P3 Town Plan Zone - Muckadilla.
 - (a) Town Zone
 - Residential Precinct;
 - Commercial Precinct;
 - Industrial Precinct;
 - Open Space and Recreation Precinct; and
 - Rural Residential Precinct
 - (b) Rural Zone incorporates preferred use areas shown on Planning Scheme Map P1 Whole of Shire – Rural Zone.

1.7 Roads, watercourses and reclaimed land

- (1) If a road, watercourse or reclaimed land in the local government area is now shown as being covered by a zone on the zoning maps, the following applies:
 - (a) If the road, watercourse or reclaimed land is adjoined on both sides by land in the same zone – the road, watercourse or reclaimed land has the same zoning as the adjoining land;
 - (b) If the road, watercourse or reclaimed land is adjoined on one side by land in a zone and adjoined on the other side by land in another zone – the road, watercourse or reclaimed land has the same zoning as the adjoining land and the centreline of the road, watercourse or reclaimed land is the boundary between the two zones;
 - (c) If the road, watercourse or reclaimed land is adjoined on one side only by land in a zone – the entire road, watercourse or reclaimed land has the same zoning as the adjoining zoned land;
- (2) If a road in the shire is now shown as being covered by a preferred use area on the zoning maps, subsection (1) applies as if the preferred use area were a zone;
- (3) To remove any doubt, it is declared that subsections (1) and (2) also apply to a closed road if the road is closed after the commencement of the planning scheme.

1.8 Determining if development is assessable or self assessable under planning scheme

- (1) Assessment tables for the zones identify development that is assessable, self assessable or exempt under the planning scheme as follows:
 - (a) Part 4 – Division 2 – Tables 1 and 2;
 - (b) Part 4 – Division 3 – Tables 3 and 4.
- (2) The assessment tables also identify assessment development under the planning scheme that is code assessable or impact assessable.

1.9 Types and names of codes

- (1) There are codes for:
 - (a) Each zone; and
 - (b) Stated Development.
- (2) The codes are the following:
 - (i) Zone:
 - (a) Town Zone Code; and
 - (b) Rural Zone Code.
 - (ii) Stated Development:
 - (a) Advertising Devices Code;
 - (b) Filling and Excavation Code;
 - (c) Reconfiguring a Lot Code.

1.10 Codes applicable to ongoing use

A code that is applicable to material change of use is also applicable to the ongoing use that results from that change³.

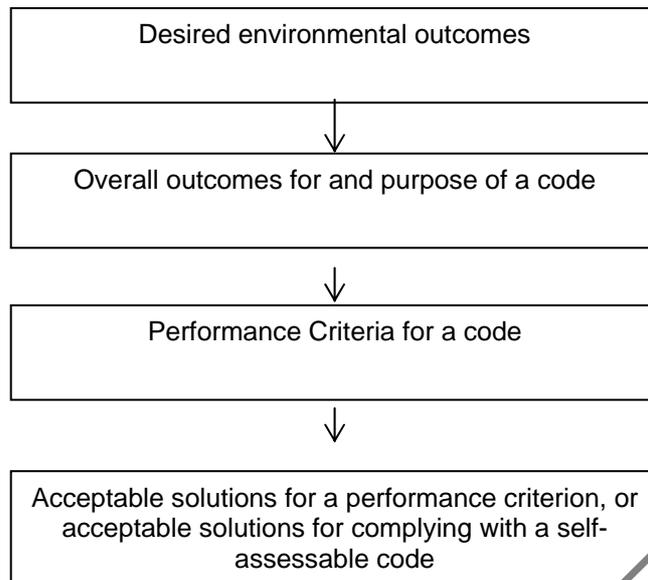
1.11 Planning scheme seeks to achieve outcomes

The planning scheme seeks to achieve outcomes that are identified according to the following levels:

- (a) Desired environmental outcomes;
- (b) Overall outcomes for and purpose of a code;
- (c) Performance Criteria for a code;

³ IPA section 2.1.23(3) (Local planning instruments have force of law) relates with respect to regulating use of premises, and also IPA, section 4.3.4, compliance with identified code for use of premises) with respect to an offence under the act.

- (d) Acceptable solutions for a performance criterion, or acceptable solutions for complying with a self-assessable code.



1.12 Assessment Provisions

(1) Exempt Development

- (a) The following is exempt development within the local government area of Bungil:
- (i) development that is made exempt pursuant to Schedule 9 of IPA⁴;
 - (ii) land designated for community infrastructure – exempt development pursuant to IPA;
 - (iii) Works conducted by local government that are ancillary to, or associated with, road works (whether on road or not) including but not limited to:
 - a. Road construction and maintenance;
 - b. Batching, excavation, crushing, screening and taking road building material from land;
 - c. Parking construction equipment and site offices;
 - d. Haul roads and side tracks.
 - (iv) development involving the supply of road transport infrastructure in existing roads;⁵

⁴ Schedule 9 of IPA lists exempt development that may not be made assessable or self assessable development under the planning scheme. For further clarification, the following is exempt for the purpose of the planning scheme and is in accordance with Table 4 of Schedule 9 of the Act:

- Operational work (including maintenance and repair work) carried out by or on behalf of a public sector entity authorised under State Law (eg Council or the Department of Main Roads) to carry out work; and
- Operational work that is ancillary works and encroachments that are carried out in accordance with requirements specified by gazette notice by the Chief Executive under the Transport Infrastructure Act 1994 (including the excavating and borrowing of material necessary for road making, maintenance and repair) or done as required by a contract entered into with the Chief Executive under the Transport Infrastructure Act Section 47.

⁵ For the purpose of section 1.4(2) existing means – lawfully existing at Commencement or lawfully established after Commencement.

- (v) development involving railway activities in existing rail corridors;
- (vi) development involving water cycle management infrastructure, including infrastructure for water supply, sewerage, collecting water, treating water, stream managing, disposing of waters and flood mitigation, but excluding water supply and sewerage treatment plants;
- (vii) development involving the reticulation and distribution of electricity in existing electricity easements or existing electricity corridors or roads;
- (viii) development involving the reticulation and distribution of gas in existing gas easements, or existing gas corridors or roads;
- (ix) development involving the reticulation and distribution of telecommunications, where collated with existing mobile telecommunications facilities;
- (x) development for the purpose of a park;
- (xi) building work being demolition; and
- (xii) operational work other than excavation and filling.

(2) Self Assessable Development

- (a) The following development is self assessable development within the local government area of Bungil:
 - (i) development identified as self assessable in Schedule 8 of IPA⁶;
 - (ii) development identified as self assessable in the table of assessment for each Zone.
- (b) Where development is identified as self assessable it:
 - (i) does not require a development application; and
 - (ii) must comply with applicable code provisions whilst the development, including the use component thereof continues.
- (c) For self assessable development⁷:
 - (i) the relevant assessment criteria is the applicable code;
 - (ii) compliance with the code is achieved only where all applicable acceptable solutions have been met; and
 - (iii) non compliance with any applicable solution will result in the need for a code assessment development application.

⁶ Schedule 8, part 2 of IPA lists development that is self assessable development that cannot be made assessable development by a planning scheme.

⁷ Compliance with the applicable acceptable solution for self assessable development does not remove the need to obtain other development approvals such as a development permit authorising Building Work assessed against the Building Act 1975 and other statutory, licensing or Local law requirements.

(3) Code Assessable Development

- (a) Development identified as code assessable in the table of assessment for each Zone is subject to code assessment.
- (b) Where development is identified as code assessment it:
 - (i) requires a development application to be lodged with the Assessment Manager; and
 - (ii) requires a development permit before development can start; and
 - (iii) is assessed against applicable codes.
- (c) For code assessment:
 - (i) the code is the purpose, performance criteria and the acceptable solutions; and
 - (ii) acceptable solutions are probable solutions and are one way of achieving compliance with the performance criteria.

(4) Impact Assessable

- (a) Development identified as impact assessable in the table of assessment for each Zone is subject to impact assessment.
- (b) Where development is identified as impact assessable it:
 - (i) requires a development application to be lodged with the Assessment Manager; and
 - (ii) requires public notification of the development application; and
 - (iii) requires a development permit before development can start; and
 - (iv) is assessed against the whole Scheme, including relevant codes⁸.

1.13 Acceptable solutions for code assessable development

An acceptable solution for a performance criterion provides a guide for achieving that outcome in whole or in part, and does not limit the assessment manager's discretion under the IPA⁹ to impose conditions on a development approval.

⁸ For impact assessment development, applicable codes are provided to assist the preparation of an application and in no way affect the regard given to the planning scheme as a whole in accordance with section 3.5.5 of the IPA.

⁹ IPA chapter 3 (Integrated Development Assessment System (IDAS), part 5, (Decision Stage), division 6 (Conditions).

PART 2 - INTERPRETATION

2.1 Definitions - the Dictionary

The Dictionary in schedule 1 defines particular words used in this planning scheme (including defined uses, use classes and administrative terms).

2.2 Terms defined in the IPA

Terms defined in the IPA have the same meaning as in the IPA.

2.3 Explanatory Notes assist Interpretation of the planning scheme

The Bungil Shire Planning Scheme Explanatory Notes¹⁰ are declared to be extrinsic material under the Statutory Instrument Act 1992, section 15 that assist interpretation of provisions of this planning scheme.¹¹

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¹⁰ The Explanatory Notes are in two parts. Part 1 provides supporting information for the local government area and how the planning scheme responds and Part 2 provides an explanation of the planning scheme provisions by way of a user's guide.

¹¹ The Statutory Instruments Act 1992 allows a statutory instrument (such as a planning scheme) to identify material (in this case the Bungil Shire Planning Scheme Explanatory Notes) that may be used to assist in the interpretation of provisions in the instrument.

PART 3 - DESIRED ENVIRONMENTAL OUTCOMES

3.1 Desired Environmental Outcomes

- (1) The desired environmental outcomes are based on ecological sustainability established by the IPA and are the basis for the measures of the planning scheme.
- (2) Each desired environmental outcome is sought to be achieved to the extent practicable having regard to each of the desired environmental outcomes.
- (3) The desired environmental outcomes for Bungil Shire are as follows:

(a) Environment

- (i) The areas of high scenic amenity, remnant vegetation, wetlands, fauna habitats and wildlife corridors and regionally significant open space in the Shire are protected.
- (ii) Places, areas or sites identified as being susceptible to land degradation, including contamination, erosion, salinity and landslip, are protected and further degradation is minimised.
- (iii) Ecological sustainability is achieved by maintaining and improving biodiversity, water and air quality.
- (iv) Places of historical and indigenous cultural heritage and social significance are protected, maintained and enhanced.

(b) Economic

- (i) Good Quality Agricultural Land is protected as a major economic resource for the region.
- (ii) Key Resource Areas, extractive resources, petroleum, gas and mineral resources are protected as a major economic resource for the region.
- (iii) Industry, business and employment opportunities are improved and appropriately located to service the community and region, and encourage economic activity within the local area.
- (iv) Rural business opportunities are improved to protect and value-add to the existing rural based economy.

(c) Community Well-Being & Lifestyle

- (i) A convenient access to roads and services is achieved through well located land uses and the efficient use and timely provision of infrastructure such as water, sewerage and roads, walkways and cycling facilities.
- (ii) Rural residential and urban residential development occurs in distinct localities that provide a sense of community, amenity, services, and a safe, affordable living environment, whilst maintaining rural amenity.

- (iii) Infrastructure networks such as road, rail, water cycle and electricity are protected from encroachment by sensitive land uses which may adversely affect or limit the normal operation of that infrastructure.
- (iv) The role and identity of Injune as the main business and community centre of the shire is consolidated.
- (v) The adverse effects from natural and other hazards, including bushfires are minimised.
- (vi) The range of housing types, services and facilities meets the needs of the community and other uses.

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PART 4 - ZONES

Division 1 - Assessment Tables for Each Zone

4.1 Assessment categories for each Zone

The assessment categories¹² are identified for development in each zone in column 2 of Tables 1, 2, 3 and 4 as follows:

- (a) Table 1 and 3 – making a “Material Change of Use”¹³ for a defined use or another use in a defined use class, listed in column 1;
- (b) Table 2 and 4 – “Other Development”¹⁴ listed in column 1 including:
 - (i) Carrying out building work not associated with a material change of use;
 - (ii) Placing an advertising device on premises not associated with a material change of use;
 - (iii) Reconfiguring a lot;
 - (iv) Carrying out operational work for reconfiguring a lot; and
 - (v) Carrying out operational work for excavating and/or filling not associated with reconfiguring a lot or a material change of use.

4.2 Relevant assessment criteria for self-assessable development and assessable development in the Zones

- (1) The relevant assessment criteria in the zones are referred to in column 3 of Tables 1, 2, 3 and 4.
- (2) For self assessable development and development requiring code assessment, the relevant assessment criteria are applicable codes.

¹² Information about assessment categories is provided in the Bungil Shire Planning Scheme Users Guide.

¹³ Works associated with an application for a material change of use may be assessed together with the material change of use. Also see Bungil Shire Scheme Explanatory Notes giving examples that explain the type of development involved in different proposals.

¹⁴ See Bungil Shire Scheme Explanatory Notes (Part 2) giving examples that explain the type of development involved in different proposals.

Division 2 - Assessment Tables for the Town Zone

**TOWN ZONE CODE
ASSESSMENT CATEGORIES AND RELEVANT ASSESSMENT CRITERIA
ONLY FOR MAKING A MATERIAL CHANGE OF USE**

TABLE 1

Column 1 Defined use or use class ¹⁵	Column 2 Assessment Category	Column 3 Relevant assessment criteria – applicable code if development is self assessable or requires code assessment.
EXEMPT USES FOR THE TOWN ZONE		
Exempt uses are listed in Part 1 Division 3, 1.12(1) of this Scheme.		
SELF-ASSESSABLE AND ASSESSABLE DEVELOPMENT FOR THE TOWN ZONE		
Commercial Premises	Code Assessable in the Commercial Precinct	Town Zone Code
Community Use	Code Assessable in all Precincts	Town Zone Code
Dual Occupancy	Code Assessable in the Residential Precinct	Town Zone Code
Dwelling House	Self Assessable in the Residential and Rural Residential Precincts	Town Zone Code
Home Based Business	Self Assessable in Residential Precinct Code Assessable in the Commercial Precinct	Town Zone Code
Host Home Accommodation (Bed & Breakfast)	Self Assessable in Residential Precinct	Town Zone Code
Industry (Low/Medium)	Code Assessable in Industrial Precinct	Town Zone Code
Telecommunication Facility	Code Assessable in all Precincts	Town Zone Code
ALL OTHER USES		
All except use for a road	Impact Assessable	

¹⁵ See Schedule 1 - Dictionary

**TOWN ZONE CODE
ASSESSMENT CATEGORIES AND APPLICABLE CODES - ONLY FOR
OTHER DEVELOPMENT**

TABLE 2

Column 1 Type of Development	Column 2 Assessment Category	Column 3 Applicable Code
Carrying out building work not associated with a material change of use ¹⁶	Self Assessable ¹⁷ – if undertaking building works associated with existing buildings on the site	Town Zone Code
Placing an advertising sign or hoarding on premises not associated with a material change of use	Self Assessable if an advertising sign Code Assessable for all other signs	Advertising Devices Code If Code Assessable – Advertising Devices Code
Reconfiguring a lot ¹⁸	Code Assessable	Reconfiguring a Lot Code
Carrying out operational work for reconfiguring a lot	Code Assessable if the reconfiguring is assessable development	(a) Filling and Excavation Code (b) Reconfiguring a Lot Code
Carrying out operational work for excavating and/or filling not associated with reconfiguring a lot or a material change of use	Exempt where the extent of cut does not exceed 100m ³ or extent of fill does not exceed 100m ³ ; or Code Assessable where the extent of cut exceeds 100m ³ or extent of fill exceeds 100m ³	If Code Assessable – Filling and Excavation Code
Other	Exempt	

¹⁶ See Bungil Shire Planning Scheme User’s Guide for examples that explain the type of development involved in different proposals.

¹⁷ This does not include building work that under IPA (schedule 9) is exempt and cannot be made self-assessable or assessable by a planning scheme.

¹⁸ Under IPA, (schedule 9) reconfiguring a lot is exempt and cannot be made self-assessable or assessable by a planning scheme if the proposal is for amalgamating two (2) or more lots, for a building format plan that does not subdivide the land, in relation to the Acquisition of Land Act 1967, or on Strategic Port Land.

Overall Outcomes for Town Zone Code

- (1) The overall outcomes are the purpose of the Town Zone Code.
- (2) The code seeks to ensure that development within the Town Zone:
 - (a) is focused in Injune for a range of business, industrial, tourist, community and recreational activity in the local government area;
 - (b) protects the rural and heritage character and amenity of the Town Zone;
 - (c) provides safe and convenient access for pedestrians and cyclists;
 - (d) has no adverse impact on Good Quality Agricultural Land;
 - (e) for residential uses to occur in areas where it is most cost effective to supply physical infrastructure, such as water, sewerage, roads and electricity;
 - (f) is located, designed and operated in a manner that protects and enhances commercial scale, intensity, form and character;
 - (g) maintains the environment, including the soil, air and water compatible with healthy natural systems and public health and safety;
 - (h) does not prejudice or impact adversely on other uses including those within other zones;
 - (i) has appropriately designed access to the road network and traffic generated by the development does not impact adversely on the local road network;
 - (j) protects areas and sites of conservation importance, including cultural and high landscape values;
 - (k) is undertaken in an orderly and logical sequence to achieve efficient provision of infrastructure, including social infrastructure;
 - (l) is located and designed in ways that minimise the need for flood and landscape mitigation, and to protect people and premises from such natural events;
 - (m) has water supply, stormwater disposal, sustainable effluent and waste disposal and power, to appropriate standards, adequate for the use; and
 - (n) does not impact adversely on infrastructure.

Town Zone Code

The Town Zone Code includes the towns of Injune and Muckadilla. The extent of the town areas is identified on Planning Scheme Maps P2 Town Plan Zone – Injune and P3 Town Plan Zone - Muckadilla.

TOWN ZONE CODE Performance Criteria	Acceptable Solution
A. For all of the Town Zone	
1. Infrastructure	
PC 1 Electricity Premises are provided with a supply of electricity adequate for the activity.	AS 1.1 Premises have a supply of reticulated electricity.
PC 2 Water supply Premises are provided with an adequate volume and supply of water for the activity.	AS 2.1 Premises are connected to Council's reticulated water system; or AS 2.2 An approved water allocation as provided by the relevant agency and have a rain water tank connected to the premises with a minimum capacity of 45,000 litres.
PC3 Effluent disposal To ensure that public health and environmental values are preserved, all premises provide for the treatment and disposal of effluent and other waste water.	AS 3.1 The premises are connected to the Council's reticulated sewerage system; or AS 3.2 Premises have on - site effluent disposal systems designed in accordance with Schedule 6: "Standards for Sewerage Supply".
PC 4 Stormwater/Inter-allotment Drainage Stormwater is collected and discharged so as to: (a) protect the stability of buildings or the use of adjacent land; (b) prevent the waterlogging of nearby land; and (c) protect and maintain environmental values.	AS 4.1 Stormwater/inter-allotment drainage is collected and discharged in accordance with Schedule 7: "Standards for Stormwater Drainage".
PC 5 Vehicle Access Vehicle access is provided to a standard appropriate for the use.	AS 5.1 Access roads are to be sealed and are to connect into the existing road network. Access is to be designed and constructed in accordance with Schedule 2: "Standards for Roads, Car parking, Access and Manoeuvring Areas".
PC 6 Parking and manoeuvring Vehicle parking and service vehicle provision is adequate for the use whilst ensuring both safe and functional operation for motorists and pedestrians.	AS 6.1 All uses provide vehicle parking in accordance with Schedule 2: "Standards for Roads, Car Parking, Access and Manoeuvring Areas". AS 6.2 All service vehicle manoeuvring is in accordance with Schedule 2: "Standards for Roads, Car Parking, Access and Manoeuvring Areas".
PC 7 Roads All weather road access is provided between the premises and the existing road network.	AS 7.1 Roads are designed and constructed in accordance with Schedule 2: "Standards for Roads, Car Parking, Access and Manoeuvring Areas".
PC 8.1 Highways All Highways are maintained and enhanced as a link between major centres.	AS 8.1 No direct access to State Controlled Roads is permitted except at designated intersections as identified on Map R1 – State Controlled Roads .

Release

TOWN ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 8.2 Development adjacent to State Controlled Roads is located to ensure safe and efficient use of the highway and maintain the integrity of the highway as a commuter link.</p> <p>PC 8.3 Noise sensitive developments (residential, educational and community) must ensure that road traffic noise levels are appropriately managed to achieve acceptable levels of amenity.</p>	<p>AS 8.2 No development is established within a 100 metre buffer either side of State Controlled Roads as identified in Map R1 – State Controlled Roads.</p> <p>AS 8.3 No solution specified.</p>
<p>PC 9 Gas and Oil Pipelines Buildings are located at an appropriate distance from pipelines to ensure community safety and operation of the use is not compromised.</p>	<p>AS 9.1 No habitable structure is constructed within the buffer established 100 metres either side of the gas and oil pipeline corridors as identified in Planning Scheme Map P1 Whole of Shire – Rural Zone.</p>
<p>PC 10 Refuse Tips and Effluent Treatment Plants Buildings are located at an appropriate distance from refuse tips or effluent treatment plants to ensure community safety and operation of the use is not compromised.</p>	<p>AS 10.1 No premise is constructed within 500 metres from the boundary of a refuse tip or effluent treatment plant.</p>
<p>PC 11.1 Rail Corridors Development is at an appropriate distance from the rail corridor so as not to prejudice safety, speed or intended role of the existing and proposed rail corridors.</p> <p>PC 11.2 Development adjoining the rail corridor is protected from the impact of noise¹⁹</p>	<p>AS 11.1 The minimum buffer for residential, business, commercial and public facility uses are 100 metres from an existing or proposed rail corridors as identified on Maps R1 State Controlled Roads and P3 Town Plan Zone - Muckadilla.</p> <p>AS 11.2 No solution specified.</p>
<p>PC 12 Development in the Vicinity of Aerodrome Development</p> <ul style="list-style-type: none"> (a) does not adversely affect the operation of the aerodrome; (b) is designed and located to achieve a suitable standard of amenity for the proposed activity; and (c) does not restrict the future operational demands of the aerodrome. 	<p>AS 12.1 Buildings and structures within 100 metres of the boundary of an aerodrome are less than 7.5 metres in height at any point above natural ground level.</p>

¹⁹ One way an applicant can demonstrate compliance with PC 11.2 is to prepare a study that identifies how the development is in accordance with Railway and EPA Regulations 1998.

TOWN ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 13 Development in the Vicinity of Aerodrome The development of premises does not cause an obstruction or other potential hazard to aircraft movement associated with the aerodrome by way of:</p> <ul style="list-style-type: none"> (a) the physical intrusion of buildings or other structures into the Obstacle Limitation Surface; (b) attracting birds or bats to the area which could cause or contribute to bird strike hazard; (c) providing very bright lighting or lighting similar to aerodrome lighting which can distract or confuse pilots; (d) interfering with navigation or communication facilities; (e) emissions that may affect pilot visibility or aircraft operations; or (f) transient intrusions into the aerodromes operational space.²⁰ 	<p>AS 13.1 No solution specified.</p>
<p>2. Environment PC 14 Watercourses Development ensures the maintenance of riparian areas and water quality including protection from off-site transfer of sediment.</p>	<p>AS 14.1 A minimum 10 metre wide buffer area is provided extending from the high bank of any watercourse. Buffer areas include a cover of vegetation, including grasses.</p>
<p>PC 15 Flooding Premises are designed and located so as:</p> <ul style="list-style-type: none"> (a) not to be adversely impacted upon by flooding; (b) to protect life and property; and (c) not to have an undesirable impact of the extent and magnitude of flooding.²¹ 	<p>AS 15.1 No solution specified.</p>
<p>PC 16 Air Emissions Air emissions from premises do not cause environmental harm or nuisance to adjoining properties or sensitive land uses.²²</p>	<p>AS 16.1 No solution specified.</p>
<p>PC 17 Noise Emissions Noise emissions from premises do not cause environmental harm or nuisance to adjoining properties or sensitive land uses.²³</p>	<p>AS 17.1 No solution specified.</p>

²⁰ One way an applicant can demonstrate compliance is to prepare a report in accordance with Planning Guidelines: Planning for Aerodromes and other Aeronautical Facilities and Australian Standards AS2021, 1993. Maps R6 and R7, Aerodrome Obstacle Limitation Surface should also be referred to.

²¹ One way an applicant can demonstrate compliance with PC15 is to adopt the maximum recorded flood as an indication of flood level.

²² One way an applicant can demonstrate compliance with PC16 is to prepare a study that identifies how the development is in accordance with Environmental Protection (Air) Policy 1997.

²³ One way an applicant can demonstrate compliance with PC17 is to prepare a study that identifies how the development is in accordance with Environmental Protection (Noise) Policy 1997.

TOWN ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 18 Water Quality The standard of effluent and/or stormwater runoff from premises ensures the quality of surface water is suitable for:</p> <ul style="list-style-type: none"> (a) the biological integrity of aquatic ecosystems; (b) recreational use; (c) supply as drinking water after minimal treatment; (d) agricultural use; or (e) industrial use.²⁴ 	<p>AS 18.1 No solution specified.</p>
<p>PC 19 Excavation and Filling Excavation and filling of land ensures:</p> <ul style="list-style-type: none"> (a) that both the amenity and safety of users of the site and adjacent land holdings; and (b) soil erosion is kept to a minimum with remedial works. 	<p>AS 19.1 Batters have a minimum slope of 25%, are terraced at every rise of 1.5 metres and each terrace has a minimum depth of 750mm; and</p> <p>AS 19.2 Excavation and filling within 1.5 metres of any site boundary is battered or retained by a wall that does not exceed 1 metre in height; and</p> <p>AS 19.3 Excavation and filling is undertaken in accordance with Schedule 8: "Standards for Construction Activity".</p>
<p>PC 20 Construction Activities Both erosion control and silt collection measures are undertaken so as to ensure protection of environmental values during construction.</p>	<p>AS 20.1 During construction, soil erosion and sediment is managed in accordance with Schedule 8: "Standards for Construction Activity".</p>
<p>PC 21 Cultural Heritage The significance of known places of indigenous and/or cultural heritage value is retained.</p>	<p>AS 21.1 A minimum separation distance of 20 metres is provided to known indigenous and/or cultural heritage sites²⁵.</p>
<p>PC 22 Buildings of Significance The architectural merit and precinct value of cultural heritage items listed in Schedule 10 is maintained.</p>	<p>AS 22.1 No solution specified.</p>
<p>PC 23 Character Buildings Development adjacent to buildings identified as heritage or character buildings in Schedule 10 incorporates design features, materials and details that blend with the existing character.</p>	<p>AS 23.1 No acceptable solution.</p>
<p>B. For the Residential Precinct Residential Development and Dual Occupancies</p>	
<p>PC 24 Height The height of residential buildings is compatible with and complementary to the character of the urban environment.</p>	<p>AS 24.1 The height of a dwelling house or dual occupancy does not exceed 8.5 metres from natural ground level.</p>

²⁴ One way an applicant can demonstrate compliance with PC18 is to prepare a study that identifies how the development is in accordance with Environmental Protection (Water) Policy 1997

²⁵ One way an applicant may demonstrate that indigenous and/or cultural heritage sites exist or do not exist on site is to provide an appropriate certificate of search from heritage registers and the aboriginal cultural heritage unit (DNRW).

TOWN ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 25 Site Coverage and Setbacks (a) Residential building design and siting maintains the character of the locality in terms of building bulk. (b) Residential buildings are located to ensure the local amenity and streetscape are protected and enhanced.</p>	<p>AS 25.1 Residential buildings do not exceed the site coverage thresholds as follows: • Dwelling House - 50%; • Dual occupancy - 40%.</p> <p>AS 25.2 For Dual Occupancies: Setback is not less than six (6) metres from any road frontage; or</p> <p>AS 25.3 Setback is within 20% of the existing setbacks of adjoining properties; and</p> <p>AS 25.4 Boundary clearances of not less than 2.5 metres and rear boundary clearance of not less than six (6) metres from property boundaries.</p>
<p>PC 26 Density The density of residential activities does not impact adversely on the residential amenity of the town.</p>	<p>AS 26.1 For Dwelling House: No more than one (1) dwelling house per lot.</p> <p>AS 26.2 For Dual Occupancy: Minimum lot size 1,000m².</p>
<p>PC 27 Residential Outbuildings Residential amenity is to be maintained.</p>	<p>AS 27.1 Residential outbuildings are to be located a minimum of six (6) metres from the boundary fronting the public road and a minimum of 2.5 metres from any other boundary; and</p> <p>AS 27.2 The size of residential outbuildings is to be restricted to structures five (5) metres in height and 80 square metres in floor area.</p> <p>AS 27.3 Site coverage of outbuildings not to exceed 15% of remaining site area.</p>
<p>PC 28 Residential amenity for Dual Occupancies: The location and design of dual occupancies provides for adequate privacy, sunlight, ventilation and open space.</p>	<p>AS 28.1 No solution specified.</p>
<p>PC 29 Landscaping for Dual Occupancies: Landscaping on the site should be: (a) visually pleasing and create an attractive environment; (b) located to take account of the direction of the breezes and sun; and (c) located to give privacy and buffering from any potential incompatible uses.</p>	<p>AS 29.1 No solution specified.</p>

TOWN ZONE CODE Performance Criteria	Acceptable Solution
For Non Residential Activities Located in the Residential Precinct	
PC 30 Location Non-residential activities are located so as: (a) not to impact adversely on the residential amenity of the residential precinct; (b) not to prejudice the consolidation of like non residential activities in other more appropriate areas; and (c) not to prejudice the landscape values of the town.	AS 30.1 No solution specified.
PC 31 Scale Non-residential activities are of an appropriate scale to protect the residential amenity of the residential precinct, and do not prejudice the operation and viability of other uses or activities in the residential precinct or other precincts.	AS 31.1 No solution specified.
PC 32 Operation Non-residential activities are operated so as to ensure that the activities do not impact adversely on residential amenity.	AS 32.1 Non-residential activities are undertaken between the hours of 7.00am and 6.00pm.
C. For the Commercial Precinct	
PC 33 Character The commercial area is enhanced and promoted with uses of a business nature or those which complement the commercial and retail character of the town centre.	AS 33.1 No solution specified.
PC 34 Streetscape Buildings and structures within the commercial area compliment the architectural character of the streetscape.	AS 34.1 No solution specified.
PC 35 Amenity The operation of commercial activities is not unduly affected by the proximity of residential dwellings.	AS 35.1 Commercial development adjoining land used or proposed to be used for residential purposes is to be fenced to a height of two (2) metres along common boundaries.
PC 36 Scale Development is at a scale which protects the amenity of the area.	AS 36.1 Total use area is no more than 50% of the overall site. AS 36.2 The site has an area of at least 600m ² .
PC 37 Setbacks and Boundary Clearance Buildings and structures are located to ensure the local character and streetscape are protected and enhanced.	AS 37.1 No solution specified.

TOWN ZONE CODE Performance Criteria	Acceptable Solution
PC 38 Operating Hours Uses are operated to ensure the amenity of the Commercial Precinct and surrounding areas are protected.	AS 38.1 Uses are operated only between the hours of 7.00am and 9.00pm.
PC 39 Delivery of Goods The loading and unloading of goods occurs at appropriate times to protect the amenity of the Commercial Precinct.	AS 39.1 Loading and unloading occurs only between the hours of: (a) 7.00am and 7.00pm Monday to Friday; and (b) 7.00am and 12.00 (noon) on Saturdays. AS 39.2 No loading and unloading occurs on Sundays and Public Holidays.
PC 40 Lighting Lighting is designed in a manner to ensure ongoing amenity and safety in the commercial area whilst ensuring surrounding areas are protected from undue glare or lighting overspill.	AS 40.1 All lighting does not exceed 8.0 lux at 1.5 metres from beyond the site boundary.
PC 41 Landscaping Landscaping is designed and established in a manner which achieves high quality frontage and contributes positively to the streetscape character.	AS 41.1 No solution specified.
For Non-Commercial Activities Located in the Commercial Precinct.	
PC 42 Location Non commercial activities are located so as: (a) not to impact adversely on the function and character of the commercial precinct; and (b) not to prejudice the consolidation of like non commercial activities in other more appropriate areas.	AS 42.1 No solution specified.
PC 43 Scale Non-commercial activities are of an appropriate scale to protect the amenity of the commercial precinct, and do not prejudice the operation and viability of other uses or activities in the commercial precinct or other precincts.	AS 43.1 No solution specified.
PC 44 Operation Non-commercial activities are operated so as to ensure that the activities do not impact adversely on commercial amenity.	AS 44.1 Non-commercial activities are undertaken between the hours of 7.00am and 6.00pm.

TOWN ZONE CODE Performance Criteria	Acceptable Solution
D. For the Industrial Precinct	
<p>PC 45 Scale The scale and location of the industrial use on the site should contribute to the amenity of the precinct.</p>	<p>AS 45.1 Total use area is no more than 70% of the site; and</p> <p>AS 45.2 Buildings and structures are less than 8.5 metres in height and not more than two (2) storeys at any point above the natural ground level; and</p> <p>AS 45.3 Front boundary clearance for any building or structure is six (6) metres or more from any road frontage; and</p> <p>AS 45.4 Side boundary clearance for any building or structure is four (4) metres or more; and</p> <p>AS 45.5 Rear boundary clearances are four (4) metres or more from property boundary; and</p> <p>AS 45.6 Where adjoining residential land, the setback along the common boundary is seven (7) metres or more.</p>
<p>PC 46 Vehicular traffic Vehicular movements connected with uses in the industrial area ensure that the amenity of the adjacent residential area is not adversely affected.</p>	<p>AS 46.1 No solution specified.</p>
<p>PC 47 Landscaping Landscaping on the site: (a) contributes positively to the built form and the street; and (b) reduces the impact of the size and scale of the buildings.</p>	<p>AS 47.1 Landscaping is provided with a minimum width of two (2) metres along site boundaries; and</p> <p>AS 47.2 Vegetation is to have a mature height of three (3) metres within five (5) years of planting.</p> <p>AS 47.3 Ground covers should fully cover the vegetation strip within one (1) year of planting.</p>
<p>PC 48 Amenity The amenity of residential uses adjacent to the industrial area is protected through appropriate boundary screening.</p>	<p>AS 48.1 Where the site adjoins residential uses a solid screen wall of two (2) metre height is to be erected on the boundary in addition to landscaping requirements.</p>
<p>PC 49 Building and Structure Design The building is designed and orientated to be identifiable from the street.</p>	<p>AS 49.1 The office space of each building is sited and orientated towards the principle road frontage.</p>
<p>PC 50 Building Appearance Buildings are designed and finished to a high quality appearance.</p>	<p>AS 50.1 No solution specified.</p>

Release

TOWN ZONE CODE Performance Criteria	Acceptable Solution
For Non Industrial Activities Located in the Industrial Precinct	
<p>PC 51 Location Non Industrial activities are located and operated so as:</p> <ul style="list-style-type: none"> (a) not to impact adversely on the function and character of the Industrial precinct; and (b) not to prejudice the consolidation of like non Industrial activities in other more appropriate areas. 	<p>AS 51.1 No solution specified.</p>
E. For the Open Space and Recreation Precinct	
<p>PC 52 Scale Development is of an appropriate scale for the locality so as to ensure that local amenity is protected.</p>	<p>AS 52.1 No solution specified.</p>
<p>PC 53 Setbacks and Boundary Clearances Buildings and structures are positioned on the site in a manner that ensures that the local amenity is protected.</p>	<p>AS 53.1 Buildings and structures have side boundary clearances of not less than 2.5 metres and rear boundary clearances of not less than six (6) metres from property boundaries.</p>
<p>PC 54 Operating Hours Development is operated in such a manner that ensures that the local amenity is protected.</p>	<p>AS 54.1 Uses are operated between the hours of 7.00am and 8.00pm where adjoining residential land.</p>
<p>PC 55 Delivery of Goods The loading and unloading of goods at appropriate times in a manner that ensures that the local amenity is protected.</p>	<p>AS 55.1 Where adjoining residential land, loading and unloading of goods occurs only between the hours of 7.00am and 7.00pm Monday to Friday and 8.00am to 5.00pm weekends.</p>
<p>PC 56 Landscaping Landscaping is provided on-site to:</p> <ul style="list-style-type: none"> • contribute to a pleasant and functional built form; and • contribute to the visual qualities of the locality. 	<p>AS 56.1 Landscaping around sporting grounds is to occur to a width of 2 metres using species which provide an effective screen of at least 1.5 metres within two (2) years of planting.</p> <p>AS 56.2 Landscaping for other community recreation uses is to occur along setbacks to a width of two (2) metres along the front boundary and one (1) metre along side and rear boundary setbacks; and</p> <p>AS 56.3 Shade trees are to be planted on edges of car parks and are to reach a mature height of at least three (3) metres within four (4) years of planting.</p>
<p>PC 57 Lighting The design of lighting does not impact adversely on the local amenity through poorly directed lighting, lighting overspill or lighting glare.</p>	<p>AS 57.1 Direct lighting or lighting does not exceed 8.0 lux at 1.5 metres beyond the boundary site.</p>

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TOWN ZONE CODE Performance Criteria	Acceptable Solution
For Non-Open Space and Recreation Activities Located in the Open Space and Recreation Precinct	
<p>PC 58 Location Non-Community and Recreation activities are located so as:</p> <p>(a) not to impact adversely on the function and character of the Open Space and Recreation precinct; and</p> <p>(b) not to prejudice the consolidation of like non-Open Space and Recreation activities in other more appropriate areas.</p>	<p>AS 58.1 No solution specified.</p>
F. For the Rural Residential Precinct	
<p>PC 59 Residential Outbuildings Rural residential amenity is to be maintained.</p>	<p>AS 59.1 Residential outbuildings are to be located a minimum of 15 metres from the boundary fronting the public road and a minimum of five (5) metres from any other boundary; and</p> <p>AS 59.2 The size of residential outbuildings is to be restricted to structures 8.5 metres in height and 80 square metres in floor area.</p>
<p>PC 60 Buffers Adequate buffers are provided to protect rural residential uses from agricultural, transport and industrial activities whilst also ensuring the integrity and viability of such uses.²⁶</p>	<p>AS 60.1 No solution specified.</p>
G. Specific Land Uses	
Home Based Business	
<p>PC 61 Size The development comprises only a minor portion of an existing residential premise.</p>	<p>AS 61.1 The business is operated by persons residing in the dwelling; and</p> <p>AS 61.2 The development is limited to a total floor area of 80 square metres for the part of the residential premises used in the operation of the business (excluding site parking).</p>
<p>PC 62 Traffic The use does not generate greater traffic loads than reasonably associated with residential premises.</p>	<p>AS 62.1 Provision is made for two (2) off street car parking spaces or the street adjacent to the frontage of the lot is sealed.</p> <p>AS 62.2 The business will not require street parking for more than one (1) additional motor vehicle at any one time, on any street with frontage to the premises; and</p> <p>AS 62.3 Delivery motor vehicles visiting the premises shall be no more than four (4) tonnes in weight.</p>

²⁶ Applicant needs to refer to Guideline 2 for SPP 1/92 Separating agricultural and residential land uses for further requirements.

TOWN ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 63 Amenity The use is operated in such a way as to not disrupt the residential amenity of the area.</p>	<p>AS 63.1 Delivery of goods and operating hours occurs between the hours of 8.00am and 6.00pm; and</p> <p>AS 63.2 The business does not display goods for sale in any window or outdoor area; and</p> <p>AS 63.3 The one (1) advertising sign associated with the business does not exceed 0.5m² and displays the name of the business operator, name of the business and the phone number. The sign is to be located on the site at a height no greater than 1.5 metres measured to the bottom of the sign. The sign is not to be illuminated.</p>
Host Home Accommodation	
<p>PC 64 Premises used for a Host Home activity are of a size and operated in such a manner as to ensure the amenity of the locality is not adversely affected.</p>	<p>AS 64.1 No more than four (4) paying guests are accommodated at any one time; and</p> <p>AS 64.2 Signage associated with the use is restricted to a 0.5m² sign located at a height no greater than 1.5 metres measured to the bottom of the sign; and</p> <p>AS 64.3 At least two (2) off street parking spaces are provided other than those associated with the permanent residents of the dwelling.</p>
<p>PC 65 Accommodation must be provided for short-term stays only.</p>	<p>AS 65.1 Visitors are accommodated for up to a maximum of 14 nights.</p>
<p>PC 66 Amenity The Host Home establishment provides reasonable levels of privacy and convenience for both residents and guests.</p>	<p>AS 66.1 The bedrooms for guests are in the same building as the bathroom and toilet facilities provided for exclusive use by guests.</p>
<p>PC 67 Location Development must be located where there is convenient access.</p>	<p>AS 67.1 The site is within 5 kilometres of an arterial or sub arterial road, with all weather access.</p>
Telecommunication Facility	
<p>PC 68 Visual Impact Development is visually integrated with its landscape or townscape so as to not be visually dominant or unduly visually obtrusive.</p>	<p>AS 68.1 No solution specified.</p>

Division 3 - Assessment Tables for the Rural Zone

**RURAL ZONE
ASSESSMENT CATEGORIES AND RELEVANT ASSESSMENT CRITERIA
ONLY FOR MAKING A MATERIAL CHANGE OF USE**

TABLE 3

Column 1 Defined use or use class ²⁷	Column 2 Assessment Category	Column 3 Relevant assessment criteria – applicable code if development is self assessable or requires code assessment.
EXEMPT USES FOR THE RURAL ZONE		
Exempt uses are listed in Part 1 Division 3, 1.12 (1)		
Exempt uses for the Rural zone include Agriculture and Grazing		
SELF-ASSESSABLE AND ASSESSABLE USES FOR THE RURAL ZONE		
Catteries and Kennels	Code Assessable	Rural Zone Code
Community Use	Code Assessable	Rural Zone Code
Dwelling House	Self Assessable on lots greater than 2.5 hectares	Rural Zone Code
Home Based Business	Self Assessable	Rural Zone Code
Host Home Accommodation (Bed & Breakfast)	Self Assessable	Rural Zone Code
Telecommunication Facility	Code Assessable	Rural Zone Code
Tourist Facility	Code Assessable	Rural Zone Code
ALL OTHER USES		
All except use for a road	Impact Assessable	

²⁷ See Schedule 1 - Dictionary

**RURAL ZONE
ASSESSMENT CATEGORIES AND APPLICABLE CODES – ONLY FOR OTHER DEVELOPMENT**

TABLE 4

Column 1 Type of Development	Column 2 Assessment Category	Column 3 Applicable Code
Carrying out building work not associated with a material change of use ²⁸	Self Assessable ²⁹ – if undertaking building works associated with existing buildings on the site	Rural Zone Code
Placing an advertising sign or hoarding on premises not associated with a material change of use	Self Assessable if an advertising sign Code Assessable for all other signs	Advertising Devices Code If Code Assessable – Advertising Devices Code
Reconfiguring a lot ³⁰	Code Assessable	Reconfiguring a Lot Code
Carrying out operational work for reconfiguring a lot	Code Assessable if the reconfiguring is assessable development	Filling and Excavation Code Reconfiguring a Lot Code
Carrying out operational work for excavating and/or filling not associated with reconfiguring a lot or a material change of use	Code Assessable on lots greater than 100 hectares and/or where the extent of cut and/or fill exceeds 500m ³ ; or Impact Assessable on lots less than 100 hectares where the extent of cut exceeds 100m ³ or extent of fill exceeds 250m ³	Filling and Excavation Code
Other	Exempt	

²⁸ See Bungil Shire Planning Scheme User’s Guide for examples that explain the type of development involved in different proposals.

²⁹ This does not include building work that under IPA (schedule 9) is exempt and cannot be made self-assessable or assessable by a planning scheme.

³⁰ Under IPA, (schedule 9) reconfiguring a lot is exempt and cannot be made self-assessable or assessable by a planning scheme if the proposal is for amalgamating two (2) or more lots, for a building format plan that does not subdivide the land, in relation to the Acquisition of Land Act 1967, or on Strategic Port Land.

Overall Outcomes for Rural Zone Code

- (1) The overall outcomes are the purpose of the Rural Zone Code.
- (2) The code seeks to ensure that development within the rural zone:
 - (a) reflects the economic potential of the rural area;
 - (b) is appropriately located within the Rural Zone and existing and future Rural Activities are not prejudiced by inappropriate development;
 - (c) maintains the environment, including soil, air and water, compatible with healthy natural systems and ensures public health and safety;
 - (d) protects Good Quality Agricultural (GQAL) from fragmentation, alienation or encroachment of incompatible land uses in accordance with State Planning Policy 1/92 – “Development and Conservation of Agricultural Land”;
 - (e) is located, designed and operated in a manner that protects and enhances the predominant rural scale, intensity, form and character;
 - (f) maintains the rural amenity;
 - (g) does not prejudice or impact adversely on other uses including those within other Zones;
 - (h) has an appropriately designed access to the road network and traffic generated by the development does not impact adversely on the State or local road network;
 - (i) protects areas and sites of conservation importance, including cultural and high landscape values;
 - (j) is undertaken in an orderly and logical sequence to achieve an efficient provision of infrastructure;
 - (k) is located and designed in ways that minimise the need for flood, bushfire and landslide mitigation and to protect people and premises from such natural events;
 - (l) has water supply, stormwater disposal, sustainable effluent and waste disposal and power to appropriate standards adequate for the use; and
 - (m) does not impact adversely on infrastructure.

Rural Zone Code

The Rural Zone includes the whole of the Shire outside the Town Zone shown on Planning Scheme Maps P1 Whole of Shire – Rural Zone, P2 Town Plan Zone - Injune and P3 Town Plan Zone - Muckadilla.

RURAL ZONE CODE Performance Criteria	Acceptable Solution
A. For all of the Rural Zone	
Infrastructure PC 1 Electricity Premises are provided with a supply of electricity adequate for the activity.	AS 1.1 Premises have a supply of reticulated electricity.
PC 2 Water supply Premises are provided with an adequate volume and supply of water for the activity.	AS 2.1 Premises are connected to Council's reticulated water system and have a rain water tank connected to the premises with a minimum capacity of 22,500 litres; or AS 2.2 An approved water allocation as provided by the relevant agency and have a rainwater tank connected to the premises with a minimum capacity of 45,000 litres. AS 2.3 Premises has an on-site storage of 20,000 litres of water for fire fighting purposes.
PC 3 Effluent disposal To ensure that public health and environmental values are preserved, all premises provide for the treatment and disposal of effluent and other waste water.	AS 3.1 The premises are connected to the Council's reticulated sewerage system; or AS 3.2 Premises have on - site effluent disposal systems designed in accordance with Schedule 6: "Standards for Sewerage Supply".
PC 4 Stormwater/Inter-allotment Drainage Stormwater is collected and discharged so as to: (a) protect the stability of buildings or the use of adjacent land; (b) prevent the waterlogging of nearby land; and (c) protect and maintain environmental values.	AS 4.1 Stormwater/inter-allotment drainage is collected and discharged in accordance with Schedule 7: "Standards for Stormwater Drainage".
PC 5 Vehicle Access Vehicle access is provided to a standard appropriate for the use.	AS 5.1 Access roads are to be sealed and are to connect into the existing road network. Access is to be designed and constructed in accordance with Schedule 2A: "Standards for Rural Roads and Access Areas".
PC 6 Parking and manoeuvring Vehicle parking and service vehicle provision is adequate for the use whilst ensuring both safe and functional operation for motorists and pedestrians.	AS 6.1 All uses provide vehicle parking in accordance with Schedule 2A: "Standards for Rural Roads and Access Areas". AS 6.2 All service vehicle manoeuvring is in accordance with Schedule 2A: "Standards for Rural Roads and Access Areas".
PC 7.1 Roads All weather road access is provided between the premises and the existing road network.	AS 7.1 Roads are designed and constructed in accordance with Schedule 2A: "Standards for Rural Roads and Access Areas".

RURAL ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 7.2 Location Development must be located where there is convenient access.</p>	<p>AS 7.2 The site is accessed by an all weather road.</p>
<p>PC 8.1 Highways All Highways are maintained and enhanced as a link between major centres.</p> <p>PC 8.2 Development adjacent to State Controlled Roads is located to ensure safe and efficient use of the highway and maintain the integrity of the highway as a commuter link.</p> <p>PC 8.3 Noise sensitive developments (residential, educational and community) must ensure that road traffic noise levels are appropriately managed to achieve acceptable levels of amenity.</p>	<p>AS 8.1 No direct access to State Controlled Roads is permitted except at designated intersections as identified on Map R1 – State Controlled Roads.</p> <p>AS 8.2 No development is established within a 100 metre buffer either side of State Controlled Roads as identified in Map R1 – State Controlled Roads.</p> <p>AS 8.3 No solution specified.</p>
<p>PC 9 Gas and Oil Pipelines Buildings are located at an appropriate distance from pipelines to ensure community safety and operation of the use is not compromised.</p>	<p>AS 9.1 No habitable structure is constructed within the buffer established 100 metres either side of the gas and oil pipeline corridors as identified in Planning Scheme Map P1 Whole of Shire – Rural Zone.</p>
<p>PC 10 Refuse Tips and Effluent Treatment Plants Buildings are located at an appropriate distance from refuse tips or effluent treatment plants to ensure community safety and operation of the use is not compromised.</p>	<p>AS 10.1 No premise is constructed within 500 metres from the boundary of a refuse tip or effluent treatment plant.</p>
<p>PC 11.1 Rail Corridors Development is at an appropriate distance from the rail corridor so as not to prejudice safety, speed or intended role of the existing and proposed rail corridors.</p> <p>PC 11.2 Development adjoining the rail corridor is protected from the impact of noise.³¹</p>	<p>AS 11.1 The minimum buffer for residential, business, commercial and public facility uses are 100 metres from an existing or proposed rail corridors as identified on Maps R1 State Controlled Roads and P3 Town Plan Zone - Muckadilla.</p> <p>AS 11.2 No solution specified.</p>
<p>PC 12 Electricity Transmission Line Easement – Vegetation Transmission lines within an Electricity transmission line easement are protected from vegetation.</p>	<p>AS 12.1 Planted vegetation within an Electricity transmission line easement shall have a mature height not exceeding 2.5 metres as shown in Schedule 3: “Power and Electricity Easements”.</p> <p>AS 12.2 No part of planted vegetation at its mature size, is located closer than 2.5 metres to an electricity transmission line as shown in Schedule 3: “Power and Electricity Easements”.</p>

³¹ One way an applicant can demonstrate compliance with PC 11.2 is to prepare a study that identifies how the development is in accordance with Railway and EPA Regulations 1998.

RURAL ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 13 Electricity Transmission Line Easement – Separation Distance Habitable buildings and community orientated uses are located a minimum distance from lines to ensure community safety.</p>	<p>AS 13.1 Habitable Buildings and Community orientated uses maintain a minimum separation distance from the most proximate boundary of an Electricity transmission line easement in accordance with Schedule 3: “Power and Electricity Easements”.</p>
<p>2. Environment PC 14 Watercourses Development ensures the maintenance of riparian areas and water quality including protection from off-site transfer of sediment.</p>	<p>AS 14.1 A minimum 10 metre wide buffer area is provided extending from the high bank of any watercourse. Buffer areas include a cover of vegetation, including grasses.</p>
<p>PC 15 Flooding Premises are designed and located so as: (a) not to be adversely impacted upon by flooding; (b) to protect life and property; and (c) not to have an undesirable impact of the extent and magnitude of flooding.³²</p>	<p>AS 15.1 No solution specified.</p>
<p>PC 16 Air Emissions Air emissions from premises do not cause environmental harm or nuisance to adjoining properties or sensitive land uses.³³</p>	<p>AS 16.1 No solution specified.</p>
<p>PC 17 Noise Emissions Noise emissions from premises do not cause environmental harm or nuisance to adjoining properties or sensitive land uses.³⁴</p>	<p>AS 17.1 No solution specified.</p>
<p>PC 18 Water Quality The standard of effluent and/or stormwater runoff from premises ensures the quality of surface water is suitable for: (a) the biological integrity of aquatic ecosystems; (b) recreational use; (c) supply as drinking water after minimal treatment; (d) agricultural use; or (e) industrial use.³⁵</p>	<p>AS 18.1 No solution specified.</p>

³² To assist the applicant to demonstrate compliance with PC 15, the maximum recorded flood may be adopted as an indication of flood level.

³³ One way an applicant can demonstrate compliance with PC 16 is to prepare a study that identifies how the development is in accordance with Environmental Protection (Air) Policy 1997.

³⁴ One way an applicant can demonstrate compliance with PC 17 is to prepare a study that identifies how the development is in accordance with Environmental Protection (Noise) Policy.

³⁵ One way an applicant can demonstrate compliance with PC 18 is to prepare a study that identifies how the development is in accordance with Environmental Protection (Water) Policy.

RURAL ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 19 Excavation and Filling Excavation and filling of land ensures: (a) that both the amenity and safety of users of the site and adjacent land holdings; and (b) soil erosion is kept to a minimum with remedial works.</p>	<p>AS 19.1 Batters have a minimum slope of 25% , are terraced at every rise of 1.5 metres and each terrace has a minimum depth of 750mm; and</p> <p>AS 19.2 Excavation and filling within 1.5 metres of any site boundary is battered or retained by a wall that does not exceed one (1) metre in height; and</p> <p>AS 19.3 Excavation and filling is undertaken in accordance with Schedule 8: “Standards for Construction Activity”.</p>
<p>PC 20 Construction Activities Both erosion control and silt collection measures are undertaken so as to ensure protection of environmental values during construction.</p>	<p>AS 20.1 During construction, soil erosion and sediment is managed in accordance with Schedule 8: “Standards for Construction Activity”.</p>
<p>PC 21 Separation of Incompatible land uses Separation distances are provided to ensure: (a) the future viability of surrounding uses; (b) infrastructure items are protected from incompatible development; (c) an appropriate standard of amenity and public safety; and (d) conflict arising from incompatible uses is minimised.</p>	<p>AS 21.1 For sensitive land uses and rural activities other than intensive animal industries: The minimum separation distance between sensitive land uses and rural activities comply with the Buffer Design Criteria as contained in Table 2 of section 4.47 of SPP1/92 – Planning Guidelines - “Separating Agricultural and Residential Land Uses”.</p> <p>AS 21.2 For sensitive land uses: The minimum separation distance to Intensive Animal Industries are as stated in Schedule 11: “Separation Distances to Intensive Animal Industries”.</p> <p>AS 21.3 For all other uses other than Extractive Industries: Buildings, Structures and Outdoor Activity Areas maintain a minimum separation distance to Extractive Industries as stated in Schedule 5: “Separation Distances Extractive Industries”.</p>
<p>PC 22.1 Development in the Vicinity of airports: Development in the vicinity of Airports: (a) does not adversely affect the operation of the airport; (b) is designed and located to achieve a suitable standard of amenity for the proposed activity; and (c) does not restrict future operational demands of the airport.</p>	<p>AS 22.1 Buildings and structures within 100 metres of the boundary of an airport are less than 7.5 metres in height at any point above natural ground level (except where establishing in an existing building and no Building Works are being undertaken for the existing building).</p>

RURAL ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 22.2 Airport Protection The development of premises does not cause an obstruction or other potential hazard to aircraft movement associated with the airport by way of:</p> <ul style="list-style-type: none"> - the physical intrusion of buildings or other structures into the Obstacle Limitation Surfaces; - attracting birds and or bats to the area which could cause or contribute to bird strike hazard; - providing very bright lighting or lighting similar to aerodrome lighting, which can distract or confuse aircraft pilots; - interfering with navigation or communication facilities; - emissions that may effect pilot visibility or aircraft operations; or - transient intrusions into the airport's operational space.³⁶ 	<p>AS 22.2 No solution specified.</p>
<p>PC 23 Good Quality Agricultural Land Good Quality Agricultural Land areas as identified in Map R2 – Good Quality Agricultural Land are conserved and managed for the longer term and protected from development that may lead to its alienation or diminished productivity.</p>	<p>AS 23.1 No solution specified.</p>
<p>PC 24 Vegetation Retention Development retains vegetation for the:</p> <ol style="list-style-type: none"> (a) protection of scenic quality; (b) protection of general habitat; (c) protection of soil quality; and (d) establishment of open space corridors and networks³⁷. 	<p>AS 24.1 No solution specified.</p>
<p>PC 25 Protected Areas Development is undertaken to ensure areas of significant biodiversity and habitat value are protected.</p>	<p>AS 25.1 A minimum separation distance of 100 metres is provided to protected areas as identified on Map R3 – Protected Areas.</p>
<p>PC 26 Sloping Land Development is undertaken to ensure:</p> <ol style="list-style-type: none"> (a) vulnerability to landslip erosion and land degradation is minimised; and (b) safety of persons and property is not compromised. 	<p>AS 26.1 Development is not undertaken on slopes greater than 15%.</p>

³⁶ One way an applicant can demonstrate compliance with PC 22.2 is to prepare a report in accordance with Planning Guidelines; Planning for Aerodromes and other Aeronautical Facilities and Australian Standards AS2021, 1993. Maps R6 and R7: Airport Obstacle Limitation Surface should also be referred to.

³⁷ Applicants should refer to the *Vegetation Management Act 1999* for further requirements

RURAL ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 27 Bushfire Hazard Area Development maintains the safety of people and property by avoiding areas of High or Medium Bushfire hazard or mitigating the risk through:</p> <p>(a) the siting of buildings ensuring setbacks from hazardous vegetation are maximised and elements least susceptible to fire are sited closest to the bushfire hazard; and</p> <p>(b) the provision of firebreaks to ensure adequate setbacks between buildings, structures and hazardous vegetation.</p>	<p>AS 27.1 Development is not undertaken in bushfire hazard areas as identified as High and Medium hazard on Map R4 – Bushfire Hazard Areas; or</p> <p>AS 27.2 For development in areas of High or Medium bushfire hazard as identified on Map R4 – Bushfire Hazard Areas and on lots greater than 2,500m² buildings and structures:</p> <p>(a) are sited within the lowest bushfire hazard area;</p> <p>(b) achieve minimum setback distances from hazardous vegetation of 1.5 times the predominant mature canopy tree height or 10 metres, which ever is the greater; and</p> <p>(c) achieve a setback distance from any retained vegetation strips or small areas of vegetation of 10 metres.</p> <p>AS 27.3 For development in areas of High or Medium bushfire hazard as identified on Map R4 – Bushfire Hazard Areas, and on lots less than or equal to 2,500m²: No solution specified.</p> <p>AS 27.4 For development in areas of High or Medium bushfire hazard as identified on Map R4 – Bushfire Hazard Areas, firebreaks or fire maintenance trails are provided in accordance with Schedule 12: “Standards for Roads in Bushfire Hazard Areas. Firebreaks and Fire Maintenance Trails”.</p>
<p>PC 28 Buildings of Significance The architectural merit and precinct value of cultural heritage items listed in Schedule 10 is maintained.</p>	<p>AS 28.1 No solution specified</p>
<p>PC 29 Cultural Heritage The significance of known places of indigenous and/or cultural heritage value is retained.</p>	<p>AS 29.1 A minimum separation distance of 20 metres is provided to known indigenous and/or cultural heritage sites.³⁸</p>
<p>PC 30 Character Buildings Development adjacent to buildings identified as heritage or character buildings in Schedule 10 incorporates design features, materials and details that blend with the existing character.</p>	<p>AS 30.1 No solution specified.</p>
<p>PC 31 Residential Outbuildings Rural amenity is to be maintained.</p>	<p>AS 31.1 Residential outbuildings are to be located a minimum of 15 metres from the boundary fronting the public road and a minimum of five (5) metres from any other boundary; and</p> <p>AS 31.2 The size of residential outbuildings is to be restricted to structures 8.5 metres in height and 120 square metres in floor area.</p>
<p>PC 32 Buffers Adequate buffers are provided to protect rural residential uses from agricultural, transport and industrial activities whilst also ensuring the integrity and viability of such uses.</p>	<p>AS 32.1 No solution specified.</p>

³⁸ One way an applicant may demonstrate that indigenous and/or cultural heritage sites exist or do not exist on site is to provide an appropriate certificate of search from heritage registers and the aboriginal cultural heritage unit (DNRM).

RURAL ZONE CODE Performance Criteria	Acceptable Solution
Specific Land Uses	
Catteries and Kennels	
<p>PC 33 Buildings, pens, other structures and waste disposal must be located, constructed and managed such that the maximum number of animals intended to be kept or processed on the land can be accommodated without creating significant adverse environmental impacts.</p>	<p>AS 33.1 Premises are developed on a site having an area of not less than four (4) hectares.</p> <p>AS 33.2 For kennels, the ratio of dogs per site is not greater than 10 per hectare.</p> <p>AS 33.3 For catteries, not more than 100 cats are kept on the site at any one time.</p> <p>AS 33.4 Premises comply with the following separation distances: (a) Road frontage – 50 metres; (b) Natural waterway – 50 metres; (c) Side or rear boundary – 30 metres; (d) Any dwelling on surrounding land – 400 metres; (e) Urban land – 800 metres.</p> <p>AS 33.5 Fencing of kennels and catteries is a minimum of 1.8 metres high.</p>
Commercial Premises	
<p>PC 34 Amenity The operation of commercial activities is not unduly affected by the proximity of residential dwellings.</p>	<p>AS 34.1 Commercial development adjoining land used or proposed to be used for residential purposes is to be fenced to a height of two (2) metres along common boundaries.</p>
<p>PC 35 Scale Development is at a scale which protects the amenity of the area.</p>	<p>AS 35.1 Total use area is no more than 50% of the overall site.</p> <p>AS 35.2 The site has an area of at least 600m².</p>
<p>PC 36 Lighting Lighting is designed in a manner to ensure ongoing amenity and safety in the commercial area whilst ensuring surrounding areas are protected from undue glare or lighting overspill.</p>	<p>AS 36.1 All lighting does not exceed 8.0 lux at 1.5 metres from beyond the site boundary.</p>
<p>PC 37 Landscaping Landscaping is designed and established in a manner which achieves high quality frontage and contributes positively to the streetscape character.</p>	<p>AS 37.1 No solution specified.</p>

RURAL ZONE CODE Performance Criteria	Acceptable Solution
Community and Recreation	
PC 38 Scale Development is of an appropriate scale for the locality so as to ensure that local amenity is protected.	AS 38.1 No solution specified.
PC 39 Setbacks and Boundary Clearances Buildings and structures are positioned on the site in a manner that ensures that the local amenity is protected.	AS 39.1 Buildings and structures have side boundary clearances of not less than 2.5 metres and rear boundary clearances of not less than six (6) metres from property boundaries.
PC 40 Operating Hours Development is operated in such a manner that ensures that the local amenity is protected.	AS 40.1 Uses are operated between the hours of 7.00am and 8.00pm where adjoining residential land.
PC 41 Landscaping Landscaping is provided on-site to: <ol style="list-style-type: none"> contribute to a pleasant and functional built form; and contribute to the visual qualities of the locality. 	AS 41.1 Landscaping around sporting grounds is to occur to a width of 2 metres using species which provide an effective screen of at least 1.5 metres within two (2) years of planting. AS 41.2 Landscaping for other community recreation uses is to occur along setbacks to a width of two (2) metres along the front boundary and one (1) metre along side and rear boundary setbacks; and AS 41.3 Shade trees are to be planted on edges of car parks and are to reach a mature height of at least three (3) metres within four (4) years of planting.
PC 42 Lighting The design of lighting does not impact adversely on the local amenity through poorly directed lighting, lighting overspill or lighting glare.	AS 42.1 Direct lighting or lighting does not exceed 8.0 lux at 1.5 metres beyond the boundary site.
Dwelling House	
PC 43 Height The height of residential buildings is compatible with and complementary to the character of the urban environment.	AS 43.1 The height of a dwelling house or dual occupancy does not exceed 8.5 metres from natural ground level.
PC 44 Site Coverage and Setbacks <ol style="list-style-type: none"> Residential building design and siting maintains the character of the locality in terms of building bulk. Residential buildings are located to ensure the local amenity and streetscape are protected and enhanced. 	AS 44.1 Residential buildings do not exceed the site coverage thresholds as follows: <ul style="list-style-type: none"> Single detached dwellings - 50%; Site coverage of outbuildings not to exceed 15% of remaining area; or AS 44.2 Setback is within 20% of the existing setbacks of adjoining properties; and AS 44.3 Boundary clearances of not less than 2.5metres and rear boundary clearance of not less than six (6) metres from property boundaries.

RURAL ZONE CODE Performance Criteria	Acceptable Solution
PC 45 Density The density of residential activities does not impact adversely on the residential amenity of the zone.	AS 45.1 For Dwelling House: No more than one (1) dwelling house per lot.
Forestry	
PC 46 Forestry Operation Forestry is established, maintained and harvested in a manner that reflects best practice management. ³⁹	AS 46.1 No solution specified.
PC 47 Amenity Forestry is established, maintained and harvested in a manner that protects the amenity of the locality.	AS 47.1 Forestry is conducted using the following minimum separation distances: <ul style="list-style-type: none"> - from boundaries: 20 metres; - from public roads/rail: 40 metres; - from power lines: 15 metres. AS 47.2 Use of equipment and machinery associated with forestry is restricted to: <ul style="list-style-type: none"> - Monday to Saturday 7.00am to 7.00pm - Sunday and Public Holidays 8.00am to 7.00pm.
PC 48 Environment The surrounding area is protected from adverse environmental impacts. ⁴⁰	AS 48.1 No solution specified.
PC 49 Heavy Vehicle Routes Use of heavy vehicles does not create adverse affects on the amenity of the locality.	AS 49.1 The proposed access route to the site does not pass through residential or rural residential localities. AS49.2 Heavy vehicles used in forestry does not affect road network infrastructure, safety and efficiency.
Home Based Business	
PC 50 Size The development comprises only a minor portion of an existing residential premise.	AS 50.1 The business is operated by persons residing in the dwelling; and AS 50.2 The development is limited to a total floor area of 80 square metres for the part of the residential premises used in the operation of the business (excluding site parking).
PC 51 Traffic The use does not generate greater traffic loads than reasonably associated with residential premises.	AS 51.1 Provision is made for two (2) off street car parking spaces; and AS 51.2 The business will not require street parking for more than one (1) additional motor vehicle at any one time, on any street with frontage to the premises; and AS 51.3 Delivery motor vehicles visiting the premises shall be no more than four (4) tonnes in weight.

³⁹ One way to demonstrate compliance with this PC is to prepare a Management Plan in accordance with the Queensland Forest Practices System Code of Practice for Native Forest Harvesting.

⁴⁰ One way to demonstrate compliance with this PC is to prepare an Environmental Management Plan in accordance with Schedule 9: "Environmental Management Plan Guidelines".

RURAL ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 52.1 Amenity The use is operated in such a way as to not disrupt the residential amenity of the area.</p> <p>PC 52.2 Location Development must be located where there is convenient access.</p>	<p>AS 52.1.1 Delivery of goods and operating hours occurs between the hours of 7.00am and 6.00pm; and</p> <p>AS 52.1.2 The business does not display goods for sale in any window or outdoor area; and</p> <p>AS 52.1.3 The one advertising sign associated with the business does not exceed 0.5m² and displays the name of the business operator, name of the business and the phone number. The sign is to be located on the site at a height no greater than 1.5 metres measured to the bottom of the sign. The sign is not to be illuminated.</p> <p>AS 52.2 The site is accessed by an all weather road.</p>
Host Home Accommodation	
<p>PC 53 Amenity Premises used for a Host Home activity are of a size and operated in such a manner as to ensure the amenity of the locality is not adversely affected.</p>	<p>AS 53.1 No more than eight (8) paying guests are accommodated at any one time; and</p> <p>AS 53.2 Signage associated with the use is restricted to a 0.5m² sign located at a height no greater than 1.5 metres measured to the bottom of the sign. The sign may only be illuminated during periods when guests are expected; and</p> <p>AS 53.3 At least two (2) off street parking spaces are provided other than those associated with the permanent residents of the dwelling.</p>
<p>PC 54 Length of Stay Accommodation must be provided for short-term stays only.</p>	<p>AS 54.1 Visitors are accommodated for up to a maximum of 14 nights.</p>
<p>PC 55 Building Design The Host Home establishment provides reasonable levels of privacy and convenience for both residents and guests.</p>	<p>AS 55.1 The bedrooms for guests are in the same building as the bathroom and toilet facilities provided for exclusive use by guests.</p>
<p>PC 56 Location Development must be located where there is convenient access.</p>	<p>AS 56.1 The site is accessed by an all weather road.</p>
Industry (Low/ Medium)	
<p>PC 57 Non Industrial uses Any non-industrial uses located in the precinct should not prejudice the operation of existing industrial uses.</p>	<p>AS 57.1 No solution specified.</p>

RURAL ZONE CODE Performance Criteria	Acceptable Solution
<p>PC 58 Scale The scale and location of the industrial use on the site should contribute to the amenity of the precinct.</p>	<p>AS 58.1 Total use area is no more than 70% of the site; and</p> <p>AS 58.2 Buildings and structures are less than 8.5 metres in height and not more than two (2) storeys at any point above the natural ground level; and</p> <p>AS 58.3 Side boundary clearance for any building or structure is at least 100 metres from any road frontage; and</p> <p>AS 58.4 Side boundary clearance for any building or structure is at least 100 metres; and</p> <p>AS 58.5 Rear boundary clearances are at least 100 metres or more from property boundary; and</p> <p>AS 58.6 Where adjoining residential land, the setback along the common boundary is 100 metres or more.</p>
<p>PC 59 Landscaping Landscaping on the site: (a) contributes positively to the built form and the street; and (b) reduces the impact of the size and scale of the buildings.</p>	<p>AS 59.1 Landscaping is provided with a minimum width of two (2) metres along site boundaries; and</p> <p>AS 59.2 Vegetation is to have a mature height of three (3) metres within five (5) years of planting.</p> <p>AS 59.3 Ground covers should fully cover the vegetation strip within one (1) year of planting.</p>
<p>PC 60 Amenity The amenity of residential uses adjacent to the industrial area is protected through appropriate boundary screening.</p>	<p>AS 60.1 Where the site adjoins residential uses a solid screen wall of two (2) metre height is to be erected on the boundary in addition to landscaping requirements.</p>
<p>PC 61 Building Orientation The building is designed and orientated to be identifiable from the street.</p>	<p>AS 61.1 The office space of each building is sited and orientated towards the principal road frontage.</p>
<p>PC 62.1 Building and Structure Design Buildings are designed and finished to a high quality appearance.</p> <p>PC 62.2 Location Development must be located where there is convenient access.</p>	<p>AS 62.1 No solution specified.</p> <p>AS 62.2 The site is accessed by an all weather road.</p>
<p>Telecommunication Facility</p>	
<p>PC 63.1 Visual Impact Development is visually integrated with its landscape or townscape so as to not be visually dominant or unduly visually obtrusive.</p> <p>PC 63.2 Location Development must be located where there is convenient access.</p>	<p>AS 63.1 No solution specified.</p> <p>AS 63.2 The site is accessed by an all weather road.</p>

RURAL ZONE CODE Performance Criteria	Acceptable Solution
Temporary Worker's Accommodation	
PC 64 The use should ensure high levels of fire safety.	AS 64.1 No solution specified.
PC 65 Road Access Council road network is not unduly affected by the establishment of the camp.	AS 65.1 Construction machinery and other vehicular traffic do not access the camp by travelling on or across the shire road network as identified on <i>Maps P Whole of Shire - Rural Zone1 and R1 State Controlled Roads</i> .
PC 66 Separation Distance The establishment of the camp does not unduly affect existing residential premises.	AS 66.1 No camp is established within: <ul style="list-style-type: none"> - 30 metres of existing of existing residential premises; and - 15 metres of a roadway.
PC 67.1 Amenity The camp buildings, layout and construction do not substantially detract from the amenity of the neighbourhood.	AS 67.1.1 All building's external cladding is not damaged; and AS 67.1.2 The age of any building is no older than five (5) years; and AS 67.1.3 The layout of the buildings is: <ul style="list-style-type: none"> - located at least three (3) metres apart; - are sited in clusters with no more than six (6) buildings per clusters; - space between cluster is no less than 10 metres; and - buildings occupy no more than 30% of the site area. AS 67.1.4 Car parking is provided: <ul style="list-style-type: none"> - on site; - at one (1) parking space for each bed provided in the camp, unless private transport is provided by the camp manager; and - which is paved with minimal dust producing materials or sealed.
PC 67.2 Location Development must be located where there is convenient access.	AS 67.2 The site is accessed by an all weather road.

RURAL ZONE CODE Performance Criteria	Acceptable Solution
Tourist Facility	
<p>PC 68 Site The site area for the Tourist facility is of sufficient size to provide for adequate on site and local area amenity, with respect to boundary setbacks, open space, car parking and landscaping around the facilities.</p>	<p>AS 68.1 For a caravan park or camping ground: A minimum site area is 4,000m².</p> <p>AS 68.2 For Tourist accommodation units: All buildings and roofed structures do not occupy more than 40% of the site area; and</p> <p>AS 68.3 If adjacent to residential areas, all buildings have a minimum setback of six (6) metres from a road and three (3) metres from any other boundary; or</p> <p>AS 68.4 If not adjacent to residential areas, all buildings have a minimum setback of three (3) metres from each boundary of the site area.</p>
<p>PC 69 Amenity Adequate amenity is available for individual caravan or camping sites or tourist accommodation units.</p>	<p>AS 69.1 There is not more than one (1) caravan or camping site or tourist accommodation unit for each 120m² of site area; and</p> <p>AS 69.2 For a caravan park or camping ground - 10% of the site area, exclusive of landscaped setbacks, is provided for open space.</p>
<p>PC 70 Landscaping Landscaping contributes to a pleasant and relaxing environment for visitors.</p>	<p>AS 70.1 No solution specified.</p>
<p>PC 71 Location Development must be located where there is convenient access.</p>	<p>AS 71.1 The site is accessed by an all weather road.</p>

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PART 5 - CODES

5.1 Introduction

This section contains codes which apply to aspects of development that are self assessable, and code assessable, and that are relevant to development which is impact assessable.

Division 1 - Stated Development Codes

5.2 Advertising Devices Code

The following provisions comprise the Advertising Devices Code:

- Compliance with the Advertising Devices Code (section 5.2.1);
- Overall outcomes of the Advertising Devices Code (section 5.2.2);
- Performance Criteria for the Advertising Devices Code (section 5.2.3).

5.2.1 Compliance with the Advertising Devices Code

An application for development that achieves the Performance Criteria in section 5.2.3, complies with the Advertising Devices Code.

5.2.2 Overall Outcomes for the Advertising Devices Code

- (i) The overall outcome is the purpose of the code.
- (ii) The code seeks to ensure that development in relation to the Advertising Devices Code is:
 - aesthetically acceptable and does not compromise the Shire's rural image; and
 - is compatible with the site, the character of the local area, safely constructed, and does not create a hazard to pedestrians, cyclists and vehicular traffic.

5.2.3 Performance Criteria for the Advertising Devices Code

The performance criteria for the Advertising Devices Code are included in column 1 and the acceptable solutions are included in column 2 of Table 5.

PERFORMANCE CRITERIA FOR THE ADVERTISING DEVICES CODE

TABLE 5

Performance Criteria	Acceptable Solution
<p>PC 1 Amenity Advertising signage is located and is of a size to minimise impacts on the visual amenity of an area.</p>	<p>AS 1.1 Advertising signage:</p> <ul style="list-style-type: none"> • Where not located on buildings, does not exceed six (6) metres in height above natural ground level; • Does not exceed 18m² of surface area; • Where protruding over a footpath by more than 50 mm, has a minimum height above the footpath, measured from the underside of the sign, of 2.4 metres; • Complies with the maximum dimensions set out in Table 6. <p>AS 1.2 Advertising signage in the Residential Precinct is for the purposes of a home business or host home accommodation and does not exceed 0.3m² in area.</p>
<p>PC 2 Safety Freestanding signs are positioned to ensure adequate setbacks from entries and exits, being the basics to ensure safe movement of vehicular traffic.</p>	<p>AS 2.1 No solution specified.</p>
<p>PC 3 Location Advertising signage is designed and constructed to avoid clutter and to be of high quality.</p>	<p>AS 3.1 The number of signs is limited to that set out in Table 6.</p> <p>AS 3.2 Advertising Signage does not include:</p> <ul style="list-style-type: none"> • Promotional pamphlets or signs pasted or affixed to any structure, machine or device noticeable from any road, street, footway, reserve or other public place; • Signs placed on vehicles, which are parked or left standing on any road, street, footway, park, reserve or other public place; • Balloons or signs placed on balloons having a volume of air or other gas greater than 0.125m³; • Signs located within 1 kilometre of an existing sign being a billboard or hoarding on the same side of the road.
<p>PC 4 State Controlled Roads Signage maintains the safety and efficiency of state controlled road corridors (as identified on <i>Map R1 – State Controlled Roads</i>).</p>	<p>AS 4.1 Signage complies with the Department of Main Roads Policy for Advertising on or near State-controlled roads.</p>

TABLE 6

Type of Signage	Number of Signs	Maximum Dimensions
Under awning signs (signs securely fixed under a permanent awning).	One (1) per tenant	Length 2.4 metres; width 200 mm.
Fascia signs (signs painted to the fascia of the permanent awning).	One (1) per tenant	The face of the fascia.
Flush wall signs (signs secured flat to a building or fence or painted on a building or fence).	One (1) per tenant	Length three (3) metres; depth 3 metres.
Above awning signs (signs securely fixed above a permanent awning).	One (1) per tenant	Length three (3) metres; width 200 mm.
Wall mounted signs (signs securely fixed to a wall of a building that do not protrude more than 1.2 metres from the wall).	One (1) per tenant	Length 1.2 metres; depth 600 mm.
Roof signs (signs securely fixed to either the roof or parapet wall at the front of a building).	One (1) per tenant	Length three (3) metres; depth 1.5 metres.
Freestanding Signs.	One (1) per tenant	Six (6) metres in height above natural ground level. Maximum area of 18m ² .

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5.3 Filling and Excavation Code

The following provisions comprise the Filling and Excavation Code:

- Compliance with the Filling and Excavation Code (section 5.3.1);
- Overall outcomes of the Filling and Excavation Code (section 5.3.2);
- Performance Criteria and Acceptable Solutions for the Filling and Excavation Code (section 5.3.3).

5.3.1 Compliance with the Filling and Excavation Code

An application for development that achieves the Performance Criteria in section 5.3.3, complies with the Filling and Excavation Code.

5.3.2 Overall Outcome for the Filling and Excavation Code

- (i) The overall outcome is the purpose of the code.
- (ii) The Filling and Excavation Code seeks to ensure that filling and excavation works:
 - (a) do not adversely impact on the surrounding environment and amenity; and
 - (b) avoids risk to human life and property; and
 - (c) do not adversely impact upon any public infrastructure including electricity, water cycle infrastructure, roads and rail, telecommunications, local and state government infrastructure and parks.

5.3.3 Performance Criteria and Acceptable Solutions for the Filling and Excavation Code

The performance criteria for the Filling and Excavation Code are included in column 1 and the acceptable solutions are included in column 2 of Table 7.

PERFORMANCE CRITERIA AND ACCEPTABLE SOLUTIONS FOR THE FILLING AND EXCAVATION CODE

TABLE 7

Performance Criteria	Acceptable Solution
<p>PC 1 Visual Amenity Impacts on visual amenity or instability of nearby land are minimised.</p>	<p>AS 1.1 No solution specified.</p>
<p>PC 2 Environmental Values The environmental values of receiving waterways are protected.</p>	<p>AS 2.1 Batters have a minimum slope of 25% are terraced at every rise of 1.5 metres and each terrace has a minimum depth of 750 mm; and</p> <p>AS 2.2 Excavation and filling within 1.5 metres of any site boundary is battered or retained by a wall that does not exceed one (1) metre in height; and</p> <p>AS 2.3 Excavation and filling is undertaken in accordance with Schedule 8: "Standards for Construction Activity".</p>
<p>PC 3 Drainage Existing drainage or flood flows, either upstream or downstream of the site, are maintained.</p>	<p>AS 3.1 No solution specified.</p>
<p>PC 4 Amenity Filling and excavation minimises impacts from dust or noise.</p>	<p>AS 4.1 The excavation or fill material is watered to maintain water content and thereby prevent dust entrainment.</p> <p>AS 4.2 Operating hours are between 7.00am and 6.00pm, weekdays and Saturdays, with no operation on Sundays or public holidays.</p>
<p>PC 5 Noise Noise generated from filling and excavation activities are within acceptable levels that do not adversely impact on surrounding amenity.</p>	<p>AS 5.1 Except for extractive industry, the total duration of filling and excavation operations does not exceed four (4) weeks.</p> <p>AS 5.2 Within or adjacent to the urban area the adjusted average weighted sound pressure level does not exceed the background level by more than 5dB(A) measured at the property boundary of the subject land.</p>
<p>PC 6 Safety Filling and excavation is undertaken in a safe manner with respect to adjacent and overhead electricity infrastructure.</p>	<p>AS 6.1 Filling and/or excavation under or adjacent to electricity infrastructure items is not undertaken.</p>
<p>PC 7 Infrastructure That public infrastructure items and works are protected from adverse impacts by excavation and/or filling work.</p>	<p>AS 7.1 No solution specified.</p>

5.4 Reconfiguring a Lot Code

The following provisions comprise the Reconfiguring a Lot Code:

- Compliance with the Reconfiguring a Lot Code (section 5.4.1);
- Overall Outcomes of the Reconfiguring a Lot Code (section 5.4.2);
- Performance Criteria for the Reconfiguring a Lot Code (section 5.4.3).

5.4.1 Compliance with the Reconfiguring a Lot Code

An application for development that achieves the Performance Criteria in section 5.4.3, complies with the Reconfiguring a Lot Code.

5.4.2 Overall Outcomes for the Reconfiguring a Lot Code

- (i) The overall outcomes are the purpose of the code.
- (ii) The Reconfiguring a Lot Code seeks to ensure that the location, size and design of lots:
 - (a) are suited to the intended use and the policy intent of the relevant zone;
 - (b) promote good urban design outcomes, energy efficiency and walking, cycling and public transport as alternative forms of transport to the private car;
 - (c) provide for the protection of areas or features of environmental significance;
 - (d) maintain the productive capacity of Good Quality Agricultural Land and limit the fragmentation of Good Quality Agricultural Land below the minimum lot size;
 - (e) enable the efficient provision of infrastructure and services; and
 - (f) enable sustainable on-site water supply and sewerage disposal in areas where reticulated services are not available.

5.4.3 Performance Criteria and Acceptable Solutions for the Reconfiguration of a Lot Code

The performance criteria for the Reconfiguration of a lot Code are included in column 1 and the acceptable solutions are included in column 2 of Table 8.

PERFORMANCE CRITERIA AND ACCEPTABLE OUTCOMES

TABLE 8

Performance Criteria	Acceptable Solution
Rural Zone - Minimum Lot Size	
<p>PC 1 Minimum Lot Size The reconfiguring of lots within the Rural Zone ensures the continued ongoing viability of primary production.⁴¹</p>	<p>AS 1.1 For land shown on <i>Map R2 – Good Quality Agricultural Land</i> as Good Quality Agricultural Land: All lots have a minimum area of 300 hectares; or</p> <p>AS 1.2 For land on <i>Map R2 – Good Quality Agricultural Land</i> NOT shown as Good Quality Agricultural Land: All lots have a minimum area of 600 hectares; and</p> <p>AS 1.3 For lots specifically for bore water supply for lots: All lots have a minimum lot size of one (1) hectare;</p> <p>AS 1.4 All lots have a minimum width to depth ratio of 1:5.</p>
Town Zone – Minimum Lot size	
<p>PC 2 Minimum Lot Size The reconfiguration of lots within the Town Zone are of a sufficient and practical size to accommodate the particular use within the precinct, whilst ensuring it is consistent with the local character and allows for effluent disposal.</p>	<p>AS 2.1 Dwelling House lots in the Residential Precinct have: (a) a minimum area of 600m²; (b) a minimum frontage of 20m²; and (c) a minimum width to depth ratio of 1:5.</p> <p>AS 2.2 Dual Occupancy lots have: (a) a minimum area of 1,000m²; (b) a minimum frontage of 20 metres; and (c) a minimum width to depth ratio of 1:5.</p> <p>AS 2.3 Commercial Precinct lots have: (a) a minimum area of 600m² and (b) a minimum frontage of 18 metres.</p> <p>AS 2.4 Industrial Precinct lots have: (a) a minimum area of 600m²; and (b) a minimum frontage of 18 metres.</p> <p>AS 2.5 Open Space and Recreation Precinct No solution specified.</p> <p>AS 2.6 Rural Residential Precinct lots have: (a) a minimum area of 4,000m² and a maximum area of two (2) hectares; (b) a minimum frontage of 65 metres; and (c) a minimum width to depth ration of 1:5.</p>

⁴¹ Where lot sizes are proposed below 300 hectares in an area identified as Good Quality Agricultural Land on *Map R2 – Good Quality Agricultural Land*, the applicant must demonstrate compliance with PC1 by preparing a study in accordance with the requirements of State Planning Policy 1/92 – The Development and Conservation of Agricultural Land and the Planning Guidelines: The Identification of Good Quality Agricultural Land.

Performance Criteria	Acceptable Solution
All Zones	
<p>PC 3 Layout and Design The reconfiguration of lots: (a) ensures safe and liveable communities; (b) ensures safe and legible vehicle and pedestrian movement areas and roads; (c) integrates with adjoining land; and (d) ensures and protects environmental values, significant features, open space areas and areas of high conservation or landscape value.</p>	<p>AS 3.1 No solution specified.</p>
<p>PC 4 Siting of Buildings and Structures Lot size, layout and design ensures future uses are able to comply with separation distances for buildings and structures in respect of: (a) watercourses; (b) ridgelines and escarpments; (c) cultural heritage places; (d) protected areas; (e) Key Resource Areas; and (f) Mining Leases.</p>	<p>AS 4.1 No solution specified.</p>
<p>PC 5 Electricity Transmission Line Easement Lot layout and design adjoining an Electricity transmission line easement promotes community safety and well being.</p>	<p>AS 5.1 Lot layout design is in accordance with Schedule 3: "Powerline/Electricity Easements".</p>
<p>PC 6 Street Lighting Street lighting is provided: (a) to ensure safety of vehicles, cyclists and pedestrians; and (b) to an appropriate engineering standard.</p>	<p>AS 6.1 Street lighting is designed and constructed in accordance with Schedule 2: "Standards for Roads, Car Parking, Access and Manoeuvring Areas".</p>
<p>PC 7 Water Supply Each lot has an adequate volume and supply of water, which is also adequate for fire fighting purposes⁴².</p>	<p>AS 7.1 Each lot is connected to Council's reticulated water supply system in accordance with Schedule 4: "Standards for Water Supply".</p>
<p>PC 8 Effluent Disposal Each lot provides for the treatment and disposal of effluent and other waste water to ensure the protection of public health and environmental values.</p>	<p>AS 8.1 Each lot is connected to Council's reticulated sewerage system in accordance with Schedule 4: "Standards for Water Supply".</p>
<p>PC 9 Stormwater Stormwater is collected and discharged so as to: (a) protect the stability of buildings or use of adjacent land; and (b) protect and maintain environmental values.</p>	<p>AS 9.1 Stormwater is collected and discharged in accordance with Schedule 7: "Standards for Stormwater Drainage".</p>

⁴² This cannot include a water allocation from the Queensland Government

Performance Criteria	Acceptable Solution
<p>PC 10 Electricity Each lot is provided with an adequate supply of electricity.</p>	<p>AS 10.1 Each lot is connected to the reticulated electricity supply.</p>
<p>PC 11 Vehicle Access Vehicle access is provided to each lot to ensure safe and functional operation for motorists and pedestrians.</p>	<p>AS 11.1 Each lot has vehicle access to a formed road. Access is to be designed and constructed in accordance with Schedule 2: “Standards for Roads, Car Parking, Access and Manoeuvring Areas” and in areas zoned 'Rural' Schedule 2A - Standards for Rural Roads and Access Areas shall also apply</p>
<p>PC 12 Roads, Firebreaks and Fire Maintenance Trails Adequate all weather road access is provided between each lot and the existing road network. In high and medium bushfire hazard areas, adequate road access is provided for fire fighting/other emergency vehicles and for safe evacuation.</p>	<p>AS 12.1 Roads are designed and constructed in accordance with Schedule 2: “Standards for Roads, Car Parking, Access and Manoeuvring Areas” and in areas zoned 'Rural' Schedule 2A - Standards for Rural Roads and Access Areas shall also apply. AS 12.2 For lots in high and medium bushfire hazard areas as identified on <i>Map R4 – Bushfire Hazard Areas</i>: Roads, firebreaks and fire maintenance trails are designed in accordance with Schedule 12: “Standards for Roads in Bushfire Hazard Areas, Firebreaks and Fire Maintenance Trails”.</p>
<p>PC 13 Electricity transmission Line Easement – Separation Distance Habitable rooms and child oriented uses are separated from electricity easements to ensure community safety.</p>	<p>AS 13.1 Habitable rooms and child oriented uses maintain a minimum separation distance from the most proximate boundary of an Electricity transmission line easement in accordance with Schedule 3: “Powerline/Electricity Easements”.</p>
<p>PC 14 Excavation and Filling Excavating or filling of land: (a) ensures safety and amenity for each lot and for land in close proximity; (b) minimises soil erosion; and (c) limits detrimental impacts on water quality.</p>	<p>AS 14.1 Excavation or filling is undertaken in a accordance with Schedule 8: “Standards for Construction Activities”.</p>
<p>PC 15 Construction Activities Erosion control measures and silt collection measures ensure that environmental values are protected during construction activities.</p>	<p>AS 15.1 During construction, soil erosion and sediment is controlled in accordance with Schedule 8: “Standards for Construction Activity”.</p>
<p>PC 16 Bushfire Hazard Area Reconfiguring a lot maintains the safety of people and property by avoiding areas of High or Medium Bushfire Hazard or mitigating the risk through the provision of firebreaks.</p>	<p>AS 16.1 Reconfiguring a lot is not undertaken in Bushfire Hazard areas as identified as High or Medium Hazard on <i>Map R4 – Bushfire Hazard Areas</i>.</p>

2.0 PART 6 SCHEDULES

Schedule 1 - Dictionary

Terms defined in the IPA have the same meaning as in the IPA.

Where any term used in this Planning Scheme is not herein defined but is defined in the Act or a Local Law, or any other existing legislation, the term shall, for the purposes of this planning scheme, and unless the context otherwise indicates or requires, have the meaning assigned to it by the Act, Local Law or any other existing legislation.

"Accommodation Units" means any premises comprising an integrated development of dwelling units and/or rooming units. The term includes multiple dwelling units, retirement villages and apartment houses.

"Access" is the practical means of entry onto an allotment from a constructed road which abuts the frontage thereof or, where approved by the Council, such means of entry by way of easement.

"Advertising Sign" means a form of signage advertising the business on which the sign is situated.

"Advertising Hoarding" means a form of signage advertising a business or product that is not related to the land on which it is situated.

"Agriculture" means any premises used for the growing and harvesting of crops, pastures, flowers, fruit, vegetables and the like. The term includes horticulture, the growing and harvesting of plantation timber on private land (i.e. farm forestry) and the storage and packing of produce grown on the same site. The term does not include domestic horticulture or native timber harvesting.

"Ancillary use" refers to a use which is associated with, but incidental and subordinate to another use.

"Building line" means a line designated in accordance with a permit or other statutory requirement beyond which a building shall not encroach.

"Camping Ground" means any land, building or other structure used or intended to be used for holiday and recreational purposes which involves primarily the setting up and use of tents for temporary accommodation. The term includes any ancillary amenity building but does not include a caravan park as herein defined.

"Caravan Park" means any premises used for the parking and/or siting of caravans and/or relocatable homes for the purpose of providing accommodation. The term includes the use of camping areas and cabins for short term accommodation where such camping areas and cabins are ancillary to the caravan park use. The term also includes any manager's office and residence, any amenity buildings and recreation and entertainment facilities which cater exclusively for the occupants of the caravan park.

"Caretaker's Residence" means a dwelling unit used or intended for use by the proprietor, manager or caretaker of premises used or intended for use for business, commercial, industrial, sporting, recreation, or accommodation purposes on the same site. The term includes the use of the caretaker's premises by the family of the proprietor, manager or caretaker.

"Catering Shop" means any premises used for any of the following purposes or any like purpose:

Cafe	Kiosk
Restaurant	Take Away Food Shop
Tea Room	

"Cattery or kennel" means premises used for boarding, breeding, keeping or training of cats or dogs for business purposes or for their impoundment.

"Cattle Feed Lot" means feeding cattle prepared or manufactured stockfeed at levels greater than necessary for survival in a confined area having a capacity of:

- (i) 150 or more standard cattle units;
- (ii) Other in accordance with Environmental Protection Regulations 1998 – Schedule 1(2).

"Child Care Centre" means premises used or intended for use for the minding or care, but not residence of children. The term includes a kindergarten, crèche, or pre-school.

"Child Oriented Uses" includes the following:

- (i) Child Care Centre;
- (ii) Home-Based Business – providing home based child care service; and
- (iii) Educational Establishment.

"Commencement" means the day upon which the Council has adopted this planning scheme in accordance with the Act.

"Commercial Premises" means displaying or offering goods or services for sale by retail or for other business, professional, entertainment or commercial recreational purposes, unless otherwise defined in this planning scheme.

"Commercial Activities" means premises used for activities involving the provision of goods, food services or entertainment including:

- (i) Catering Shop;
- (ii) Commercial premises;
- (iii) Hotel;
- (iv) Professional office;
- (v) Shop; and
- (vi) Tourist Facility.

"Community Use" means use of premises for the provisions of cultural, social or community services, e.g. community centre, community hall, youth club, library, church or public building.

"Community Orientated Uses" means premises used for activities involving the provision of social, cultural, educational, community, infrastructure, hospital, cemeteries, crematorium and government services including:

- (i) Child Care centre;
- (ii) Educational Establishment;
- (iii) Place of Worship; and
- (iv) Public utility.

"Council" means the Council of the Shire of Bungil.

"Curtilage" means the area of land appurtenant to a building or other structure.

"Dual Occupancy" means any premises used as two (2) only dwelling units which are attached.

"Dwelling House" means any separate premises used as a single detached dwelling unit. The term includes removal homes. The term does not include caretaker's residences, caravans or relocatable homes, or a dwelling unit comprising part of a dual occupancy or accommodation units.

"Dwelling Unit" means habitable rooms and other spaces used or intended for use as a self-contained unit to accommodate one(1) household.

"Educational Establishment" means any premises used for any of the following purposes, or any like purpose (whether or not residential accommodation and ancillary uses are provided for the users of such premises):

Academy	Kindergarten
Agricultural college	Lecture hall
Art gallery	Library
Child care centre	Museum
College	Pre-school
Convent	School
Cultural centre	Sheltered workshop
Institute of advanced education	Technical college
Institute of technology	University

"Extractive Industry" means any premises used for the winning or treatment on the land or on adjacent land, of gravel, rock, sand, soil, stone, or other similar materials. The term does not include the removal of materials authorised by Section 106(1) of the *Local Government Act 1993*, or mining within the meaning of the *Mineral Resources Act 1989*. *Transport Infrastructure Act* – extraction of material from roadway.

"Forestry" means any land, building or other structure used or intended for use for the planting, growing and harvesting of trees as a commercial venture.

"Gross Floor Area" means the sum of the floor areas (inclusive of all walls, columns and balconies, whether roofed or not) of all storeys of every building located on a site, excluding the areas (if any) used for building services, a ground floor public lobby, a public mall in a shopping centre, and areas associated with the parking, loading and manoeuvring of motor vehicles.

"Habitable Room" means a room that is designed, constructed or adapted for the activities normally associated with domestic living, and for this purpose:

- (i) includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, sunroom, and the like; and
- (ii) excludes, in addition to bathrooms, laundries, water closets, and the like, such rooms or spaces as food storage pantries, walk-in wardrobes, corridors, enclosed verandahs, hallways, lobbies, photographic darkrooms, clothes drying rooms and office spaces of a specialised nature occupied neither frequently nor for extended periods.

"Health Care Premises" means any premises used as a maternal and child welfare centre, an x-ray centre or a district clinic, or for the providing of professional services of a physiotherapist, medical practitioner, dentist, psychiatrist, or chiropractor or other health services, but does not include hospitals.

"Home-Based Business" means a business conducted within the curtilage of a dwelling unit, where the person responsible for the business is a resident of that dwelling unit.

"Household" means a person living alone or two (2) or more persons who live together.

"Host Home Accommodation" means any premises where the owner or host resides on the premises on a full time basis, and provides accommodation for visitors. The term includes bed and breakfasts, and accommodation provided in conjunction with the use of the premises for agriculture or animal husbandry.

"Hotel" means any premises licensed under the *Liquor Act 1992* primarily used for the sale of liquor for the consumption on site. When provided in conjunction with the hotel, the term includes a bottle shop, dining facilities and short term accommodation, but does not include any other shop or indoor entertainment.

“Indoor Recreation” means any premises used for any of the following purposes or any like purpose:

Amusement hall	Gymnasium
Bazaar	Meeting hall (including places of worship)
Billiard saloon	Music hall
Bowling centre	Premises specified in a Cabaret License issued under the <i>Liquor Act 1992</i>
Cinema	School of art
Circus (indoor)	Side show (indoor)
Club (non-residential)	Skating rink (indoor)
Concert hall	Squash court
Court (covered)	Stadium (indoor)
Covered swimming pool	Theatre (indoor)
Entertainment machines (more than two (2))	
Exhibition	

The term includes ancillary activities such as kiosk or beverage bar but does not include hotels.

“Industrial Activities” means premises used for activities involving the manufacture, production, servicing, storage and distribution of goods, articles, equipment or vehicles including:

- (i) Extractive industry;
- (ii) Industry;
- (iii) Noxious or Offensive Industry;
- (iv) Service Station;
- (v) Storage Facility; and
- (vi) Transport Terminal.

“Industry” means any premises used for any of the following operations:

- (i)
 - (a) any manufacturing process whether or not such process results in the production of a finished article; or
 - (b) the breaking up or dismantling of any goods or any goods or any articles for trade, sale or gain, as ancillary to any business; or
 - (c) repairing and servicing of articles including vehicles, machinery, buildings or other structures, laundering of articles but not including on-site work on buildings or other structures; or
 - (d) any operation connected with the installation of equipment and services and the extermination of pests but not including on site work on buildings or other structures or land; or
 - (e) treating waste material; or
 - (f) the storage or sale of any solid, liquid or gaseous fuel where such storage is not for a purpose separately defined herein; or
 - (g) any process of testing and analysis; and
- (ii) when conducted on the same land as any of the above operations:
 - (a) the storage of goods used in connection with or resulting from any of the above operations; or
 - (b) the provision of amenities for persons engaged in such operations; or
 - (c) the sale of goods, resulting from such operations; or
 - (d) any work of administration or accounting in connection with such operations.

The term does not include extractive industry or other use defined separately in this section:

“Low Impact Industry” - means any industrial activity which is not classified as an environmentally relevant activity by the *Environmental Protection Act 1994* or which is a level 1 or 2 ERA and is devolved to Council, and which in the opinion of Council is unlikely to:

- (i) cause any interference with the amenity of adjoining areas as a result of traffic generation, hours of operation, appearance, the emission of noise, vibration, light, odours, fumes, steam, soot, ash, dust, waste products, electrical interference or otherwise;

- (ii) impose a load on any public utility greater than that which is required for the normal development of the locality in which the industry is carried out on; and
- (iii) result in impacts beyond the boundaries of the site due to the materials or processes involved or the products or wastes produced.

The term includes:

- (i) the ancillary storage of flammable or combustible liquids in accordance with the Building (Flammable and Combustible Liquids) Regulation, but not in quantities that would require licensing under that regulation; and
- (ii) activities commonly referred to as service trades or service industry.

"Medium Impact Industry" - means any industrial activity not being a Low Impact Industry or High Impact Industry as defined herein.

"High Impact Industry" - means any activity which is classified by the *Environmental Protection Act 1994* as a level 1 environmentally relevant activity that has not been devolved to local government, or any activity which is not classified as level 1 environmentally relevant activity but which:

- (i) are likely to result in material environmental harm (as defined in the *Environmental Protection Act 1994*), due to the materials or processes involved or the products or wastes produced;
- (ii) are likely to generate noise greater than Labg.T +5db(A) at any boundary of the site; or
- (iii) require a licence under the Building (Flammable and Combustible Liquids) Regulation and are within 200 metres of land zoned Urban or Rural Residential.

The term includes activities commonly referred to as noxious, hazardous, or offensive industries and salvage yards.

"Intensive Animal Industry" means the use of premises including buildings, structures, pens, storage areas and effluent treatment areas for commercial or other non domestic activities involving the breeding, keeping or depasturing of animals where the animals:

- a. are reliant on prepared or manufactured feed for production purposes⁴³; and/or
- b. are temporarily held pending transportation or marketing.

The term includes the use of premises for purposes such as:

- (i) Aquaculture;
- (ii) Dairy;
- (iii) Commercial Livestock Dip;
- (iv) Cattle Feed Lot;
- (v) Piggery;
- (vi) Stable;
- (vii) Cattery;
- (viii) Kennel;
- (ix) Commercial Stockyard.

"Mean Building Height" means that point of a building measured from finished ground level to the highest ridgeline of the building (e.g. roof or parapet).

"Minor building work" means building work:

- (i) to which the provisions of the Building Code of Australia do not apply because the work does not have structural or fire safety significance; or
- (ii) which results in an increase in the existing gross floor area by the lesser of 50m² or 10%, whichever is the lesser.

⁴³ Excluding supplemental feeding for weaning purposes or for emergency purposes.

"Motel" means any premises used for temporary accommodation of travellers and the motor vehicles used by them and includes, if provided, any restaurant, office and/or manager's residence on the same site. The term also includes boarding-houses, guest houses, hostels, unlicensed hotels, serviced rooms, student accommodation, or any similar use.

"Net density" means, for the purposes of residential subdivision, the number of lots per hectare of land exclusive of public roads, open space and other service areas. Such density is calculated on the assumed basis of 75% of the total area of land proposed to be subdivided.

"Noxious or Offensive Industry" means an industry where:

- (i) the use of premises causes detriment to the amenity of the area by reason of the emission of noise or vibration; and
- (ii) the process involved in the method of manufacture or the nature of the materials or goods which are used, produced or stored;
- (iii) causes fumes, vapours or gases or discharges dust, foul liquid, blood or other impurities; or
- (iv) constitutes a danger to persons or premises.

"Open Space and Recreation Activities" means premises used for activities involving sport, active or passive recreation including:

- (i) Indoor Sport; and
- (ii) Outdoor Sport.

"Off-street Carpark" means any premises used solely for the temporary parking or temporary storage of motor vehicles.

"Park" means the use for recreational and/or conservation purposes of land which is normally open to the public with or without charge and includes any vehicle parking areas associated therewith. The term includes a children's playground and a sports field or outdoor court.

"Piggery" means any premises used for the keeping, pasturing, feeding or watering of pigs, or the disposal of wastes so produced where the number of pigs exceeds 10.

"Place of Worship" means premises used for the public, religious and associated social and recreational activities of a religious organisation whether or not those premises are also used for religious instruction but does not include Child Care Centre or Educational Establishment.

"Premises" has the meaning of the *Integrated Planning Act 1997*.

“Professional Office” means any premises used or intended for use for the provision of professional services or the giving of professional advice by any person qualified and professionally registered to practice or carry out the business or occupation, or by companies practicing or carrying on the business of any of the professions included in but not limited to the following list:

Accountants	Consultants (not associated with equipment sales)
Actuaries	Debt collectors
Advertising consultants/agents	Draftsmen
Analysis – market, systems	Engineers – chemical, civil, communication, designing, electrical, mechanical, structural
Architects	Geologists
Artists – commercial, teachers	Landscape architects
Attorneys – patent	Photographers
Auditors	Planners – regional, city, town and country
Authors	Solicitors
Barristers	Surveyors – aircraft, building, engineering, health, marine, mining, quantity, registered, ship
Cartographers	Teachers (other than a dancing teacher or a music teacher)
Consuls	Valuers

“Public Utility” means the use of premises for any public utility undertakings by Council, or other agency or organisation providing community infrastructure including:

- (i) the conveyance of water, sewerage and stormwater drainage;
- (ii) the reticulation of electricity or gas;
- (iii) the collection of garbage;
- (iv) the provision and maintenance of roads, directional signs and traffic control devices; and
- (v) public transport facilities, including railways, other than depots, workshops, offices or Transport Terminals.

The term does not include Telecommunication facility.

“Refrigerated Animal Carcass Storage” means refrigerated containers set up to receive and store carcasses of animals.

“Residential Activities” means premises used for the activities involving the accommodation of persons, including:

- (i) Accommodation Units;
- (ii) Host Home Accommodation;
- (iii) Caretakers Residence;
- (iv) Dwelling House;
- (v) Home – Based Business; and
- (vi) Multiple Dwelling.

“Residential Outbuilding” means any premises constructed or placed on an allotment with or without a dwelling house and which constitutes the following uses:

- (a) a Class 10 building according with the classification of building under the Australian Building Code; or
- (b) any roofed structure (whether fixed or moveable) wholly or partly enclosed by walls which is not classified as Class 1 to 10 inclusive, where a building is erected with or without a valid building approval.

The term includes sheds, garages and shipping containers.

“Rooming Unit” means any part of a building used or intended for use to accommodate one (1) household but which is not a self-contained unit.

“Sensitive Land Uses” includes: Accommodation Units, Bed and Breakfast premises, Child Care Centre, Dwelling House, Educational Establishment, Home Based Business providing home-based child care service, Dual Occupancy, Tourist Facility and includes land in the Town Zone.

“Service Station” means any premises used for the sale by retail of petrol and automotive distillate or any derivatives, capable of use in internal combustion engine, and for all or any of the following purposes, namely:

- (i) The fuelling of motor vehicles involving the sale by retail of motor fuel;
- (ii) The following activities when carried out in connection with the fuelling of motor vehicles:
 - (a) the sale by retail of petroleum products, automotive parts and accessories and goods for the comfort and convenience of travellers; and
 - (b) the servicing and minor repairs of motor vehicles.

The term does not include Shop or Industry.

“Shop” means any premises not exceeding a gross floor area of 250m² and comprising one (1) or more traders or occupiers used for the purpose of displaying or offering goods for sale or hire to the public or for the rendering of personal services to the public. The term includes ancillary storage of goods and administration and accounting activities. The term does not include commercial premises, hotel, industry, retail showroom or shopping centre as herein defined.

“Shopping Centre” means any premises used or intended for use as a shop or group of shops in the form of an integrated development having a gross floor area exceeding 250m² but less than that which constitutes a major shopping development as herein defined, whether or not such building is also used or intended for use for any one or more of the following purposes:

- (i) Commercial premises;
- (ii) Food outlet;
- (iii) Service industry;
- (iv) Restaurant;
- (v) Health care practice;
- (vi) Other like uses.

A **major shopping development** is defined as a development that includes or comprises:

- (i) The use of land exceeding one (1) hectare in area; or
- (ii) The erection and use of any building or other structure of a gross floor area exceeding 4,000 m².

“Showroom” means any premises used for the display and/or sale of large and/or bulky items such as agricultural equipment, boats, caravans, electrical goods, furniture, hardware, motor vehicles or the like. The term includes any area used for the ancillary use of selling of spare parts and the carrying out of repairs, servicing and detailing. The term does not include shops.

“Site” means any land on which development is carried out or is proposed to be carried out whether such land comprises:

- (i) the whole of any one (1) lot, or parcel of land;
- (ii) only part of one (1) lot;
- (iii) more than one (1) lot where each lot is contiguous with the other or another lot;
- (iv) jointly used lands which are not adjoining lands.

“Storage Facility” means premises used for the storage of goods, including the selling of those goods by wholesale. The term includes storage activities such as a builder’s yard or construction contractor’s yard, a truck, vehicle or plant parking depot. The term also includes the following activities when carried out in connection with a storage activity:

- (i) the work of administration or accounting; and
- (ii) the garaging and routine servicing of vehicles associated with the conduct of the storage activity.

“Storey” means the space within a building which is:

- (i) between a floor and the floor above; or
- (ii) where there is no floor above, between a floor and any ceiling or roof above it; or
- (iii) a foundation area, garage workshop, storeroom or the like where the height between the ground level and the top of the floor immediately above is 1.5 metres or more.

For the purposes of counting the number of storeys in a building, the number shall be the maximum number of storeys of the building that may be intersected by the same vertical line, not being a line which passes through any wall.

“Structure” has the meaning given in the *Building Act 1975*.

“Telecommunication Facility” means any line, equipment, apparatus, tower, antenna, or other structure or thing used by the holder of a carrier’s licence under the *Telecommunications Act 1997 (Aust)* as part of a system or network which carries, or is intended to carry, communications by electromagnetic energy.

“Telecommunications facility - low impact” means “low impact facilities” as defined by the Telecommunications (Low Impact Facilities) Determination 1997.

“Temporary Accommodation” means an approved⁴⁴ building or other structure or not more than one caravan on an allotment in which an owner or occupier of that allotment is to reside temporarily whilst constructing that persons own permanent dwelling house on the land which the temporary accommodation is located. This term does not include a shipping container used for the purpose of accommodation.

"The Act" means the *Integrated Planning Act 1997*.

“Tourist Facility” means any premises used or intended for use primarily for the purpose of providing entertainment, recreation and attractions for the general touring or holidaying public. The term includes accommodation or eating facilities for tourists as an ancillary use, together with any buildings, structures or other uses.

"Transport Terminal" means any premises used for a road transport passenger terminal, a water transport passenger terminal, air transport passenger terminal, a bus station or heliport. The term does not include transport depots.

“Undefined Use” means any use not defined in this section.

“Use” (in relation to a use class) means a use for a single purpose that is part of that use class.

“Use class” means a group of uses having different purposes but broad characteristics in common.

"Warehouse" means any premises used for the storage of goods, merchandise or materials in large stocks pending their distribution or sale for the purposes of resale only.

⁴⁴ Approval is required under the Building Code of Australia.

Schedule 2 - Standards for Roads, Car parking Access and Manoeuvring Areas

Street Design Acceptable Measures

Description	Local Access Place / Access Street	Local Collector Street	Local Industrial Street	Trunk Collector / Arterial
Traffic Catchment (max)	50 lots (500 vpd)	150 lots (1500 vpd)	8 hectares (3000 vpd)	N/A
Design Speed (max)	50 kph	50 kph	50 kph	60 kph
Carriageway Lanes (No)	2	2 plus parking	2 plus 2 parking	2 plus 2 parking
Carriageway Widths (measured between channel inverts) (Explanation 3)	10 m except cul de sac-9m	12 m except <60 lots 10m	12 m	14 m
Verge Width (min)	4 m	4.0 m	5.5 m	5.5 m
Road Reserve Width Minimum	20 m except cul de sac-18m	20 m	25 m	25 m
Carriageway Longitudinal Drainage Kerbing required	Yes	Yes	Yes	Yes
Kerb Types Longitudinal kerb & channel Traffic islands Kerb connectors required at subdivisional stage.	Layback Type M3 (Explanation 2) Semi-mountable No			
Footpaths Required Width	No	Yes > 60 lots 1.2 m both sides	No	Yes 1.2 m both sides
Dual Use Footpath / Cycleway Required Width	N/A N/A	N/A N/A	N/A N/A	N/A N/A
Carriageway Grades Desirable max Absolute max Desirable min Absolute min	10% 12% 0.5% 0.3%	10% 12% 0.5% 0.3%	8% 10% 0.5% 0.3%	8% 10% 0.5% 0.3%
Vertical Sight Distance General minimum distance	40 m (Explanation 4)	60 m (Explanation 4)	110 m (Explanation 4)	110 m (Explanation 4)
Carriageway Crossfall One way, two way or both Desirable max Absolute max Desirable min Absolute min	Two way 5% 7% 3% 2%	Two way 5% 7% 3% 2%	Two way 4% 5% 3% 2%	Two way 4% 5% 3% 2%
Carriageway Seal Required (new roads)	Bitumen (Explanation 5)	Bitumen (Explanation 5)	Bitumen (Explanation 5)	Bitumen (Explanation 5)
Road Widening Seal Type Crossfall	As above As above	As above As above	As above As above	As above As above
Pavement Design Method	Austroads	Austroads	DMR	DMR
Minimum Pavement Depths	300 mm (240 mm allowed in some limited areas)	300 mm	300 mm	300 mm

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Schedule 2 - Standards for Roads, Car parking Access and Manoeuvring Areas

Description	Local Access Place / Access Street	Local Collector Street	Local Industrial Street	Trunk Collector / Arterial
Speed Control Devices Required	Yes (No speed bumps)	Yes < 60 lots (No speed bumps)	No	No
Superelevation of Carriageway required?	No	No	No	No
Private Access to Property – maximum grade	(Explanation 8)	(Explanation 8)	(Explanation 8)	(Explanation 8)
Features in Paving (e.g.: paving, patterned concrete to thresholds, infills etc)	Acceptable at intersections and speed control devices	Acceptable at intersections and speed control devices	Not acceptable	Not acceptable
Cul-de-sac (max. length 200 m) Single movement turns: Preferred: Min radius in head (clear of parking) Approach radius Min footpath width at any point Three point turns (Tee, Offset Square, Wye): Preferred. Subject to approval. Min footpath width at any point.	Yes 9.0 m (central bowl) 20.0 m (central bowl) 2.5 m No Yes 2.5 m	N/A N/A N/A N/A N/A N/A N/A	Yes 12.5 m (central bowl) 20.0 m (central bowl) 2.5 m No Yes 2.5 m	N/A N/A N/A N/A N/A N/A N/A
Street Lighting	(Explanation 1)	(Explanation 1)	(Explanation 1)	(Explanation 1)
Utility Service Allocations Overhead electrical permitted Telecom (underground) in single trench: Required Alignment Electrical (underground) and Telecom in shared trench: Required Alignment	No (Explanation 6) No 0.9 – 1.8 m clearance to the registered property alignment. No 0.9 – 1.8 m clearance to the registered property alignment.	Yes > 60 lots (Explanation 6) No 0.9 – 1.8 m clearance to the registered property alignment. No 0.9 – 1.8 m clearance to the registered property alignment.	Yes (Explanation 6) No 0.9 – 1.8 m clearance to the registered property alignment. No 0.9 – 1.8 m clearance to the registered property alignment.	Yes (Explanation 6) No 0.9 – 1.8 m clearance to the registered property alignment. No 0.9 – 1.8 m clearance to the registered property alignment.
Water Reticulation: Required Alignment Sewerage Reticulation: Required Alignment	Yes 1.8 – 2.7 m Yes (Explanation 7)	Yes 1.8 – 2.7 m Yes (Explanation 7)	Yes 1.8 – 2.7 m Yes (Explanation 7)	Yes 1.8 – 2.7 m Yes (Explanation 7)

Schedule 2 - Standards for Roads, Car parking Access and Manoeuvring Areas

Description	Local Access Place / Access Street	Local Collector Street	Local Industrial Street	Trunk Collector / Arterial
Natural gas reticulation: Required Alignment	Yes 3.3 – 3.85 m	Yes 3.3 – 3.85 m	Yes 3.3 – 3.85 m	Yes 3.3 – 3.85 m

Table Explanations

1. The required design standard is to be discussed with Council.
2. Traffic islands should have semi-mountable kerbs, unless mountable kerbs are specified to allow access for larger vehicles. Barrier kerb and channel is required for all park frontages, unless satisfactory provisions are made to prevent vehicular access to park (e.g.: fences).
3. For rural residential subdivision where no kerb and channel is provided, the width of the sealed carriageway required is seven (7) metres.
4. In accordance with the relevant section of Queensland Streets.
5. Two coats primer seal 14 mm & 7 mm aggregate. (check aggregate)
6. If overhead power exists along the frontage of the subdivision, it may remain. Poles may require relocation for street lighting requirements.
7. Generally provided within the lot two (2) metres from property alignment.
8. Property access should conform with standard verge cross-sections. The maximum crossfall within street reserve is 15%. The maximum driveway grade is 25% with a maximum change in grade of 10%.
9. Use absolute design values only with approval of Council.

Minimum Car Parking Requirements

Purpose	Minimum Number of Car Parking Spaces	Minimum Service Vehicle Provision
Accommodation Units	1.5 spaces for each dwelling unit up to 10.0 units then 1.4 spaces per additional unit, and 0.5 spaces for each rooming unit and 0.25 spaces for each dormitory or nursing home bed. Student accommodation 0.7 spaces per student.	SRV where more than 10 units.
Caravan Park	1.0 space for each site, plus 1.0 car washing bay for each 10 relocatable home and caravan sites.	HRV
Catering Shop	1.0 space for each 10m ² or part thereof of GFA plus room for 8 vehicles to queue if the premises includes a drive through facility.	SRV, or AV where part of a shopping centre
Commercial Premises	1.0 space for each 30m ² or part thereof of GFA.	SRV
Dual Occupancy	0.7 spaces per bedroom.	-
Dwelling House	1.0 space.	-
Educational Establishment	1.0 space for each staff member plus either 1.0 space for each 20 students for a secondary school or 1.0 space for each 10.0 students for a tertiary education facility.	SRV
Health Care Premises	1.0 space for each 30m ² of part thereof of GFA.	-

Purpose	Minimum Number of Car Parking Spaces	Minimum Service Vehicle Provision
Home-Based Business	In addition to that required for the Dwelling House - 1.0 space; or - 2.0 spaces where an employee is engaged.	-
Host Home Accommodation	1.0 space per guest sleeping room.	-
Hotel	1.0 space for each 30m ² or part thereof of non-residential GFA plus 1.0 space for each dwelling and rooming unit.	AV
Indoor Entertainment	1.0 space for each 20m ² or part thereof of GFA or 1.0 space per four (4) users or visitors whichever is greater. Plus, 1.0 bus parking space (minimum dimensions as specified).	SRV
Industry	1.0 space for each 2.5 employees or 1.0 space for each 100m ² or part thereof of GFA, or 2.0 spaces, whichever is greater OR Where a service trade activity: 1.0 space for each 20m ² or part thereof or retail GFA plus 1.0 space for each 50m ² or part thereof of other GFA.	AV where the site has an area of not less than 2,000m ² . HRV otherwise.
Miscellaneous Use	As determined by Council.	-
Motel	1.0 space for each unit, plus 1.0 space for a resident manager, plus 1.0 space per 30m ² GFA of dining area that the motel might have. Plus, 1.0 bus parking space (minimum dimensions as specified).	SRV
Outdoor Entertainment	4.0 spaces per playing court, plus 30.0 parking spaces for a bowling green, plus 25.0 spaces per hockey, football or cricket field, plus 1.0 space for every 40m ² of public swimming pool area. Plus, 1.0 bus parking space (minimum dimensions as specified).	-
Professional Office	1.0 car space per 30m ² of gross floor area.	N/A
Service Station	4.0 spaces for each service bay plus 1.0 space for each 30m ² or part thereof of GFA of any shop component of the use.	AV
Shop	1.0 space for each 20m ² or part thereof of GFA. Where a shop has immediate road frontage the number of on-street car parking spaces may be included in the numbers of car parking spaces for the development. The on-street car parking is calculated as including: <ul style="list-style-type: none"> The car parking spaces immediately in front of the shop between the property boundary lines; and Half the car parking spaces within the median strip contained within the extension of the property boundary. Plus, 1.0 bus parking space (minimum dimensions as specified) where part of a shopping centre.	AV where part of a shopping centre, SRV otherwise.
Showroom	1.0 space for each 50m ² or part thereof of GFA.	HRV
Transport Depot	0.6 spaces for each truck in the fleet plus 1.0 space for each 150m ² of GFA. Plus, 1.0 bus parking space (dimensions as specified).	AV

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Schedule 2 - Standards for Roads, Car parking Access and Manoeuvring Areas

Purpose	Minimum Number of Car Parking Spaces	Minimum Service Vehicle Provision
Warehouse	1.0 space for each 50m ² or part thereof of office GFA plus 1.0 space for each 150m ² or part thereof of other GFA.	AV where the site has an area of not less than 2,000m ² , HRV otherwise.

Where: SRV = small rigid vehicle
 HRV = heavy rigid vehicle
 AV = articulated vehicle, and
 GFA = gross floor area.

Bus parking space minimum dimensions:
 Width 4 metres
 Height 4 metres
 Length 20 metres

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Schedule 2A - Standards for Rural Roads and Access Areas

In the absence of a Priority Infrastructure Plan, prepared under the *Integrated Planning Act 1997*, the standards for rural roads shall be determined by the Shire Engineer bearing in mind PC 11 and PC 12 of the Reconfiguration of a Lot Code.

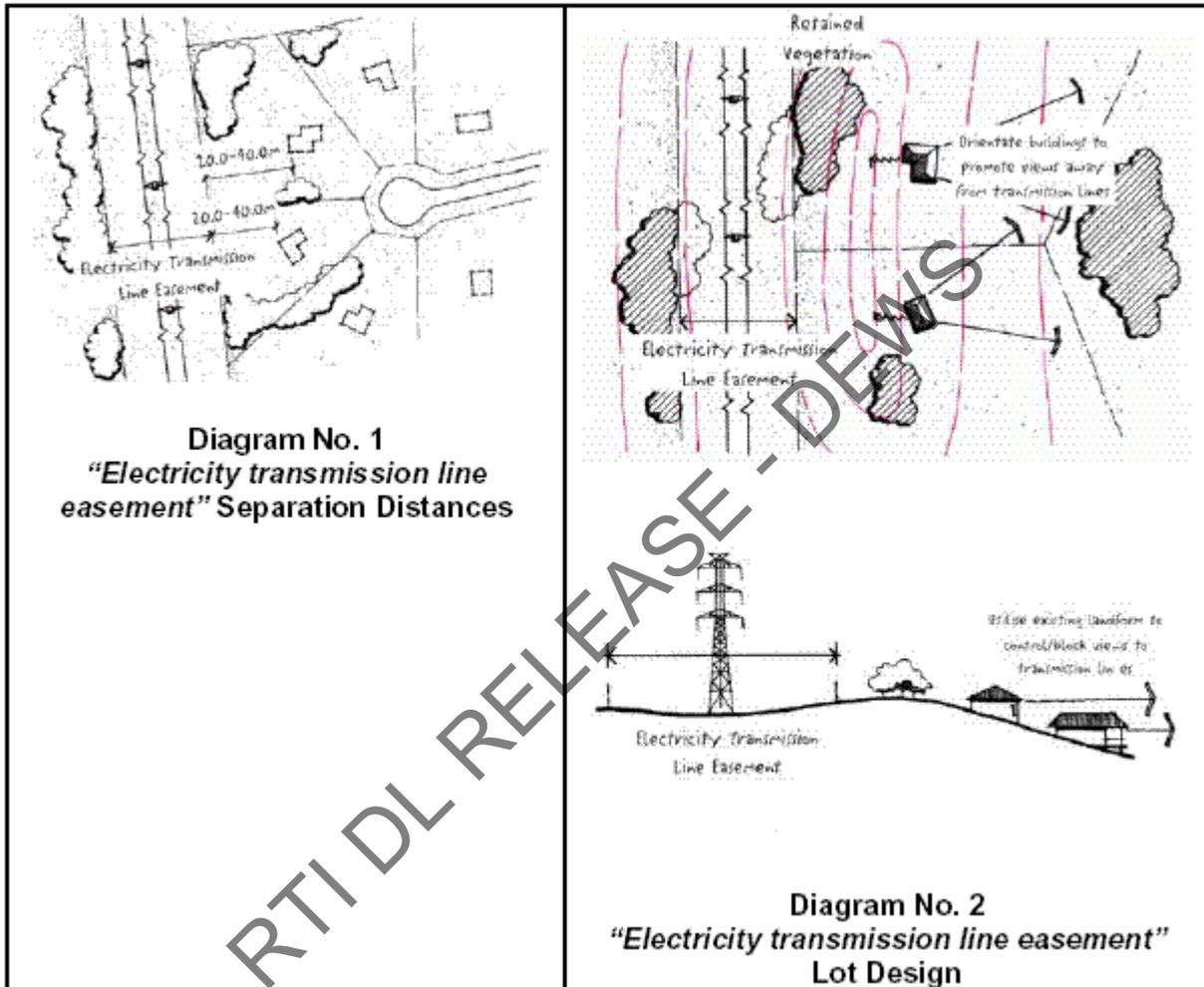
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Schedule 3 - Powerline/Electricity Easements

1. Separation from Powerline/Electricity Easements

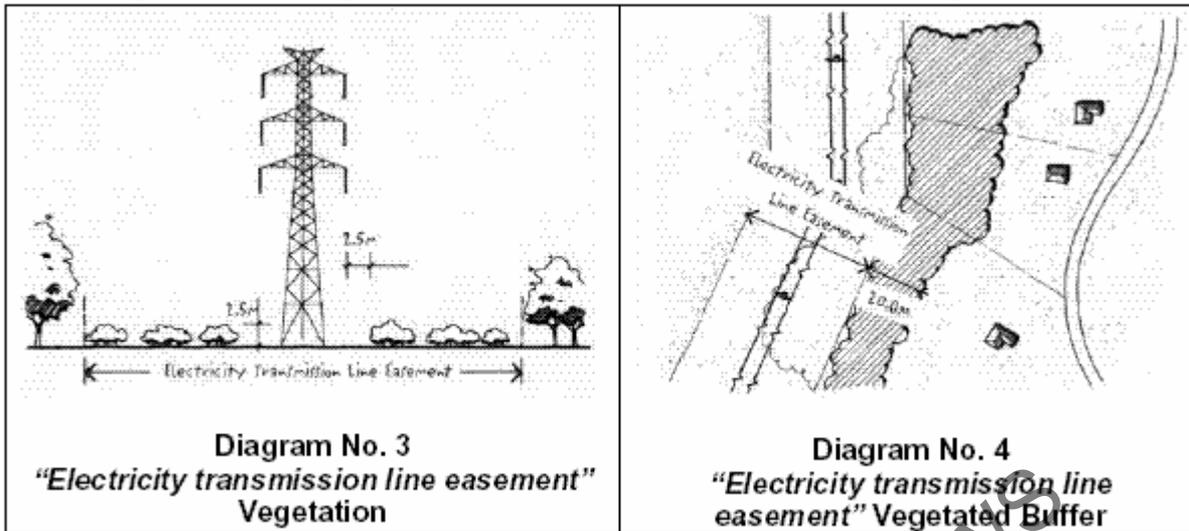
Separation to Powerline/Electricity Easements in accordance with the following distances:

Separation or Buffer Distance	Transmission Line Size
20.0 metres	Up to 132kV
30.0 metres	33kV-275kV
40.0 metres	Greater than 275kV



2. Powerline/Electricity Easements – Vegetation and Vegetated Buffers

Vegetation and Vegetated Buffers in accordance with the following:



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Schedule 4 - Standards for Water Supply

(1) Standards for Reticulated Water Supply

Reticulated Water Supply in accordance with:
WSA03 Water Reticulation Code of Australia DNRM 2002

Guidelines for Planning and Design of Urban Water Supply Schemes DNRM.

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Schedule 5 - Separation Distances for Extractive Industries

Separation distances to extractive industries (blasting and non blasting) are as follows:

Extractive Industry Type	Separation Distance (metres)
Blasting	1,000
Non-blasting	200

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Schedule 6 - Standards for Sewerage Supply

- (1) Standards for Reticulated Sewerage is in accordance with:

WSA02 Sewerage Code of Australia DNRM 2002
WSA04 Pumping Station Code of Australia DNRM 2001
Guidelines for Planning and Design of Sewerage Supply Schemes Volume 1 and Volume 2
DNRM

- (2) Standards for On-Site Sewerage is in accordance with:

On Site Sewerage Code DNRM AS1547.2000
On-Site Sewerage Facilities Guidelines for Effluent Quality DNRM.

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Schedule 7 - Standards for Stormwater Drainage

- (1) Standards for Stormwater Drainage are in accordance with:
- Qld Urban Drainage Manual (Volume1 text, Volume 2 Design Charts)
 - Australian Rainfall and Runoff (Volume 1 A guide to Flood Estimation).

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Schedule 8 - Standards for Construction Activity

(1) Construction Standards in accordance with:

Soil Erosion and Sediment Control – Engineering Guidelines for Queensland Construction Sites
(IE Aust – or later versions)

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Schedule 9 - Environmental Management Plan Guidelines

- (1) This Policy provides guidelines for the preparation of an Environmental Management Plan and/or a Conservation Agreement.
- (2) In the Planning Scheme, environmental protection and conservation is identified as one of the desired environmental outcomes for the Shire in that:
- Areas of high scenic amenity, remnant vegetation, existing wetlands, and fauna habitats of the Shire are protected;
 - Land degradation, including contamination, erosion, salinity, and landslip, is reduced and the potential for further degradation is minimised;
 - Ecological sustainability is achieved by maintaining and improving biodiversity, water and air quality.
- (3) **Environmental Management Plan:**
- i. An Environmental Management Plan shall be submitted with an application that conserves and protects areas identified by and/or considered by Council to be subjected to, or potentially subject to landslip, erosion, erosive flooding, salinity or any other form of land degradation, or for areas where building work may impact on the environment and amenity of the neighbourhood.
 - ii. The Environmental Management Plan is required to address only the environmental issues relevant to the particular application. For example, if only flooding was identified for the application, the Environmental Management Plan will then only be required to address issues such as flooding and water quality.
 - iii. An Environmental Management Plan must be prepared by a suitably qualified consultant and/or agency, and must include details of the author's qualifications. Any proposal requiring the submission of an Environmental Management Plan shall conduct works and operations in accordance with the approved Environmental Management Plan. Council may refuse an application if an Environmental Management Plan has not been completed to Council's satisfaction. The Environmental Management Plan should serve the function of integrating environmental conditions under various legislations or for local government approval into a site management system.
 - iv. The Environmental Management Plan should link findings of development assessment (such as impact assessment) into the management system and ongoing auditing of environmental performance.
 - v. The Environmental Management Plan shall contain the following information where relevant, and other matters at the discretion of Council.
 - (a) **Land Capability Assessment**

An assessment of land capability of the site is required as part of the Environmental Management Plan to determine the presence of degraded land, as supporting information to an erosion control plan and to assist in assessing the impacts of any effluent disposal on the environment.

Soil analysis of representative soil profiles to 1.5 metres should be provided for each soil identified. The soil analysis should include the following:

- Electrical Conductivity (10 cm increments);
- pH (10cm increment);
- Chloride (10 cm increment);
- CEC 0-10cm, 20-30cm, 50-60cm, 80-90cm;
- Particle size distribution 0-10cm, 20-30cm, 50-60cm, 80-90cm;
- Exchangeable sodium percentage (sodicity).

(b) **Construction**

The report should demonstrate that construction can be practically and safely carried out on the site. The report shall include at least a geological study and a study of the effects of surface drainage, introduced groundwater and sewerage effluent on the stability of the site.

(c) **Erosion Control**

- Temporary erosion control works such as drains, silt fences, silt traps and diversion of water around disturbed areas should be in place at an early stage of construction.
- An erosion control plan must be prepared and should meet the standards set out in the *Draft Guidelines for Soil Erosion and Sediment Control* (Institute of Engineers, Australian Institute of Agricultural Science).

(d) **Stormwater Management**

- Council will only consider proposals which have given consideration to stormwater control measures such as retention of natural drainage patterns, retention of vegetation on drainage lines, vegetated drains, flow retardation and porous pavements.
- An assessment of the proposed systems of stormwater runoff (including from roads, roofs, driveways etc) shall be provided.

(e) **Water Quality**

- An assessment to demonstrate the long term sustainability of proposed effluent system shall be provided.
- Assessment should demonstrate that irrigation of effluent and/or landscaping irrigation onto designed disposal areas will not adversely affect the hydrology of the area. This assessment should include a water balance model operating on a daily time step. If necessary, design a vegetation plan to restore the hydrological balance.
- An assessment of the potential for the release of pathogens in treated or untreated effluent should be prepared.

- A report highlighting methods of maintaining effluent systems, and the personnel responsible for that maintenance should be prepared.
- A report highlighting measures to manage and mitigate impacts on water quality from liquid and solid waste other than sewage effluent should be prepared.

(f) **Water Quality**

- Prepare an assessment of the salinity potential of the site. Where salinity potential is identified, a survey should be undertaken to identify high salinity and shallow watertable areas. In the case of the latter, the assessment should indicate the extent and quality of ground water.
- The assessment should demonstrate that increase in deep drainage from the addition of effluent, storm water and landscaping irrigation will not lead to rising saline water tables either on site or on adjacent lands.

(g) **Vegetation/Fauna and Habitats**

- Provide details of location and extent of vegetation to be cleared and how this will influence visual amenity and contribute to land degradation. The management plan is also required to show how ecologically significant areas of remnant vegetation are protected, also fauna and habitats including mitigation strategies to minimise impacts on the flora, fauna and habitat areas.

(h) **Rehabilitation**

- A rehabilitation program should be prepared to restore degraded land.
- Provide a list of species to be re-established in disturbed areas. Rehabilitation should be representative of original biological community structure and composition.
- Topsoil should be stockpiled to assist the revegetation program and measures to prevent erosion losses from the stockpile should be implemented to reduce sedimentation of watercourses. Topsoil must be stockpiled to a maximum of 1.5 metres to reduce microbial breakdown.

(i) **Noise**

Nearby noise sensitive places should be identified. Noise levels generated from the proposal and noise mitigation measures during construction and operation should be identified. The plan should demonstrate consistency with relevant legislation and policies.

(j) **Air**

- Measures to prevent dust becoming a nuisance should be detailed. Measures to prevent odour nuisance should be detailed.
- For proposals that may generate significant odour or air pollution, such as piggeries and industrial activities, the Environmental Management Plan should examine air flow patterns to assist in the assessment of impacts.

- Council will have regard for data on air circulation when considering the appropriateness of proposed locations for such activities.

(k) **Water Supply**

Details on the method and adequacy of water supply.

(l) **Waste Disposal**

Details on the method and adequacy of solid and liquid waste disposal.

(m) **Flooding**

Analyse inundation problems and propose solutions acceptable to Council, that do not detrimentally impact upon adjacent landowners, natural water courses or flood levels in the general area.

(n) **Remedial Measures**

Detail remedial action to be taken in cases where natural watercourses, land or flood levels are adversely effected by the proposal.

(o) **Environmental Impact Statement**

Council may require an Environmental Impact Statement in conjunction with any proposed use or development within the areas designated for water catchment purposes. The Environmental Impact Statement will have particular regard for water quality, erosion/sediment control and effluent treatment and disposal issues.

(p) **Risk Investigation**

Council may require applicants to prepare a risk investigation addressing:

- (i) The extent of potential hazards to environmental integrity, public safety and human life;
- (ii) The possible frequency of potential hazards, accidents, abnormal events. Assess possible cumulative impacts if more than one (1) hazard should occur;
- (iii) Measures taken to protect the environment from pollution and damage associated with accidents and abnormal events;
- (iv) Emergency procedures and contingency plans.

(q) **Buffers**

Where Council considers conflict may occur between the proposed use and nearby existing, or likely future uses, Council may require an area of private land to be maintained as a buffer. The requirement to maintain a buffer may form a condition of approval on a proposal.

(4) Conservation Agreements:

Conservation agreements are tools intended to encourage more effective conservation on private lands, and to build partnerships that will benefit private landowners, government agencies, the community and the environment.

Conservation Agreements do not mean that the land must not be used, nor does it mean that the land must be opened up for public access. The land will remain in private ownership and be managed by the landholder to conserve the area's natural resources, provide for its controlled use, in accordance with the Planning Scheme, Council's local laws and other relevant statute.

Conservation agreements may take one (1) of a number of forms, including:

- (a) *Nature Refuge Agreements*, which are administered by the Environmental Protection Agency and operate under the (Queensland Nature Conservation Act 1992). Nature Refuge Agreements may be attached to the land title.
- (b) *Registrable Planning Covenants*, which operate under the *Land Act 1994*, the *Land Title Act 1994* and the *Integrated Planning Act 1997*. Registrable planning covenants bind the covenantor (landowner or leaseholder) and successors in title.
- (c) *Voluntary Conservation Agreements*, which are administered by local governments. Voluntary conservation agreements do not attach to the land title.

When preparing a covenant or agreement, regard is to be given to relevant guidelines, including, but not limited to *Motivating People: Using Management Agreements to Conserve Remnant Vegetation* Paper 1/97 of the National Research and Development Program on Rehabilitation Management and Conservation of Remnant Vegetation.

An example of the process for the preparation of an agreement recommended in that publication is included in Attachment 1.

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ATTACHMENT 1**Preparing and Writing a Conservation Agreement**

The following steps are recommended in *Motivating People: Using Management Agreements to Conserve Remnant Vegetation* and may be followed in order to prepare a conservation agreement.

1. Bring the parties together to talk through the issues without trying to influence the outcome.
2. Consider all the issues and in particular conservation values, production and use values, and guiding principles of land management and conservation. Ensure all concerns are raised and listed.
3. Reach agreement on the values and needs for the land and guiding principles for the operation of a covenant and its implementation.
4. Discuss all roles and responsibilities in particular those of the landholder and the contracting organisation and any other relevant parties. Try and resolve any outstanding concerns or make a note of them to be considered during the following steps. Resolve any outstanding guiding principles.
5. Reach agreement on the specific roles and responsibilities of the parties. Confirm guiding principles.
6. Discuss the opportunities that may arise ranging from conservation through to commercial applications e.g. seed production, bees, grazing, tourism, education.
7. Reach agreement on specific goals for the land both in relation to conservation and land use.
8. Consider the various options to achieve the goals.
9. Reach agreement on the general direction or strategies to achieve the goals.
10. Consider the range of decisions which need to be taken to implement the strategy and determine priorities - consider any decision making structure required.
11. Reach agreement on the objectives for the covenant.
12. Consider what and how things need to be organised to implement objectives.
13. Reach agreement on any management systems or action plans and in particular: planning and management, joint and individual obligations, access, and scientific research.
14. Discuss how everything will be implemented and any specific actions which are required.
15. Reach agreement on any review systems, methods of compliance and conflict resolution processes.
16. Consider how the enthusiasm can be maintained during the covenant and the level of continuing contact. Ensure expectations of all parties are clear.

Schedule 10 - Historic Cultural Places

The Environmental Protection Agency has advised that the following historic places are listed.

PLACE ID	PLACE NAME	STREET ADDRESS	TOWN/SUBUR B	STATUS
0	Blyth Creek Bridge – Blythedale		Bungil	Reported
0	Muckadilla Railway Complex and Bore Site		Muckadilla	Reported

It should be noted that a “reported place” is not on the register. It is simply recorded as a place of possible cultural heritage significance.

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Schedule 11 - Separation Distances for Intensive Animal Industries**1. Separation of Intensive Animal Industries from Sensitive Land Uses**

- (1) Intensive Animal Industries are separated from sensitive land uses in accordance with the following distances:

Type of Intensive Animal Industry	Animal/Fowl Numbers	Town Zone (metres) and the Roma Town Council Local Government boundary	Public Roads (metres)	Other Boundaries of Land (metres)	Sensitive land uses other than in the Town zone (metres)	Watercourses, wells and bores (metres)
Piggery (Standard Pig Units)	Up to 1,000	2,500	200	50	800	100
	1,001-5,000	3,500	200	50	1,000	200
	5,001-10,000	5,000	200	50	1,500	200
	>10,000	8,000	200	50	2,000	200
Poultry Farm	Up to 1,000	2,000	80	40	800	100
	1,001-10,000	4,000	120	40	1,000	100
	>10,000	5,000	140	40	2,000	100
Lot Feeding (Cattle: Standard Cattle Units)	Up to 500	2,000	200	100	700	100
	501-5,000	6,000	200	130	1,500	200
	5,001-10,000	8,000	200	130	2,000	200
	>10,000	15,000	200	130	2,500	200
Sheep/Goats	Up to 500	1,000	150	100	800	100
	501-1,500	3,000	150	100	800	150
	1,501-10,000	4,000	200	130	1,000	200
	>10,000	7,000	200	130	2,000	200
Other	All	1,000	70	40	700	100

2. Separation of Sensitive Land Uses from Intensive Animal Industries

Sensitive land uses are separated from intensive animal industries in accordance with the following distances:

Type of Intensive Animal Industry	Animal/Fowl Numbers	Separation Distance (metres)
Piggery (Standard Pig Unit)	Up to 1,000	800
	1,001-5,000	1,000
	5,001-10,000	1,500
	>1,0000	2,000
Poultry Farm	Up to 1,000	800
	1,001-10,000	1,000
	>10,000	2,000
Lot Feeding (Cattle: Standard Cattle Units)	Up to 500	700
	501-5,000	1,500
	5,001-10,000	2,000
	>10,000	2,500
Sheep/Goats	Up to 500	800
	501-1,500	800
	1,501-10,000	1,000
	>10,000	2,000
Other	All	700

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Schedule 12 - Standards for Roads in Bushfire hazard Areas, Fire Breaks and Fire Maintenance Trails**1. Standards for Roads in High and Medium Bushfire Hazard Areas**

- (1) Roads in High and Medium Bushfire Hazard Areas are in accordance with the following:
 - a) Roads are designed and constructed with a maximum gradient of 12.5%;
 - b) Cul-de-sacs are not used except where a perimeter road designed in accordance with 2(1)(a) (of this schedule) isolates the development from hazardous vegetation and the cul-de-sac are provided with alternative access linking the cul-de-sac to other roads.

2. Firebreaks and Fire Maintenance Trails

- (1) Firebreaks are provided in accordance with the following:
 - a) Firebreaks consisting of a perimeter road that separates lots from areas of bushfire hazard are designed and constructed so that, the road has a minimum cleared width of 20 metres and the road is designed in accordance with the standards in Schedule 2: "Standards for Roads, Car Parking, Access and Manoeuvring Areas".
 - b) Cleared breaks of a minimum width of six (6) metres are provided in retained bushland within the development to allow burning of sections and access for bushfire response.
- (2) Where it is not practicable to provide firebreaks in accordance with 6.2(1)(a), Fire Maintenance Trails are provided in accordance with the following:
 - a) Located as close as possible to the boundaries of the lot and the adjoining hazardous vegetation;
 - b) The minimum cleared width not less than six (6) metres;
 - c) The formed width is not less than 2.5 metres;
 - d) The formed gradient is not greater than 15%;
 - e) Vehicular access is provided at both ends;
 - f) Passing bays and turning areas are provided for fire-fighting appliances;
 - g) Either located on public land or in an access easement that is granted in favour of the Local Government and QFRS.

PART 7 PLANNING SCHEME POLICIES

Planning Scheme Policy 1 - Information Council May Request

1.0 Purpose

To ensure Council has appropriate information to assist with development assessment.

To ensure applicants are aware of the information Council may request during the development assessment process.⁴⁵

2.0 Information Requirements

2.1 Plans

(1) Plans should contain sufficient information to enable an accurate assessment of the proposal. Appropriate plans include:

- a site analysis plan identifying and describing all existing site features, such as the cadastral boundaries of the site, buildings, structures, roads, vehicle and pedestrian access, car parking, servicing areas, vegetation, topographic, hydraulic and geological features.
- a proposal plan identifying and describing the extent of modification of site features, such as, the cadastral boundaries of the site, buildings, structures, roads, vehicle and pedestrian access, car parking, servicing areas, vegetation, hydraulic and geological features.
- a landscaping plan detailing the location, extent, densities and species of proposed plantings and other external treatments.

(2) Plans should be drawn to scale and observe recognised drafting conventions.

2.2 Existing Use and Site Details

(1) Sufficient detail should be provided to enable Council to accurately determine the nature and extent of the current use of the site as well as the extent of built and natural features on the site. The following details should be provided:

- existing and previous use of the site;
- existing and previous use of adjoining or adjacent sites;
- floor areas of buildings and other external activity areas, including car parking, storage areas and the like;
- site characteristics e.g. levels and contours;
- the nature and location of all services and infrastructure, including easement details.

2.3 Proposed Use and Site Details

(1) Sufficient detail should be provided to enable Council to accurately determine the nature of the proposed development. The following details should be provided:

- details of the proposed use, including floor area of buildings, and external activity areas, including car parking, storage areas and the like.

⁴⁵ An information request may be made pursuant to section 3.3.6 of IPA

2.4 Amenity

- (1) Sufficient detail should be provided to enable Council to accurately determine the likely impact of the proposal on the amenity of the locality. The following details should be provided:
- hours of operation;
 - delivery times of goods;
 - heights of buildings and structures;
 - setbacks and boundary clearances of all buildings and structures; and
 - external lighting arrangements.

2.5 Infrastructure

- (1) Sufficient detail should be provided to enable Council to accurately assess infrastructure requirements. The following information should be provided:
- known or determined flood levels;
 - proposed water supply;
 - proposed effluent disposal;
 - proposed stormwater disposal;
 - proposed method of liquid and solid waste disposal;
 - proposed electricity supply; and
 - proposed telecommunication.

2.6 Traffic and Servicing

- (1) Sufficient information should be provided to enable Council to accurately assess traffic related matters. The following information should be provided:
- traffic likely to be generated by the proposal;
 - the number, type and frequency of vehicles likely to service the proposal;
 - the times and arrangements for servicing of the premises;
 - anticipated car parking requirements; and
 - the extent of car parking, vehicle manoeuvring areas, crossover/access details; loading/unloading areas, service areas.

2.7 Emissions

- (1) Sufficient detail should be provided to enable Council to accurately assess traffic related matters. The following information should be provided:
- the nature of any anticipated emissions (including odour, noise, dust, run-off and the like);
 - measures proposed for the control of emissions;
 - the location and methods of containment and control of waste disposal and waste storage areas;
 - types, quantities, storage methods, and protection measures relating to storage and use of chemicals; and
 - emergency equipment and procedures to be utilised.

2.8 Environmental

- (1) Sufficient detail should be provided to enable Council to accurately determine the likely impact of the proposal. The following information should be provided:
- location of ridgelines and escarpments;
 - location of watercourses and lakes and the extent of associated riparian buffers;
 - location of effluent disposal areas;
 - location and extent of existing vegetation;
 - location and extent of vegetation to be retained; and
 - location of any known sites of indigenous, cultural or natural heritage.

2.9 Constraint areas

- (1) Sufficient detail should be provided to enable Council to accurately determine the likely impact of the proposal on constraint areas, as identified in the Planning Scheme.

2.10 Reconfiguring A Lot

- (1) Sufficient detail should be provided to enable Council to accurately assess proposed reconfiguration of a lot. The following information should be provided:
- existing use of the land;
 - proposed use of the land after subdivision;
 - details of all proposed lots and of areas proposed for roads, parks or other public spaces;
 - details of any proposed filling or excavation;
 - details of any encumbrances (for example easements, leases and the like);
 - contours and levels of the land;
 - location of all services and infrastructure on or adjacent to the land;
 - details of any areas of land subject to subsidence, slip or erosion;
 - location of any watercourse or waterhole;
 - details of any known flood levels;
 - location and size of existing buildings and structures;
 - location of existing parking and vehicle manoeuvring areas;
 - preliminary design details of proposed infrastructure, including water supply, sewerage and stormwater drainage;
 - preliminary design details of proposed site access and of proposed new roads or upgrading of existing roads; and
 - details of any proposed easements for access and other purposes.
- (2) Details of the needs for and suitability of the proposed reconfiguration (subdivision) should be provided. Appropriate information would include:
- Existing subdivision pattern in the locality;
 - The nature of the proposed subdivision within the context of that existing subdivision pattern;
 - Availability of alternative locations that may reduce the need for the proposed subdivision;
 - Availability of lots within the locality and recent trends in development and occupation of those lots;
 - Anticipated effect of the proposed subdivision on the future use and development of land in the locality;
 - Potential for an oversupply of lots having regard for recent and anticipated rates of dwelling completions;
 - Details of existing or likely future rural development in the locality involving intensive animal industry or activities such as aerial spraying and the like;
 - Potential for the subdivision to detrimentally affect the preservation of Good Quality Agricultural -- Land (GQAL);
 - Potential for the creation of ribbon development; and
 - Potential for the need to upgrade infrastructure and services.
- (3) For subdivision within the Rural Zone, additional information should be provided in relation to:
- Economic viability of proposed lots for agriculture or grazing;
 - Availability of water and the capacity of the soils to support crops or grow pasture; and
 - Sustainability of the new lots in relation to land degradation, including issues of slope/landslip, soil erosion and the like.

2.11 Groundwater vulnerability

- (1) Sufficient detail should be provided to enable Council to determine the likely impacts of the development on the quality of groundwater. The following information should be provided:
- Identification of possible risks to groundwater quality from the development;
 - On-site soil and water characteristics;
 - Local groundwater conditions;
 - Proposed measures for the on-going monitoring, management and protection of groundwater; and
 - Details of any proposed remedial plans, applicable to the proposal, to achieve water quality objectives.

2.12 Bushfire Management Plan

- (1) Sufficient detail should be provided to enable Council to determine the likely implication of the development in relation to bushfire hazard. Development that materially increases the number of people living or working in an area of high bushfire hazard or which includes the storage of hazardous materials in an area of high or medium bushfire hazard should be accompanied by a Bushfire Management Plan that addresses the following matters:
- The Bushfire Management Plan has been prepared by a suitably qualified person (in an environment management, landscape architecture, town planning, or civil engineering field);
 - Appropriate consultation has been undertaken with organisations or individuals representing Rural and/or Urban Fire Brigades and managers of adjacent parks or reserves;

The Bushfire Management Plan includes:

- An assessment of the nature and severity of the bushfire hazard affecting the site. The key factors to be considered are vegetation type, slope and aspect.
- An assessment of other site specific factors relevant to determining suitable bushfire mitigation strategies. These factors could include:
 - Likely direction of bushfire attack;
 - Environmental values that may limit mitigation options;
 - Location of evacuation routes and/or safety zones; and
- An assessment of the specific risk factors associated with the development proposal, including matters such as the nature of activities to be conducted and materials to be stored on the site, numbers and types of persons likely to be present and particular warning and/or evacuation requirements.
- Recommendations for specific mitigation actions including:
 - Road and lot layout and land use allocations;
 - Firebreaks and buffers;
 - Building locations or building envelopes;
 - Landscaping treatments;
 - Warning and evacuation procedures and routes;
 - Firefighting requirements including infrastructure;
 - Any other specific measures such external sprinkler systems and alarms; and
- The level of detail required will vary with the nature of the development proposal and of the site.

Information Applicants should be aware of

Applicants should be aware of the following pieces of legislation, plans or State Planning Policies (SPP), which may be used in assessing their application:

- SPP 1/92 Development and Conservation of Agricultural Land and Guidelines 1 and 2 for SPP 1/92 The Identification of Good Quality Agricultural Land.
- SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities and Guideline for SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities.
- SPP 1/03 Mitigating the Adverse Impacts of Flood, Bushfire and Landslide and Guideline for SPP 1/03 Mitigating the Adverse Impacts of Flood, Bushfire and Landslide.
- *Aboriginal Cultural Heritage Act 2003 (Qld).*
- *Building Act 1975 (Qld).*
- *Environmental Protection Act 1994 (Qld).*
- *Environmental Protection and Biodiversity Conservation Act 1999 (Aust).*
- *Fire and Rescue Service Act 1990 (Qld).*
- *Fisheries Act 1994 (Qld).*
- *Forestry Act 1959 (Qld).*
- *Land Act 1994 (Qld).*
- *Nature Conservation Act 1992 (Qld).*
- *Pest Management Act 2001 (Qld).*
- *Queensland Heritage Act 1992 (Qld).*
- *Transport Infrastructure Act 1994 (Qld).*
- *Vegetation Management Act 1999 (Qld).*
- *Water Act 2000 (Qld).*
- Soil Conservation Plan or for an approved Soil Conservation Plan (DNRW).
- Australian Standard 2885: Pipelines - Gas and Liquid Petroleum.

Planning Scheme Policy 2 - Third Party Advice or Comment**1. Purpose**

- (1) To describe the methods that may be used by Council to obtain third party advice or comment on a development application.

2. Requirements**Consultation**

- (1) Council may seek third party advice or comment on any development proposal.
- Advice may be sought from any individual, stakeholder or interest group.
 - Advice or comment may be sought in any appropriate way, including:
 - Public notification in a newspaper;
 - Placing a notice on the premises;
 - Placing a notice at a public place;
 - Personal notification or contact;
 - Public meetings;
 - Meeting with a person having a special interest.

Information

- (2) When seeking third party advice or comment, Council will provide appropriate information on the proposal, including:
- A description of the proposal;
 - Details of where the development application may be inspected;
 - Details of where comments may be lodged; and
 - The last day upon which Council will accept advice or comment.

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