Land Use and Project Approvals - Table of Contents

Appendix A - Brannock & Associates

Baseline Information Report

May 2009

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GLADSTONE LIQUIFIED NATURAL GAS PROJECT

Land Use Study

(Final Draft—Baseline Information Reports)

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TABLE OF CONTENTS

Figures and Appendices

APPENDIX 1

1.0 INTRODUCTION

This Report has been prepared by Brannock and Associates on behalf of URS Australia. The purpose of the Report is to provide a strategic land use assessment of the area encompassing the Gladstone Liquefied Natural Gas (GLNG) project; the report will form part of the Environmental Impact Statement to be submitted to the Queensland State Government for review and approval.

Santos is proposing to develop its Queensland coal seam gas resources in the Bowen and Surat Basins in the area around Roma as feed gas for a LNG liquefaction and export facility on Curtis Island, off the coast of Gladstone.

The Study Area encompasses an area extending from Roma in the West of Queensland to Gladstone/Curtis Island on the eastern coast. The Study area includes land with a variety of land use designations including National and State Park, urban areas, agricultural land, mining areas and coastal protection areas. Figure 1 illustrates the three Study Areas that comprise the GLNG project.

The Report examines the land use impacts arising from the various components of the project; the project comprises three main components;

- a coal seam gas exploration area;
- a gas transmission pipeline; and
- a LNG liquefaction and export facility on Curtis Island.

Associated uses include accommodation camps for workers during construction and a new bridge from Gladstone to the LNG plant on Curtis Island.

The project has been examined in the context of relevant land use planning instruments, such as the relevant Federal Government legislation, State Planning Policies, and local government planning schemes. The relevant approvals and approval process has been outlined.

The Report describes the existing land values of the area, the impact of the project on these environmental values and present recommendations for managing these impacts.

The Report will define land use management objectives and measures for protecting land use values.

2.0 OVERVIEW/PLANNING CONTEXT

The GLNG project area is under the legislative jurisdiction of the Federal, State and local government authorities. The project is a declared significant project under the State Development and Public Works and Organisation Act (SDPWO)1971.

Under the SDPWO Act a project can be declared a "significant project" by the Coordinator General. If a project is declared a significant project, the proponent must prepare an EIS and undertake public notification of the project as per the requirements of the Act. Under Section 27 of the Act, the Coordinator General then assesses the project's potential effect on relevant infrastructure, employment opportunities that will be provided by the project and the strategic significance of the project to the locality, region or state in making the decision.

The project will require consideration against relevant Federal and State legislation, including the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999, Queensland State legislation including the Integrated Planning Act 1997, Coastal Management and Protection Act 1995, Vegetation Management Act 1999;,State Development and Public Work Organisation Act and others.

As the Study Area encompasses a number of local government authorities, each with its own land use planning scheme that details the preferred land use pattern and land use outcomes for the local government area, consideration of the project against these land use planning outcomes is required.

2.1 Legislation and Approval Framework

2.1.1 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places, defined in the Act as matters of *national environmental significance (NES)*.

The EPBC Act is a consideration when a proposal has the potential to have a significant impact on a matter of national environmental significance.

The seven matters of national environmental significance to which the EPBC Act applies are:

- *world heritage sites;*
- *national heritage places;*

- *wetlands of international importance (often called 'Ramsar' wetlands)*
- *nationally threatened species and ecological communities;*
- *migratory species;*
- *Commonwealth marine areas; and*
- *nuclear actions.*

The Act is relevant to this project as;

- Curtis Island is part of the Great Barrier Reef Marine Park which is an identified World Heritage Area; and
- the GLNG has the potential to impact on matters of NES in the following way;

PROJECT COMPONENT	RELEVANT MATTERS OF NES
Pipeline & bridge	World Heritage site 25 listed threatened species occurring within area 32 listed migratory species occurring within area
CSG field	43 listed threatened species occurring within area 5 listed vegetation communties 17 protected migratory species
LNG Facility	World Heritage site 24 listed threatened species 33 protected migratory species
Marine facilities	World Heritage site 25 threatened species 33 protected migratory species
Pipeline	World Heritage site 41 threatened species 2 protected migratory species

Source; MNES Database

The Act affects any proponent whose actions may have a significant impact on a matter of national environmental significance. Such proponents must refer the project to the Department of the Environment, Water, Heritage and the Arts. This 'referral' is then released to the public for comment on whether the project is likely to have a significant impact on matters of national environmental significance. Public comments are assessed and, if relevant to the Act, are taken into consideration. The Minister or his delegate will then decide whether the likely environmental impacts of the project are such that it should be assessed under the Act.

On 28 February 2008 and 13 March 2008, Santos lodged five separate EPBC referrals to cover the following project components:

- EPBC 2008/4057 development of a natural gas liquefaction and export park with a 10 million tonne capacity;
- EPBC 2008/4058 construction of marine facilities including a jetty, materials offloading facility and channel dredging;
- EPBC 2008/4059 development of coal seam gas resources across around 2 million hectares in the area around Roma, Queensland;
- EPBC 2008/ 4060 construction of a bridge, road and services corridor to access the LNG plant; and
- EPBC 2008/ 4096 gas transmission pipeline and route option.

All five EPBC referrals have been declared controlled actions under the Australian Government's EPBC Act; as such the EIS will be developed pursuant to the Bilateral Agreement between the Australian and Queensland Governments for the purposes of the Australian Government's assessment under Part 8 of the EPBC Act.

Curtis Island is listed as an Australian Heritage Place for its natural attributes. The Island contains a high diversity of vegetation and landscape types that are among the best remaining examples of their type.

GLNG Project Components and their Areas of Impact

The gas fields will entail an earthworks program across a variety of terrain requiring a level of vegetation clearing. Development within the coal seam gas fields may potentially affect flora and fauna identified as significant under the EPBC Act.

The pipeline corridor is within the World Heritage Area where it crosses Port Curtis. Potential environmental impacts during construction include vegetation clearing and fragmentation of habitat. As a result, development could potentially impact upon listed threatened species and ecological communities.

Whilst the pipeline does not interfere with any Ramsar Wetlands, the closest Ramsar wetland being Shoalwater and Corio Bays Area Ramsar wetland over 80km to the North. Port Cutis is listed in the Directory of Important Wetlands within Australia; it contains important marine wetlands including seagrass beds, mangroves, and intertidal mudflats that provide habitat for a significant number of species.

2.1.2 Great Barrier Reef Marine Park

The Great Barrier Reef Marine Park (GBRMP) is a heritage place under the EPBC Act; as such special requirements come into force to ensure that the values of the GBRMP will be protected and conserved for future generations. The EPBC Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed.

The Study Area does not fall within a specific management plan area, but is adjacent to the Mackay/Capricorn Coast Management Area.

Great Barrier Reef Marine Park (Commonwealth)

The *Great Barrier Reef Marine Park Act 1975* is the primary Act in respect of the Great Barrier Reef Marine Park (GBMRP). It provides for the establishment, control, car and development of the Marine Park. It includes the following:

- *Establish the Great Barrier Reef Marine Park*
- *Establish the Great Barrier Reef Marine Park Authority (GBRMPA), a Commonwealth authority responsible for the management of the Marine Park*
- *Provide a framework for planning and management of the Marine Park, including through Zoning Plans, Plans of Management and permits*
- *Prohibit operations for the recovery of minerals (which includes prospecting or exploration for minerals) in the Marine Park (unless approved by the GBRMPA for research)*

The Great Barrier Reef Marine Park Authority (GBRMPA) functions to make recommendations to the Minister in relation to the care and development of the Marine Park. The study area is managed under the Great Barrier Reef Marine Park Authority which provides a framework for the *Great Barrier Reef Marine Park Zoning Plan 2003* which forms the primary planning instrument for the conservation and management of the Marine Park.

Great Barrier Reef Marine Park Zoning Plan 2003

The *Great Barrier Reef Marine Park Zoning Plan 2003* has been developed as the primary planning instrument under Section 32 of the *Great Barrier Reef Marine Park Act 1975*.

The Zoning Plan divides the Marine Park into a number of zones, each providing for increasing levels of protection and various types of resource use. The Zoning Plan also sets out the purposes for which each Zone may be used or entered without the permission of the GBRMPA, and the purposes for which each Zone may be used or entered only with the written permission of the Authority.

The Narrows area of Port Curtis is within the Habitat Protection Zone of the GBRMP; the pipeline and bridge will be in close proximity to this zone and will be assessed for any impact on the values of this Zone as detailed designs are prepared. The Habitat Protection Zone is to assist in the protection and management of areas of the Marine Park that are considered sensitive habitats and to facilitates opportunities for reasonable use of this Zone of the GBRMP.

Habitat Protection Zone

The Habitat Protection Zone provides for the conservation of areas of the Marine Park by protecting and managing sensitive habitats and ensuring they are generally free from potentially damaging activities. Allowable uses in this zone are outlined in Table 1 below.

Table 1

Aquaculture	Permit
Bait netting	Yes
Boating, diving, photography	Yes
Crabbing (trapping)	Yes
Harvest fishing for aquarium fish, coral, and beachworm	Permit
Harvest fishing for sea cucumber, trochus, tropical rock lobster	Permit
Limited collecting	Yes
Limited impact research	Yes
Limited spearfishing (snorkel only)	Yes
Line fishing	Yes
Netting (other than bait netting)	Yes
Research (other than limited impact)	Permit
Shipping (other than a designated shipping area)	Permit

Tourism programme	Permit
Traditional use of marine resources	Permit or an accredited TUMRA
Trawling	No
Trolling (for pelagic species)	Yes

The Australian Government and State Government have a cooperative and integrated approach to management of the Great Barrier Reef World Heritage Area. The Great Barrier Reef Marine Park Authority (GBRMPA) is the Australian Government agency responsible for overall management, and the Queensland Parks and Wildlife Service, provides day-to-day management for the Authority.

2.1.3 Coastal Protection and Management Act 1995

The *Coastal Protection and Management Act 1995* recognises the diverse range of coastal resources and values in the coastal zone and provides a comprehensive framework for their coordinated management. Fundamental tools to implement the Coastal Act are the State Coastal Management Plan and regional coastal management plans.

The Gladstone area, including Port Curtis is managed under the Curtis Coast Regional Coastal Management Plan (RCMP).

Approval for Operational Works for any project related works in a tidal area or for works within a coastal management district will need to be made in accordance with the provisions of the *Coastal Management and Protection Act 1995* and associated management plans.

Curtis Coast Regional Coastal Management Plan

As a statutory instrument under the *Coastal Protection and Management Act 1995* (Coastal Act), the Curtis Coast Regional Coastal Management Plan (RCMP) has the force of law to guide relevant decisions by State and local governments and the Planning and Environment Court. State Government is required to consider the Curtis Coastal Plan when making relevant decisions about coastal management in the Curtis Coast region. For example, the State Coastal Plan and Curtis Coastal Plan will guide the Environmental Protection Agency's (EPA) decisions regarding coastal development and management. The extent of the Curtis Coast Region is illustrated in Figure 6 at Appendix 2.

The RCMP and the State Coastal Plan, has the effect of State planning policies under the *Integrated Planning Act 1997*. Because of this the Calliope Shire and Gladstone City Councils reflect these documents appropriately in their planning schemes.

The RCMP complements other statutory plans for the coastal zone — it does not conflict with them nor does it duplicate their requirements. However, the Curtis Coastal Plan makes reference to provisions established under other Acts.

The lead agency in coastal management, the EPA, coordinates the preparation of the coastal plans, regulates certain development activities in tidal waters and on land in the coastal management district, and provides advice to local government, other agencies and persons on coastal management best practice.

The RCMP contains *regional policies* that assist in the implementation of the plan. The Plan provides a set of guiding principles for 'Coastal Use and Development' that includes, inter alia;

1A Coastal resources are conserved, managed and restored for the wellbeing of existing and future generations.

1B The interdependence of coastal resources is recognised and taken into account in planning, developing and managing the coastal zone.

1C The cumulative impacts of human use are taken into account in planning and managing coastal resources.

1D Coastal use and development is planned and managed to ensure that significant adverse effects of activities on the natural environment are avoided, mitigated or remedied.

The Plan contains a series of sub-policies that seek to achieve the guiding principles; main sub-policies have been developed in relation to;

- Settlement pattern and design
- Coastal dependant land uses
- Canals and dry land marinas
- Maritime infrastructure
- Extractive industry
- Mining and petroleum activities
- Dredging
- reclamation
- tourism and recreational activities
- rural land uses
- managing water resources
- fishing

- aquaculture.

There are 13 Key Coastal Sites within the Curtis Coast Regional RCMP. These are;

- Curtis Island
- The Narrows
- Rundle Range
- Mt Larcom
- Targinie Remnant Vegetation
- Gladstone Harbour
- Calliope River/Flying Fox Creek
- Facing Island
- Boyne Island and South Trees Inlet
- Boyne River
- Canoe Point
- Wild Cattle Island/Colosseum Inlet
- Capricorn Group

The RCMP outlines the desired coastal outcomes, significant resources and their values and coastal management issues for each Key Coastal Site relevant to the project.

Curtis Island

Identified coastal management issues relevant to the GLNG in general are;

- Development is occurring in sensitive areas, such as on coastal headlands and in areas vulnerable to coastal processes (including erosion and storm surge).
- Management of public access is a significant issue, with uncontrolled vehicle use impacting on sensitive areas such as beaches and wetlands, and disturbing wildlife, i.e. turtles.
- Future pressures on the island include intent for future residential, industrial, port and urban development possibly timed with a bridge from the mainland. Future development requires sensitive management recognising the interconnectedness of coastal management issues on the island to ensure significant coastal resources and their values are not degraded.
- Detailed strategic land use planning for Curtis Island is required prior to any further allocation of land for urban settlement to ensure coastal resources and their values are protected.

The GLNG will have to be planned and designed to reduce its bearing on these particular issues if it is to be environmentally sustainable and to retain the values of Curtis Island. Appropriate management of development in a coastal area is of critical importance as the coastal environment is highly sensitive to physical development.

In the context of the GLNG, minimising access through sensitive areas will be important; the use of the existing access track from the southern point during the construction phase will assist in reducing the impact of the GLNG project. Limiting access and use of the road bridge to GLNG traffic only will also ensure the volume of traffic on the island is minimised.

Project related residential development on the island is not planned. Santos will restrict access by its workforce to the existing facilities at the southern end of the island.

The Curtis Coast Management Plan, acknowledges the presence of industrial uses in the Curtis Coast region and the importance of the Port of Gladstone to the Queensland and Australian export market as a whole and also acknowledged is the value of agricultural production in the region. The Curtis Coast Management Plan recognises that development in the region is critical to a much wider economy but that this needs to occur in a manner that reduces environmental impacts.

The following table outlines the key coastal outcomes and management issues for the south west corner of Curtis Island and how the project responds to these:

Issues	Relation to GLNG
Desired Coastal Outcomes	
Planning for future development appropriately identifies and takes into consideration the values of areas of high conservation significance including the cumulative impacts of associated development on these values.	The EIS process will identify and investigate all areas of potential impact of the project on the environmental values of Curtis Island.
Planning for future development considers the design and location of development ensuring any impacts on the scenic coastal landscape values associated with the island are minimised.	A visual assessment of the LNG facility will be undertaken as part of the EIS process and the design of the facility will incorporate the findings of the analysis.
Coastal management issues	
Although this coastal locality is undeveloped there is significant potential for future development associated with port and industrial expansion. Gladstone Port Authority's Strategic Plan identifies part of this coastal locality for future port development by 2025. Development of part of this coastal locality for industry and port development has the potential to be a catalyst for further major development on Curtis Island that could have significant adverse impacts on coastal	The undertaking of the EIS process for the GLNG is to ensure that the environmental values of Curtis Island are maintained and any impacts that have the potential to arise are mitigated by the implementation of appropriate measures. Development of the facility will have accounted for all possible environmental impacts and will have been designed to

resources and their values. Any future development of this coastal locality needs to be carefully planned and managed in an ecologically sustainable manner to avoid significant impact on the area's biodiversity and coastal landscape values.	ensure a high level of sustainability.

Targinie

The following table outlines the key coastal outcomes and management issues for the Targinie and how the project responds to these:

Issues	Relation to GLNG
Desired Coastal Outcomes	
Conserve and appropriately manage biodiversity including the values associated with remnant vegetation while allowing for development in suitable areas.	Where the GLNG borders Targinie the biodiversity and remnant vegetation will be conserved.
Maintenance of viable networks of wildlife habitat including the importance of this area in contributing to a bioregional wildlife corridor and in providing wildlife linkages to the coast.	The development will be managed so that the wildlife corridors are maintained.
Preservation of 'endangered' regional ecosystems. Protection of rare and threatened species including the chain fruit Alyxia magnifolia.	The development will be managed so that it does not impact on 'endangered' regional ecosystems or threatened species.
Coastal management issues	
The Gladstone State Development Area borders this key coastal site to the west and south. Coastal management issues include maintenance of public access to key areas, management of adverse impacts on biodiversity, protection of significant coastal landscape values and management of pest species and fire.	The pipeline corridor has the potential to impact on the significant vegetation within this area. Vegetation disturbance will be avoided as far as possible.
Coordinated management is needed between State agencies and landholders regarding the	The development will be jointly managed between state agencies and the proponent

above issues.	with regard to the above issues.

Gladstone Harbour

Identified Coastal Management issues relevant to the GLNG are;

- providing for future port and industrial expansion while ensuring significant adverse impacts to coastal resources and their values are minimised.
- Dredging of the harbour and sea-placing of spoil has the potential to cause benthic disturbances and increased turbidity in the water column. This can adversely affect marine biodiversity and in particular seagrass beds.
- Future population increases of the nearby centres of Gladstone and Calliope are likely to result in increased vessel traffic and use of the harbour for recreational fishing and tourism. Associated impacts from this increased use include an increasing risk to dugong and turtles from boat strike and increasing disturbance to shorebirds roosting and feeding.
- A mining lease overlays part of this key coastal site relating to the Stuart oil shale deposits. If mining of this area proceeds, large areas of coastal habitat could be altered with subsequent adverse impacts on biodiversity, coastal landscape values, water quality, public access and recreation.

The following table outlines the key coastal outcomes and management issues for Gladstone Harbour and how the project responds to these:

Issues	**Relation to Site**
Desired Coastal Outcomes	
Management of the harbour providing for a range of uses, while ensuring conflicts between these uses are managed and adverse impacts on coastal resources and their values are minimised.	The Gladstone harbour will be managed appropriately to ensure a clear separation of uses within the harbour and to prevent adverse impacts on the coastal resources and values.
Continued development of the Port of Gladstone in an ecologically sustainable manner avoiding the location of port infrastructure in areas of high conservation significance, where possible.	The development of the port will be located away from high conservation areas, where possible.
Recognition of the importance of the undeveloped inner-harbour islands in providing public access, recreation, biodiversity and scenic amenity to the regional community and	The GLNG will not intended to impact upon the inner harbour islands.

avoidance of development with the potential to compromise these values.	
Coordination of management approaches among land and marine resource managers in relation to monitoring the health of the harbour in regards to water quality, managing increasing vessel use and minimising impacts to shorebirds, turtles and dugong.	The proponent will liaise with relevant authorities as required.
Future use of the following State land on the coast protects coastal resources and values through the implementation of an appropriate management regime: 5DS219, 10SUSL39395, 8USL39395, 9USL39395, 7USL39395, 6USL39395, 11USL39395, 1USL36585.	Where the GLNG encroaches onto these sites appropriate EMPS will be implemented.
Coastal management issues	
A critical issue for Gladstone Harbour is providing for future port and industrial expansion while ensuring significant adverse impacts to coastal resources and their values are minimised.	GLNG-related development will be undertaken in full recognition of the sensitive environmental nature of the area. The proposed bridge and LNG facility will be designed and constructed to minimise impacts on the coastal environment. Construction EMPs will be developed to facilitate this.
Dredging of the harbour and sea-placing of spoil has the potential to cause benthic disturbances and increased turbidity in the water column. This can adversely affect marine biodiversity and in particular seagrass beds.	The proposed dredging will be undertaken in a manner that aims to reduce benthic disturbances.

The Narrows

Identified coastal management issues relevant to the GLNG are;

- Future mining of oil shale adjacent to and into The Narrows has the potential to significantly alter the coastal habitats and impact on the area's biodiversity, coastal landscape values (including the significance of this area as an indicator of past geomorphological processes) and water quality.

- Adjacent increasing development for port, industrial and residential purposes in Gladstone has potential to adversely impact on the relatively pristine water quality of The Narrows with subsequent impacts on marine biodiversity.
- There is State land in the vicinity of Graham Creek requiring consideration of an appropriate management regime that protects coastal resources and values.

The following table outlines the key coastal outcomes and management issues for The Narrows and how the project responds to these:

Issues	Relation to GLNG
Desired Coastal Outcomes	
This key coastal site is given the highest level of protection in recognition of its near pristine state and significant coastal resources and their values.	The GLNG project will be planned and constructed with the highest level of consideration and protection to the significant coastal resources and their values. The EIS will identify significant coastal resources and propose strategies to manage impacts on them.
Protection of the area's integrity and ecological functioning from incompatible development, land uses and activities.	GLNG-related development will be undertaken in full recognition of the sensitive environmental nature of the area. The proposed bridge and LNG facility will be designed and constructed to minimise impacts on the coastal marine environment. Construction EMPs will be developed to facilitate this.
Maintenance of the mangrove fringe bordering The Narrows and associated waterways to protect scenic amenity and water quality.	Scenic amenity and water quality will be protected and maintained through ongoing management and monitoring of the mangrove fringe and waterways. The GLNG Project will be designed to minimise impacts on these sensitive environments of The Narrows.
Maintenance of World Heritage values associated with the area's outstanding coastal landscape values including its scientific value as an indicator of past geomorphological	The coastal landscape, scientific and scenic amenity values associated with the coastal site will be maintained throughout the life of the project.

processes and its scenic amenity values.	The GLNG Project will have ongoing monitoring and assessment to ensure impacts on the World Heritage values are minimised.
Monitoring of water quality to detect any adverse impacts on marine and estuarine biodiversity from contaminants including suspended solids.	The GLNG Project will have ongoing monitoring of external impacts such as water quality to ensure the marine and estuarine environments are protected. Management and monitoring programs will be implemented.
Future use of the following State land on the coast protects coastal resources and values through the implementation of an appropriate management regime: 29DS546, 1USL36622, 3USL39057 and 2AP8707.	Any development associated with State land will be protected through appropriate environmental management regimes.

2.1.4 Fisheries Act 1994

Declared Fish Habitat Areas (DFHA) currently give protection to inshore and estuarine fish habitats that are important for sustaining local and regional fisheries. The FHA protects all habitat types (e.g. vegetation, sand bars and rocky headlands) from direct physical disturbance and coastal development. The aim of creating Declared Fish Habitats is to provide long-term protection for a network of fish habitats that are essential to sustaining these fisheries.

There are no declared DFHA within proximity to the project. The closest DFH to the project are Colloseum Inlet, Rods Harbour 20km south of Gladstone and Fitzroy River to the North. Gladstone.

The Act includes provisions for taking, causing damage or interfering with marine plants, works in declared fish habitat areas, and waterway barrier works. An application will be submitted for any proposed disturbance of marine plants as a result of the project.

2.1.5 Vegetation Management Act 1999

This Act is administered by the Department of Natural Resources Mines and Water (NRMW). The aim of this Act includes; the conservation of remnant endangered and of concern regional ecosystems; prevention of land degradation and further loss of biodiversity; managing the environmental impacts of clearing vegetation; and the reduction of greenhouse gas emissions.

As required by this act, the GLNG project will submit any necessary applications for relevant project activities such as vegetation clearance.

2.1.6 Nature Conservation Act 1982

The aim of this Act is to protected native wildlife, including both individual species of plants and animals, as well as ecosystems and species habitats.

Generally under Part 4 of the Act 'mining activities' are prohibited from areas protected under this Act. However since the survey licence permits limited clearing of protected native vegetation within areas protected under this Act permits may be required from the Chief Executive of the EPA if the following criteria (as a minimum) can be satisfied:

- if the works will be undertaken so the management principles for national parks are observed to the greatest extent possible; and
- the use will be in the public interest; and
- the use is ecologically sustainable; and
- there is no reasonable alternative to the use; and
- the use is a permitted use for the area under the either the *Nature Conservation (Wildlife) Regulation 1994* or the *Nature Conservation Regulation 1994.*

2.1.7 State Development and Public Works and Organisation Act 1971

The State Development and Public Works Organisation Act 1971 (SDPWO Act) provides for development and planning at a State level through a coordinated approvals system including environmental impact assessment. It provides the Coordinator General with significant powers to manage major projects on a whole of government basis.

Under the SDPWO Act a project can be declared a "significant project" by the Coordinator General. If a project is declared a significant project, the proponent must prepare an EIS and undertake public notification of the project as per the requirements of the Act. Under Section 27 of the Act, the Coordinator General considers the project's potential effect on relevant infrastructure, employment opportunities that will be provided by the project and the strategic significance of the project to the locality, region or state in making the decision.

The GLNG project has been declared a significant project by the Co-ordinator General and is thus subject to the EIS process under the SDPWO Act.

2.1.8 Water Act 2000

The aim of this Act is to establish a system for planning, allocation and sustainable use of water and other aquatic/riparian resources within Queensland. This includes adopting uses and management techniques that protect the biodiversity and health of natural ecosystems associated with the State's waterways, lakes and springs.

As required by this act, the GLNG project will submit any necessary applications for relevant project activities.

2.1.9 Aboriginal Cultural Heritage Act 2003

The key relevant provisions of this Act are the "duty of care" to avoid harming cultural heritage and the requirement to develop a Cultural Heritage Management Plan (CHMP) for those projects that require an EIS.

The "duty of care" provisions require those conducting activities in areas of significance to take all reasonable and practical measures to avoid harming cultural heritage. There are gazetted guidelines that set out measures for meeting the "duty of care" requirement.

As required by this act, the GLNG project will submit the necessary applications for any cultural heritage survey activities required by the CHMP and in the event of project activities uncovering any items of cultural heritage significance.

2.1.10 Land Protection Act

Under the *Land Protection Act*, the administration of the stock route network is shared between local government and the Department of Natural Resources and Water (NRW). Local government is responsible for day-to-day management, while NRW is responsible for providing the framework of legislation and policy for stock route management and support for local governments. The *Land Protection (Pest and Stock Route Management) Act 2002* regulates the use of the stock route network. A permit is required to travel or agist stock on the stock route network.

Stock routes are a valuable support use for livestock farmers as they allow the movement of stock between grazing pastures and as a means of getting stock to market. There are a number of designated stock routes throughout the coal seam area and these will require protection during the exploration of the area (refer to Figure 21 at Appendix 5). Measures to avoid the stock routes and provide sufficient buffers from proposed wells to the stock routes will need to be implemented.

2.2 State Planning Policies

The following are current Queensland State Planning policies;

STATE PLANNING POLICY	OBJECTIVE
SPP 1/92 Development and Conservation of Agricultural Land	Principles for protection of good quality agricultural land from inappropriate development
SPP 1/02 Development in the Vicinity of Certain Airports and Aviation Facilities	Principles for protecting airports and associated aviation facilities from encroachment by incompatible development in interests of maintaining operational efficiency and safety
SPP 2/02 Planning and Managing Development involving Acid Sulphate Soils	Aims to ensure development involving acid sulphate soils is planned and managed to avoid release of potentially harmful contaminants in to the environment.
SPP 1/03 Mitigating the adverse impacts of Flood, Bushfire and Landslide	Aims to minimise potential adverse impacts of flood, bushfire and landslide on people, property, economic activity and the environment.
SPP 1/07 Housing and Residential Development	Ensure housing needs are met in high growth areas
SPP 2/07 Protection of Extractive Resources	Aims to protect extractive resources from the developments that might prevent or constrain current or future extraction.

The following policies are to be considered in relation to the development proposal:

2.2.1 SPP 1/2 Development in the Vicinity of Certain Airports and Aviation Facilities

Gladstone Airport is an identified airport that this policy applies to. However the GLNP project is not within the 20 ANEF contour of the airport and does not impact on airport operations.

2.2.2 SPP 1/92 Development and Conservation of Agricultural Land

The purpose of the policy is to address the conservation of good quality agricultural land; agricultural land as a resource is finite and requires management for the longer term. Land degradation through soil erosion, salinisation and declining fertility are some of the issues facing the use of agricultural land in Queensland.

It is recognised there may be circumstances where there is a need to build on undeveloped land however this needs to be balance with maintaining the viability of agricultural land. The State Planning

Policy provides guidance to local government authorities to manage development and preserve agricultural land.

The GLNG Study Area includes areas of good quality agricultural land (refer to Figures 14 to 21 at Appendix 5 for location of good quality agricultural land within the Study Area). As the GLNG will potentially affect the ability of farmers to use the land during the different stages of the project, careful consideration of how to minimise these impacts needs to be given.

Footprints for lease areas and equipment will need to be kept to the minimum workable area to minimise disruption on farming and grazing. Lease and well areas will need to be appropriately signed and fenced off to avoid harm to grazing livestock and to farm workers.

Of the three components of the GLNG, the coal seam gas exploration has the greatest potential to affect farming land. The pipeline largely follows the existing Alinta pipeline route with the exception of the portion of the alternative route through Arcadia Valley. Farming land within the Arcadia Valley is generally held in medium sized holdings and predominantly used for cultivation. This area has not been subject to disturbance previously from gas and petroleum activities. The pipeline will be buried at a depth that will not interfere with agricultural activities.

The LNG plant on Curtis Island is within the Calliope Rural Locality on Rural Zone land but does not contain land subject to the SPP.

Coal seam gas exploration will have an impact on the long-term use of land over which leases exist, although the degree of impact will lessen over the phases of the exploration. This is due to the decrease in the area of land required for each well. Nevertheless there will be limitations on the continued use of the land as it is currently used.

2.2.3 SPP 2/02 Planning and Managing Development Involving Acid Sulphate Soils (ASS)

The purpose of this policy is to ensure that development in low-lying coastal areas is planned and managed to avoid potential adverse impact on the natural and built environment.

The policy applies to land below 5m AHD where the natural ground level is less than 20m AHD and development on that land that involves the following;

- filling of land involving more than 500m^3 or more of material; and
- Excavation of more than 100m^3 or more of soil and sediment.

There are a number of adverse effects that can be caused by disturbance of ASS such as the corrosion of concrete and steel infrastructure, such as culverts and pipes; the build-up of toxic concentrations of

acid and metal contaminants leading to skin conditions and eye irritations. Disturbing ASS can have severe impacts on water quality and dependent ecosystems and have serious consequences for industries, such as fishing and aquaculture that rely upon there being a high standard of water quality.

Development in areas identified as containing ASS should be managed by implementing appropriate risk management techniques during construction and post-construction phases. There are a number of areas within the Gladstone Regional Council area that contain acid sulphate soils. These are largely coastal areas including some parts of Curtis Island and within the Port Authority Area. Refer to Figure 29 at the Appendix 9.

The SPP is particularly important to the pipeline and bridge component of the project. The construction footprint of the bridge will occur in low lying coastal areas in some areas that have been identified by the former Calliope Shire planning scheme and the former Gladstone City Planning Scheme as land containing acid sulphate soils. This will require evaluation and monitoring prior and during construction to ensure that any effects arising from the disturbance of soils does not cause harm to the environment or to personnel working in the area.

2.2.4 SPP 1/03 Mitigating the Impacts of Flood, Bushfire and Landslide

The purpose of this policy is to ensure that the risk from flood, bushfire and landslides are considered when making decisions about development. The policy is applicable to development that;

- increases the number of people in a natural hazard management area;
- involves the manufacture or storage of hazardous goods.

A natural hazard management area is defined for each of the natural hazards of flood, bushfire and landslide. These are areas identified in local government planning schemes as being subject to the particular natural hazard. Refer to Appendix 9 for relevant Planning Scheme maps identifying natural hazard areas.

Within the Study Area the natural hazard that appears to present the most risk and which local government authorities have identified is that of risk from bushfire. Authorities have developed policies relating to land use in proximity to land designated as prone to bushfire risk. Figures 28a to 28d at Appendix 9 indicate the bushfire risk areas throughout within the study area. A bushfire natural hazard management area is land identified in an assessment prepared in accordance with a methodology approved by the Queensland Fire and Rescue Service, as being an area of risk. This should be a critical consideration when determining the location of all components of the GLNG. A fire could have the potential to be devastating in terms of the project and on other land uses, in terms of reducing the short and medium term use of the land.

Not all local governments have maps identifying these areas; former Waroo Shire and former Peak Downs has no information available, and Bauhinia Shire has produced tabular information that details the lots that are within 100m of land at risk from natural hazard.

A flood natural hazard management area comprises land inundated by a Defined Flood Event; the appropriate flood event stipulated by the State government is the 1% Annual Exceedance Probability flood.

A landslide natural hazard management area comprises land with slope of 15% and greater and other land that is known to the local government authority as being geologically unstable.

The SPP provides guidelines on managing the risks proposed by these hazards and the development that has the potential to increase the extent or severity of the natural hazard.

The SPP requires development to achieve a number of outcomes; if a development cannot achieve these outcomes it is not considered a compatible use in the natural hazard management area and appropriate mitigation measures are to be implemented to minimise any risk to the community.

It is acknowledged that there some uses are incompatible in a natural hazard management area but that that development meets a public need that overrides aspects of the risk associated with the potential hazard. Risk management measures should still be formulated and implemented as part of development of this nature.

Land use that introduces activities to hazard risk areas and have the potential to cause environmental harm in the event of a natural hazard occurring will need to;

- prepare incident management plans that address the hazardous events; and
- design associated infrastructure to cope with the likely impacts of the hazardous events.

2.2.5 SPP 2/07 Protection of Extractive Resources

The purpose of the policy is to identify and protect the State's key extractive resources. Such resources include sand, gravel, clay, coal, gas and oil. The locations of these resources have been identified, along with a separation area and associated transport route. These are known as Key Resource Areas (KRA); the KRA includes the separation area and transport route.

Figures 28a to 28e at Appendix 9 contains available maps identifying the KRAs within each local government authority. The proposed GLNG project is consistent with the outcomes of SPP 2/07 in that it will not compromise the operation of existing resource areas.

It is intended that development within a Key Resource Area be compatible with the existing extractive industry. Development in KRAs should not;

- increase the number of people living in the separation area; and
- compromise the function of the separation area.
- development should be for uses that are associated with the extractive industry.

The policy does recognise that there may be circumstances wherein development needs to occur within a KRA that is not directly associated with the extractive industry. In these instances it must be proven that the development;

- provides an overwhelming benefit to the community; and
- cannot be reasonably located elsewhere.

2.2.6 Transport Infrastructure Act 1994 - Development on Strategic Port land

Under the *Transport Infrastructure Act 1994,* a Port Authority is responsible for its Port in terms of establishing, managing and operating Port facilities and services and the preparation of a land use plan. The Gladstone Port Corporation has been established under this Act to manage the development and operation of the port area.

A material change of use on Strategic Port Land (SPL) that is inconsistent with the Port Authority's land use plan is assessable development under Schedule 8 of the IPA. Strategic Port Lands are not subject to local government planning schemes instead, the relevant Port Authority, in the case the Gladstone Port Corporation regulates development in the SPL and is the assessment manager for all application whether the development is inconsistent or consistent with the land use plan. Certain components of the GLNG Project maybe located within strategic port land and the requisite applications will be made to the Gladstone Port Corporation.

For the components of the GLNG Project located within the GSDA the assessment manager will be the Department of Infrastructure and Planning.

2.2.7 Integrated Planning Act 1997

The Integrated Planning Act (IPA) enables and provides local government authorities with the powers to prepare and implement planning schemes, to manage development within their boundaries. Planning schemes are intended to;

- Outline the desired outcomes sought for the local government area as a whole and for particular localities;

- allocate land for different uses, including residential growth areas, having regard to a range of considerations ;
- coordinate and integrate infrastructure and land use planning, and indicate the location of existing and proposed community infrastructure ;
- identify areas or places that constrain the use of land due to their environmental value, resource value or their adverse effects on development;
- identify the kind of development that requires approval (assessable development) or that can be carried out without approval if certain requirements are met (self-assessable development); and
- Specifiy the development standards or criteria for assessing the suitability of a development proposal.

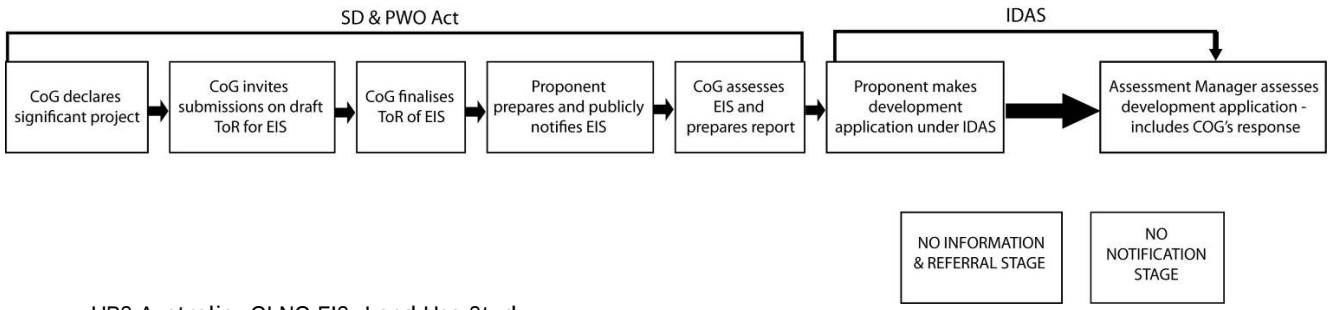
Each relevant local government area has an IPA compliant planning scheme; the planning schemes facilitate the implementation of the principles and outcomes of the IPA in the local context. In the normal course of development, compliance with planning schemes is essential, however as the GLNG is a significant project under the SWDPO Act and is not subject to the requirements of local government planning schemes.

This is the four stage process under IPA for assessing and deciding development applications. All development is subject to the process unless it has been declared exempt development under the IPA or another statute.

The four stages are;

1. Application
2. Information and referral
3. Notification
4. Decision.

EIS Process under SD & PWO Act occurs before lodgement of development application under IDAS



Schedule 9 Table 5, of the IPA outlines all development exempt from the integrated development assessment system (IDAS) process. This includes;

- certain mining and petroleum activities under the Mining Resources Act 1989, the Petroleum Act 1923 and the Petroleum and Gas (Production and Safety) Act 2004;
- all aspects of development for a mining activity to which an environmental authority (mining activities) under the *Environmental Protection Act 1994* applies; and
- all aspects of development for a petroleum activity as defined in the *Environmental Protection Act 1994*, section 75.
- all aspects of development for community infrastructure prescribed under a regulation.

(under Schedule 5 of IPA, community infrastructure includes; jetties, wharves, port facilities and navigational facilities; oil and gas pipelines.)

The GLNG project has been declared to be a 'significant project' in accordance with the provisions of *the State Development and Public Works Organisation Act 1971.* Sections 37-43 of the act deals with the relationship with the IPA. As the project, under the IPA, involves a material change of use and requires impact assessment, the referral and notification stage of IDAS does not apply and there are deemed to be no referral agencies for the application. The Co-ordinator Generals report has the same effect as if it were a concurrence agency's response.

It should be noted that discussions with staff from the Department of Mines and Energy has indicated that they are unclear as to whether the LNG facility would be classified as a petroleum facility. Should the facility not be classed as a petroleum facility then Santos would be required to lodge a development application under the IDAS for approval of the LNG facility following completion of the EIS process.

2.3 Regional Planning

There are a number of regional planning documents that require consideration:

2.3.1 Central Queensland Regional Growth Management Strategy (CQRGMS)

The CQRGMS was endorsed in July 2002 by the State Government; it is a non-statutory document. The project area comprises 13 local government areas including the following within the Study area: Banana, Bauhinia, Calliope, Gladstone and Taroom.

The RGMS provides a policy framework for the growth of the region; it recognises the valuable commodities in the region and the importance of preserving and enhancing existing land uses that are mainstays of the areas' economy.

Agricultural production (primarily beef and grain) is recognised as the traditional mainstay of Central Queensland's economy, other drivers of the economy include mining, manufacturing, minerals processing and tourism. Banana Shire contributes $199million (2002) to the regional agricultural economy and Bauhinia Shire $143.3million (2002).

The CQRGMS divides the region into 4 naturally occurring sub-regions:

1. Central Highlands
2. Dawson Valley and Callide Valley
3. Gladstone and Calliope
4. Rockhampton and Capricorn Coast.

The GLNG project passes through sub-regions 1-3. The major industries in the Central Highlands are crop production, primarily cotton, peanuts, grains, beef and sheep production and coal mining. The Dawson/Callide Valley subregion is also dominated by agriculture with 80% of land in the region used for agricultural production. Beef production forms the greatest percentage of annual income in the sub-region (ABS 2000). Dryland cropping is also practiced particularly of legumes, grain and wheat. (*Source: CQRGMS)*

The Gladstone/Calliope sub-region is a major trade and resource processing, metals smelting and light metals founding location. The region contains a first class port (Gladstone) and accounts for 19.3% of Queensland's international trade and 17.9% of Australia's international trade.

The CQRGMS identifies a number of 'Outcomes' across a range of themes including;

- Resource Use, Conservation and Management
- Economic Development
- Infrastructure
- Social and Cultural Development
- Education, Training and Research
- Planning and Governance.

The CQRGMS contains 'Strategies and Actions' to achieve these outcomes. Of particular relevance to the GNLG are the Resource, Conservation and Management objectives and the Economic Development objectives.

The Outcomes for the Resource, Conservation and Management theme is;

'The promotion of, and adherence to, best practice land management for sustainable and profitable land use'.

Strategies to support the achievement of this outcome are:

- Support the use of land resources within the limits of their capabilities.
- Ensure that land use is supported by appropriately located and timed monitoring for land condition and trend.
- Demonstrate the linkages between sustainability and profitability.
- Ensure the protection and conservation of the region's valuable natural resource assets.
- Incorporate Native Title interests into land use planning processes.
- Identify and recognise mining, petroleum and extractive resources, including hard rock quarry resources, and their economic potential, ensuring sites and access to them are protected from incompatible land uses, and impacts associated with their extraction are kept within socially and environmentally acceptable limits.
- Restore land use capability and ecosystem function of degraded areas for improved viability and community benefit.

Actions include:

- Develop sustainable grazing practices within the region.
- Refine and implement the preferred methods for the examination of sustainable farming and grazing practices.
- Develop, where appropriate, and implement state and local policies, vegetation management plans, area management plans and guidelines for nature conservation.
- Protect agricultural land resources in the region and continue programs, including necessary land resource surveys, to identify and spatially represent information on areas suitable for agricultural production.
- Encourage and support ongoing community input on future land use options for degraded landscapes.
- Identify 'community continuity' issues after mining and extractive industry operations cease, and implement a long term community sustainability strategy.
- Explore the impact of short term, small scale mining operations on communities, grazing land and the environment.
- Encourage the rehabilitation, where appropriate, of degraded areas of agricultural land and mineral and extractive industry areas.

The GLNG project should seek to support the outcomes of the CQRGMS and implement management strategies that are similar to and reflect those contained within the CQRGMS. The location of gas wells in particular will need to consider the use of sustainable farming practices in the CSG fields area, what these practices are and entail, and be located to minimise the impact on the implementation of these practices.

2.3.2 Gladstone State Development Area

The Gladstone State Development Area (GSDA) is a significant industrial land bank (6800 hectares) located 15 km to the north west of Gladstone. It was declared by the Queensland Government in 1993 under the State Development and Public Works Organisation Act 1971, following a series of detailed engineering, environmental, social and economic studies in the early 1990s.

The purpose of the GSDA is to secure and protect a large area of suitable land with ready access to a deep water port for large scale industrial development over a 30-50 year timeframe; approximately 29% of Queensland's international trade is serviced through the Gladstone Port.

The GDSA is intended to facilitate industry of regional, State and national significance. Containing industry to a planned industrial area protects the environmental values of an area and optimises benefits to the community

The GSDA comprises the Clinton, Yarwun, Aldoga and Targinie precincts in Gladstone City and Calliope Shire and totals approximately 22,000 hectares.

The State Government has proposed an extension to the GSDA to include the southern portion of Curtis Island and Kangaroo Island in Port Curtis in order to provide land for proposed LNG plants; this is as a result of the announcement that a number of resource companies are investigating the construction of LNG processing plants in Gladstone. By including what is considered the most suitable location for a LNG plant in the GSDA it protects the site by controlling surrounding development and secures the land for industrial development. Figure 7 at Appendix 2 illustrates the geographical footprint of the GSDA and the proposed extension area.

Through the GSDA, the Queensland Government has provided defined processes for:

- Land Use Planning
- Environmental Management
- Community Consultation
- Long-Term Strategic Support for Industrial Development

The GSDA is managed under a dedicated development scheme that merges individual governing regulations and is designed to streamline the project approvals process and facilitate the timely and orderly provision of infrastructure needs.

Under this framework there are:

- Requirements for public notification of development proposals (where appropriate) and referral to relevant government agencies
- Processes to avoid duplication in the review of development proposals Procedures to ensure that referrals proceed within acceptable timeframes
- Procedures which ensure effective liaison with adjoining Local Governments and other key stakeholders.

The GSDA development scheme replaces the local authority planning scheme for developments within the GSDA. It applies for development applications that would otherwise require a material change of use application under the IPA. The assessment manager is the Coordinator General.

2.3.3 Local Government Authorities

The GLNG project is contained within the following local government authority jurisdictions:

- Roma Regional Council;
- Central Highlands Regional Council;
- Banana Shire Council; and
- Gladstone Regional Council.

The Regional Councils were formed in March 2008 upon the amalgamation of the following former Shires;

- Bauhinia, Duaringa, Emerald and Peak Downs (Central Highlands RC);
- Bendemere, Booringa, Bungil, Warroo and Roma (Roma RC);
- Gladstone, Calliope and Miriam Vale (Gladstone RC).

Local authority planning Schemes are the effective instrument governing the assessment of an application for a development permit. Under the transitional arrangements for amalgamated Councils, the planning schemes for the former Shires remain applicable until such time as new consolidated schemes are prepared.

The following former Shire planning schemes are the relevant planning instruments that assessment of the impacts of the proposal should be against;

- Roma
- Bungil Shire
- Bendemere Shire
- Waroo Shire
- Bauhinia Shire
- Banana Shire
- Calliope Shire

It is important to consider the GLNG in the context of relevant local government planning schemes; the planning schemes are an expression of the desired pattern of development in an area and the GLNG may impact upon the ability of desired land uses to be developed. This is an important part of the Land use Study as the planning schemes can provide guidance on how to integrate the components of the project into the existing landscape and manage the effects of the project in the long term.

Figure 2 shows the boundaries of local government areas within the Study Corridor.

2.3.3.1 Local Government Authority Schemes

The planning scheme Zoning maps found at Appendix 1 show the land use patterns within each local government area; the majority of land within the Study Corridor is contained within the Rural Zone. The impact on rural land will vary depending on the agricultural quality of the land and current use. Land is categorised into classes of agricultural quality, from 'A' to 'D', with 'A' being the highest quality land. Each planning scheme sets out the requirements for the use of this land.

Within each Zone particular land uses are permitted, subject to a level of assessment. Appendix 10 contains a comprehensive Table detailing land uses for each Zone that the GLNG Project will encroach upon within each local government authority.

The Zone Map for each urban area is contained in Appendix 1. The Zone maps for the town areas typically show a small commercial hub, a small industrial hub bounded by residential land and open space areas. The capacity of the urban areas to accommodate additional land uses associated with the GLNG project needs to be determined. The GLNG project and the need for support uses should not place undue pressure on existing urban resources and those providing them, without adequate consideration.

The capacity of particular urban areas to absorb an increase in population and attendant needs will require consideration when:

- choosing locations of accommodation camps; and
- final location of components of the operation requiring large workforce.

All relevant local government authorities, with the exception of former Warroo Shire, contain specific planning scheme Code requirements in relation to the location and construction of temporary workers accommodation and accommodation camps. The Code requirements relate to siting, setbacks and layout amongst other things. Refer to Appendix 11 for details of Code requirements. These requirements should be considered when designing and locating accommodation camps for the GLNG workforce.

3.0 DESCRIPTION OF EXISTING ENVIRONMENT

3.1 Location, Land use and character

This Section describes the environmental characteristics and values of the study area. Land use of the gas field and pipeline route is dominated by rural uses. There are also areas of significant environmental value such as National Parks and State Forests. The landscape of the study area is characterised by vast open areas with very little built form.

3.2 Land

3.2.1 Regional and local context

The Study Area covers a broad area of central and western Queensland; the Study area includes the Surat Basin, the Port of Gladstone and Curtis Island. There are a number of regional centres and smaller towns within the Study Area including Gladstone, Roma, Biloela, Banana, Injune and Rolleston.

The coal seam gas fields cover an area of approximately 3000 km^2. The pipeline extends from Gladstone on the east coast to Compressor Site Number 2, PL92, approximately 50km north east of Injune. The towns of Rolleston, Injune, Roma, Taroom and Wallumbilla are nearby towns to the gas fields. These are small towns both in physical size and population. Residents are generally dependent on the agricultural sector for employment although the proportion of jobs in the resource sector is increasing as the area is explored for further oil and gas development.

The pipeline is approximately 400km in length and requires a corridor with a width of approximately 100m. There are two alternative routes being investigated for the pipeline. The preferred route is from Compressor Site Number 2, through the Arcadia Valley and then follows the Dawson Highway. The other proposed route heads west to the Carnarvon Development Road following the existing Alinta pipeline route north before veering off across country and then follows the Dawson Highway corridor.

The pipeline corridor will pass through largely rural areas that contain isolated development, generally in the form of homesteads and ancillary agricultural buildings.

The LNG facility is located at the southern end of Curtis Island adjacent to Port Curtis. The footprint of the facility will be approximately 379.6hectares

Banana Shire has a variety of soil types suitable for the production of a wide range of crops, together with land suitable for beef cattle breeding and fattening. Nearly 80 percent of the Shires cotton crop is grown in the Dawson Valley area.

Waroo Shire, (now part of Roma Regional Council) is predominately rural, with the area having a reputation for high quality wool, beef and grain production. Other rural industries include irrigated crops such as cotton and a vineyard and date plantation.

Land use in the former Bendemere Shire area (now part of Roma Regional Council) is predominantly a cattle grazing and crop production area ; 58% of its agricultural income results from cattle grazing and 37% from grain growing.

Urban development is focussed around the following centres;

Roma

Roma is the administrative hub for the newly formed Roma Regional Council. The town has a population of approximately 6800 people, with the surrounding region having a population of approximately 15000 people. The Regional Council is an amalgamation of Bendemere, Booringa, Bungil, Warroo and Roma Councils.

Roma is the service centre for the south west Queensland area, providing an extensive range of retailing opportunities and community services such as regional offices of State government agencies such as the Department of Primary Industries, Department of Natural Resources, CentreLink, Disability Services, AgForce, Landcare Management, all major banks, rural banks, a hospital and an airport.

Land uses around Roma are varying, with extensive farm holdings contrasting with numerous national parks, including Carnarvon Gorge. Roma is the cattle business centre for the Western Downs area of Queensland; the Roma Saleyards regularly selling up to 12,000 head of cattle each week. Sales are held on a regular twice-weekly basis with special sales such as Bull Sales and Special Breed Sales held throughout the year. The Saleyards are the largest in the southern hemisphere.

Wheat growing is extensive throughout the region providing a considerable and valuable source of employment and revenue.

The Roma region contains existing oil and gas fields operations, with operators such as Santos and Origin operating in the region. Further details of these can be found at Appendix 3 Figures 8-10 and Tables 1-3. Many oil and gas workers currently live in Roma.

Springsure

Springsure is mid-way between Rolleston and Emerald. It was the administrative hub for the former Bauhinia Shire Council; the Shire has an approximate total population of 2400 persons with 900 persons residing in Springsure. It is well-serviced with a State School up to Year 10, two convenience

supermarkets, ambulance station, Queensland Government offices, the former Bauhinia Shire Council offices, several hotels and motels.

The local economy is dependent on agriculture with high quality grazing country throughout the former Bauhinia Shire. Coal mining is emerging as an economic driver, with coal mines in proximity to both Rolleston and Springsure. There are also high quality gas fields in the former Shire with gas currently being piped to Gladstone and Rockhampton.

Photo 1: Springsure Main Street

Photo 2: Springsure Ambulance Station

Injune

Injune has a population of around 500 and its surrounds are dominated by agricultural uses ranging from small holdings to large scale intensive modern farms. The town is within the proposed coal seam gas fields.

Rolleston

The township of Rolleston lies at the intersection of the Dawson Highway and the Carnarvon Development Road. It is small, with few services; the township contains a post office, garage, convenience shop, rural produce shop, an auto electrician and a pub. There are few houses. It has a population of approximately 100 persons.

Banana

The township of Banana is small and consists of a service station, providing rest services such as toilets, showers and hot food and a small convenience shop. It lies at the intersection of the Leichardt Highway and the Dawson Highway.

Biloela

Biloela is the administrative town of Banana Shire. It has a population of around 5000 and is the retail and commercial focus of the Shire. The town contains a shopping centre anchored by a Woolworth supermarket and containing a full range of national stores, including Dick Smiths, Rockmans and Target. All major banks and a government agent service the town. In terms of community services

Biloela contains a hospital, community health centre, high school, two child care centres, youth facility, a library and a number of churches.

Photo 3: Biloela shopping centre

Photo 4: Main Street Biloela

Moura

Moura is the second largest town within Banana Shire and offers a wide range of shops and services. The town has a long established coal mining industry, with underground mining operations commencing in the 1950s; this is known as the Dawson Mine. Most of the coal is exported overseas. The Dawson Mine has expanded in recent times to include a Dawson North and Dawson South Field. In total the coalfield will follow a corridor 120km in length. The town of Moura benefits from the presence of the Dawson fields being in proximity to the town with two large accommodation camps housing approximately 1000 contractors located at the edge of the town. The camp occupants utilise the towns' retail outlets and provide a valuable source of revenue for the local economy.

Gladstone

The pipeline corridor does not physically impact on the city of Gladstone itself, with the corridor traversing the Gladstone State Development Area.

The other components of the project, such as the LNG plant and bridge are likely to have a visual impact from Gladstone. The project will have social impacts on the City; the potential for these will be thoroughly investigated and addressed by the Proponent.

Curtis Island

Curtis Island is located North/East of Gladstone City centre, along the Queensland coast. The major land uses on Curtis Island consist of a number of conservation areas of state parks and national forests, as well as a historic lighthouse and camping grounds (EPA 2008).

The proposed location of the LNG plant on Curtis Island is in the south western corner of the island. This area of Curtis Island has been included in the Gladstone State Development Area. This area of the island has been used in the past as a cattle grazing area. There are no built structures in the area of the proposed plant. The nearest urban settlement is at South End approximately 14 kms away. South End

has a permanent population of approximately 20 people, that increases to about 90 during the summer season.

3.2.2 Tenure and Zoning

3.2.2.1 Pipeline

The majority of land along the proposed pipeline route is freehold tenure and held in large holdings. Refer to Figure 11 in Appendix 4

Land along the proposed pipeline route is generally zoned Rural under the relevant local government planning schemes. The land is used for agricultural purposes such as cattle grazing and crop production. There has been substantial clearing of vegetation in the study corridor.

3.2.2.2 Coal seam fields

The coal seam gas field area is predominately used for agriculture and is mostly held in freehold tenure. The size of the holdings increases from the central to the western and southern portion of the study area. The Rural Zone is the dominant land use zone within the CSG area (refer to Appendix 5). The CSG study area is intended to remain agricultural for the long term.

There are a number of operational coalfields, quarries and resource-related plants in the study area; there are a large number of leases in the areas, particularly in the west of the study area, around Moura, Rolleston and towards Roma. The location of these and the particular resource being mined can be found at Appendix 3.

The type of agricultural uses change within the study area, determined by the category of agricultural land. Grazing (cattle) is the most visible agricultural use in the eastern portion; towards Roma there is an increasing proportion of crop production particularly of wheat. Farms are of a significantly large scale and need to be able to work at this scale in order to produce sufficient wheat for the market. Disruption to the ability to operate at such a large scale would have an economic impact on the farm owners.

There are numerous stock routes traversing the area. The stock route network is used predominately for moving stock to market, an important link in the network for cattle to traverse through adjoining Shires and to assist in times of drought.

These are of critical importance to the cattle industry in the region, providing a means of transporting livestock from across the region to pick-up points and then to the Roma Saleyards. Queensland's stock route network (SRN) provides pastoralists with a means of moving stock 'on the hoof' around the state's main pastoral districts, as an alternative to trucking and other transport methods. Refer to Figure 22 at Appendix 5 for details of the SRN in the region.

Stock routes are located within road reserves. The location of CSG wells will need to avoid interfering with the stock routes and in circumstances where this is unavoidable ensure that an alternative route can be implemented enabling the continuing movement of stock across the region.

The management of stock routes is shared between local governments and the Department of Natural Resources and Water. Consultation with these stakeholders during development of the gas wells would be necessary.

The towns of Roma, Rolleston, Bauhinia and Wandoan are wholly within the coal seam gas fields. New wells will need to be outside of the urban areas, separated by a buffer that provides appropriate protection in the event of an incident involving the wells and to minimise visual intrusion, preserving the amenity of the urbanised areas.

3.2.2.3 LNG Facility

The site of the facility on Curtis Island is on land zoned for Rural purposes under the former Calliope Shire planning scheme. The site of the proposed plant is held in large freehold holdings; the land is vegetated and has been used for cattle grazing in the past.

The population of the south end of Curtis Island is approximately 100, with 20 permanent residents and the remainder being seasonal residents. The settlement area is approximately 14km from the proposed LNG plant and due to the topography of the island and the location of the plant, is screened from the visual impact of the plant.

3.2.3 Surrounding land uses

3.2.3.1 Pipeline

Land use the length of the pipeline is dominated by agricultural uses either for cultivation or for grazing purposes. Outside of the existing townships, the extent of built environment is limited to farm buildings and homesteads.

The settlement of Bauhinia Downs falls within the Study Corridor; this comprises a State School and a number of residential dwellings. The risk of locating a pipeline in proximity to a school will be assessed during the construction planning phase of the project; the pipeline's physical location should have an appropriate buffer if it is within the vicinity of the school.

The township of Mount Larcom has the potential to be affected by the location of the pipeline. As it is intended that the proposed pipeline will follow the existing Alinta pipeline, it is not expected that the additional pipeline will impact adversely on the properties, as a buffer zone currently exists between the pipeline corridor and properties.

As the proposed pipeline will largely follow an existing pipeline route, adjoining land uses throughout the study corridor are considered compatible and not be impacted upon.

3.2.3.2 Coal Seam Gas Fields

The coal seam gas fields cover an extensive area incorporating a mix of land uses. The coal seam fields encompass urban centres (Roma, Rolleston, Wandoan and Bauhinia) containing residential areas, community services (schools, hospital, retail) and light industrial uses. Figures 3h to 4g at Appendix 1 illustrate the designated town areas for each of the existing urban centres. The designation of the land in the planning scheme through a zoning scheme provides an indication of the physical area that the urban land uses are not intended to spread beyond. Any new support services for the GLNG operation should be contained to these urban areas to avoid the need for providing new and possibly unnecessary infrastructure in rural areas.

Development of the CSG should avoid fragmenting farmland and impacting on the ability to fully utilise the land.

Homesteads are dispersed throughout the Study Area, but particularly in the Coal Seam Gas Fields. The location of wells will need to be located within a safe distance from the homesteads.

3.2.3.3 LNG Facility

The proposed LNG facility on Curtis Island is located within an area used primarily for grazing. The continued use of the land for grazing is an issue identified in the RCMP as problem in this coastal area and needs further management to protect the sensitive environment on the island.

The Narrows is the water body extending north from Port Curtis separating Curtis Island from the mainland at the location of the GSDA. It is within the Habitat Protection Zone of the GBRMP; activities such as boating, limited line fishing, netting, tourism and diving are allowed within the Zone. Port Curtis is within the General Use Zone with a wider range of activities allowed within this zone. The location of the bridge will be in close proximity to the Narrows; a design solution will be required that enables the continued use of the Narrows for the range of activities that are currently enjoyed there.

The construction of the bridge and pipeline will use construction methods that will have minimal impact on these activities.

3.2.4 Land use

3.2.4.1 Pipeline

The majority of the length of the proposed route of the pipeline follows the existing Alinta Gas pipeline route, but is unlikely to share the existing easement. The pipeline will originate from the coal seam gas fields in the Roma Regional Council area and terminate at a proposed plant on Curtis Island.

The pipeline corridor area is characterised by rural land and agricultural activities and associated uses. There is little urban development in proximity to the pipeline.

The pipeline will pass through the GSDA; there are a number of industrial uses dispersed throughout this area, including the Stuart Oil reserves, Earth Commodities Quarry and the Yarwun Alumina Refinery. At present the Stuart Oil plant is not operational. These uses have established on very large land holdings; this has the effect of lessening their visual impact and to minimise their impact on other uses in the area. The location of the GSDA is 15km north-west of Gladstone and 100km south-east of Rockhampton, therefore having little impact on the amenity of these two cities. Mount Larcom is the closest population concentration; impact of the proposed pipeline would be minimal as the existing pipeline corridor is already a constraint that the population considers.

Photo: Rio Tinto Aluminium Refinery, Yarwun (source: Gladstone Economic Industry Development Board)

The Central and Western end of the pipeline passes through agricultural land and as the pipeline will be buried at depth, it is unlikely to have an adverse impact on land use, other than development being prohibited within the designated corridor. The required corridor is 100m wide and is not considered excessive.

The pipeline will pass through the Anglo Coal Dawson Mine located in the vicinity of Moura. Appropriate safety measures will need to be implemented in the construction of the pipeline and its continued operation in this area, to minimise any potential impacts on the operation of the existing mine.

The Southern end of the pipeline will pass through the Arcadia Valley; this comprises of medium sized property holdings and cultivation is the predominant activity. This area is generally used for the production of sorghum and wheat. The Arcadia Valley contains Expedition National Park; the specific environmental values of the Park will need to be assessed and accommodated in the final delineation of the pipeline route.

3.2.4.2 Coal seam gas fields

The coal seam gas field area comprises land that is rural in nature with little urban development outside of the designated townships. Development outside of the townships is limited to homesteads and ancillary farm buildings.

There are a number of other resource exploration sites (coal mines, quarries and the like) within the coal seam fields. Refer to Appendix 3 for the locations of these. The GLNG will need to be cogniscent of existing resources operations when considering the location of gas wells, and appropriate safety and avoidance measures will need to be implemented.

The character of the landscape varies throughout the coal seam fields, from open plain grazing land in the area between Gladstone and Rolleston, to heavily vegetated natural rocky areas from Rolleston north and south.

There are a number of existing resource-related operations in the coal seam fields. Refer to Appendix 3 for detail regarding the location of these resource operations; Tables 1-3 detail the type of operation and the operator.

3.2.4.3 LNG Facility

The area of Curtis Island proposed for the location of the gas plant is currently used as grazing land, as is the large majority of surrounding land. The study area is disturbed and contains re-growth vegetation. Vehicular tracks exist in the area but these are unsealed.

The GSDA is proposed to be extended to encompass an area that includes the proposed site of the GLNG facility in the southern portion of Curtis Island. The proposed extension is to specifically facilitate the construction of a LNG facility.

The LNG plant should not cause impact on proposed future use of the land, as it is low quality agricultural land used for grazing purposes. The economic value of the land is low in comparison to land used for crop production; the quarantining of this area of Curtis Island for industrial purposes ensures that compatible land uses are achieved and that appropriate buffers between uses are implemented.

There is a small settlement at South End of Curtis Island with approximately 20 permanent residents and 90 seasonal residents; this is approximately 8.5km as the crow flies from the proposed LNG plant.

3.3 Infrastructure

3.3.1 Roads

The pipeline corridor crosses the following main roads:

- Dawson Highway
- Leichardt Highway
- Burnett Highway
- Carnarvon Development Road

This primary road network is all controlled by the Queensland State Department of Main Roads. The roads are single lane each way, with intermittent over taking lanes. The roads are sealed.

Figure 23 illustrates the highway network. The Dawson Highway is the main East-West route from Gladstone and Rockhampton. The Leichardt Highway runs North – South, passing through Biloela, heading south to Theodore and Warrego and North to Rockhampton. The Carnarvon Development Road is the main North-South road in the west of the Study Area and is the central vehicle route in the coal seam gas fields area. The Carnarvon Development Road runs from Emerald to Roma.

The secondary road network comprises sealed and unsealed rural roads; the quality of road surface is consistent and appropriate for the low volumes of vehicle that use the road network on a daily basis. The local road network is used mostly by agricultural traffic.

The Department of Main Roads has a program of upgrades and maintenance planned for the Study Area.

3.3.2 Rail

Passenger rail connections are available to and from Brisbane to Roma and Gladstone. The Western Line from Brisbane to Quilpie and Cunnamulla provides a service to Roma. The North Coast line services Gladstone, and the rail heads west to Blackwater, Emerald and Springsure.

Freight services are available throughout the region; Queensland Rail provides services for agriculture, coal, minerals and industry. Figure 25 illustrates the coal freighting network in the Study Area. A significant proportion of Queensland's total coal is transported from Moura and the Blackwater area; 11.9million tonnes per annum and 49.2 million tonnes per annum respectively.

3.4 Protected Environmental Areas

There are a number of protected areas within the Study Corridor. These include;

- Great Barrier Reef Marine Park (adjacent to Curtis Island).
- Carnarvon Gorge National Park- lies within the proposed gas field and the proposed pipeline corridor. The proposed pipeline itself is approximately 2km from the closest point of the park.
- Expedition National Park - Lies within the proposed gas field, and partially within the proposed corridor for the pipeline route. The nearest point of the actual physical pipeline infrastructure is approximately 1.5km away
- Nuga Nuga National Park – 1.5km distance from the pipeline corridor.

And the following State Forests (SF);

- Expedition SF – Lies within the proposed gas field, and partially within the proposed corridor for the pipeline route
- Mount Nicholson SF – Partially cuts through the proposed corridor and pipeline route.
- Redcliffe SF
- Mount Stowe SF
- Boxvale SF – Lies within the proposed corridor for the pipeline, with its closet point to the physical pipeline infrastructure being approximately 1km.
- Forrest SF – Approximately 6.5km from the pipeline corridor boundary
- Doonkuna SF – The forest partially runs through the proposed corridor and pipeline; and
- Callide Timber Reserve.

National parks, also known as protected areas, are designated to protect and conserve outstanding examples of Queensland's natural environment and cultural heritage. National Parks and state forests are administered and managed by the Environmental Protection Agency.

With over 12% of its area covered by National Parks, Bauhinia Shire has one of the highest percentages of National Parks of any Shire in Queensland.

The process for designating a National Park beings with the application of 'Forest Reserve' designation to an area of land when timber harvesting ceases; this was created under the Nature Conservation Act 1992. Following this designation the land is then afforded National Park status; depending on the environmental values of the land it is designated as one of 5 types of protected area;

- National Park (scientific);
- National Park;
- National Park (recovery);
- Conservation Park; and
- Resources Reserve.

All areas of State Forest and National Park within the Study Area are, therefore, no longer used for timber harvesting.

The main principle for managing national parks is to provide for the permanent preservation of the area's natural condition and the protection of the area's cultural resources and values.

There are a number of pressures on national parks from urban uses, industrial and agricultural uses. The EPA actively manages national parks and has in place management plans for most National Parks in Queensland.

In managing national parks, the Queensland Parks and Wildlife Service aims to:

- protect the park's natural condition;
- ensure rare or threatened species are protected;
- provide facilities for minimal impact and nature-based recreation;
- protect parks from overuse;
- concentrate human activity in less sensitive areas; and
- help visitors enjoy the park's special attractions.

The Nature Conservation Act 1992 requires that management plans be prepared for each park to guide how the park is managed. The management plan:

- identifies the park's key natural and cultural values, and
- proposes strategies for day-to-day and long-term management to protect those values.

The EPA has two major guiding principles for land use and development activities co-located within protected areas. The first is that incompatible uses should not be in close proximity to such reserves. If this cannot be achieved then the second guiding principle is that;

'buffering measures (e.g. separation distances, vegetated buffer areas, screening, noise attenuation, contouring, barriers) or the provision of easements…should be used to minimise conflicts.' (Source EPA Guideline 12/02)

Further, buffer zones should be implemented within the site of the conflicting land use and not the forest reserve.

Park Management Plans

Land use within National Parks and State Forests is strictly limited to very low impact uses such as those previously mentioned. Grazing is allowed to the extent where it is compatible with existing forest values and where the activity does not compromise principles of ecologically sustainable forest management.

The Nature Conservation Act 1992 has provided for authorised cattle grazing activities on some protected areas including conservation parks and resource reserves where it is consistent with the management principles for these areas.

Grazing is not normally allowed on national parks, however, where a new national park is declared on land used for grazing this activity can be allowed to continue for the unexpired term of the existing lease or permit.

Carnarvon National Park

The Carnarvon National Park lies within the proposed pipeline corridor, its nearest point to the proposed pipeline is approximately 2km. It is the only park within the Study Area to have an endorsed Management Plan. The Management Plan sets out the strategy for protecting the environmental values of the park and guides the type of other land uses that can occur within the Park. The Park is divided into Zones with certain activities limited to occurring in certain parts of the Park and not other. Land uses in the park are limited to passive recreational activities such as camping, walking and picnicking.

Expedition National Park

Expedition National Park is part of the Central Queensland Sandstone Belt. It is largely covered by dry eucalypt forest; patches of dry rainforest scrub grow in narrow side gorges. The park is divided into three separate land areas; 1 large area that sits outside of the proposed corridor for the pipeline and 2 smaller areas that lie within the proposed corridor. The nearest point that the Expedition National Park comes to the proposed pipeline route is approximately 1.5km in distance.

The park has three sections; Robinson Gorge, Lonesome and Beilba Sections. Lonesome is a former grazing property included in to the national park in 1972 to protect its scenic and amenity values; one of the few remaining areas of brigalow exists within the Arcadia Valley section of Lonesome. The Beilba section protects an intact example of escarpment country.

3.5 Native Title

Native title is the recognition by Australian law that some Indigenous people have rights and interests to their land that come from their traditional laws and customs. The principle legislation relating to native title is the Commonwealth Native Title Act 1993 and the Native Title (Queensland) Act 1993.

The native title rights and interests held by particular Indigenous people will depend on both their traditional laws and customs and what interests are held by others in the area concerned. Generally speaking, native title must give way to the rights held by others. The capacity of Australian law to recognise the rights and interests held under traditional law and custom will also be a factor.

Native title rights and interests may include rights to:

- live on the area;
- access the area for traditional purposes, like camping or to do ceremonies;
- visit and protect important places and sites;

- hunt, fish and gather food or traditional resources like water, wood and ochre; and
- teach law and custom on country.

The Native Title Act allows, subject to Commonwealth approval, each State or Territory to develop its own set of procedures for negotiating with native title holders in respect of mining and exploration. Queensland established its own set of procedures for exploration and mining tenements within Parts 12 to 19 of the Mineral *Resources Act 1989* (MRA) known as the Alternative State Provisions (ASPs) which commenced operation on 18 September 2000.

A number of judicial decisions have been made since the implementation of native title legislation that establishes some common law principles: for example the Wik decision held that the grant of a pastoral lease did not necessarily extinguish native title and in the Fejo decision, the High Court held that freehold title completely extinguished native title. (*Source; Department of Natural Resources and Water, Qld)*

The Department of Natural Resources and Water (NRW) helps the Government ensure that all land and resource dealings take account of native title.

NRW is involved in negotiations for land use agreements, including:

- right to negotiate (RTN) agreements for mining, exploration and petroleum tenements
- Indigenous land use agreements (ILUAs) for mining, exploration and petroleum tenements, and land use tenements.

The Department also:

- helps other government agencies and regional staff facilitate these agreements
- assesses the native title implications of all mining, petroleum and exploration applications and develops policy for processing applications
- facilitates the grant of exploration permits for minerals and coal through native title processes
- promotes acceptance of the expedited procedure as set out in the Commonwealth Native Title Act 1993 and to which special native title protection conditions apply.

Figures 26 to 27 at Appendix 8 illustrates the regional traditional lands.

4.0 POTENTIAL IMPACTS AND MITIGATION MEASURES

This Section examines the potential impacts that the components of the GLNG may have on current and future land use. It considers the subsequent effects and proposes management measures that can be employed to minimise these impacts.

4.1 Land Use Suitability

Each local government authority within the region that encompasses the GLNG project has prepared a planning scheme that directs and manages the way in which land within its boundary is to be used, to achieve a level of growth that is sustainable and protects the environment.

The introduction of land use activities that have not been anticipated, such as those associated with a higher level of growth in the resource sector, will effect the way in which land needs to be utilised. The use of land for other purposes than those envisaged in the relevant planning schemes needs to be considered and addressed.

The location of support activities, such as camps, worker facilities, additional permanent accommodation and additional retail facilities required during the construction and operation of the GLNG should be directed to established urban areas or appropriately zoned areas to reduce a potential requirement for local government to provide infrastructure out of sequence.

4.2 Community Impacts

The GLNG will introduce a significant number of temporary workers to the region during the construction phase of the project that will lessen in number for the operational horizon of the project. This workforce, temporary and permanent will place additional pressure on land use.

The workforce required during and construction and operation of GLNG project will vary over time. There will be a greater number of employees involved in the construction phase of the LNG plant than in field operations. This will have a considerable impact on the housing supply in the Gladstone area as temporary accommodation will be needed to house construction workers. This number will reduce significantly post-construction.

Workforce Numbers

Component	Construction	Operation
Pipeline	300	4
LNG Plant	3000	40
Gas fields	350	250

(numbers are approximate, based on workforce modelling figures provided by Santos)

Further detailed information in relation to the impact of the increased regional workforce can be found in the Social Impact Assessment prepared as part of the EIS process.

Workers will require access to a range of public services provided by local and state government, medical facilities, basic infrastructure such as water, sewer, and transport infrastructure. Workers and their families will need retail and recreation opportunities. Land supply for residential purposes will need to be sufficient to respond to demand.

The provision of additional services and facilities to satisfy demand should not be to the detriment of local populations and should not lead to the diversion of resources from the existing local population to service the new temporary population attracted to the region by the GLNG project. Other services provided by local governments should not be impacted upon by the need to provide more basic services to the new workers.

The requirement to facilitate temporary structures such as car parks and accommodation camps could lead to pressure on local authority land resources; the re-allocation of land to uses not envisaged under planning schemes could be detrimental. Additional land requirements will need to identified and presented to local government authorities.

If existing urban infrastructure needs to expand to service the new population, this should be limited to designated urban areas. Encroachment of urban uses into rural areas needs to be avoided; this can be costly for local governments in terms of the potential for losing rural/agricultural land, which is an employment source and contributor to the local economy, and the increase in cost for developing land for uses not intended.

A detailed Housing Study is being undertaken as part of the EIS and will provide greater detail in regards to the level of demand for housing.

4.2.1 Accommodation Camps

Accommodation camps will be provided during the construction of the pipeline using a 'leap frog' process; a main camp will be established with a typical 300 person capacity and as the line is constructed smaller 'fly' camps will be located at the location where it becomes inefficient to travel back

to the main camp every day. The main camp will then move to a new location, further along the pipeline. Each fly camp can typically support 50 people and is generally an overnight camp.

The proposed locations for the camps have yet to be confirmed.

Location criteria for accommodation camps include:

- Appropriate standard of road access;
- Away from a watercourse;
- Minimal site works required; and
- Potential to access main electricity grid if required.

Each camp will be totally self-sufficient with their own water supply, temporary waste disposal system, food and gas (for cooking) supplies, however the availability of local services and the capacity of these services will need to be considered.

Resource extraction over such a broad area will have implications on physical land use. The extent to which existing land uses are affected will be mitigated by the appropriate assessment of the new land uses and the preparation and implementation of management plans.

4.3 Land Use

4.3.1 Pipeline

The pipeline and associated infrastructure, including the in-field gathering lines, the main lines and the sales lines will all be trenched. There will be no physical presence on the landscape of the pipeline to interfere with the use of the land that it traverses.

The pipes extracting the water from the coal seams will be above ground but these will follow fence lines and roads, avoiding overt visual intrusion.

The trenches for the in-field gathering lines will be at a depth appropriate to the current use of the land: the pipe will be laid deeper for land used for crop production. The trench is also tagged with marker ribbon; when a farmer decides to plough the land deeper than usual the marker ribbon will be visible before the pipeline is reached. The safe and continued utilisation of the land is assured during the life of the project.

The compressors will be above ground; however these will be fenced off with no access to the plant other than by maintenance crew for the life of the project. The safety zone, or compound area, around

the compressor, an area of approximately 600m^2, will ensure that the land can continue to be used in a safe manner.

The pipeline construction will entail a large workforce, to be accommodated in temporary camps along the route of the pipeline. The main camps will be in one location for approximately 28 days and fly camps in a single location for 9 days. The long-tem impact on land use is therefore minimal. The sites will be rehabilitated following decommissioning.

4.3.1.1 Buffer Zone

A 100m wide buffer corridor will be in place for the entire length of the pipeline. This will reduce the risk to the public by restricting all development within the buffer zone. There will be appropriate visual markers to alert the public to the presence of the pipeline and to delineate the corridor area.

Some activities will be restricted in this area as a safety precaution. Most agricultural activities present in the area will not be affected, however some activities such as controlled burn-offs will be restricted.

The presence of the Alinta high pressure gas pipeline provides further impetus for the implementation of a buffer zone around the GLNG pipeline. A buffer is required to reduce the risk of an incident occurring with one of the pipelines impacting on the other. There will be little impact on tenure and land use.

A potential consequence of the co-location of the new pipeline with the existing pipeline might be the increase in width of the buffer zone around the two pipelines. This is unlikely to cause any impact on the current use of the land, given the existence of the existing pipeline. An increase in the buffer zone will need to consider existing development; is the development still protected by the buffer zone or not.

4.3.1.2 Existing Mineral Exploration

There are a number of mining leases that are located in proximity to the pipeline corridor. The pipeline will intersect the northern end of ML656, being the Dawson Mine operated by Anglo Coal. Santos is in discussion with the operator to minimise impacts on future use of this lease.

Impacts on all other oil and gas operations will need to be similarly managed.

4.4 Coal Seam Fields

4.4.1 Existing Mineral Exploration

There are other mineral exploration permits, for oil, coal and gas, within the coal seam fields study area. Santos will negotiate with operators of the leases to ensure that there will be minimal disruption to future exploration and operation in this area.

4.4.2 Well Location and construction

Well construction and production will have a significant impact on land use for the life of the project. Landholders will be compensated for any loss in the use of their land throughout the life of the project.

The drilling of core wells through to full production wells will limit the ability of landholders to use the land to its fullest for a period of 12-18 months; during this time the areas of land used in the exploration process varies in size from an area of 800m^2 for the core/appraisal well to a 25m^2 area for a production well.

These areas of land will be fenced off and not be accessible for the life of the well; landholders will not be able to use the land for any purpose. Use of surrounding areas can continue.

Landholders will be consulted and informed when locations of wells are identified.

4.4.3 Access to land

Wells are small in size and will not have an adverse visual impact on the landscape. The location of wells will be determined as exploration occurs; all measures will be taken to mitigate the visual impacts of the wells.

The degree of impact on farming practices will depend on the purpose for which the land is being used; grazing land is likely to be impacted to a lesser extent as animals can still wander around any physical structure that may be erected. Crop production will experience greater constraints from the exploration of the gas field as the wells and their associated lease areas can lead to fragmentation of pastures and inefficiencies in trying to cultivate the land.

Land is typically held in large holdings for commercial farming, and land is categorised as good quality agricultural land; the fragmentation and loss of good quality agricultural land needs to be avoided in order to maintain the financial viability of the farming sector in the study area, both as an employment generator and a local revenue stream.

4.4.4 Water containment

A by-product of the gas extraction process is water. Large quantities of water will be extracted from the seams at the same time as the gas. Initially there will be a greater volume of water than gas extracted from the seam; over time this proportion will reverse as the amount of gas extracted is able to increase.

A range of options is being considered for water reuse, storage and discharge. For the storage option, dams will be constructed to hold the water extracted from gas wells during production. Each dam could be up to approximately 7 hectares in size. The dams will be in operation for the duration of the production.

Dams will be constructed in locations that do not interfere with overland flow; that will not impact on existing aquifers. Typically dams will be located on higher ground and away from areas of cultivation.

The dams are designed to a high standard as the water extracted from the coal seam is classified as a regulated waste. The dams are strictly monitored at all times and access to the dams is restricted, with fences erected to prevent stock from accessing the dams; the quality of the water extracted from the wells can vary.

Once the dams are not required Santos will liaise with the land holder to discuss future use of the area. Santos will hand over responsibility of the dam, if the landholder wants the dam to remain on site. Otherwise the dam will be decommissioned and will be removed. The lining of the dam, containing the residue from the water will be completely sealed and buried at depth.

At all stages of the exploration process Santos will consult and negotiate with landholders as to where drilling is to occur, where dams are to be located and where other infrastructure is to be placed.

The extraction of gas and water from the coal seam has the potential to cause 'land slump'; after the gas and water has been removed from the seam, 'gaps' in the seam are created that have the potential to crumble and cause the land above it to collapse. In the event that this occurs appropriate remediation of the land will take place to render it safe.

4.4.5 Environmentally Sensitive Areas

The coal seam gas fields encompass areas of significant environmental sensitivity including Carnarvon National Park and State forests. The location of these will be a crucial consideration in the planning of the well sites and will try to be avoided; impacts from the wells include detraction from scenic amenity, disturbance to ecosystems and fauna. In instances where wells may be located within sensitive areas construction techniques will be employed to minimise disturbance to the environment and remediation plans will be implemented when production ceases to return any disturbed environments back to their original condition.

The GLNG infrastructure (pipeline, gas wells and plant) will need to be designed to lessen the range of impacts on the rural landscape. Visual impacts will occur as the region has a plain appearance being flat and open, and any structure is highly visible on the landscape.

4.5 LNG Facility

The Study Area for the LNG facility is within the proposed GSDA extension. This clarifies the State governments' intention that this area is suitable for industrial development.

4.5.1 Great Barrier Reef Marine Park

The infrastructure associated with the LNG facility may have an impact on part of the Great Barrier Reef Marine Park. In particular, the bridge and the pipeline may encroach into the protected habitat area of the marine park. The pipeline will be trenched along the seabed; it will be trenched to a depth of 2m and a rock cover and the bridge will have footings and piers in the water. Construction management plans will be prepared and implemented to ensure that the impact on the marine park is kept to a minimum.

4.5.2 Marine Activities

Fishing activities (commercial and recreational) occur in Port Curtis; the GLNG project should not adversely impact on the continued undertaking of these activities.

4.5.3 Facility Construction

During the construction of the facility all equipment and personnel will be transported across Port Curtis on barges, to a point at the southern tip of the island. Workforce modelling has indicated that at its' peak the construction workforce will reach 3000 persons, travelling across from Gladstone. There will be a significant increase in the amount of shipping traffic as a result. This will be managed in consultation with the port authority to ensure that the increase in shipping is managed safely and does not present any risk to the existing shipping traffic.

All construction plant will be transported from Gladstone to a landing site at the southern tip of Curtis Island. A haulage road will then be constructed from the landing site to the facility. Due care will be taken to remove as few trees as possible during this process.

A construction camp will be erected during this process to accommodate construction workers.

Worker facilities will be required on the Gladstone side of Port Curtis, such as car parking. Detailed assessment will be undertaken to determine land requirements for such facilities. The Gladstone Port Corporation will be consulted to assist in the provision of the facilities.

4.5.4 Curtis Island

In the context of the GLNG, minimising access through sensitive areas will be important; the use of the existing access track from the southern point during the construction phase will assist in reducing the impact of the GLNG project. Limiting access and use of the road bridge to GLNG traffic only, will also ensure the volume of traffic on the island is minimised. Vehicular traffic is intended to be kept to a minimum and will utilise existing tracks.

Potential for future urban development in the southern portion of the island should be limited to preserve the significant environmental values of the area; the expansion of South End should not be considered as a site for future residential accommodation for the LNG workforce. The proponent has undertaken to a guarantee that it will not pursue the development of residential accommodation at South End.

The GSDA has been extended to incorporate the south-western portion of the island within its boundaries for industrial development. This development will be subject to the development controls contained within the GSDA development scheme.

4.6 Land Availability

The need to increase the amount of land being used for urban purposes for example, additional housing and retailing requires further consideration. Local government planning schemes identify current land use zoning allocations based on desired outcomes for the Shire. The land use allocations in the relevant planning schemes in the Study Area may not have accounted for the scale of increases in the resource sector that are currently being predicted and require re-assessment of the land use allocation.

The townships within the Study Area contain sufficient appropriately zoned land within their boundaries to cater for an increase in development for urban purposes. Figure 4a to 4g in Appendix 1 illustrate the current extent of such land within each township in the Study area.

Further detailed projections will need to be undertaken to determine if additional land is required to cater for the provision of urban services and to provide land for housing supply. If additional land is required outside of that currently zoned for such land uses, local governments will need to commence the process of amending their planning schemes as soon as is practicable to facilitate this.

5.0 CONCLUSION

This Report has been prepared to inform the Environmental Impact Statement prepared on behalf of Santos Pty Ltd for the Gladstone Liquefied Natural Gas Project, Queensland.

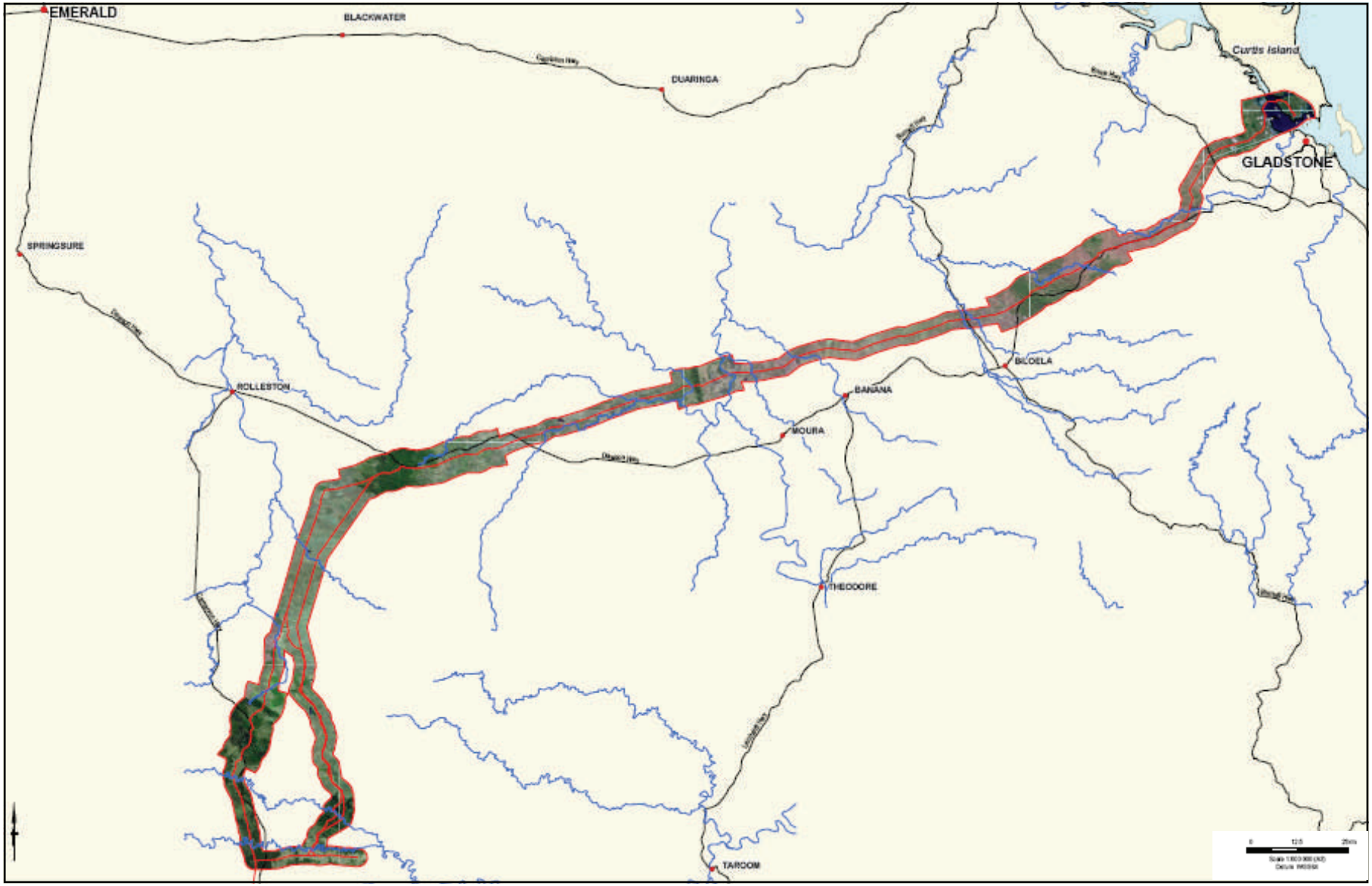
The GLNG has been declared a 'significant project' under the State Development and Public Works Act 1971; when a project is declared a significant project, the proponent must prepare an EIS and undertake public notification of the project as per the requirements of the Act.

Under Section 27 of the Act, the Coordinator General then assesses the project's potential effect on relevant infrastructure, employment opportunities that will be provided by the project and the strategic significance of the project to the locality, region or state in making the decision.

This Report provides a basis for the assessment of the land use component of the GLNG project and for the development and implementation of appropriate landuse management strategies as part of the GLNG, to minimise the impacts of the project on existing and future landuse patterns.

FIGURES

Figures 1a to 2

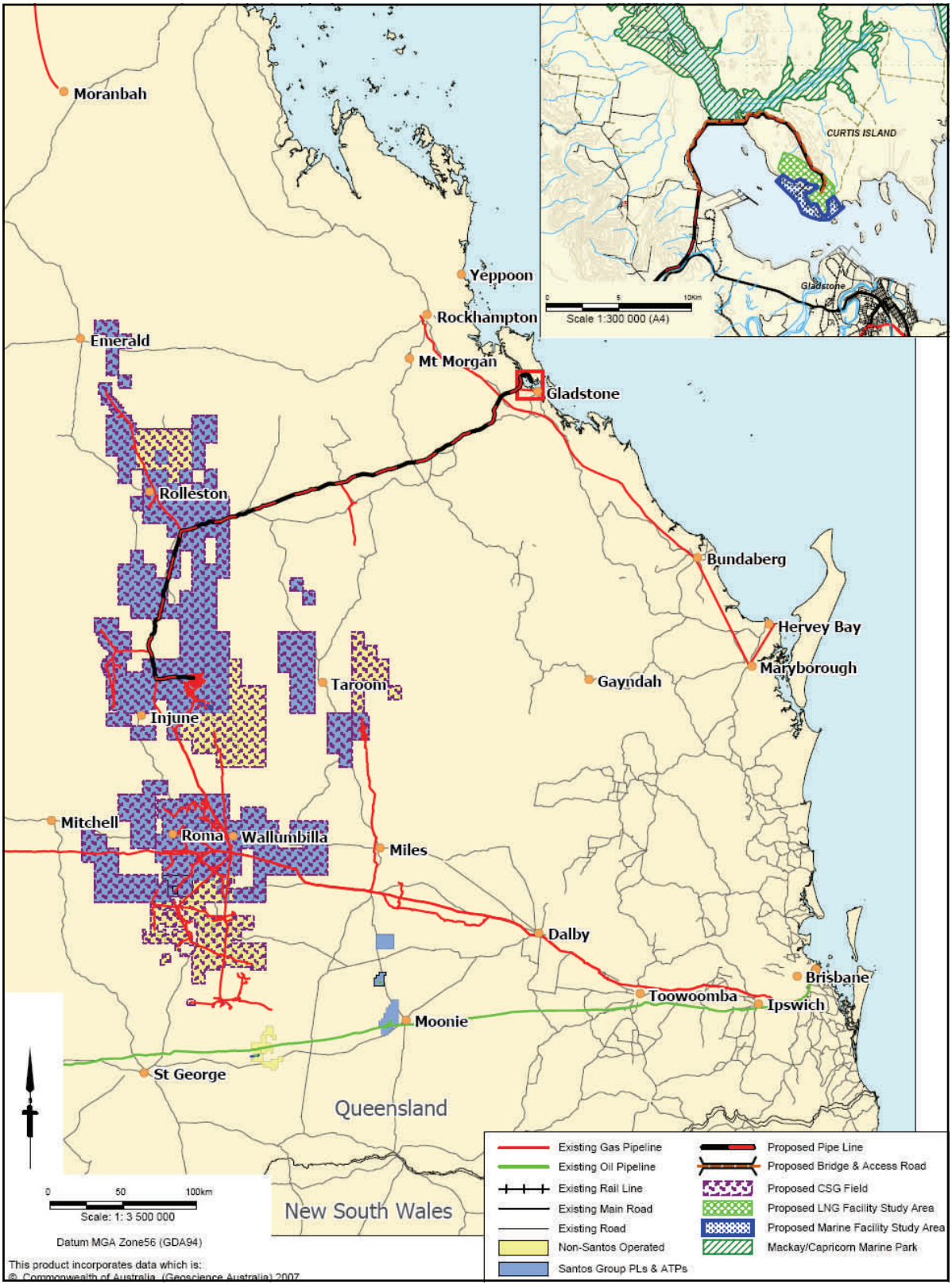


Map Source: URS

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Extent of Pipeline

Figure 1a



Map Source: URS

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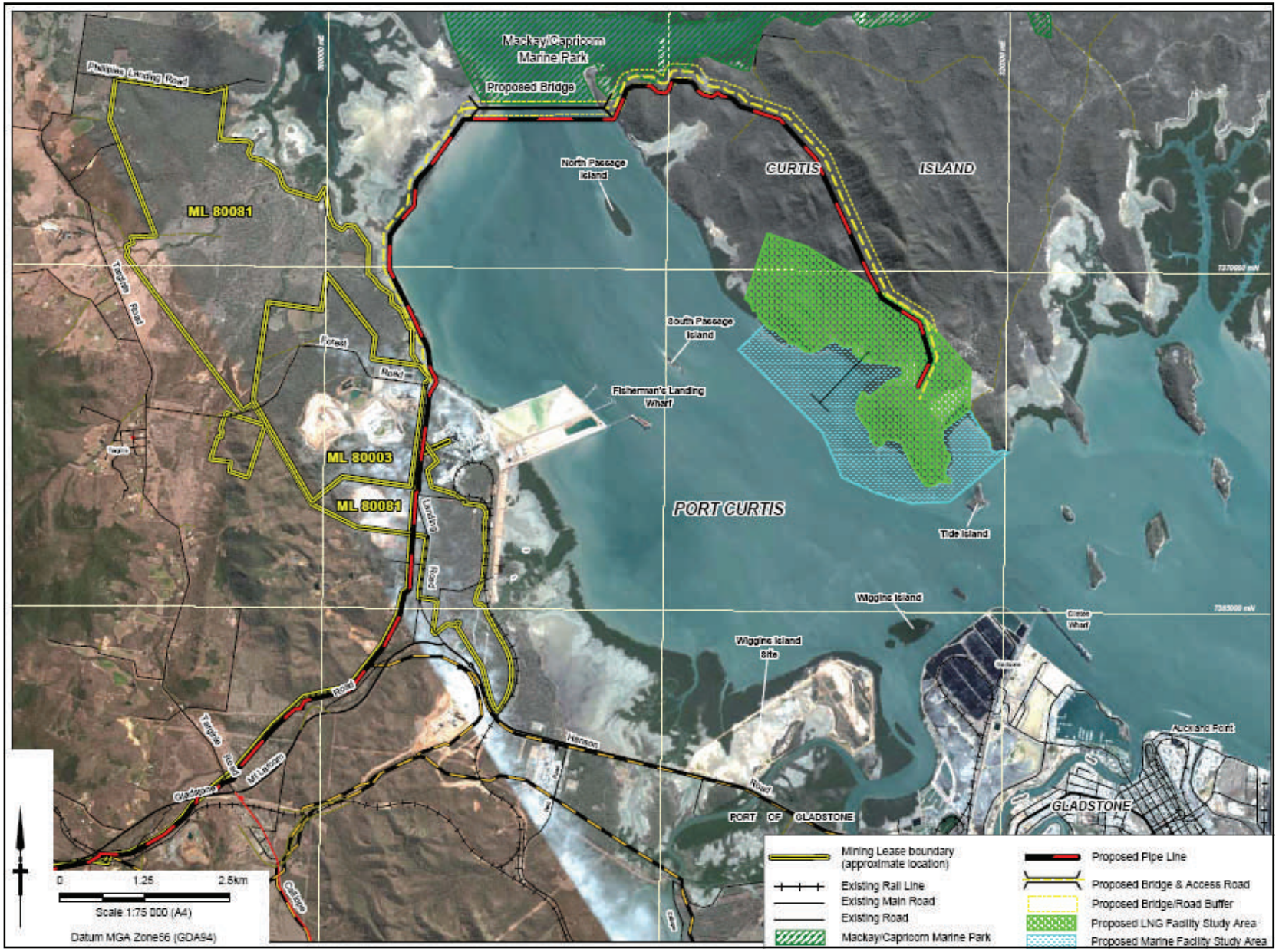
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Extent of Gas Fields

Figure 1b



Map Source: URS

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

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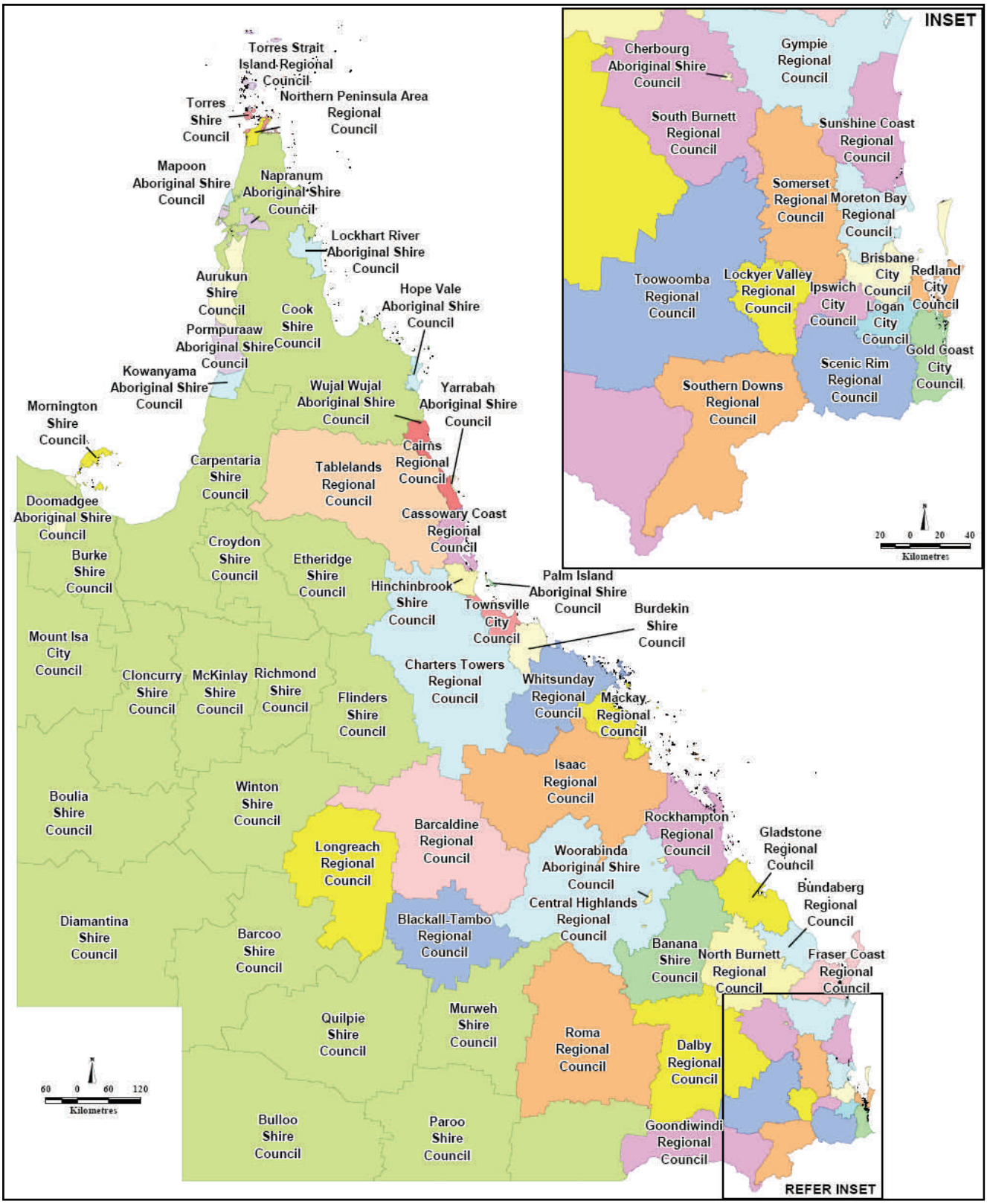
Location of LNG Facility Study Area
Figure 1c



Map Source: Department of Infrastructure and Planning

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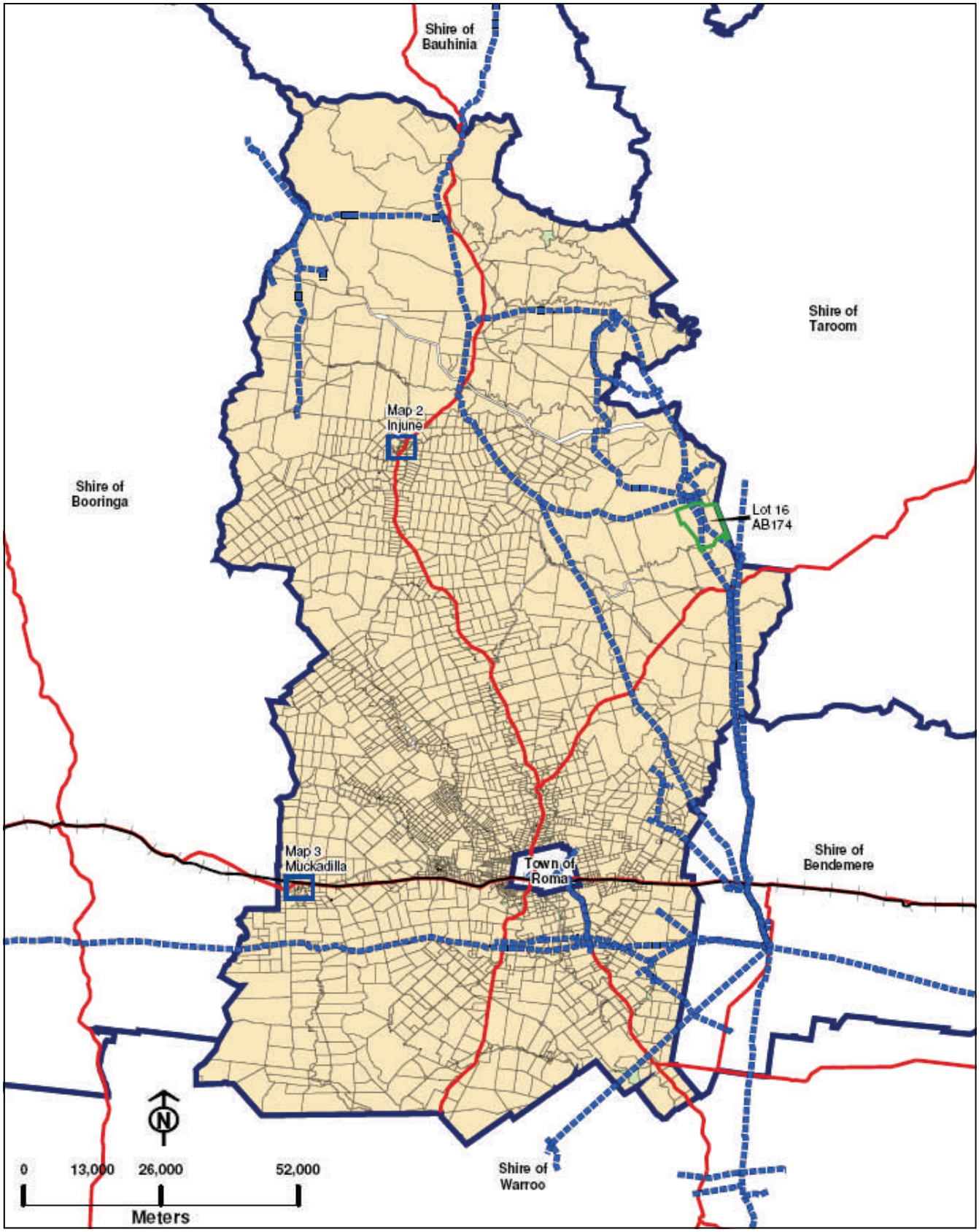
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Queensland Local Government Areas

Figure 2

APPENDIX 1

Figures 3a to 4g



Map Source: Planning Scheme for the Shire of Bungil

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

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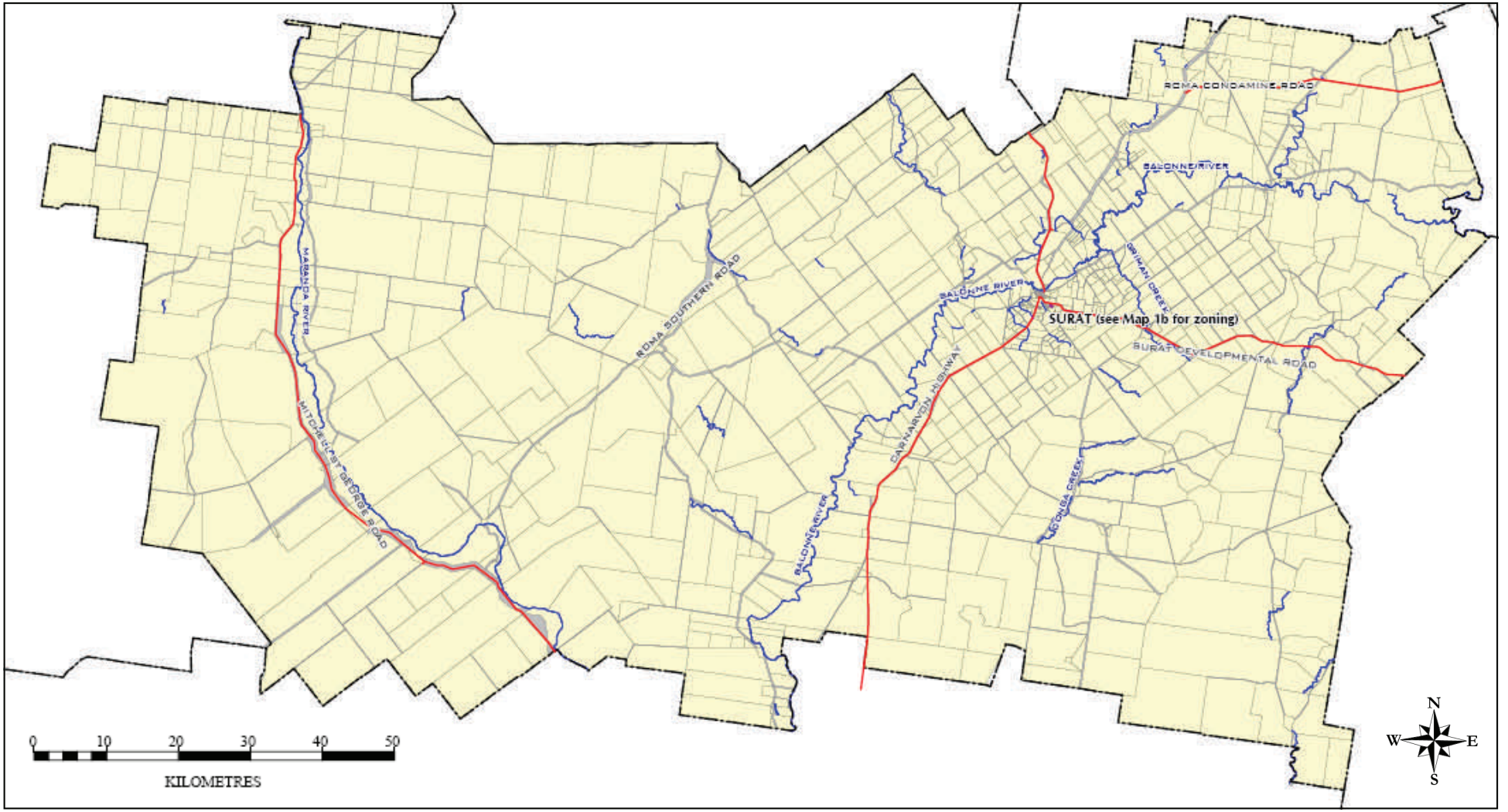
Planning Scheme Maps—Bungil Shire

Figure 3a



Map Source: Warroo Shire Planning Scheme

DMR Road

Shire Boundary

Zoning

- Commercial
- Industrial
- Residential
- Rural

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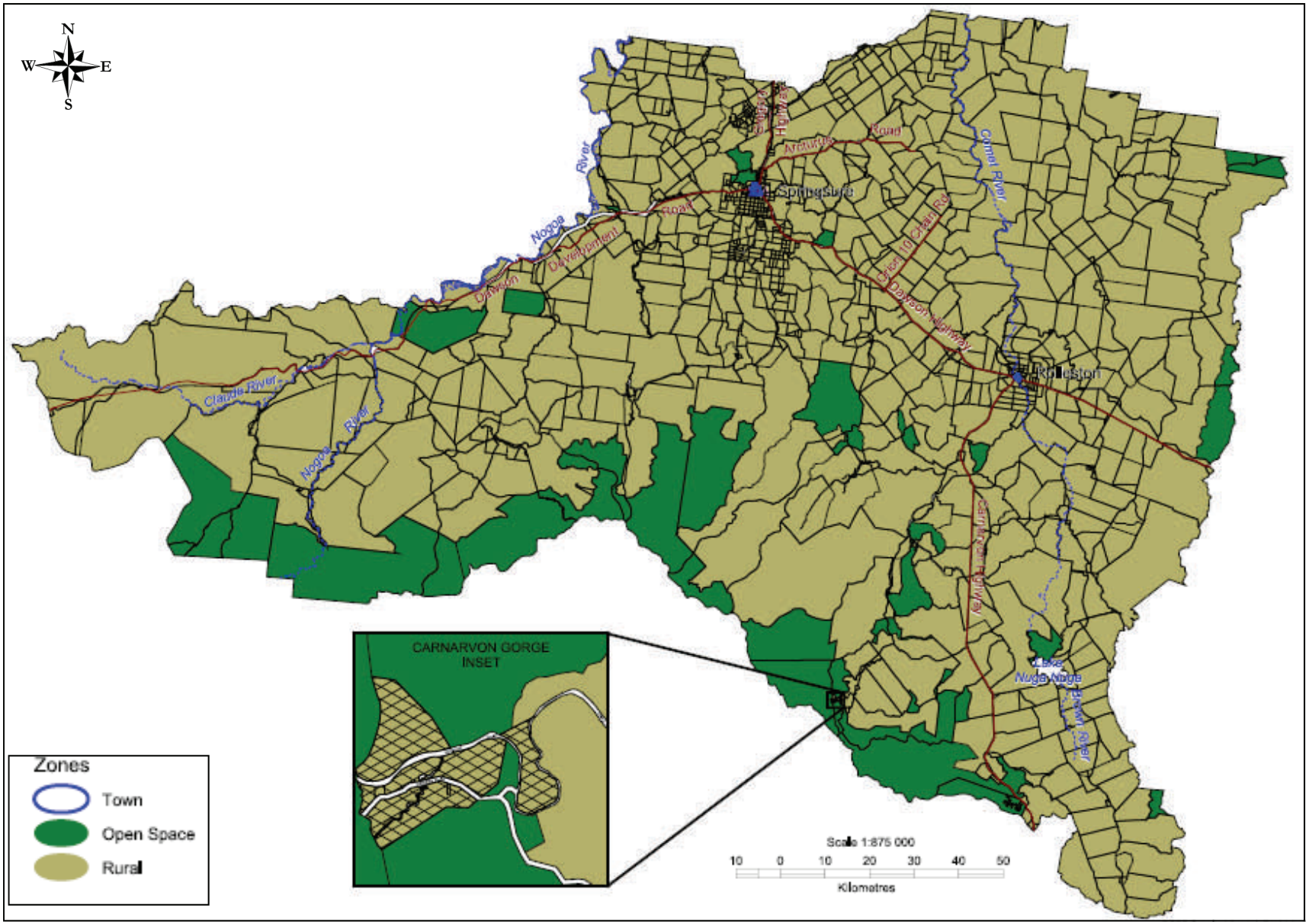
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps—Warroo Shire

Figure 3b



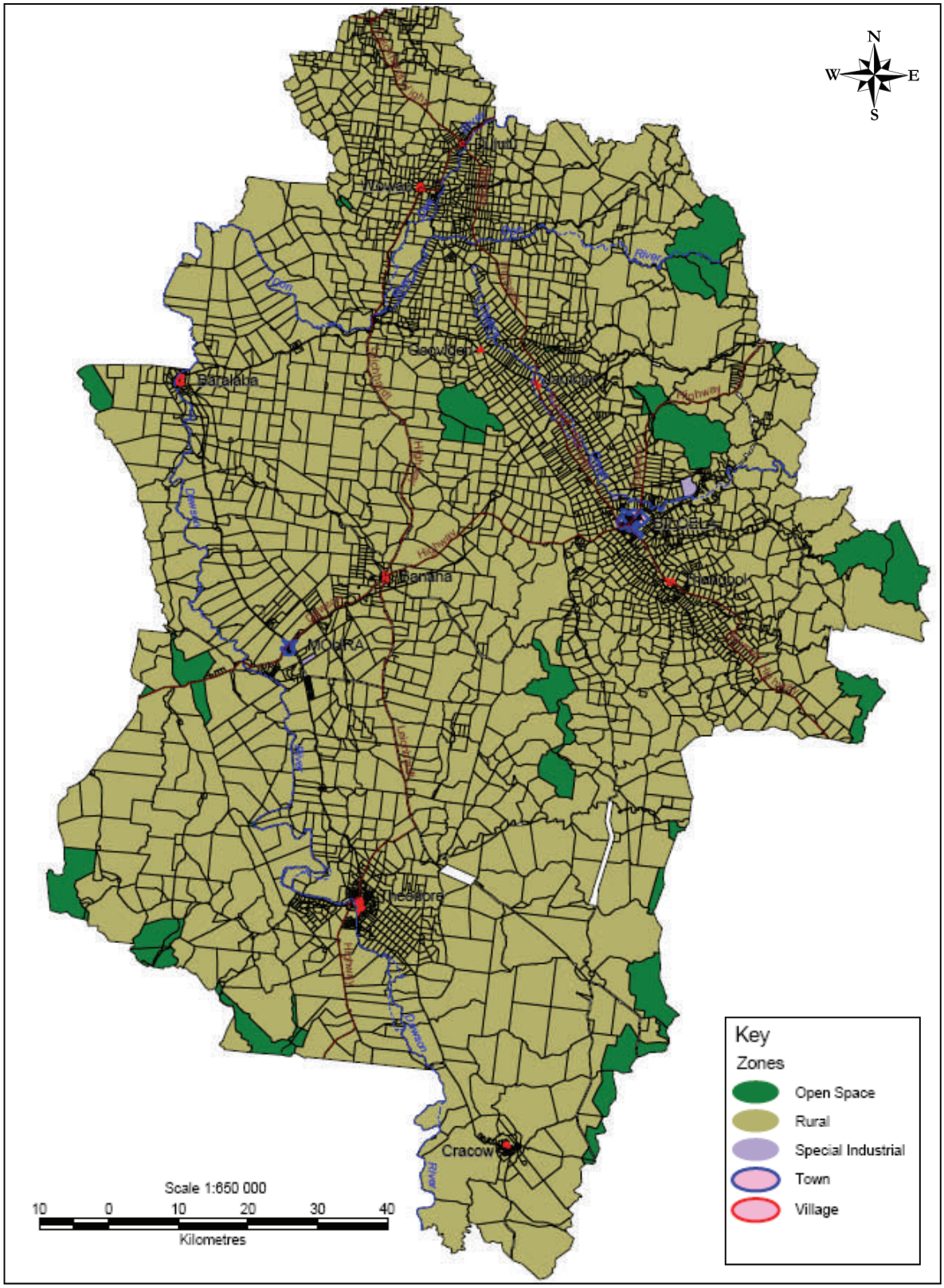
Map Source: Shire of Bauhinia Town Planning Scheme

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

BRANNOCK & ASSOCIATES | planning consultants

Planning Scheme Maps— Bauhinia Shire

Figure 3c



Map Source: Banana Shire Planning Scheme

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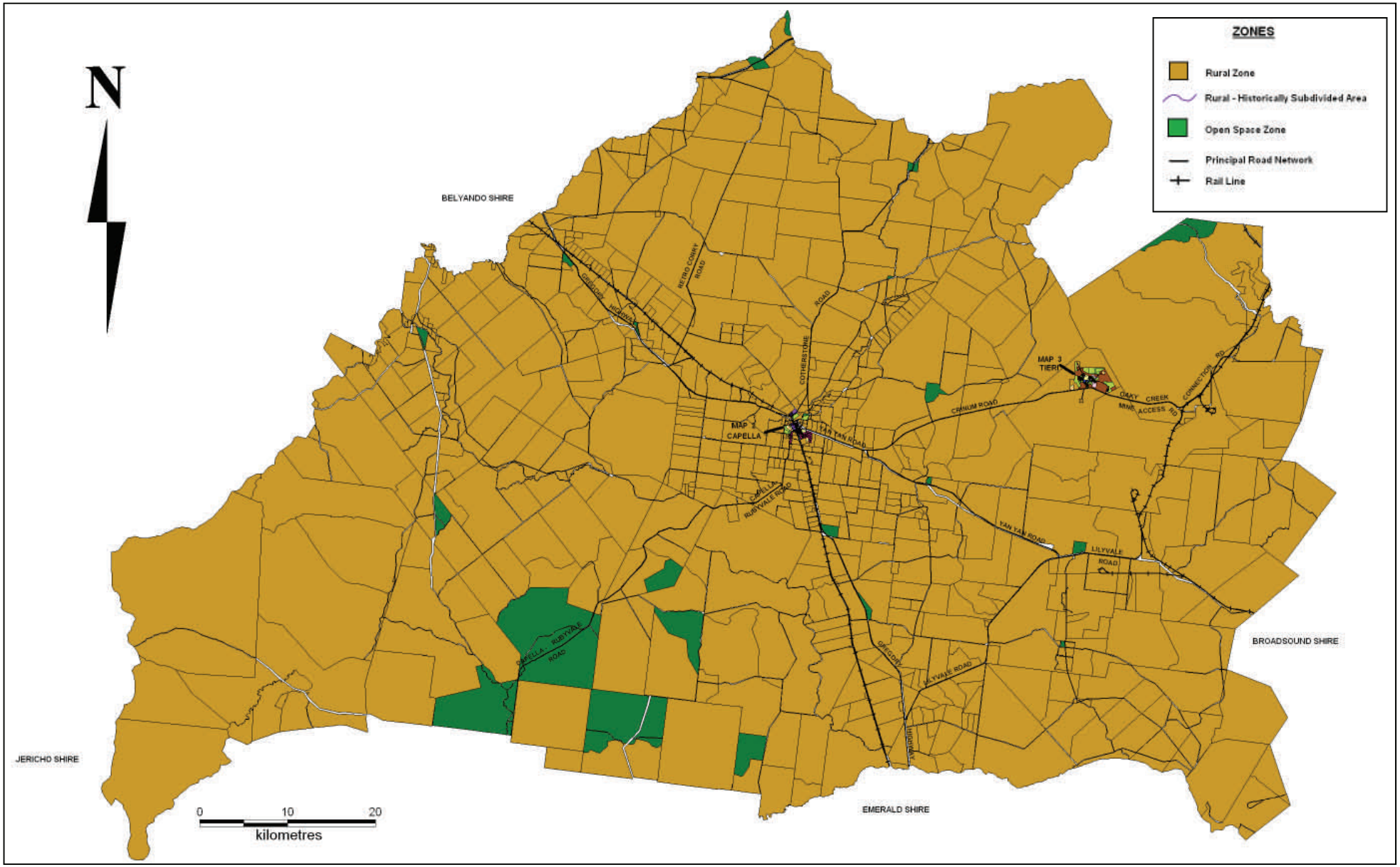
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps—Banana Shire

Figure 3d

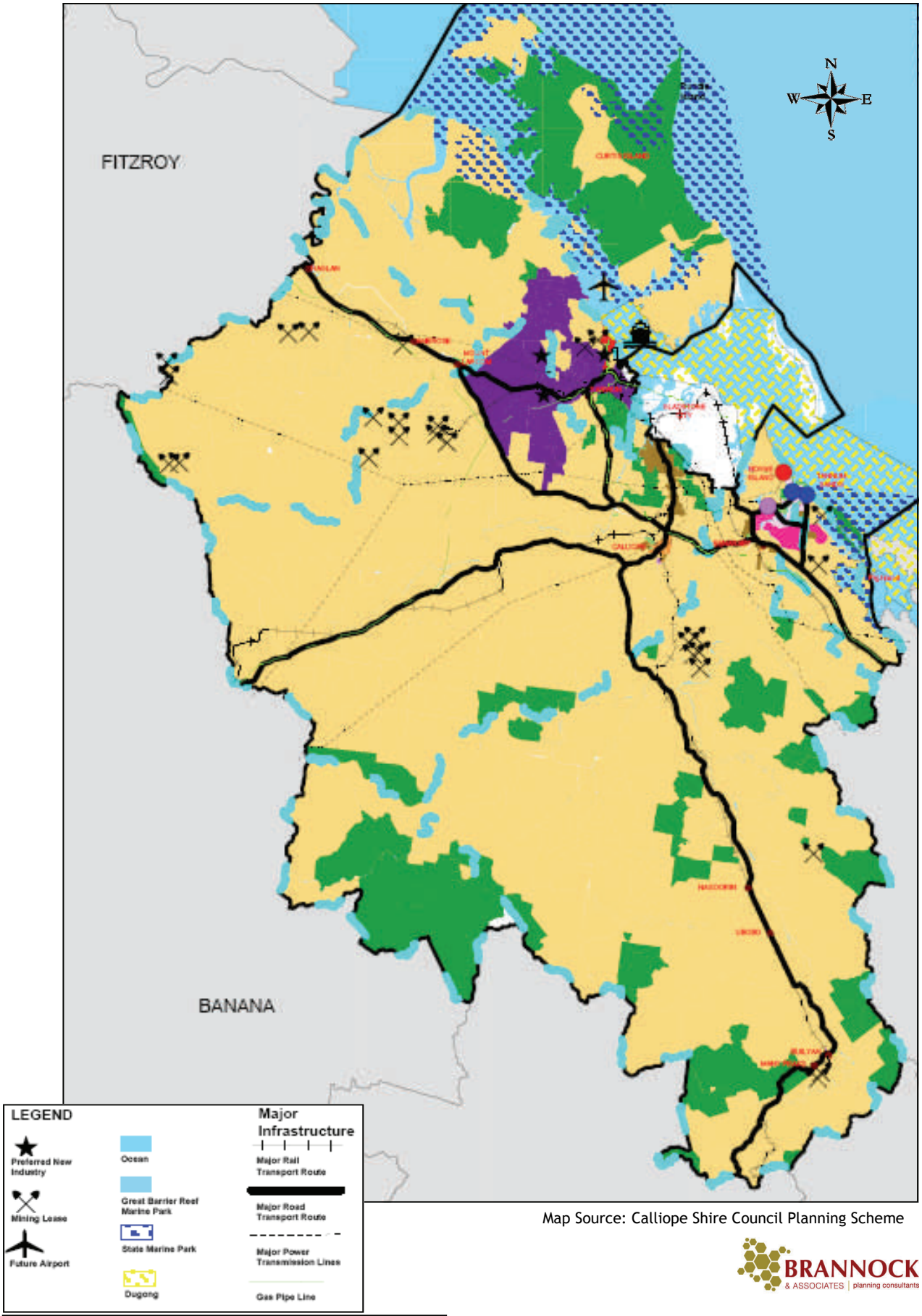


Map Source: Peak Downs Shire Council Planning Scheme

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps— Peak Downs Shire

Figure 3e



Map Source: Calliope Shire Council Planning Scheme

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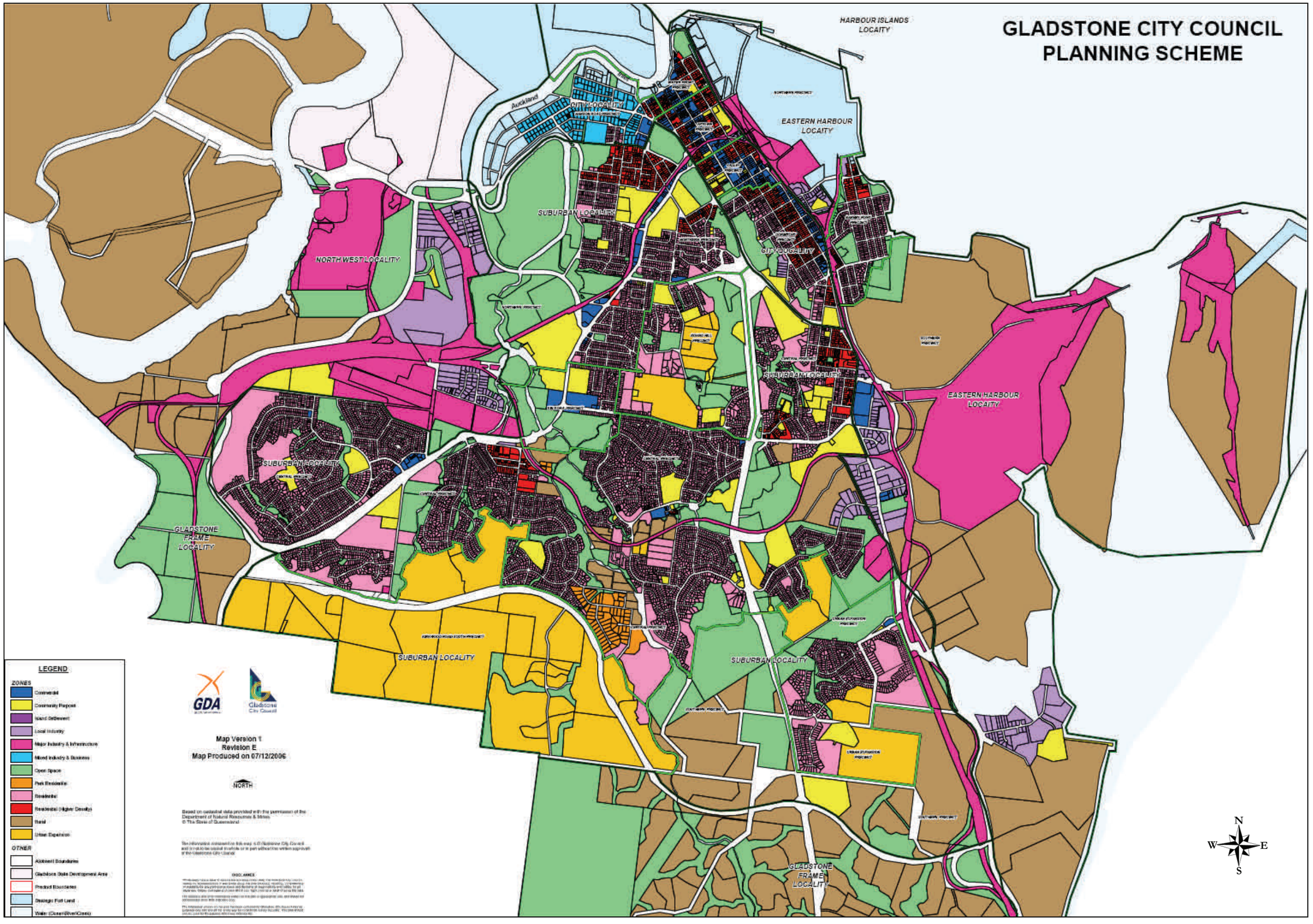
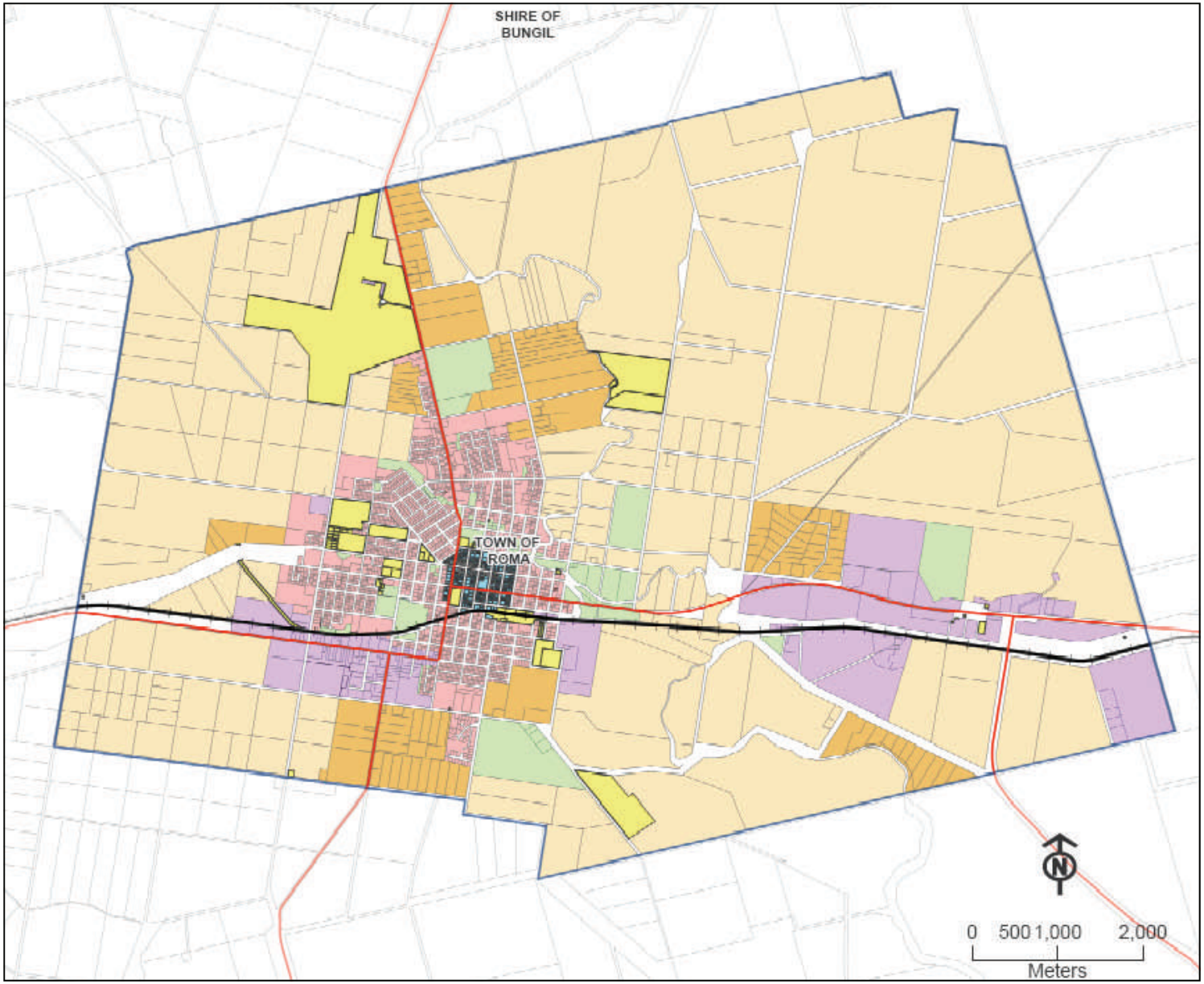
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps—Calliope Shire

Figure 3f



Map Source: Gladstone City Council Planning Scheme



Map Source: Planning Scheme for the Town of Roma

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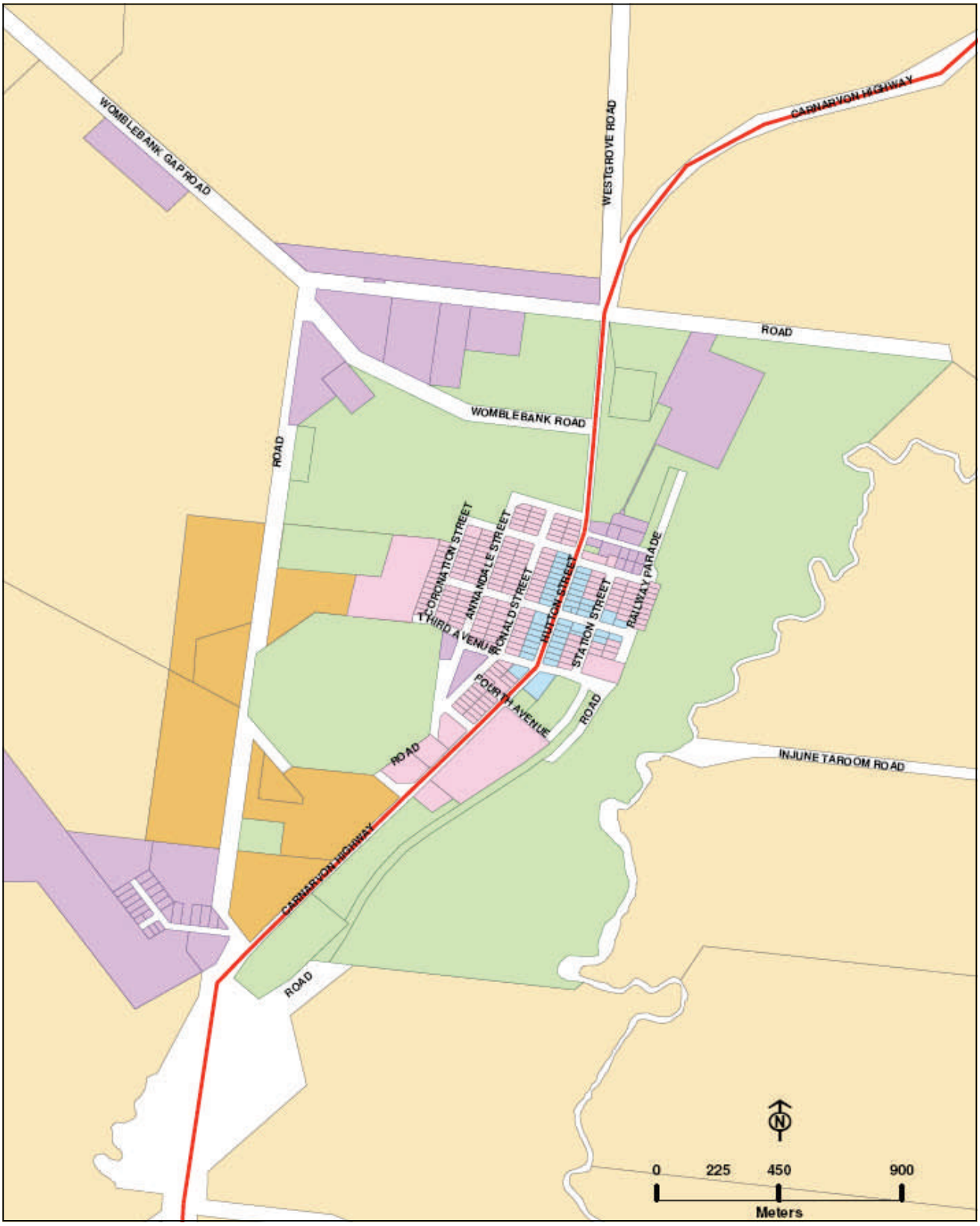
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps—Town of Roma

Figure 3h



Map Source: Planning Scheme for the Shire of Bungil

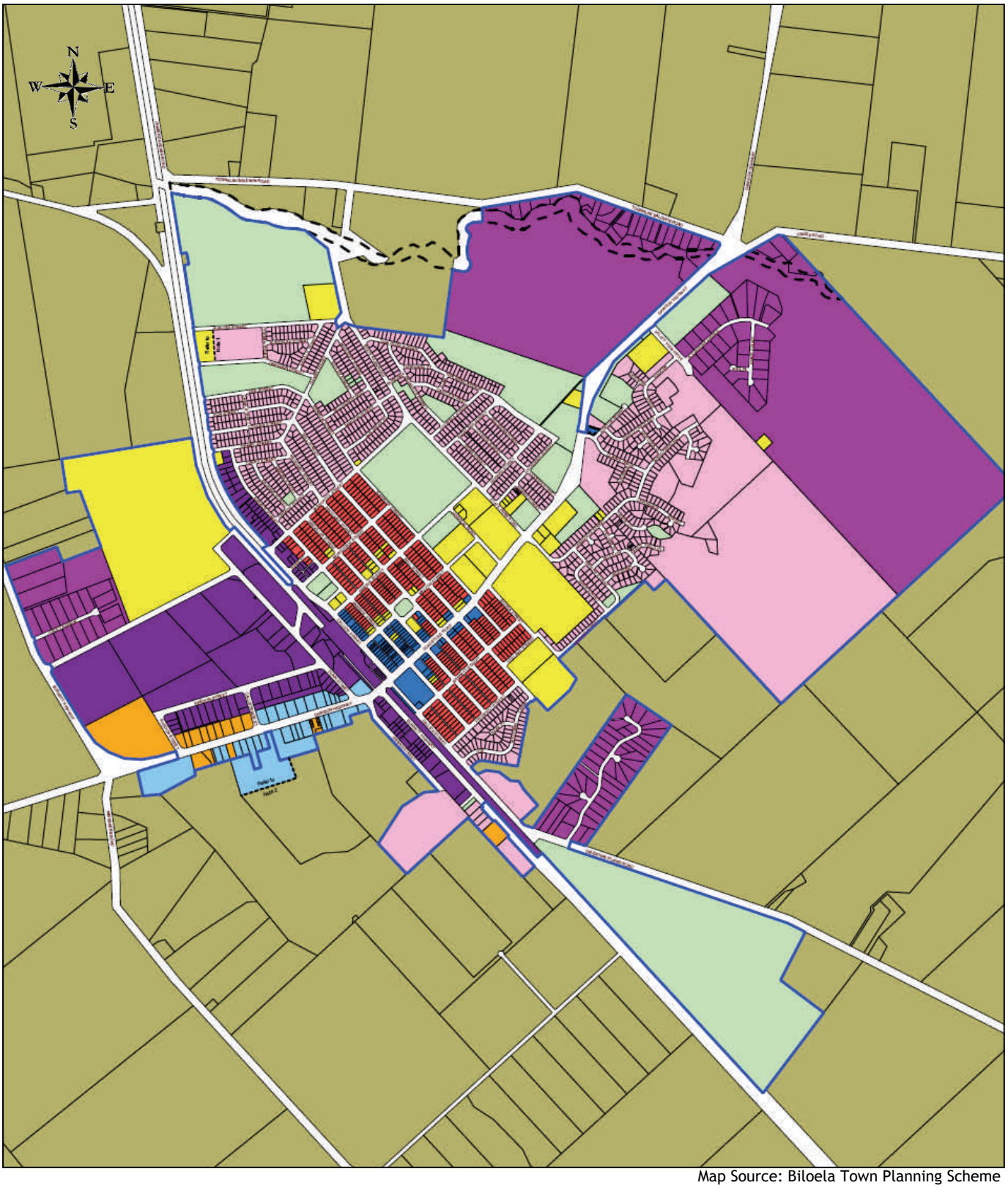
BRANNOCK & ASSOCIATES | planning consultants

RURAL ZONE
- Rural

TOWN ZONE
- Residential Precinct
- Rural Residential Precinct
- Industrial Precinct
- Commercial Precint
- Open Space and Recreation Precinct
- State Controlled Roads
- Shire Boundary
- Rail Lines

Planning Scheme Maps—Injune Town Zone Map

Figure 4a



Map Source: Biloela Town Planning Scheme

Scale 1:20 000

500 0 500 1000

Metres

Key

Town Precincts

- Commercial
- Community
- Highway
- Industrial
- Recreation
- Residential
- Residential Accommodation
- Rural Residential
- Tourism

Zones

- Rural
- Town

Overlays

- Drainage Problem Areas
- Non Cadastral Boundaries

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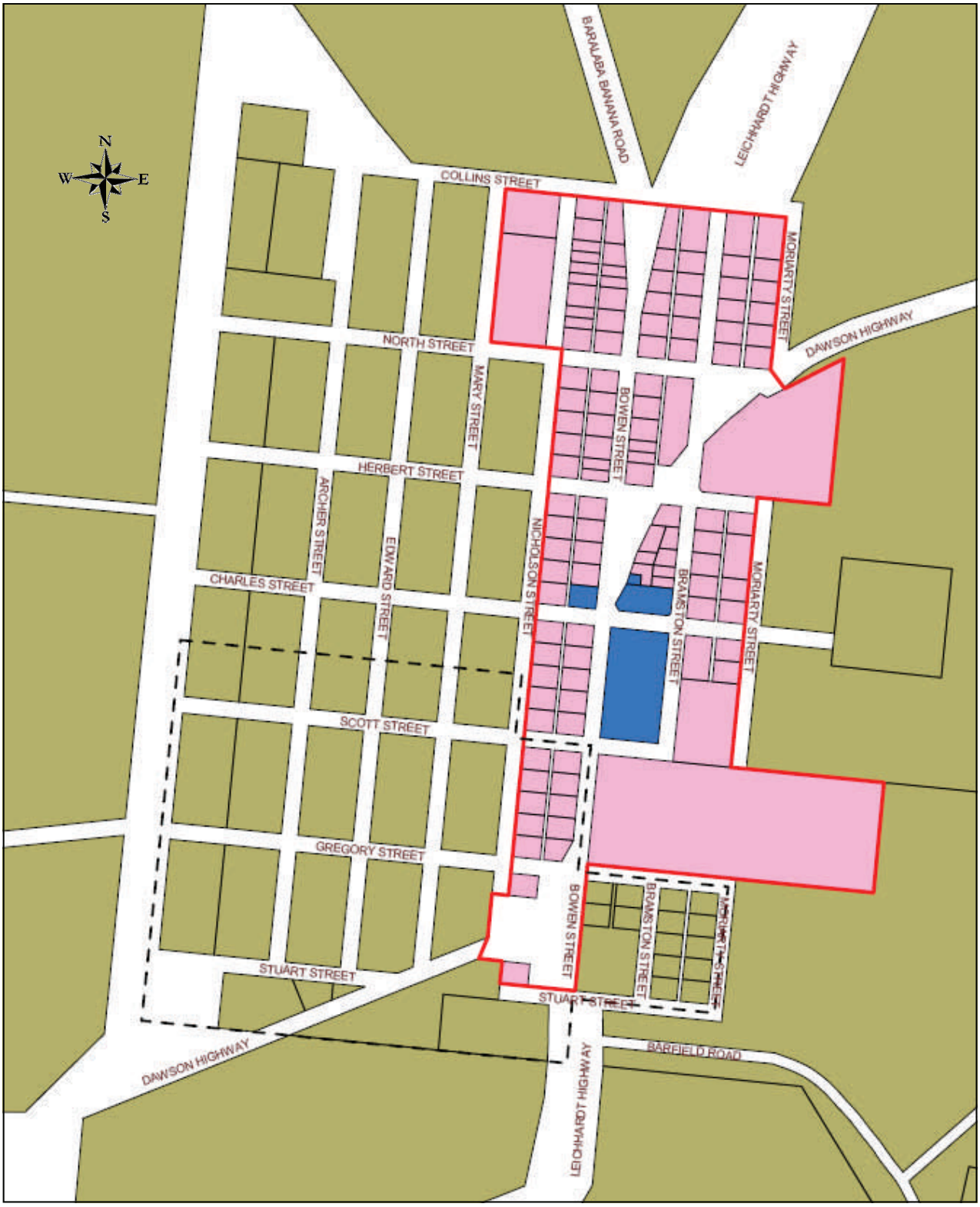
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps—Biloela Town Zone Map

Figure 4b



Key

Zones

Rural

Village

Village Areas

Central Business Area

Overlays

Drainage Problem Area

Map Source: Village of Banana Town Planning Scheme

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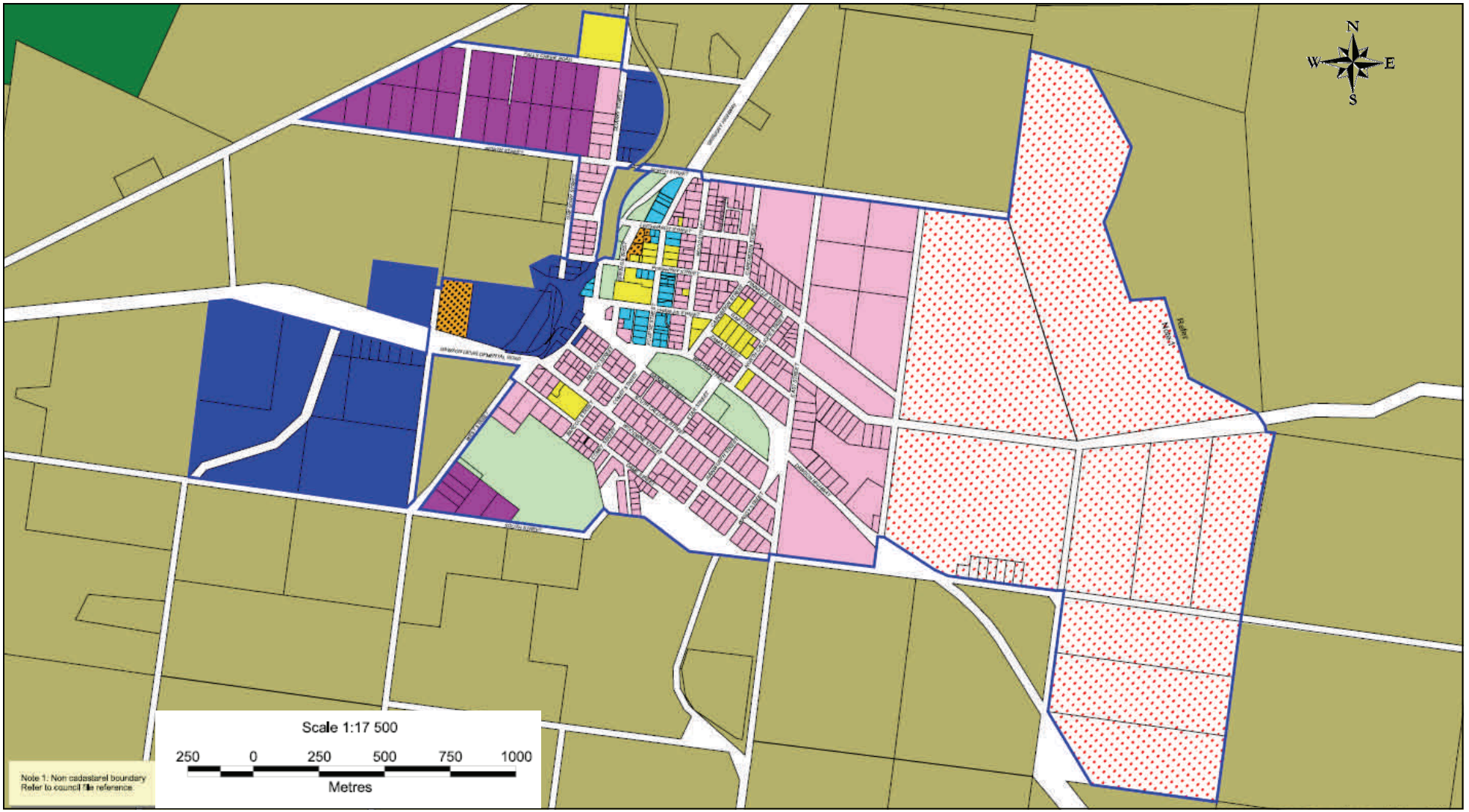
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps—Banana Town Zone Map

Figure 4c



Map Source: Town of Springsure Town Planning Scheme

Town Precincts

- Commercial
- Community
- Industry
- Investigation Area
- Recreation
- Residential
- Rural Residential
- Utility

Zones

- Town
- Rural
- Open Space

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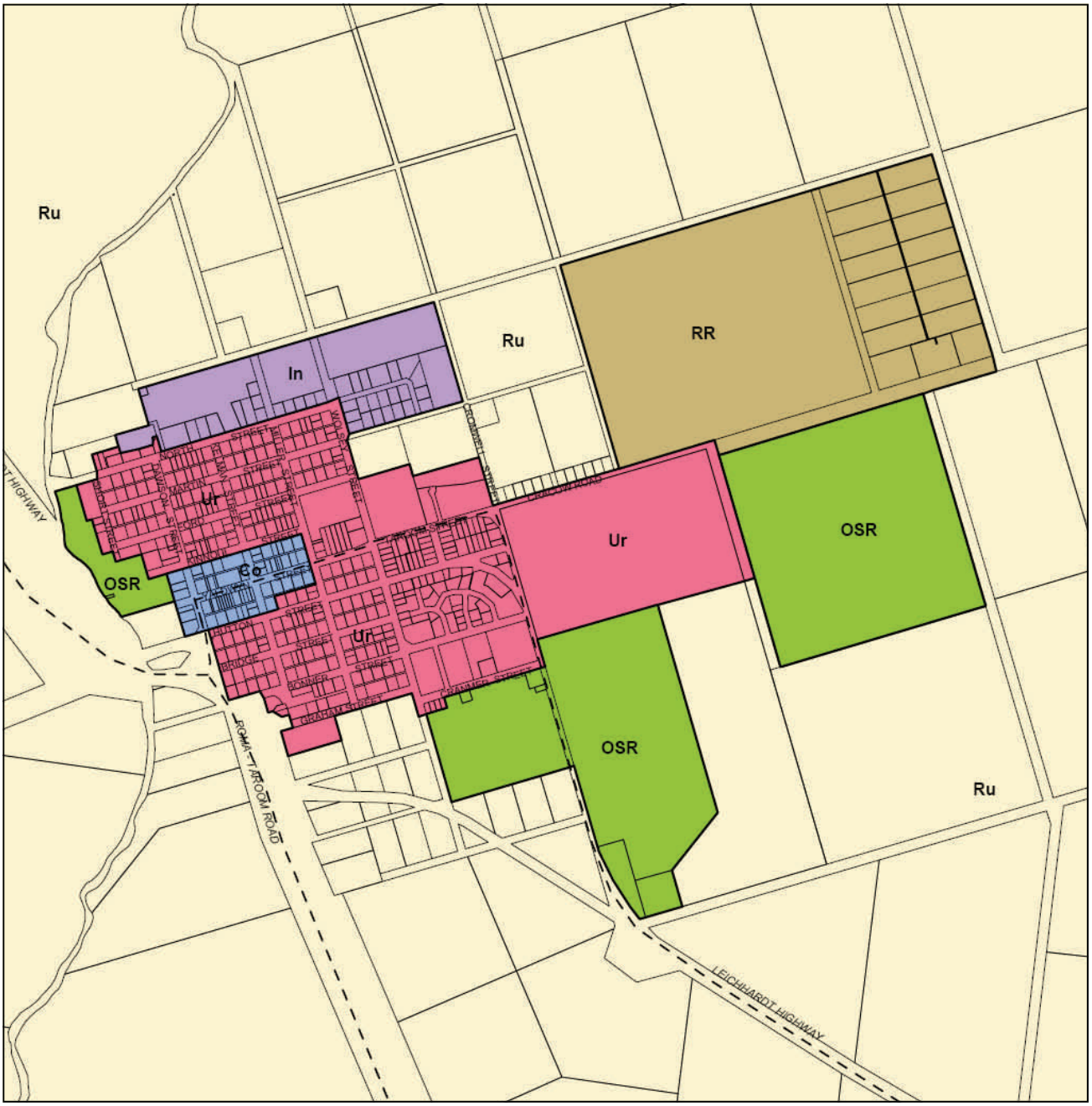
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps—
Springsure Town Zone Map

Figure 4d



0 0.25 0.5
kilometres
1: 15,000

Map Source: Taroom Shire CouncilPlanning Scheme

Legend:

Main Transport Route

Rail Line

ZONING

- Commercial (Co)
- Industrial (In)
- Open Space and Recreation (OSR)
- Rural (Ru)
- Rural Residential (RR)
- Small Town (ST)
- Urban (Ur)

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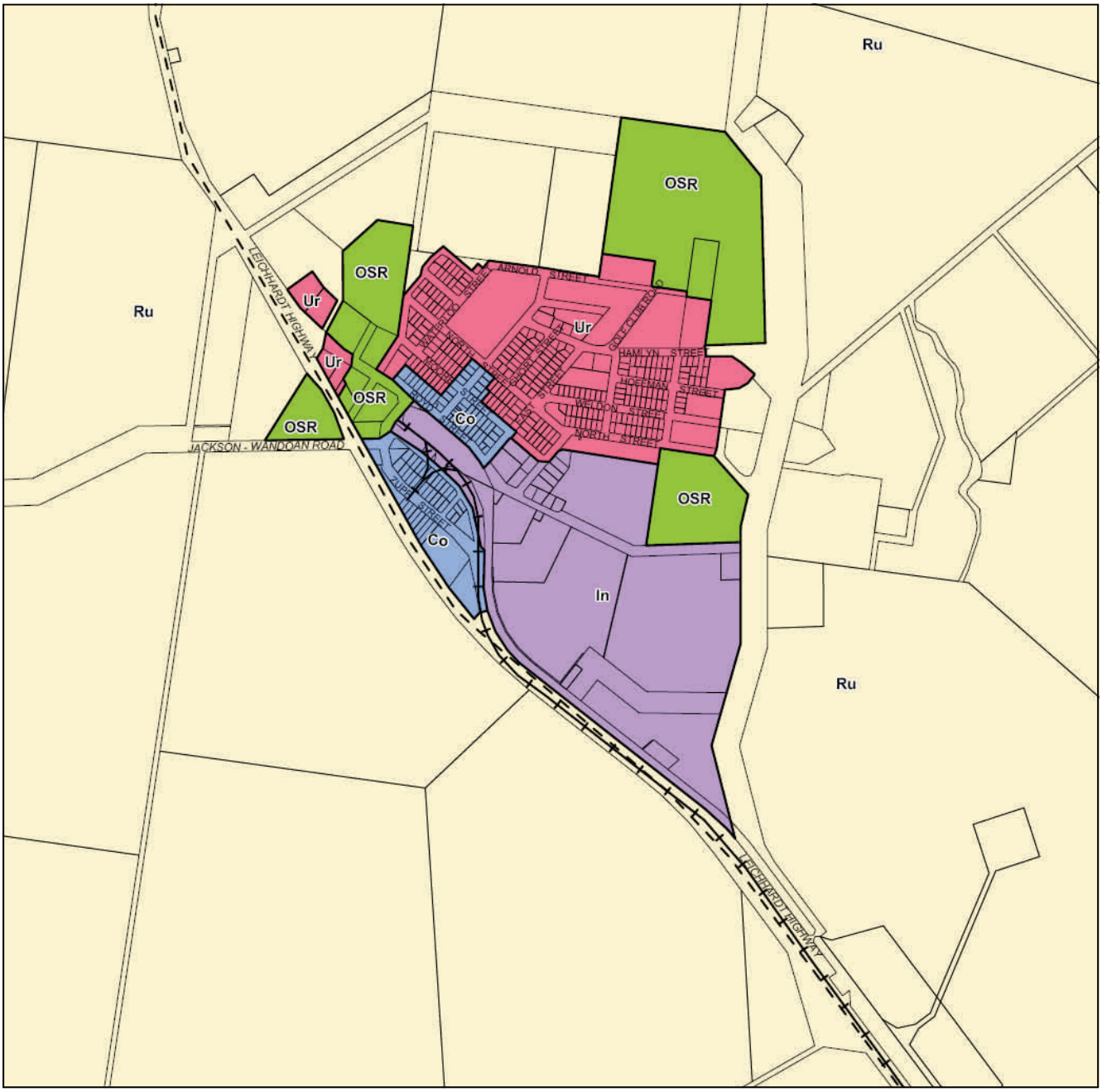
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps—Taroom Town Zone Map

Figure 4e



0 0.25 0.5
kilometres
1: 15,000

Map Source: Taroom Shire CouncilPlanning Scheme

Legend:

- Main Transport Route
- Rail Line

ZONING

- Commercial (Co)
- Industrial (In)
- Open Space and Recreation (OSR)
- Rural (Ru)
- Rural Residential (RR)
- Small Town (ST)
- Urban (Ur)

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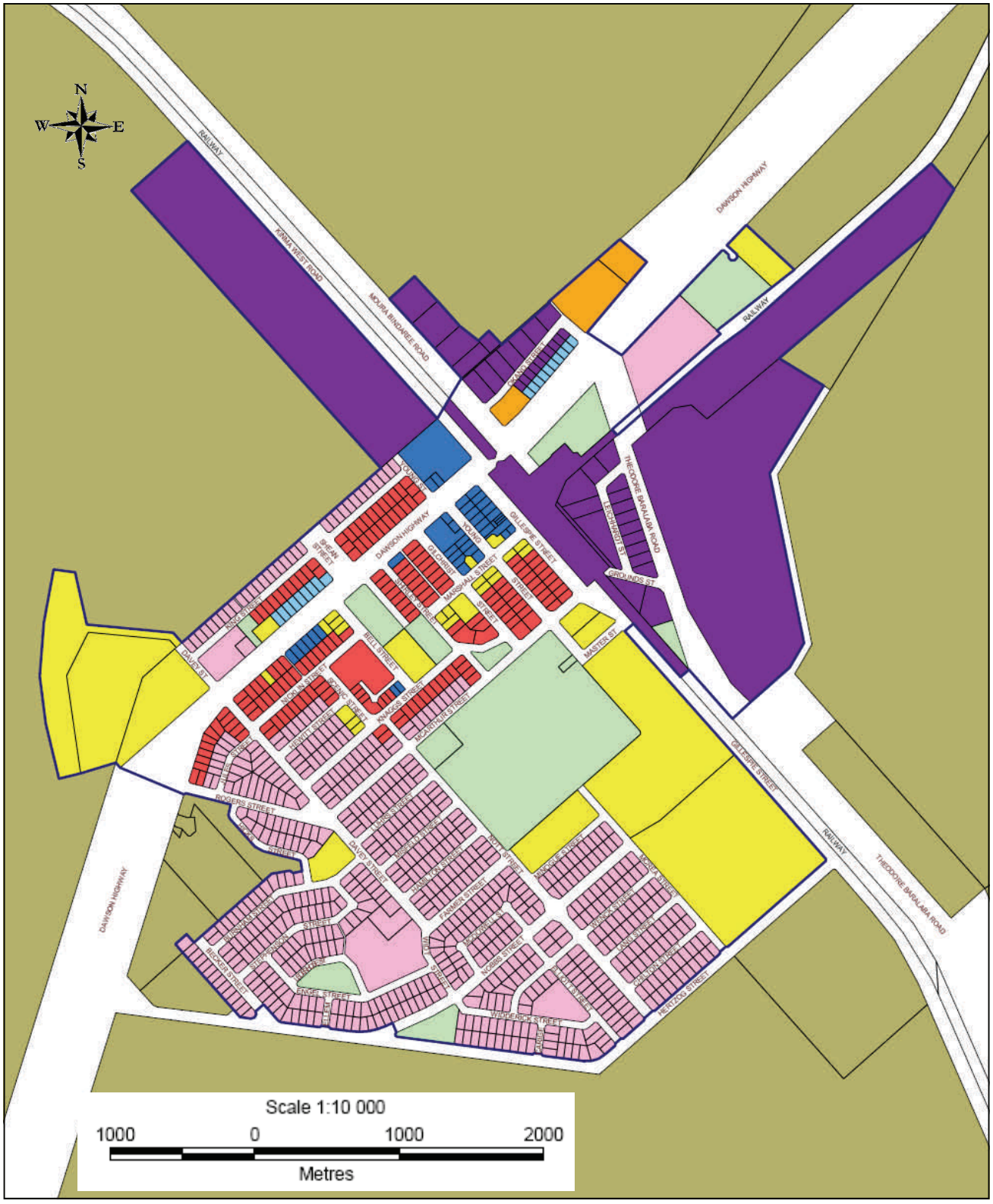
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps—
Wandoan Town Zone Map

Figure 4f



Key

Town Precincts

- Commercial
- Community
- Highway
- Industrial
- Recreation
- Residential
- Residential Accommodation
- Tourism

Zones

- Rural
- Town

Map Source: Town of Moura Planning Scheme

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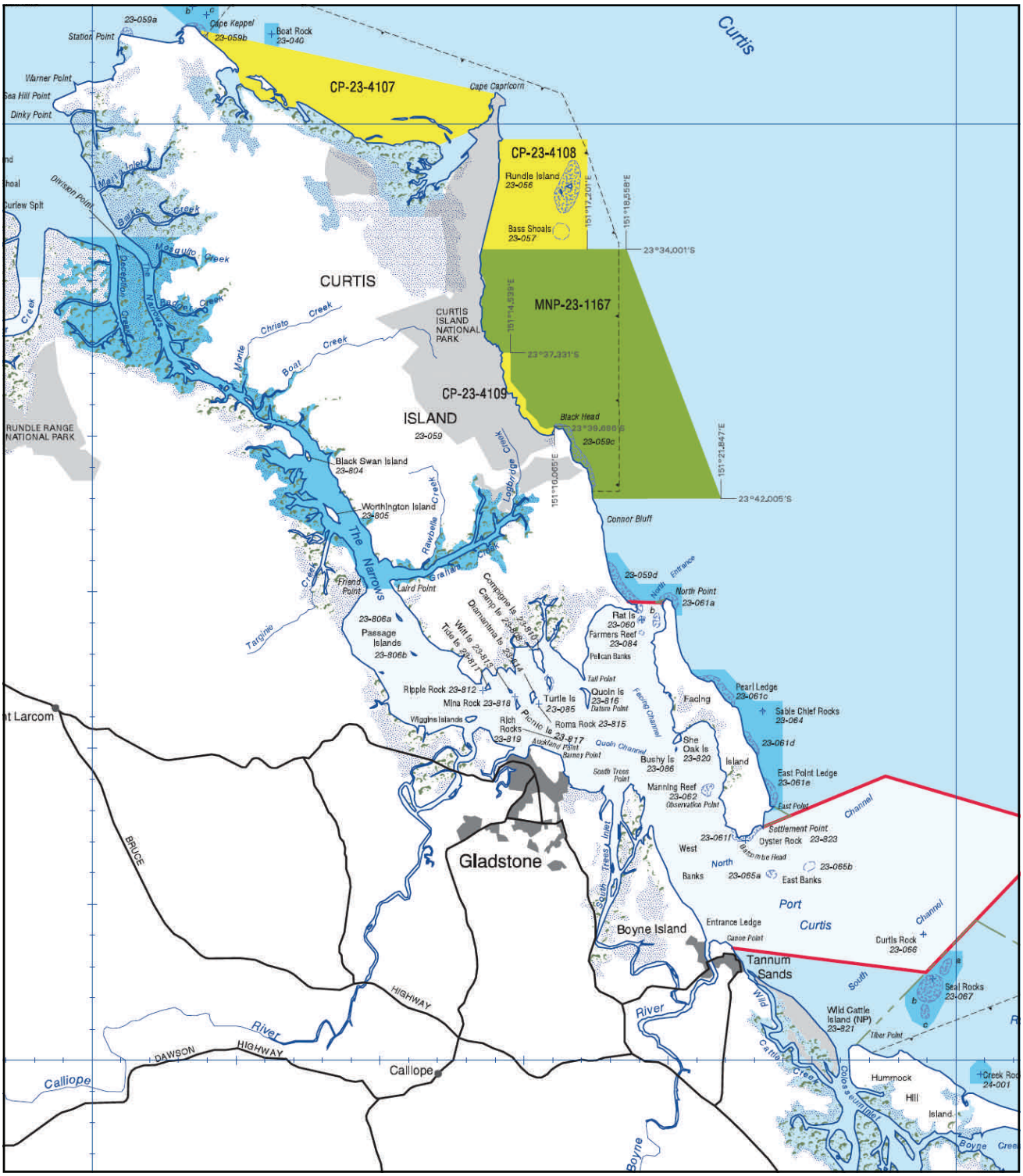
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Planning Scheme Maps—Moura Town Zone Map

Figure 4g

APPENDIX 2

Figures 5 to 7



Map Source: GBRMP

ACTIVITIES GUIDE
(see relevant *Zoning Plans* and *Regulations* for details)

	General Use Zone	Habitat Protection Zone	Conservation Park Zone	Buffer Zone	Scientific Research Zone [2]	Marine National Park Zone	Preservation Zone
Aquaculture	Permit	Permit	Permit [1]	×	×	×	×
Bait netting	✓	✓	✓	×	×	×	×
Boating, diving, photography	✓	✓	✓	✓	✓ [2]	✓	×
Crabbing (trapping)	✓	✓	✓ [3]	×	×	×	×
Harvest fishing for aquarium fish, coral and beachworm	Permit	Permit	Permit [1]	×	×	×	×
Harvest fishing for sea cucumber, trochus, tropical rock lobster	Permit	Permit	×	×	×	×	×
Limited collecting	✓ [4]	✓ [4]	✓ [4]	×	×	×	×
Limited spearfishing (snorkel only)	✓	✓	✓ [1]	×	×	×	×
Line fishing	✓ [5]	✓ [5]	✓ [6]	×	×	×	×
Netting (other than bait netting)	✓	✓	×	×	×	×	×
Research (other than limited impact research)	Permit	Permit	Permit	Permit	Permit	Permit	Permit
Shipping (other than in a designated shipping area)	✓	Permit	Permit	Permit	Permit	Permit	×
Tourism programme	Permit	Permit	Permit	Permit	Permit	Permit	×
Traditional use of marine resources	✓ [7]	✓ [7]	✓ [7]	✓ [7]	✓ [7]	✓ [7]	×
Trawling	✓	×	×	×	×	×	×
Trolling	✓ [5]	✓ [5]	✓ [5]	✓ [5,8]	×	×	×

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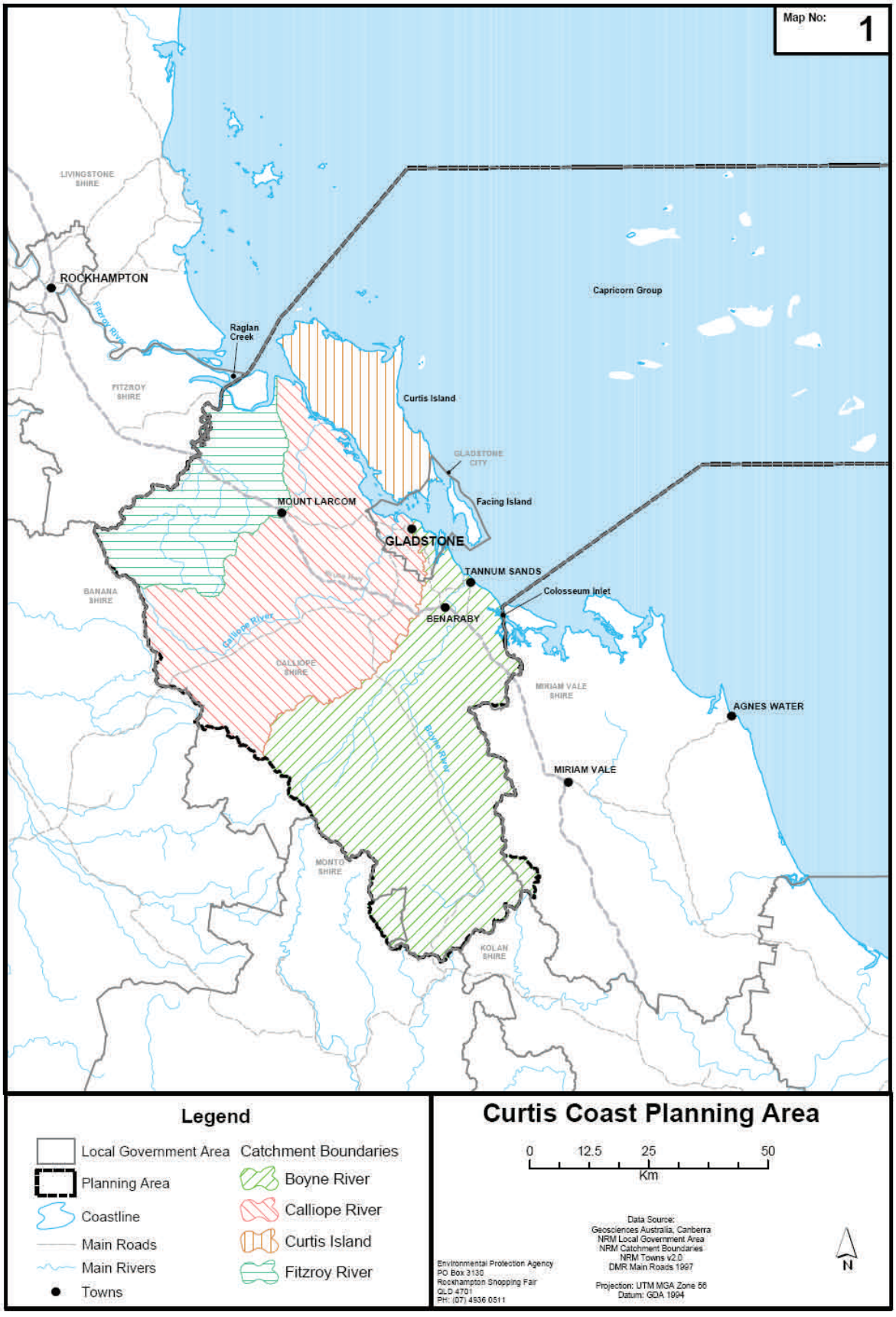
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Other Statutory Maps—
Great Barrier Reef Marine Park

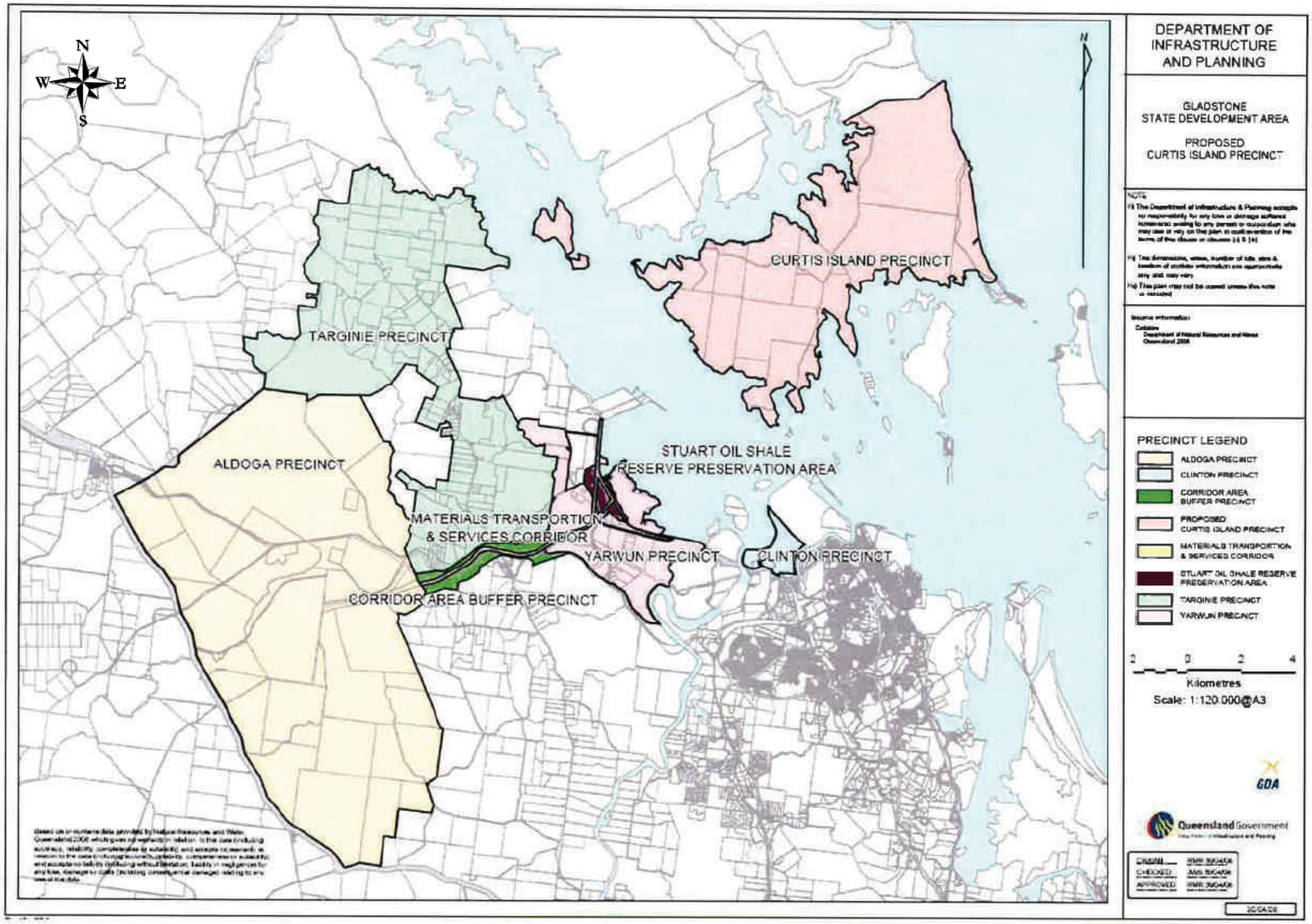
Figure 5



Map Source: Curtis Coast Regional Coastal Management Plan

Curtis Coast Region—
Curtis Island Regional Coastal Management Plan

Figure 6



Map Source: DIP

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Gladstone State Development Area Extension

Figure 7

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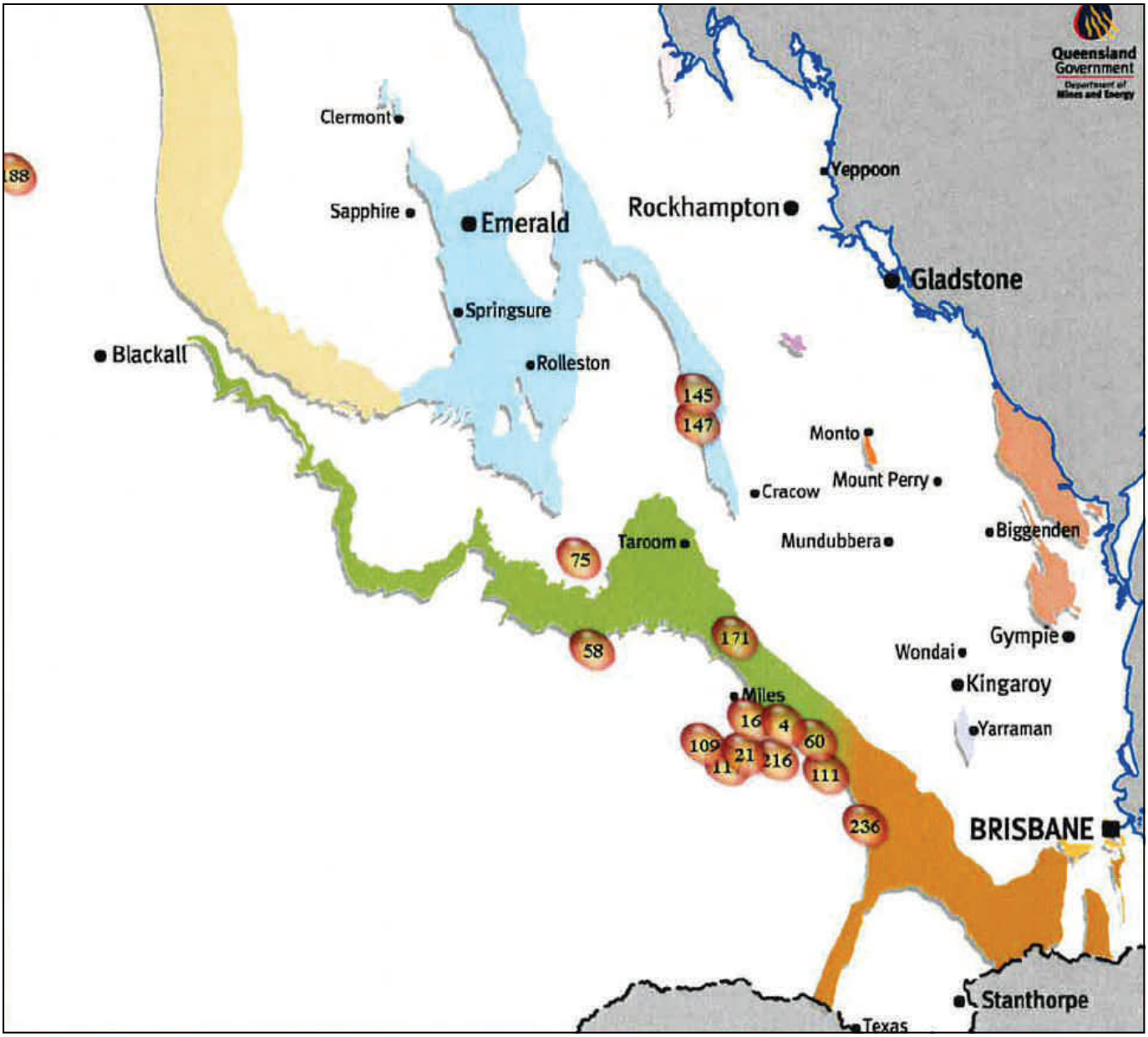
APPENDIX 3

Figures 8 to 10

Tables 1 to 3



Map Source: Department of Mines and Energy

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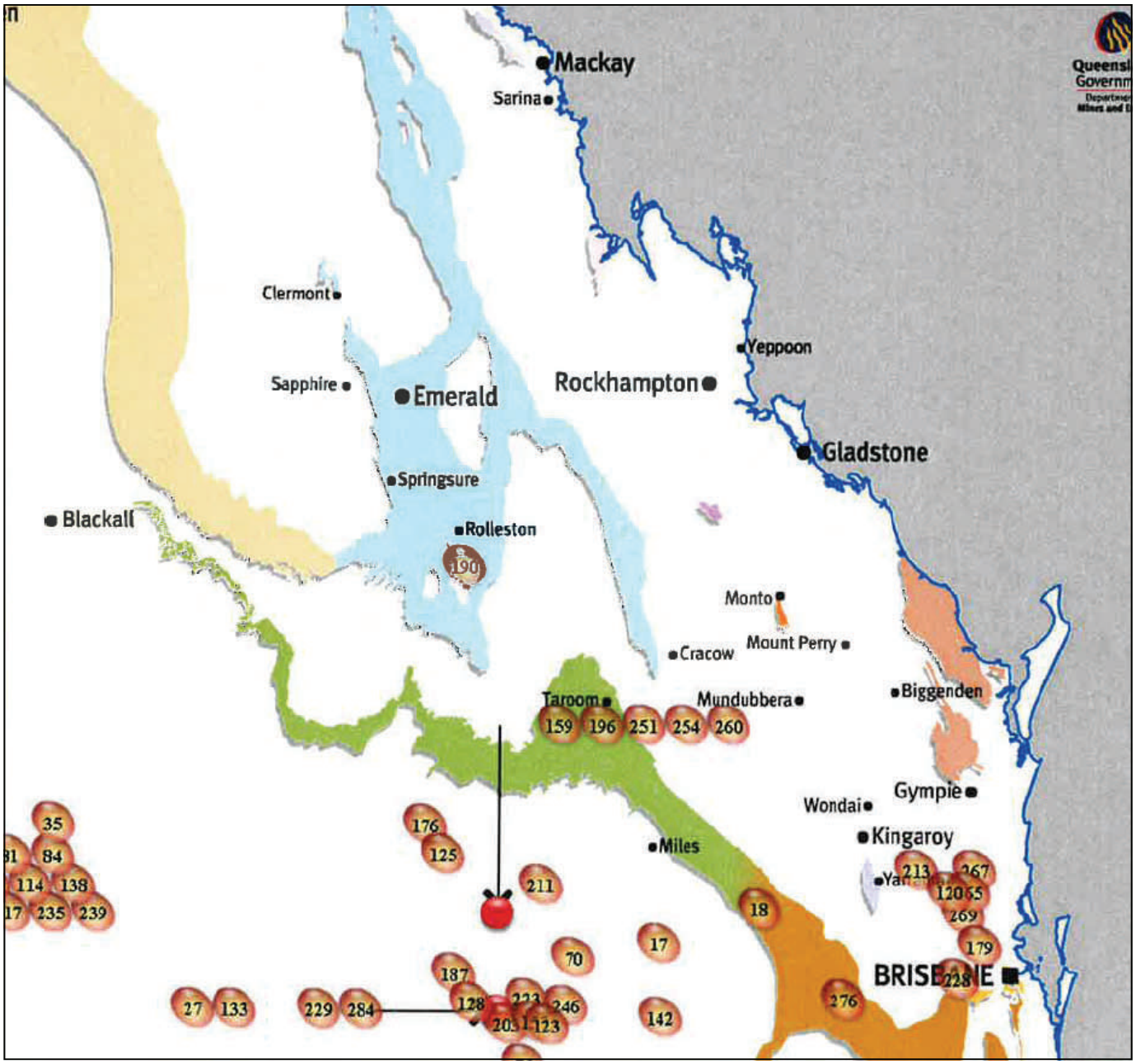
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Existing Resource Operation—Coal Seam Gas

Figure 8

Table 1 Existing Coal Seam Gas Operations

COAL SEAM GAS DEPOSITS				
Map Ref No	**Name**	**Location**	**Owner**	**Status**
16	Bellvue	10km SE Miles		Prospect
147	Mungi Dawson Valley	5km SE Moura	Anglo	Operating Project
17	Peat	17km NE Wandoan	Molopo Australia	Operating Project
21	Berwyndale	33k SW Chinchilla	Origin Energy	Prospect
216	Talinga	32k SW Chinchilla	Origin Energy	Active Prospect
145	Moura Dawson	5k E Moura	Queensland Gas Company	Operating Project
109	Kenya	30k SW Chinchilla	Queensland Gas Company	Operating Project
117	Lauren/Codie	35k SW Chinchilla	Queensland Gas Company	Prospect
58	Coxon Creek	40km NE Roma	Santos	Prospect
75	Fairview	40km NE Injune	Tipperary Oil & Gas	Operating Project



Map Source: Department of Mines and Energy

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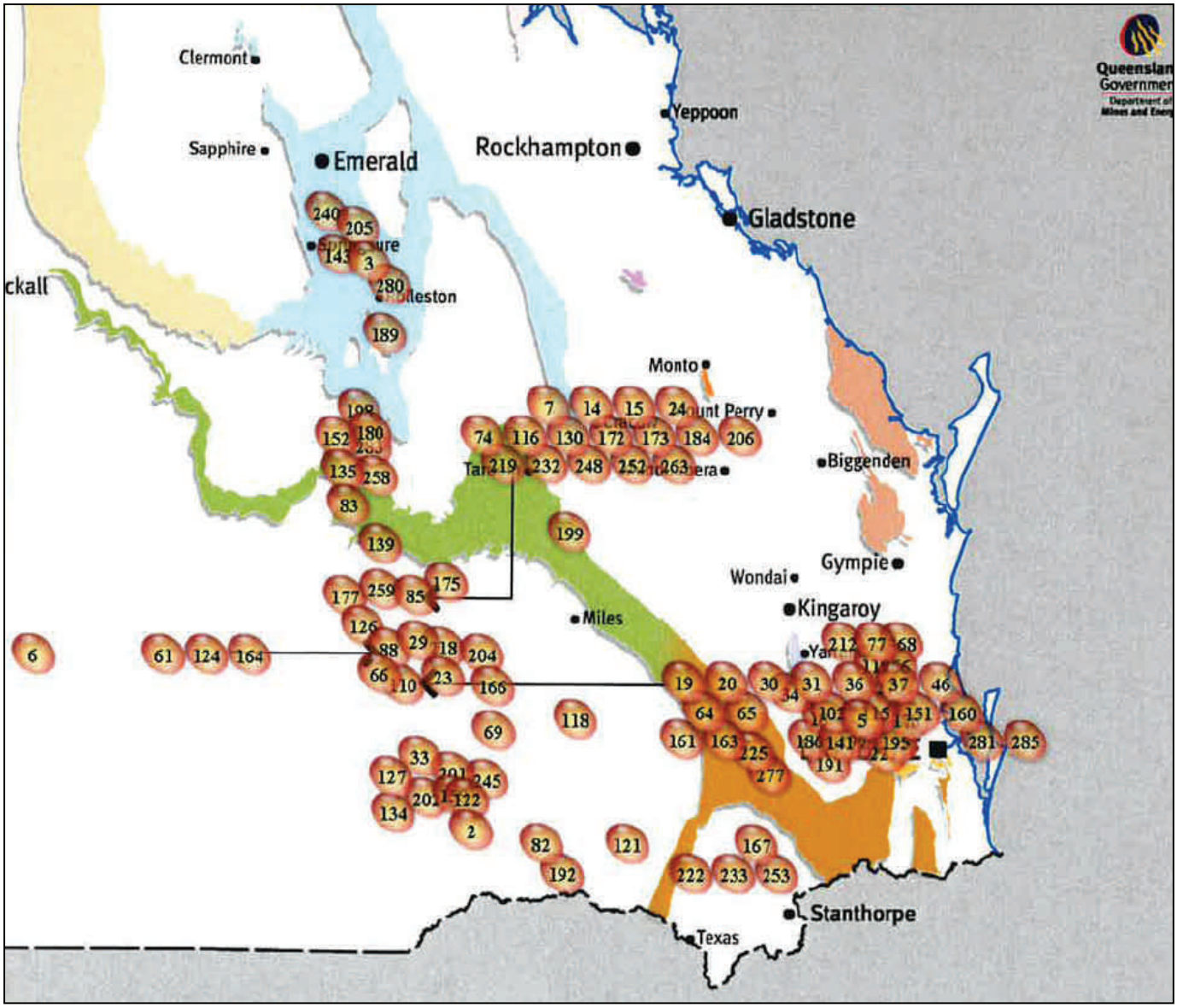
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Existing Resource Operation—Oil Deposits

Figure 9

Table 2 Oil Deposits

OIL DEPOSITS				
Map Ref No	**Name**	**Location**	**Owner**	**Status**
159	New Royal	20k W Surat	Origin	Operating Project
196	Sandy Creek	18k W Surat	Origin	Operating Project
251	Waratah	52k SSE Roma	Origin	Operating Project
254	Washpool	9k W Surat	Origin	Operating Project
190	Rolleston	Rolleston Township Area	Santos	Operating Project
179	Pringle Downs	13k SSW Roma	Santos	Operating Project
125	Maffra	18 S Roma	Santos	Operating Project



Map Source: Department of Mines and Energy

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Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Existing Resource Operation—Gas Deposits

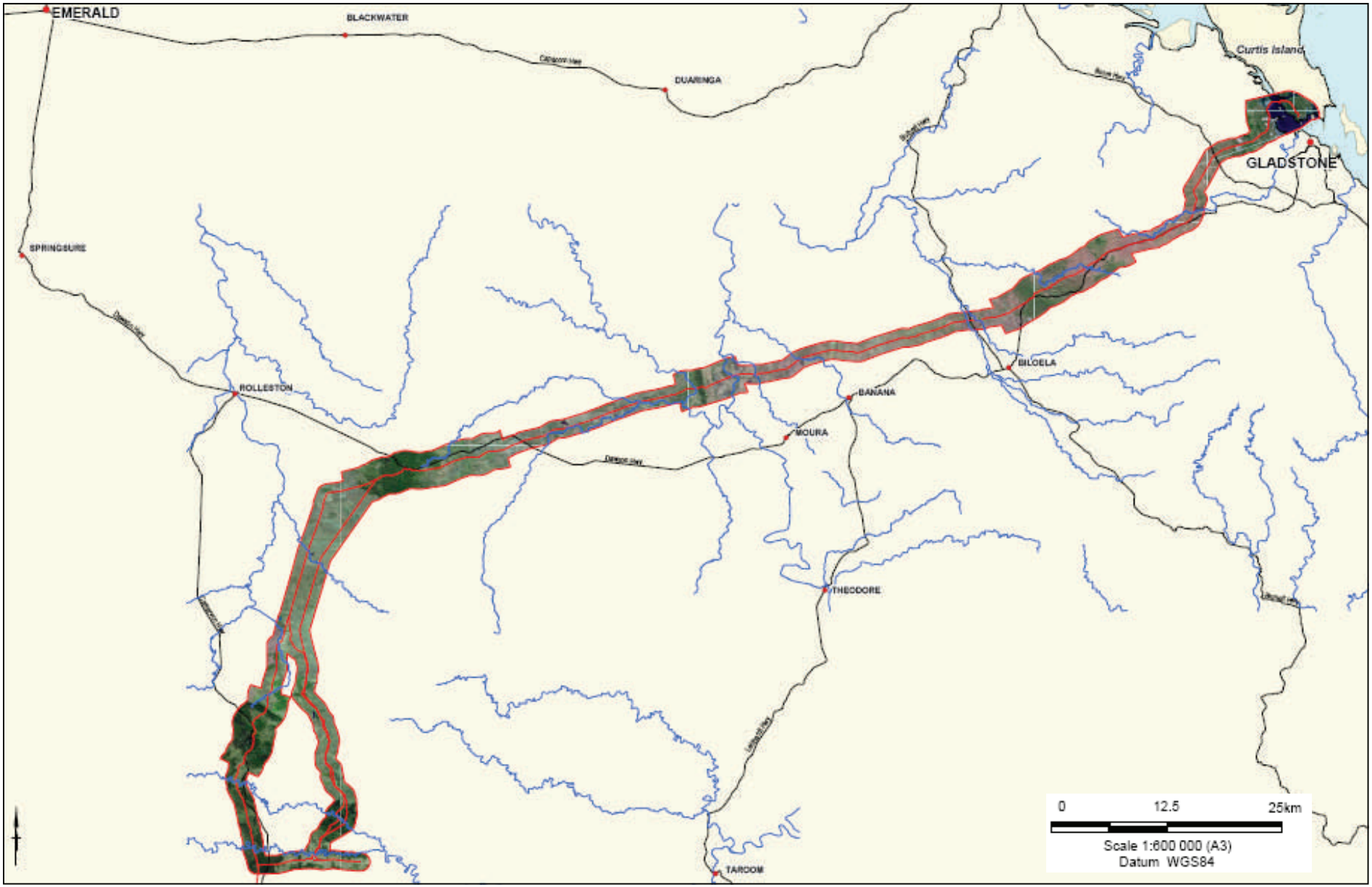
Figure 10

Table 3 Gas Deposits

GAS DEPOSITS				
Map Ref No	**Name**	**Location**	**Owner**	**Status**
110	Kincora	53k S Roma	Origin Energy	Operating Project
240	Turkey Creek	37k NE Springsure	Origin Energy	Operating Prospect
143	Moorooloo	35k NE Springsure	Origin Energy	Operating Prospect
280	Yandina	44k E Springsure	Origin Energy	Operating Prospect
198	Sardine	65k NW Injune	Origin Energy	Operating Project
180	Punchbowl Gully	52k NW Injune	Origin Energy	Operating Project
258	Westgrove	38k NW Injune	Origin Energy	Operating Project
83	Glentulloch	18k WNW Injune	Origin Energy	Operating Project
205	Springton	36k NE Springsure	Santos	Operating Prospect
3	Arcturus	42k E Springsure	Santos	Operating Prospect
189	Rolleston	Rolleston Township area	Santos	Operating Project
152	Myrtleville	63k N Injune	Santos	Operating Project
135	Merivale	63k N Injune	Santos	Operating Project
139	Mooga	19 N Roma	Santos	Operating Project
119	Scotia	23 NE Wandoan	Santos	Operating Project
175	Pleasant Hills	27 NE Roma	Santos	Operating Project
85	Grafton Range	23k NE Roma	Santos	Operating Project
259	Westlands	18k N Roma	Santos	Operating Project
177	Pringle Downs	13k SW Roma	Santos	Operating Project
126	Maffra	18k S Roma	Santos	Operating Project
88	Hollyrood	21k S Roma	Santos	Operating Project
29	Bony Creek	27k SE Roma	Santos	Operating Project
218	Tarralonga	36k SE Roma	Santos	Operating Project
204	Snake Creek East	45k SE Roma	Santos	Operating Project
23	Bloodwood	57k SE Roma	Santos	Operating Project
66	Durran	14k SSE Roma	Santos	Prospect
74	Euthella	12k E Roma	Santos	Operating Project
219	Tarrawonga	36k SE Roma	Santos	Operating Project
232	Pembury Hills	5k ENE Roma	Santos	Operating Project
116	Lamen	23k SE Surat	Santos	Operating Project
7	Back Creek	38k SE Roma	Santos	Operating Project
248	Wallumbilla South	41k E Roma	Santos	Operating Project

APPENDIX 4

Figures 11 to 13



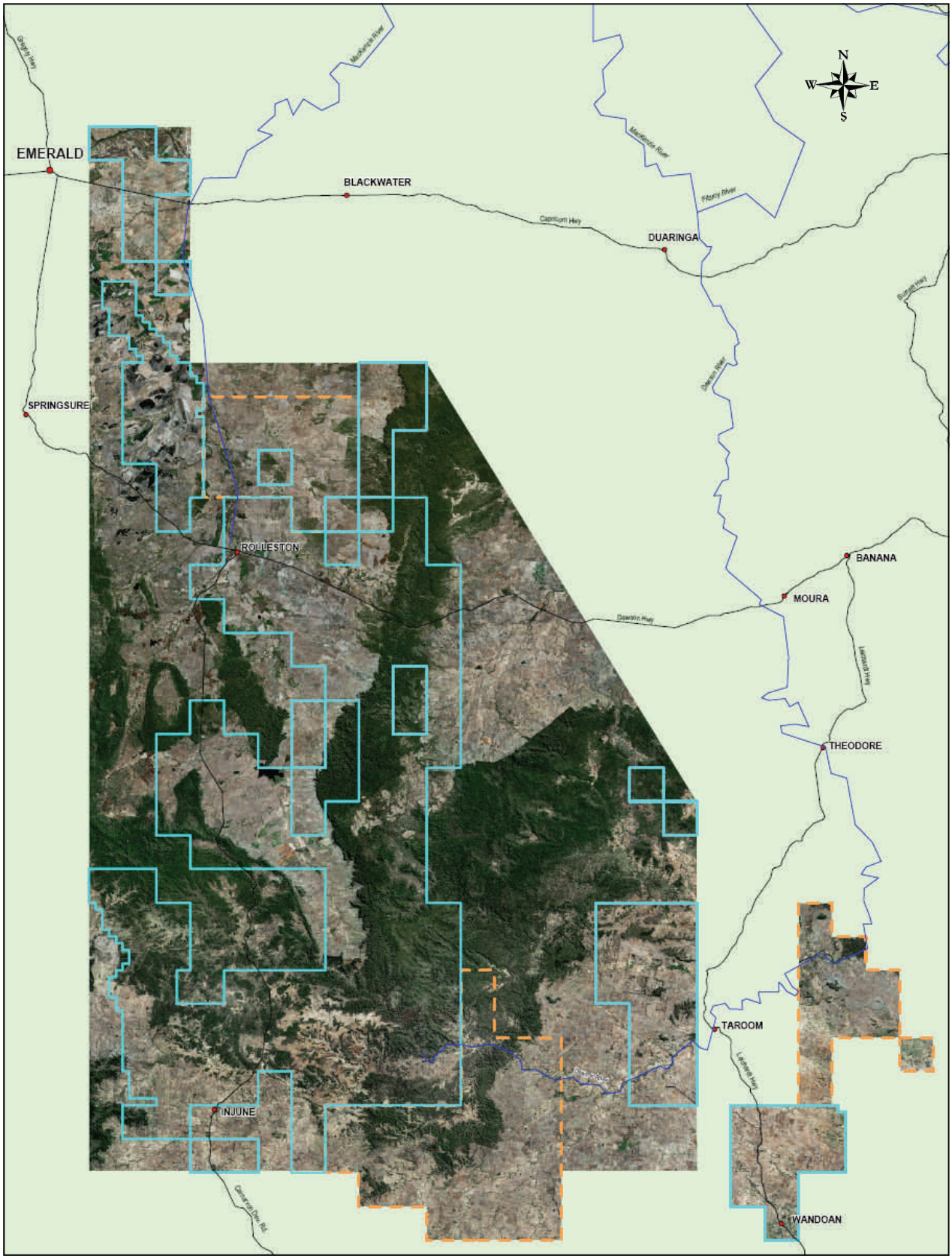
Map Source: URS

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Tenure and Zoning—Pipeline

Figure 11

BRANNOCK & ASSOCIATES | planning consultants



Map Source: URS

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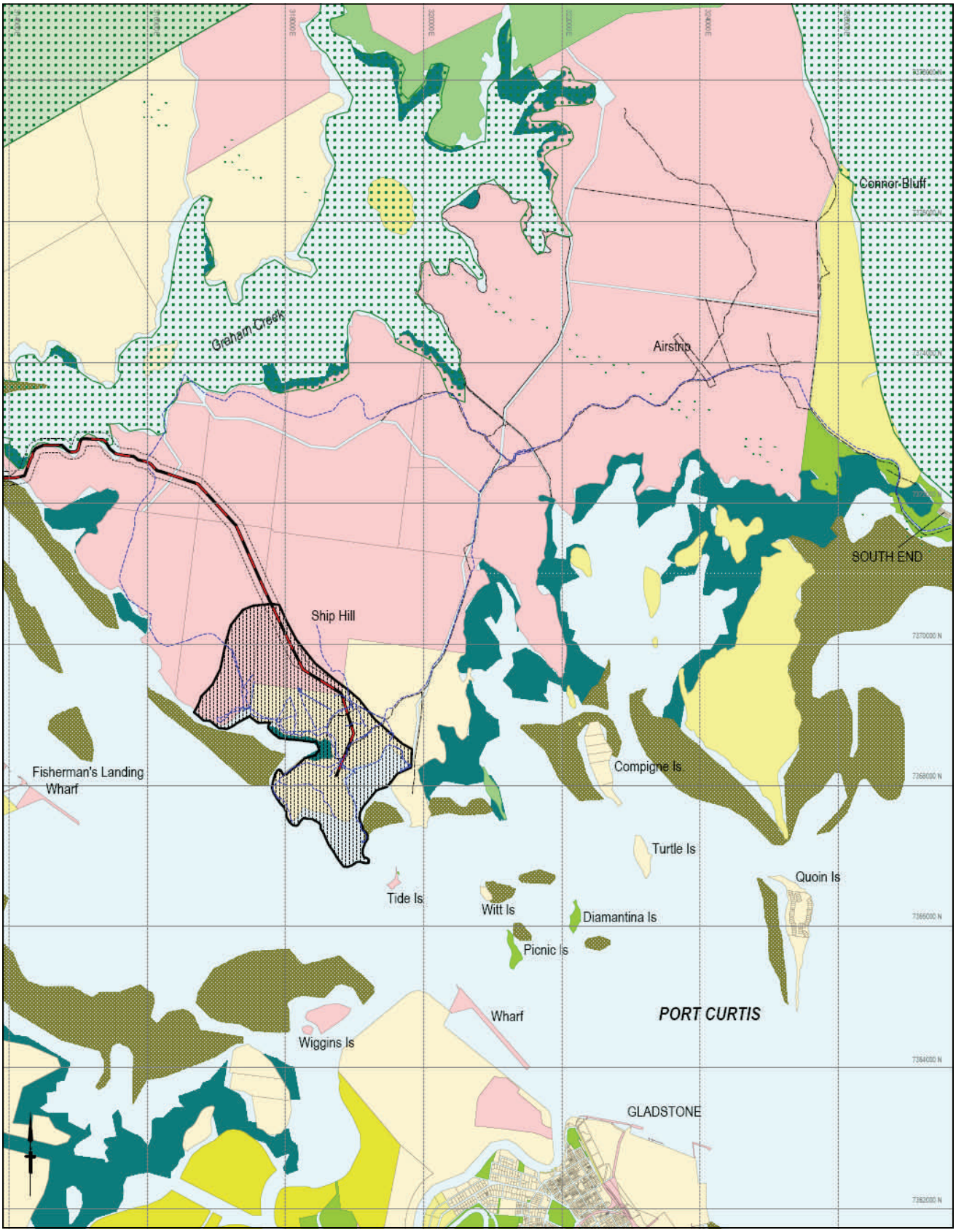
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Tenure and Zoning—
Coal Seam Gas Field Northern Section

Figure 12a



Map Source: URS

0 1 2km

Scale 1:50 000 (A3)
Datum MGA94 Zone56

BRANNOCK & ASSOCIATES | planning consultants

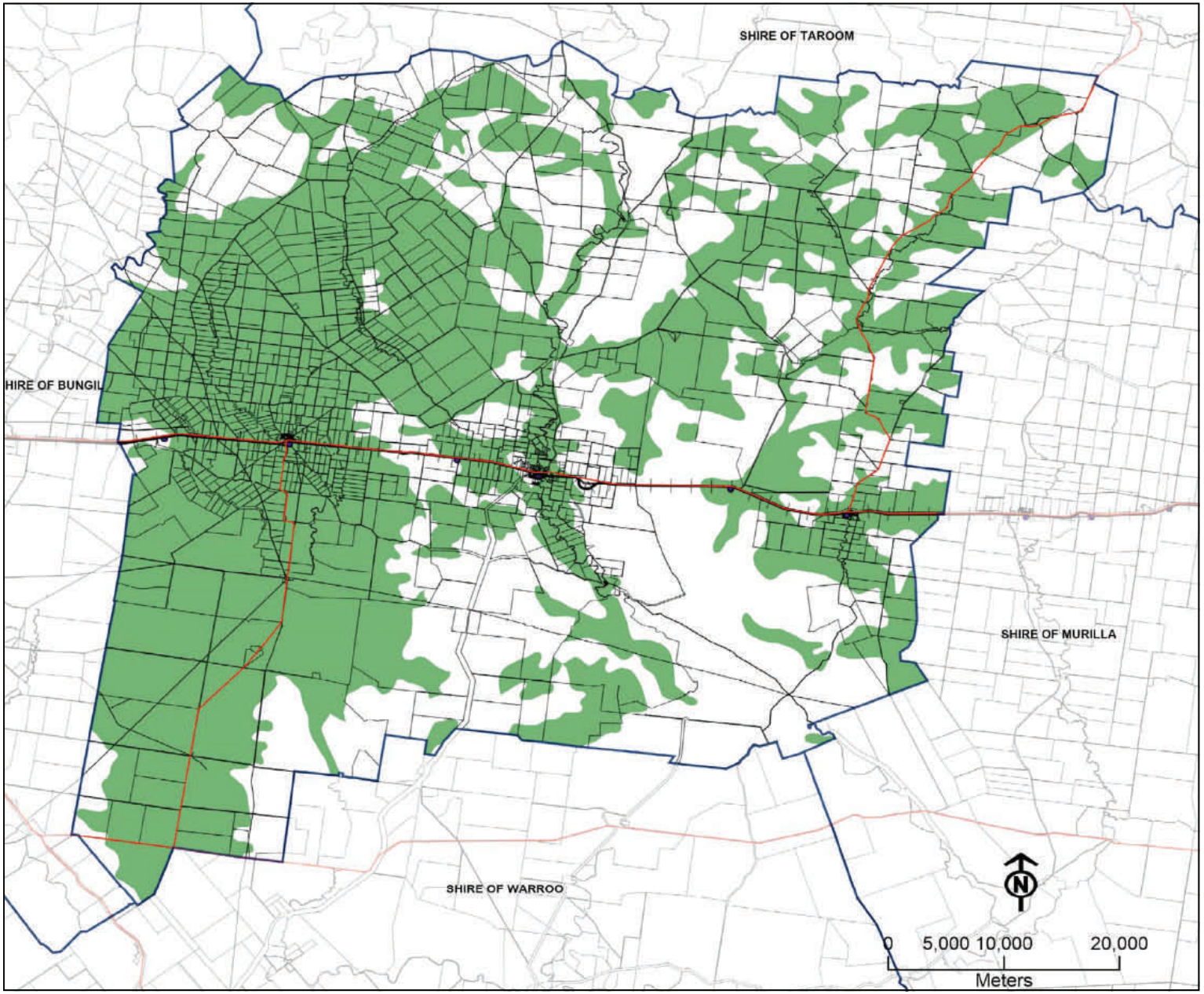
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Tenure and Zoning—Curtis Island

Figure 13

APPENDIX 5

Figures 14 to 21



Good Quality Agricultural Land

Shire Boundary

Rail Lines

State Controlled Roads

Map Source: Planning Scheme for the Shire of Bendemere

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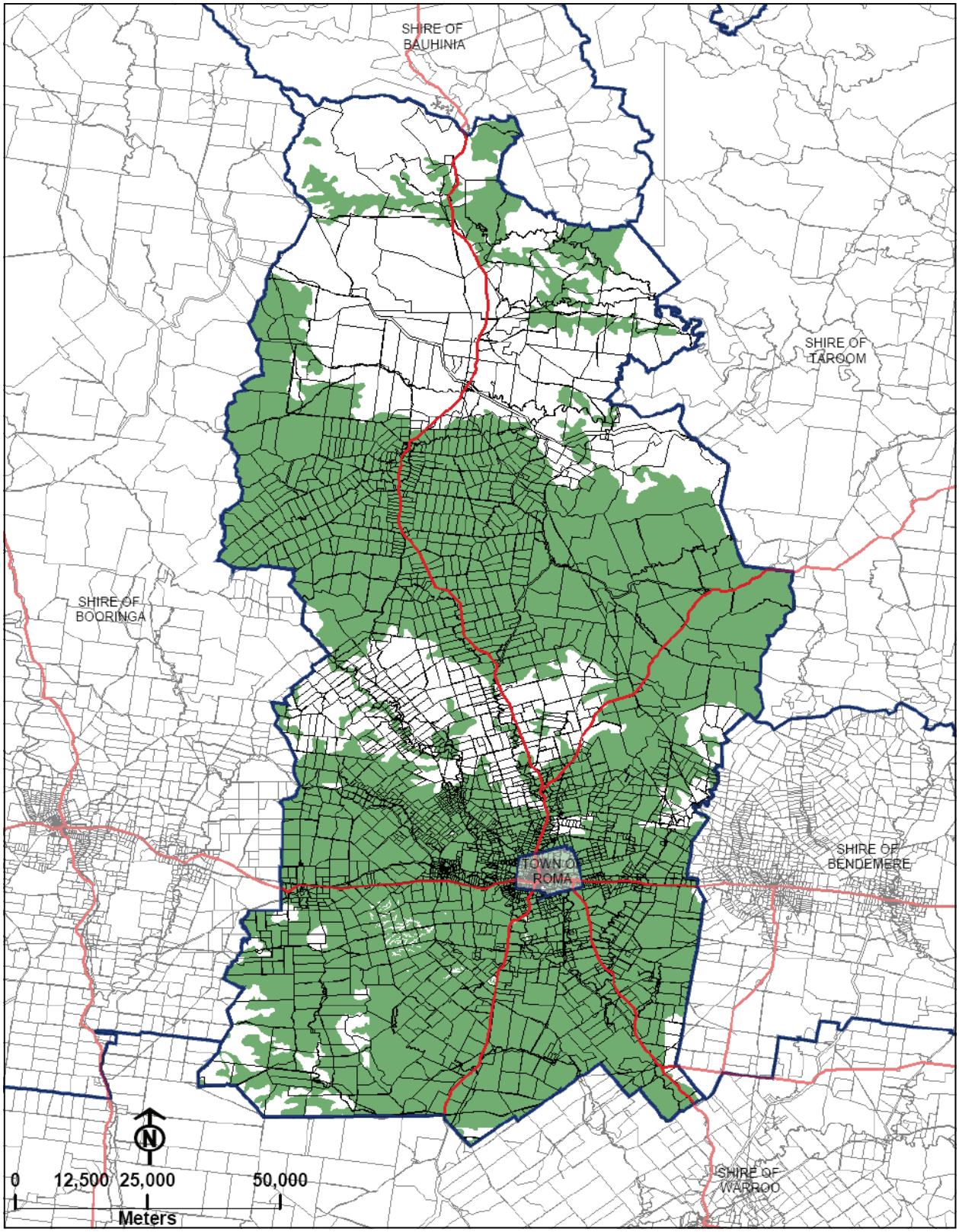
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Good Quality Agricultural Land—Bendemere

Figure 14



Map Source: Planning Scheme for the Shire of Bungil

Good Quality Agricultural Land

State Controlled Roads

Shire Boundary

Rail Lines

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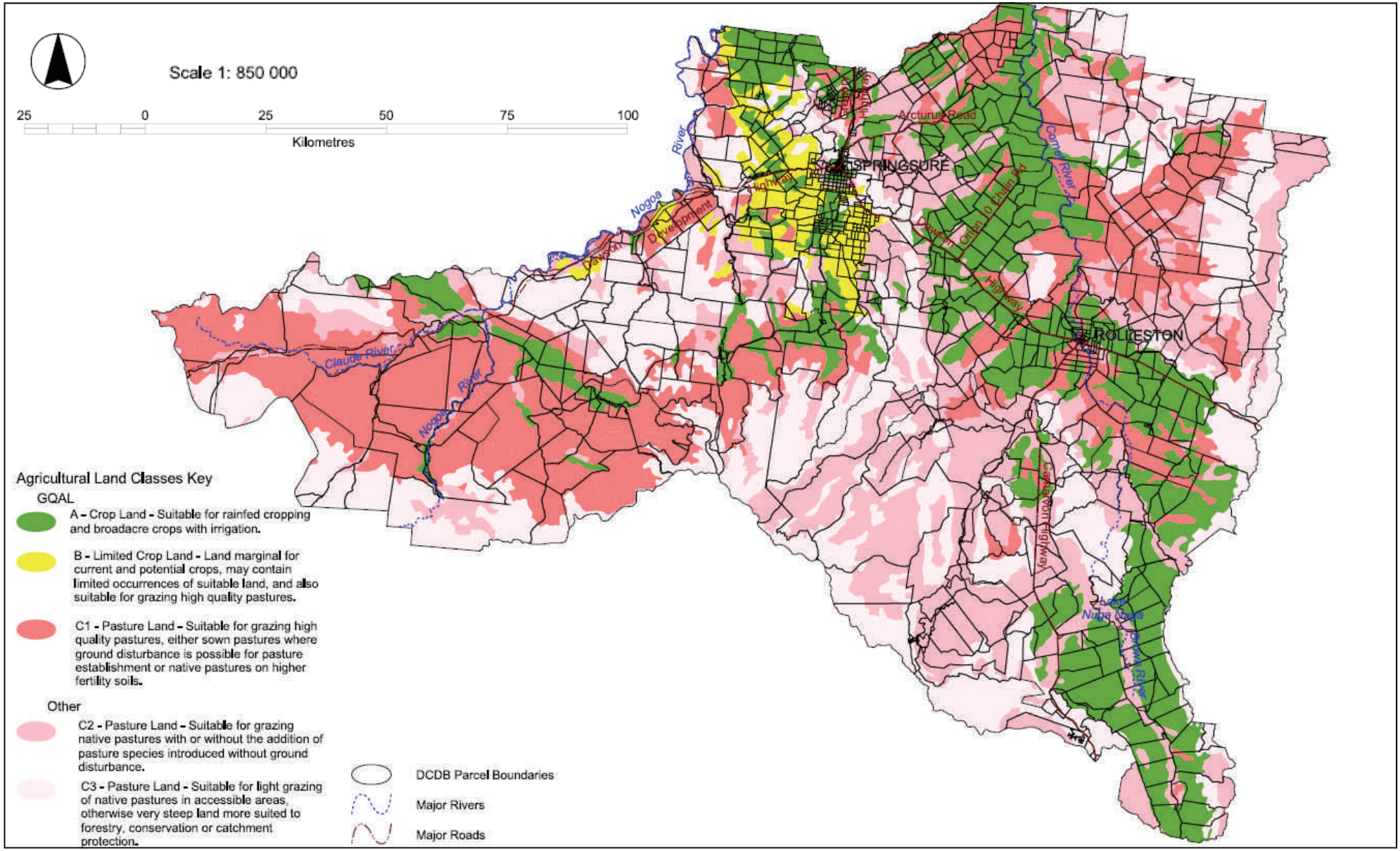
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Good Quality Agricultural Land - Bungil

Figure 15



Map Source: Bauhinia Shire Planning Scheme

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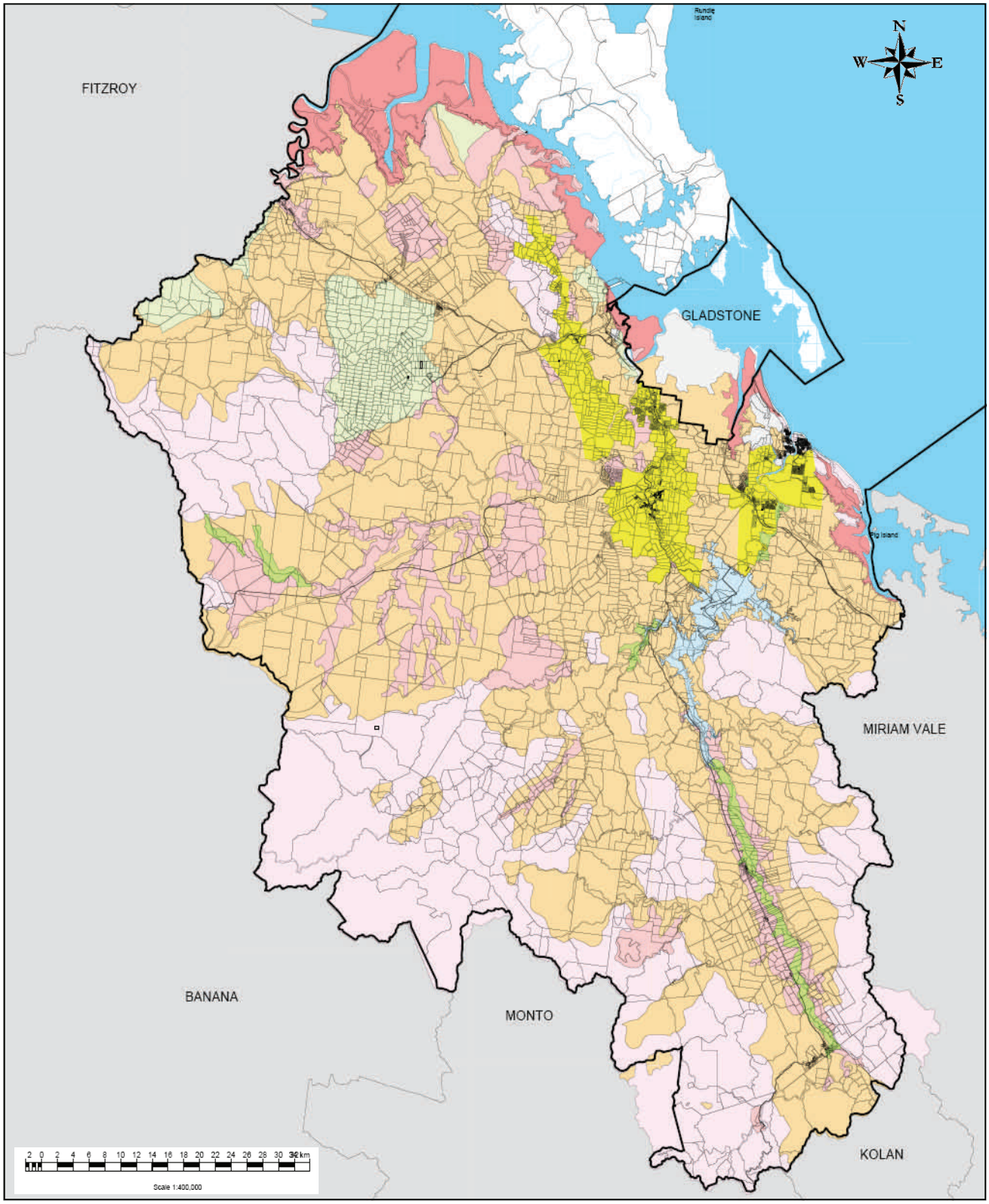
Good Quality Agricultural Land—Bauhinia

Figure 16



Map Source: Calliope Shire Council Planning Scheme

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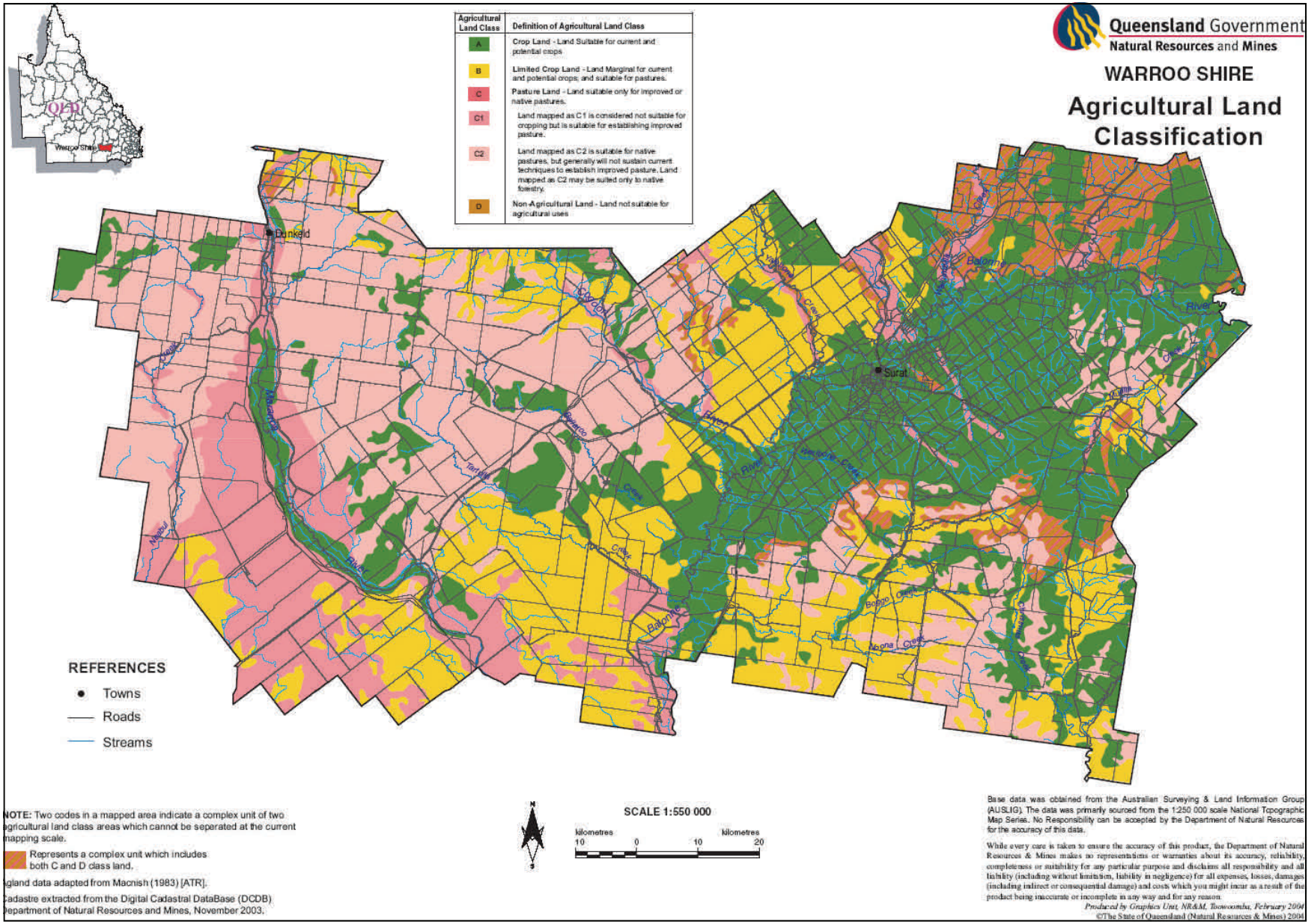
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Good Quality Agricultural Land - Calliope

Figure 17



Map Source: Department of Natural Resources and Mines

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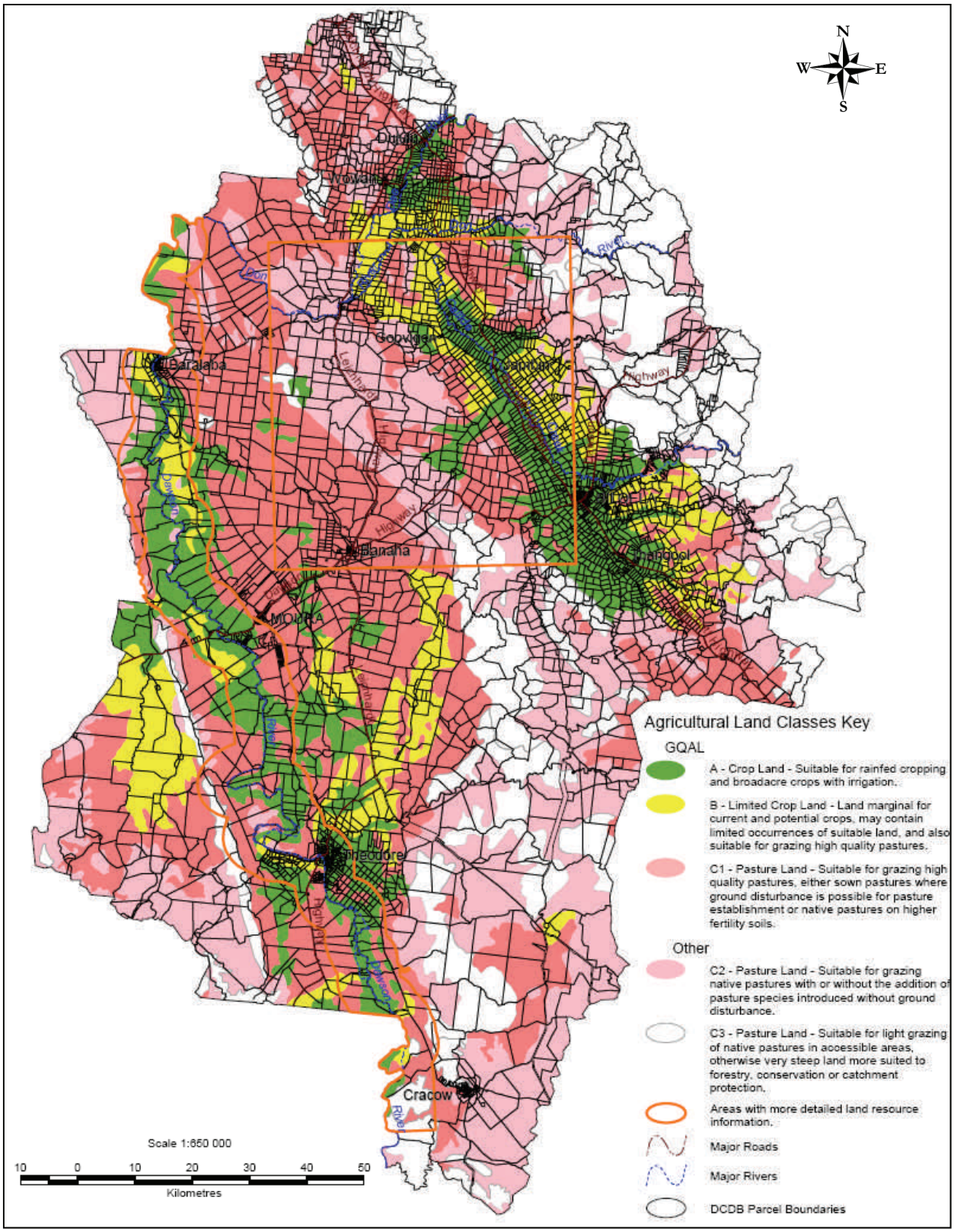
Good Quality Agricultural Land—Warroo

Figure 18



Map Source: Banana Shire Planning Scheme

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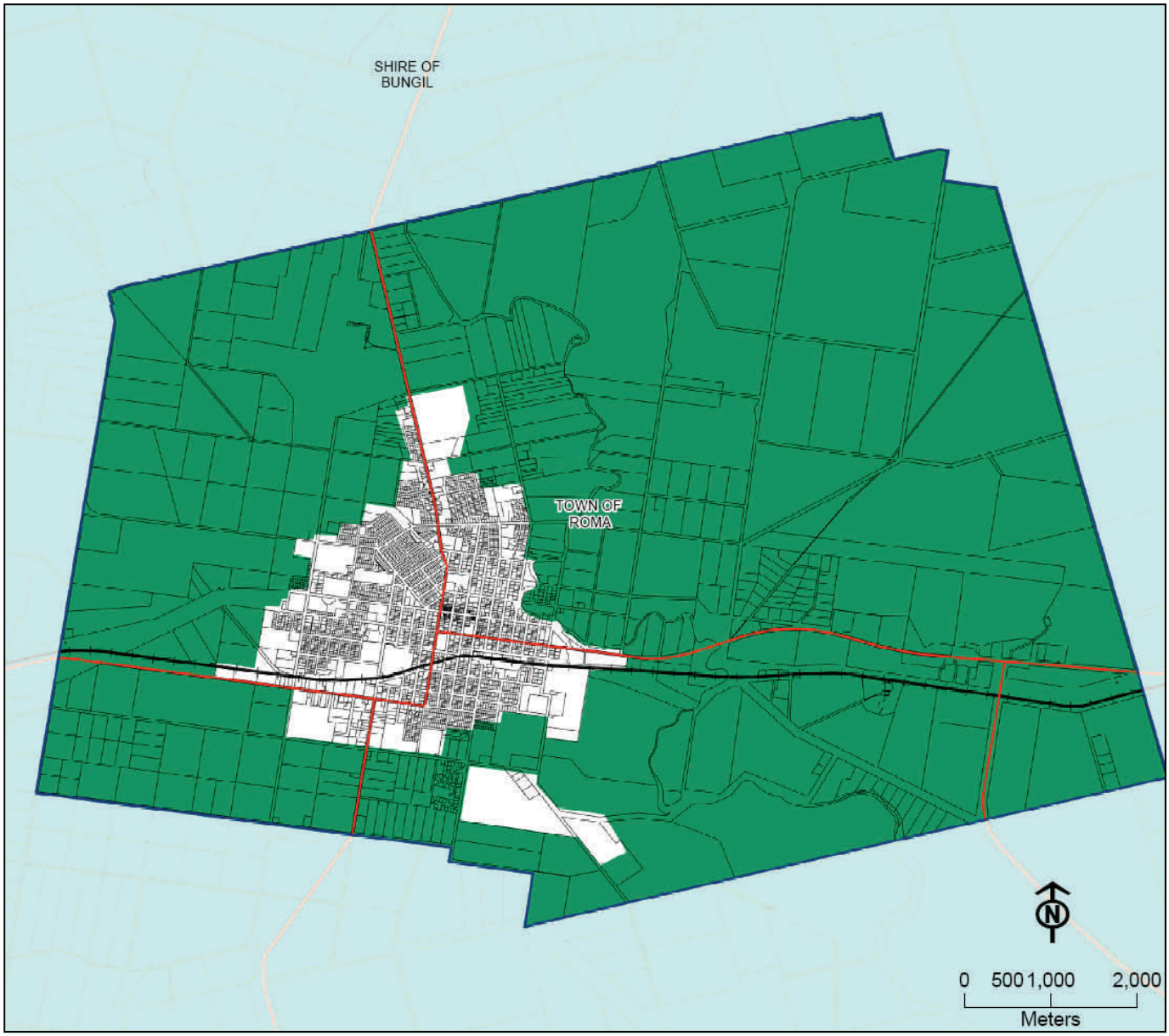
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Good Quality Agricultural Land - Banana

Figure 19



Map Source: Planning Scheme for the Town of Roma

Good Quality Agricultural Land

Shire Boundary

Rail Lines

State Controlled Roads

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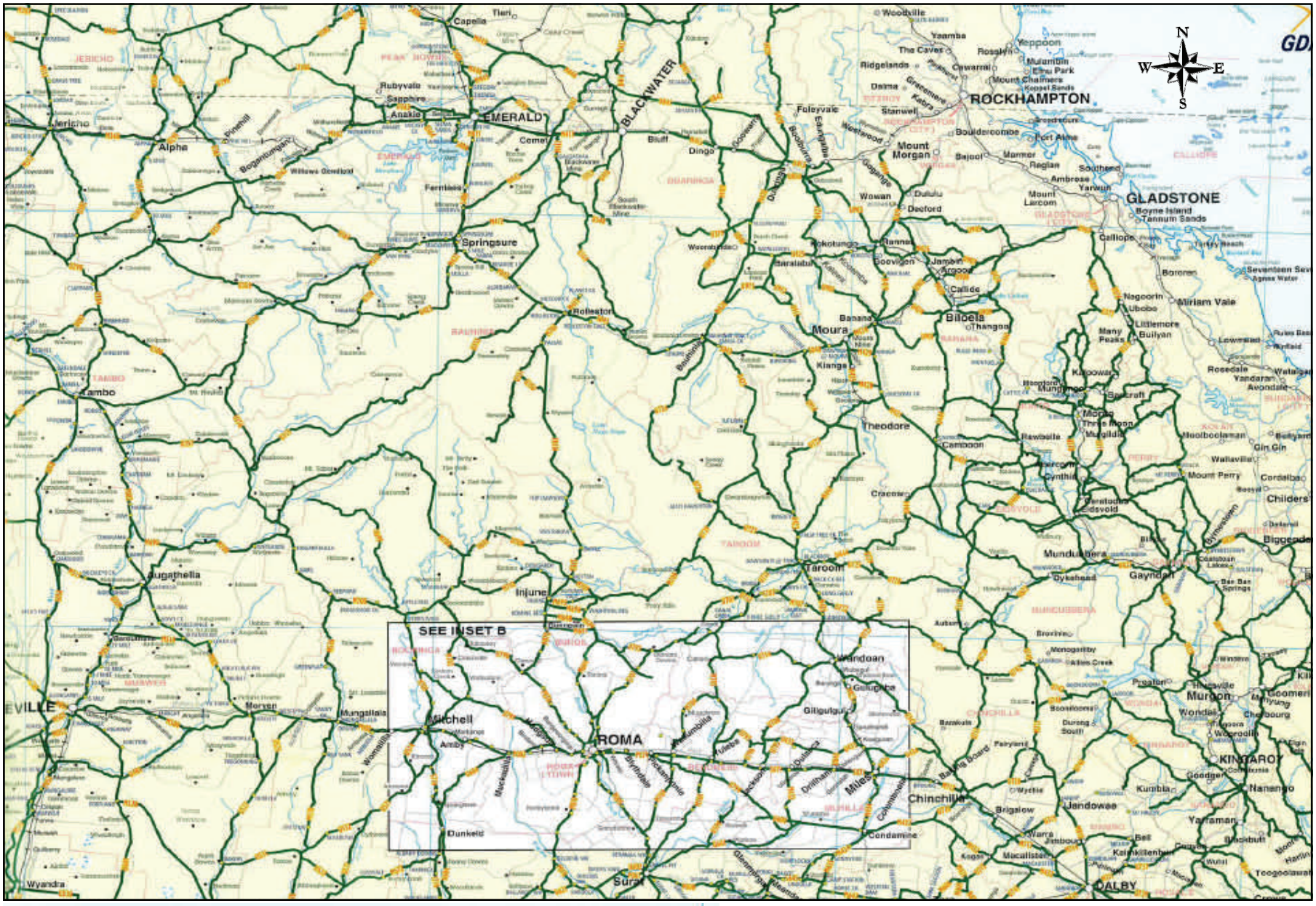
Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Good Quality Agricultural Land - Roma

Figure 20



Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Queensland Stock Routes

Figure 21

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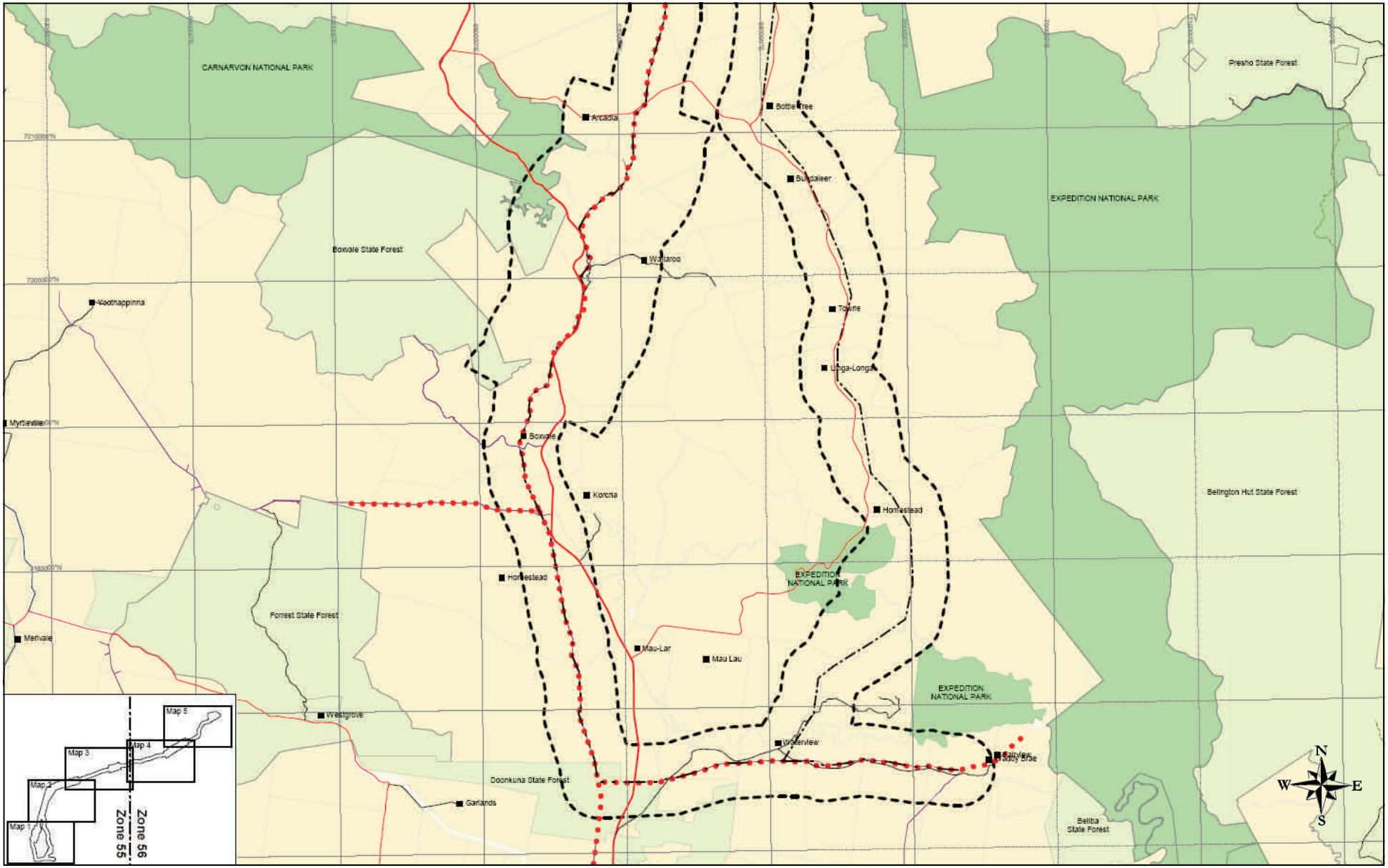
Map Source: DNRW

APPENDIX 6

Figures 22a to 22c



0 5 10Km

Scale 1:250,000 (A3)

MGA Zone 55

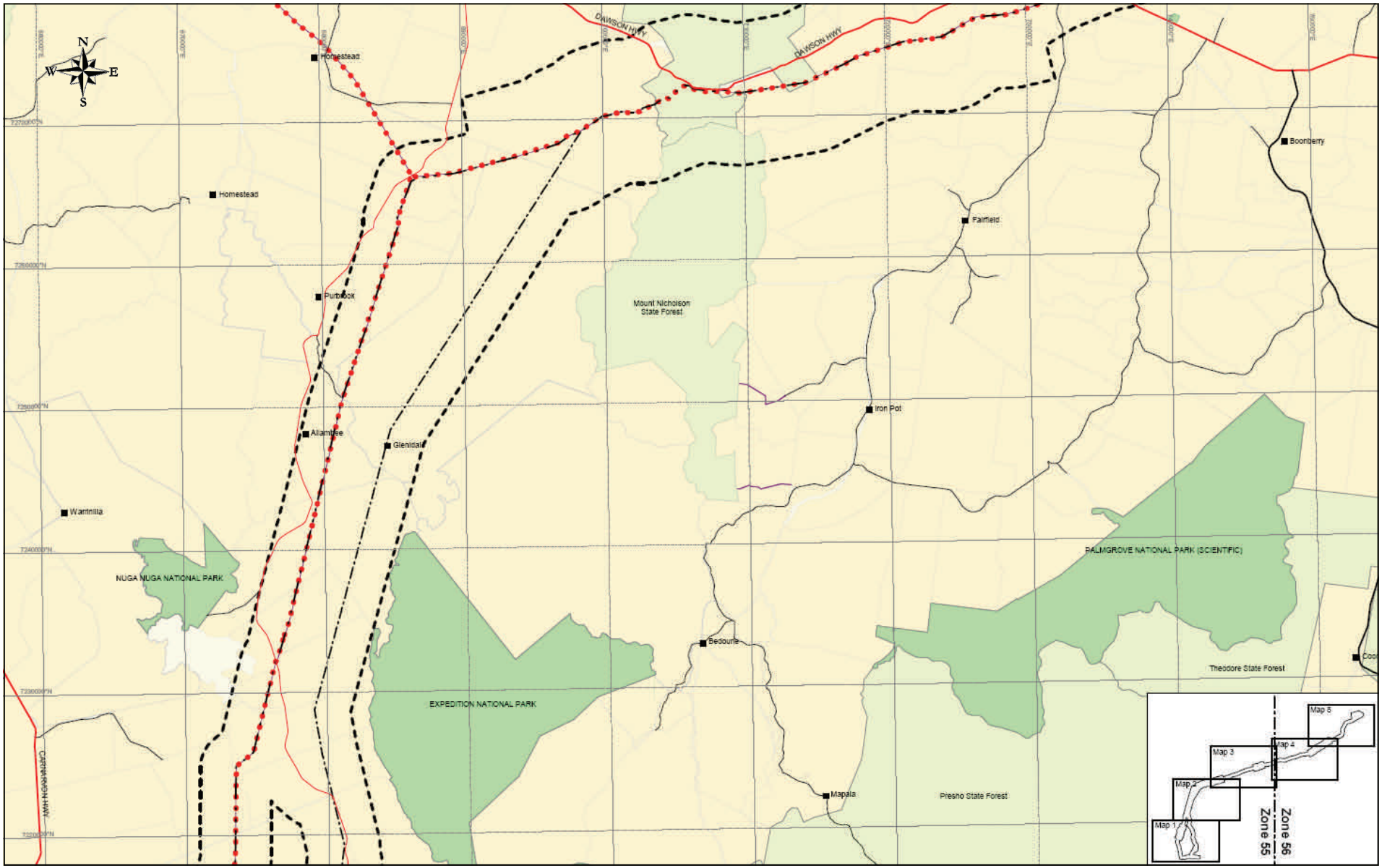
BRANNOCK & ASSOCIATES | planning consultants

- National Park (eg. CARNARVON NATIONAL PARK)
- State Forest (eg. Boxvale State Forest)
- Proposed Corridor for Proposed Route and Proposed Alternate Route
- Proposed Pipeline Route
- Proposed Alternate Pipeline Route
- Easement
- Major Road
- Minor Road
- Homestead
- Gas Pipeline
- Water Pipeline
- Powerline

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

National and State Parks

Figure 22a



0 5 10Km

Scale 1:250,000 (A3)

MGA Zone 55

National Park (eg. CARNARVON NATIONAL PARK)

State Forest (eg. Boxvale State Forest)

Proposed Corridor for Proposed Route and Proposed Alternate Route

Proposed Pipeline Route

Proposed Alternate Pipeline Route

Easement

Major Road

Minor Road

Homestead

Gas Pipeline

Water Pipeline

Powerline

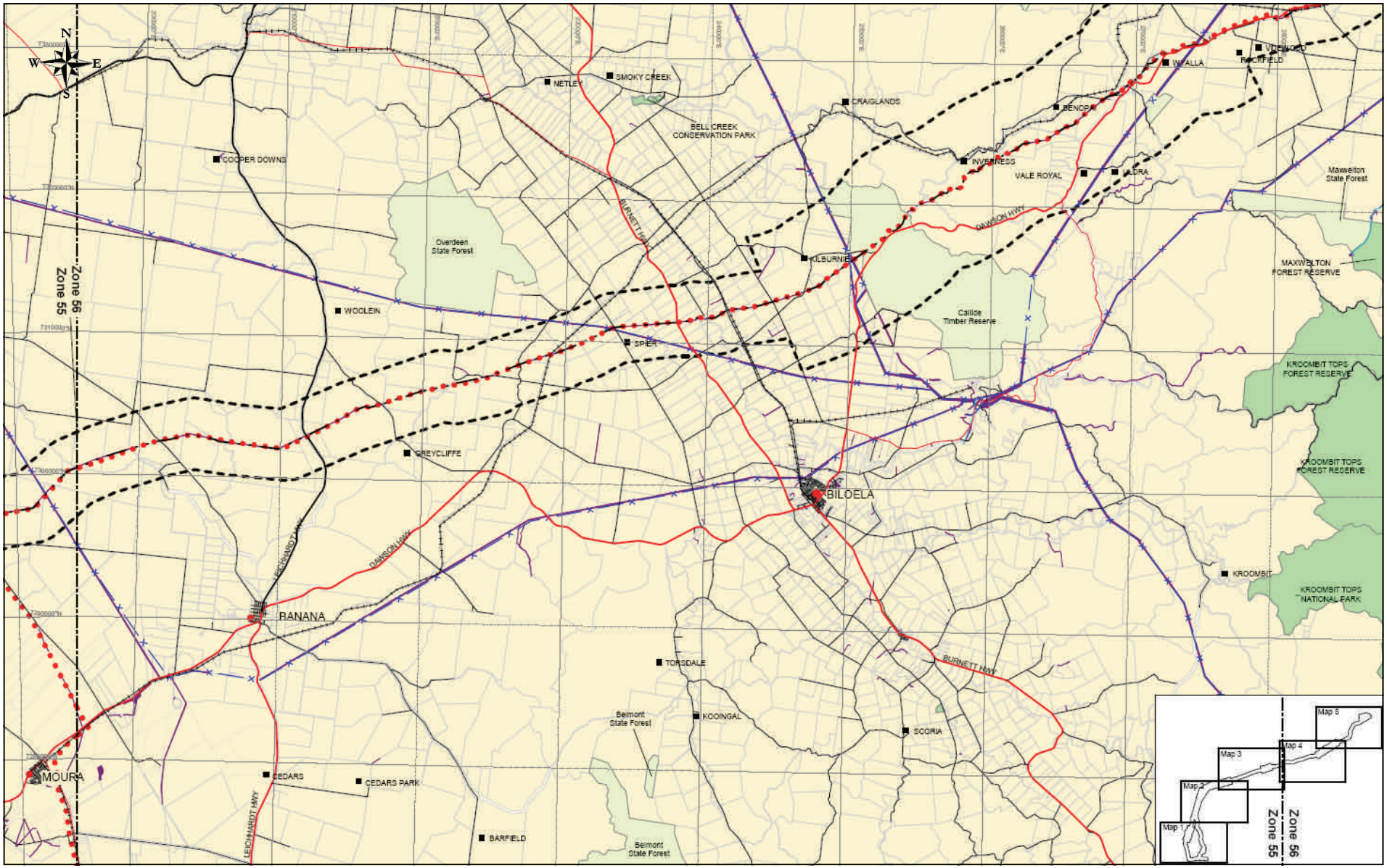
BRANNOCK & ASSOCIATES | planning consultants

Map Source: URS

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

National and State Parks

Figure 22b



0 5 10Km

Scale 1:250,000 (A3)

MGA Zone 56

BRANNOCK & ASSOCIATES | planning consultants

- National Park (eg. CARNARVON NATIONAL PARK)
- State Forest (eg. Boxvale State Forest)
- Proposed Corridor for Proposed Route and Proposed Alternate Route
- Proposed Pipeline Route
- Proposed Alternate Pipeline Route
- Easement
- Major Road
- Minor Road
- Homestead
- Gas Pipeline
- Water Pipeline
- Powerline

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

National and State Parks

Map Source: URS

Figure 22c

APPENDIX 7

Figures 23 to 24

Map Source: Department of Main Roads

BRANNOCK & ASSOCIATES | planning consultants

Road Network

Figure 23

Map Source: Queensland Rail

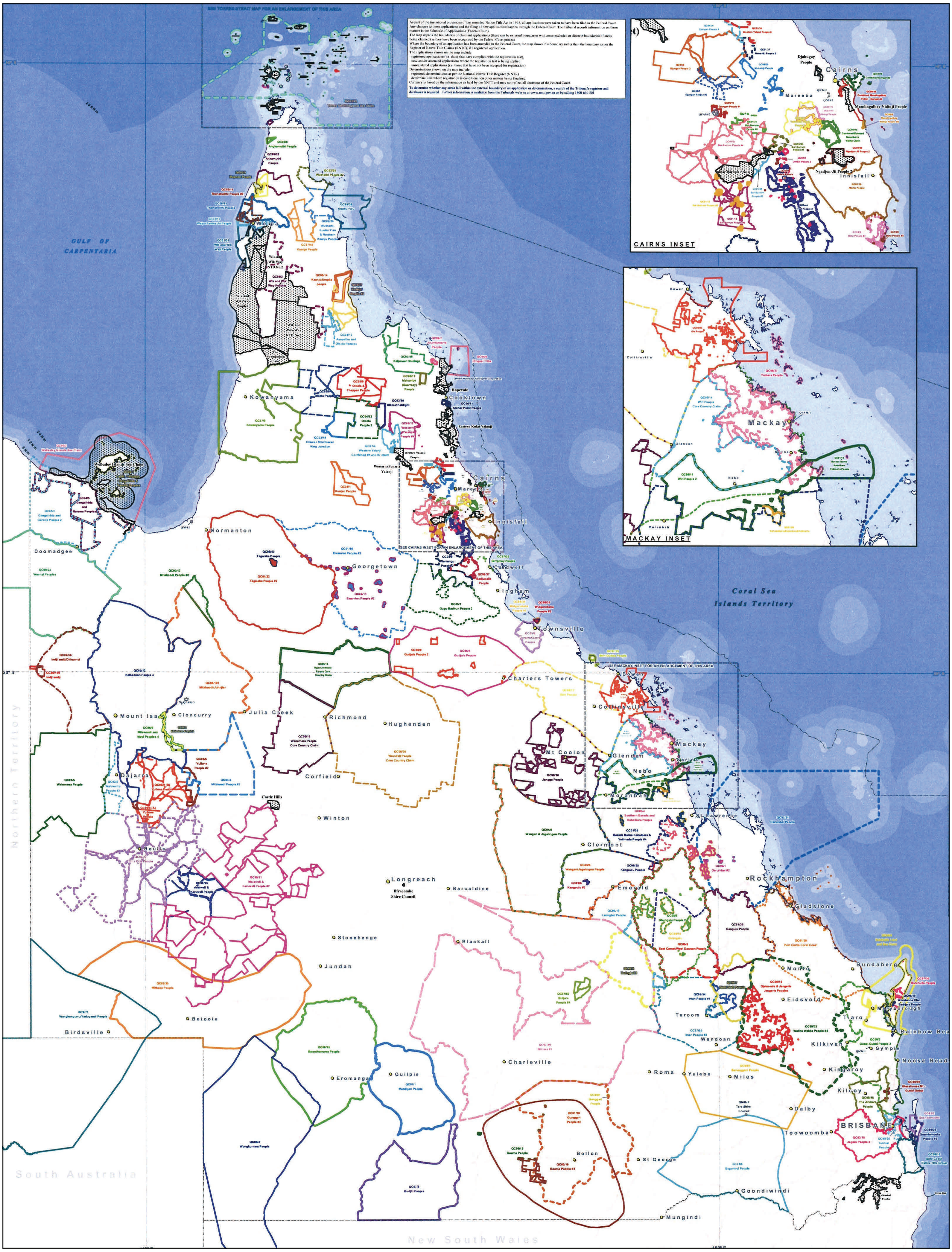
Land Use Strategy for Environmental Impact Statement
GLNG Project– URS Australia

BRANNOCK & ASSOCIATES | planning consultants

Rail Network
Figure 24

APPENDIX 8

Figures 25 to 26

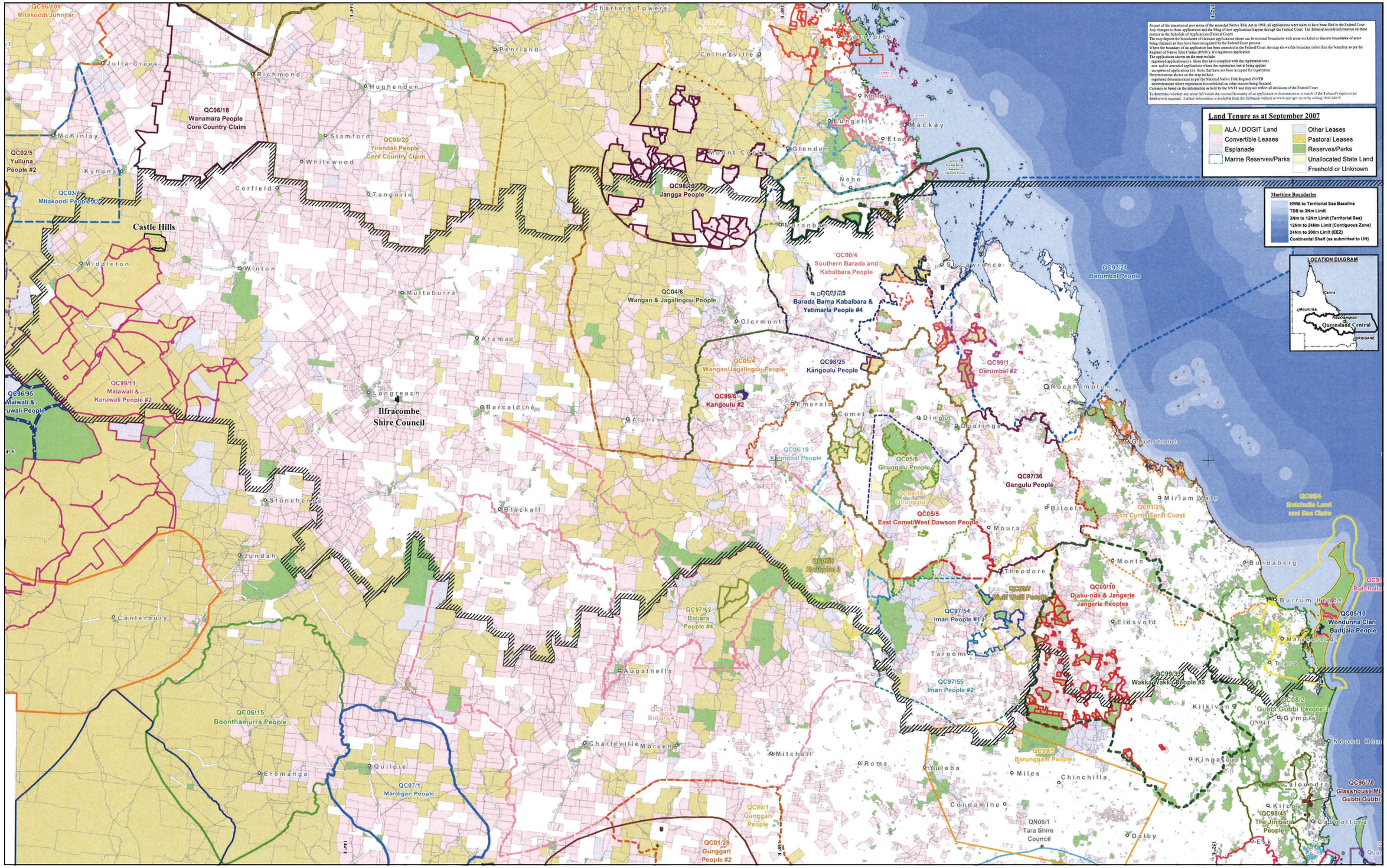


Map Source: National Native Title Tribunal

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Native Title—Tribunal Areas

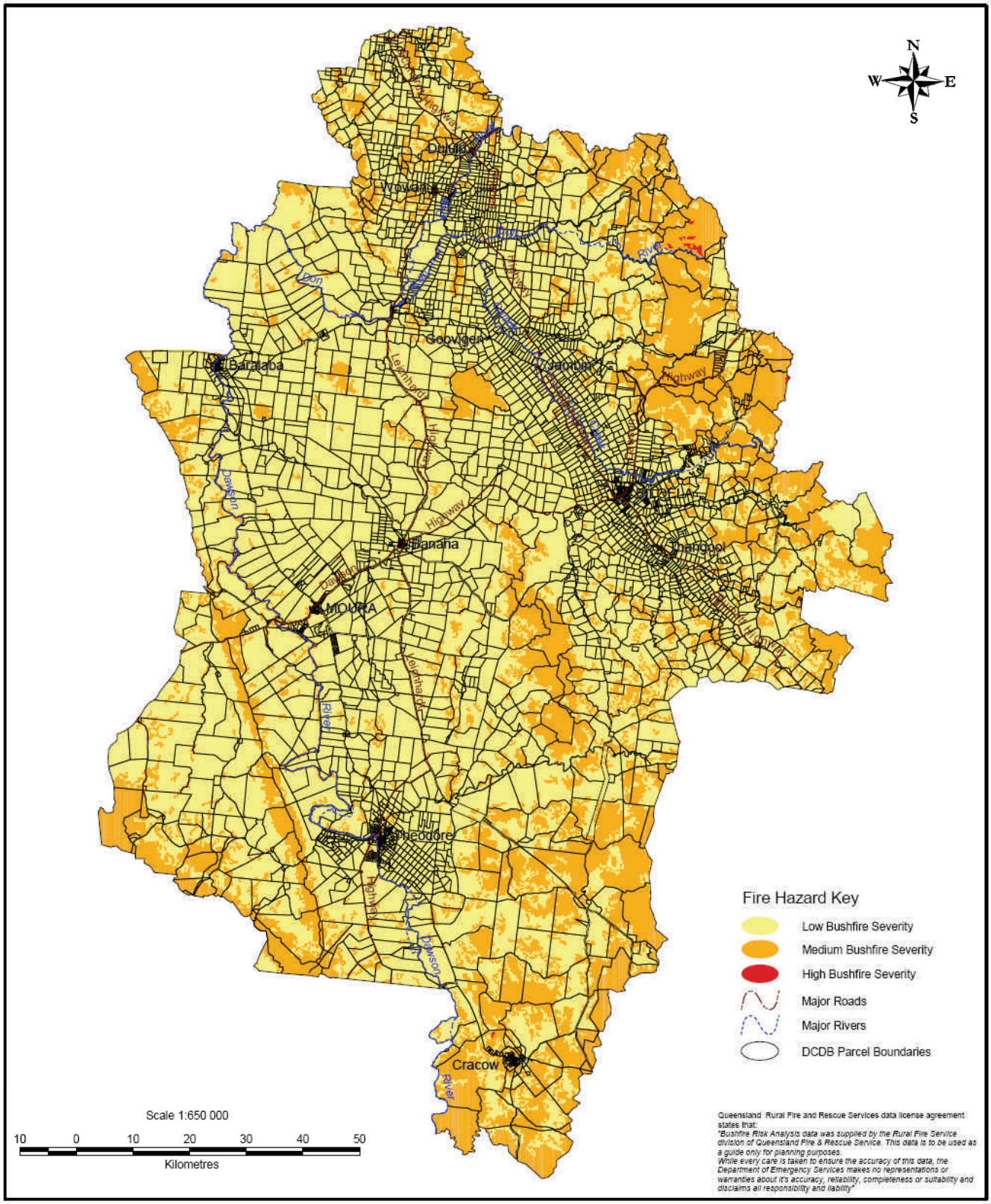
Figure 25



Map Source: National Native Title Tribunal

APPENDIX 9

Figures 27a to 29



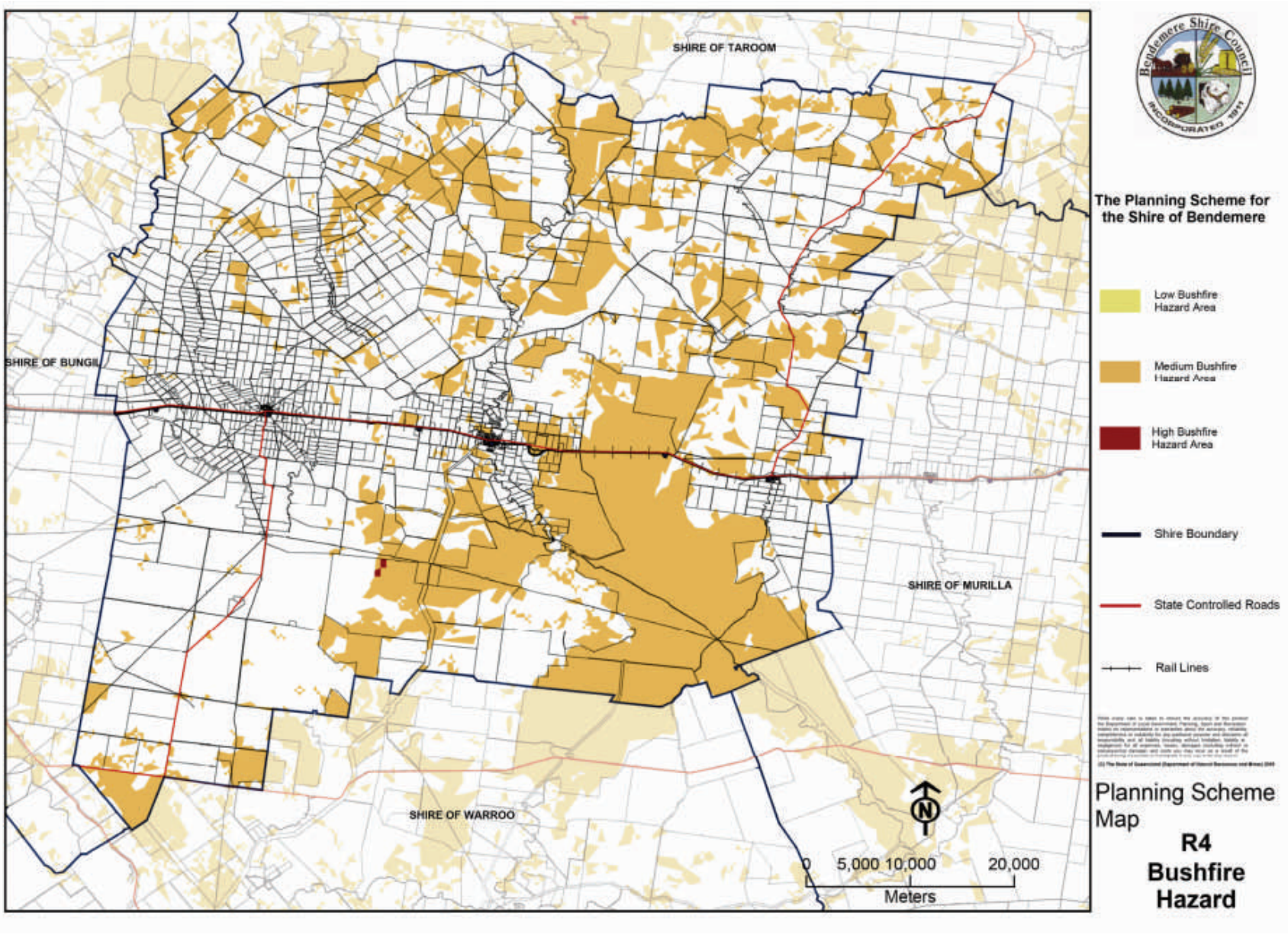
Map Source: Banana Shire Planning Scheme

BRANNOCK & ASSOCIATES | planning consultants

Land Use Strategy for Environmental Impact Statement
GLNG Project— URS Australia

Bushfire Prone Land Overlay—Banana Shire

Figure 27a



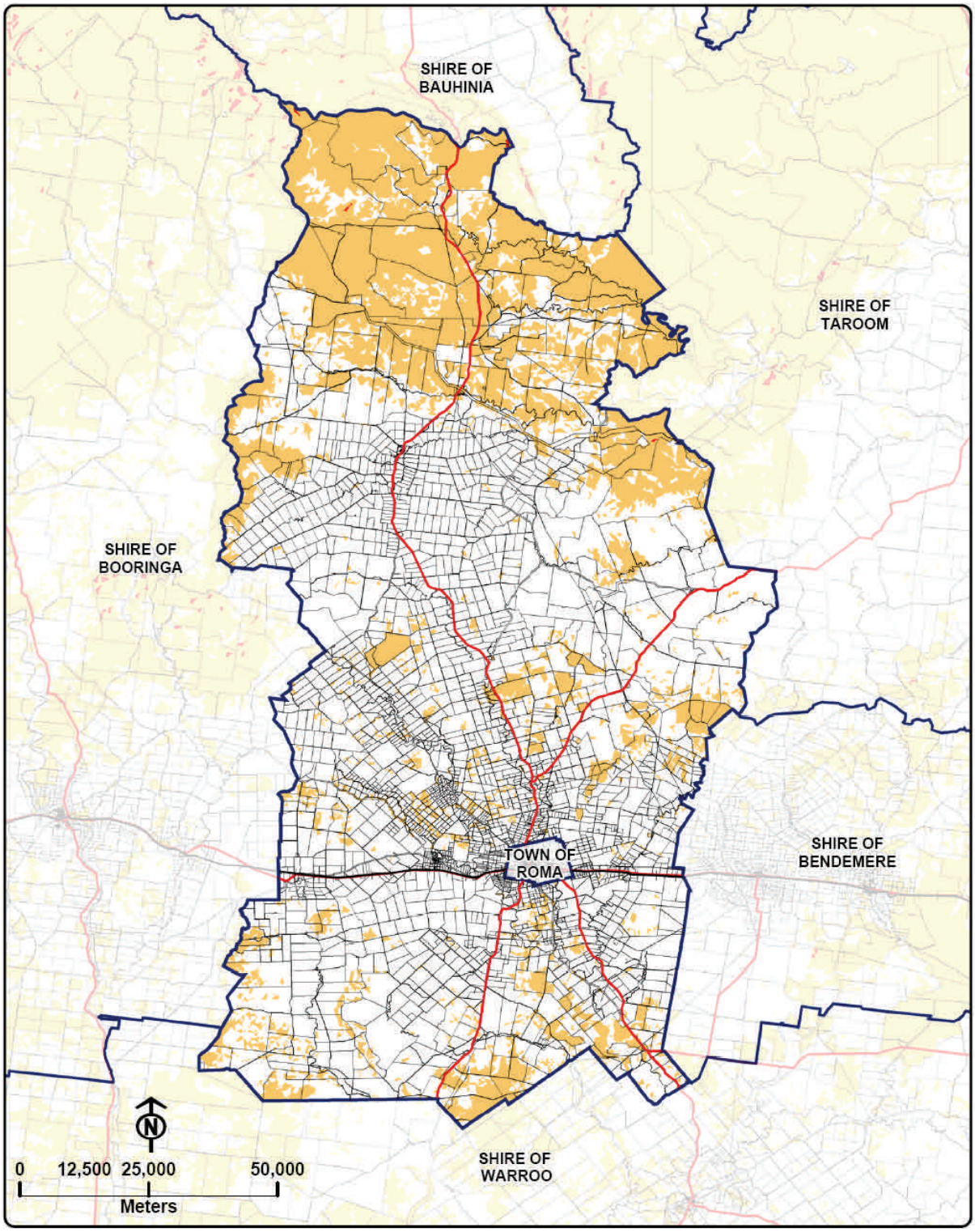
Map Source: Bendemere Shire Council

Land Use Strategy for Environmental Impact Statement
GLNG Project— URS Australia

BRANNOCK & ASSOCIATES | planning consultants

Bushfire Hazard Map—Bendemere Shire

Figure 27b



Map Source: Bungil Shire Planning Scheme

N
W
E
S

Medium Bushfire Hazard Area

High Bushfire Hazard Area

State Controlled Roads

Shire Boundary

Rail Lines

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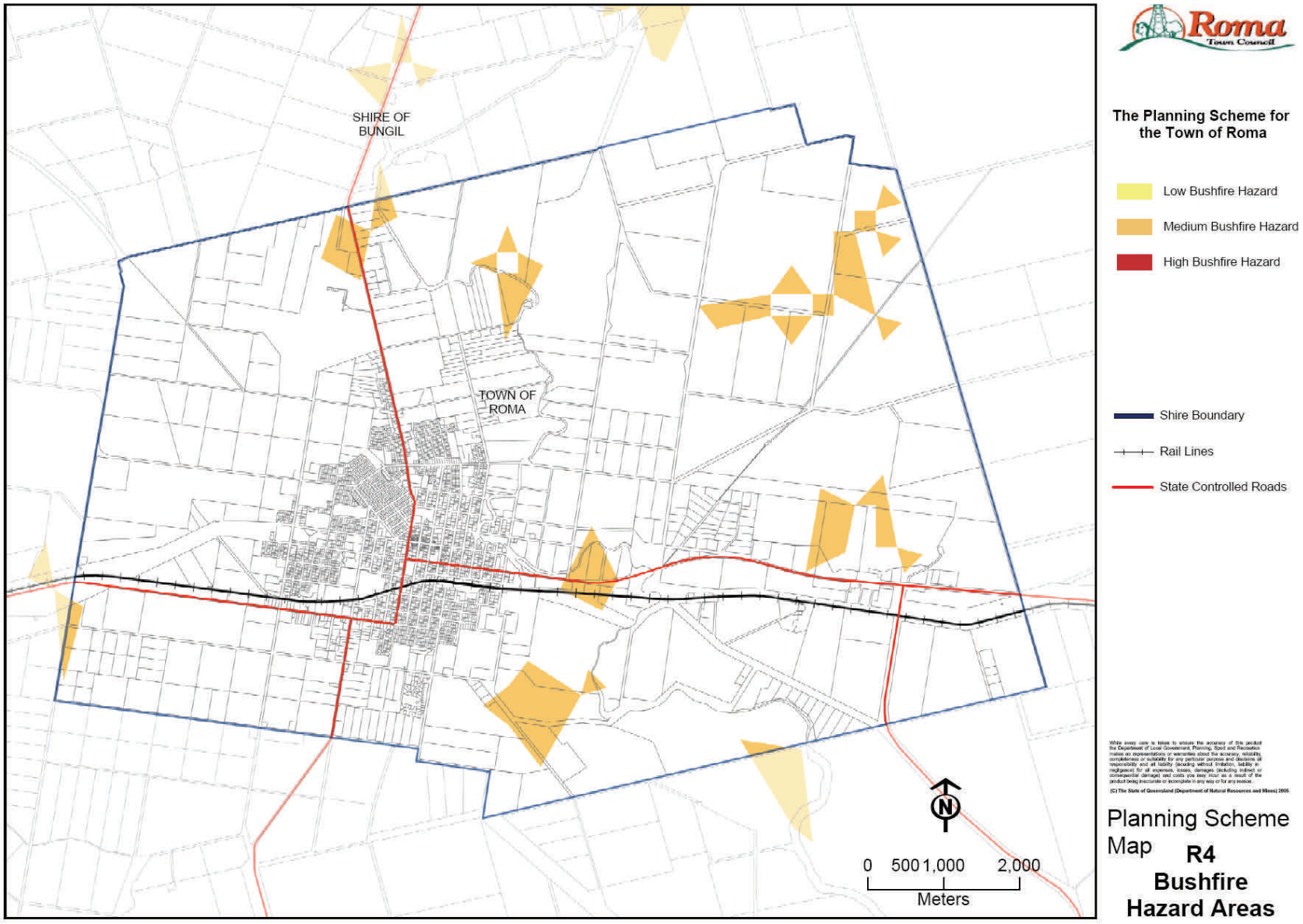
Land Use Strategy for Environmental Impact Statement
GLNG Project— URS Australia

Bushfire Hazard Area—Bungil Shire

Figure 27c

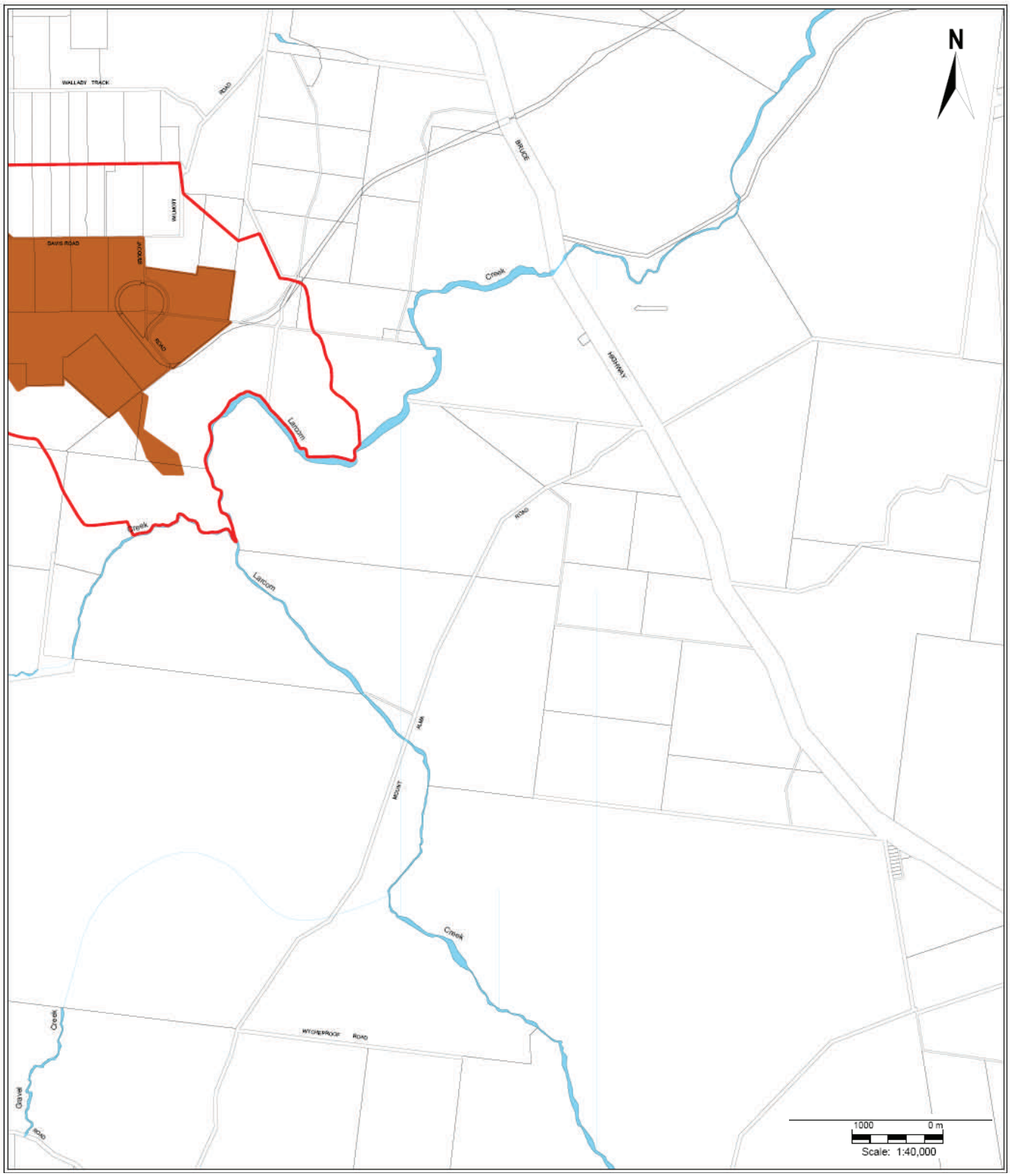


Map Source: Planning Scheme for Town of Roma

BRANNOCK & ASSOCIATES | planning consultants

Bushfire Hazard Areas—Town of Roma

Figure 27d



Map Source: Calliope Shire Planning Scheme

LEGEND

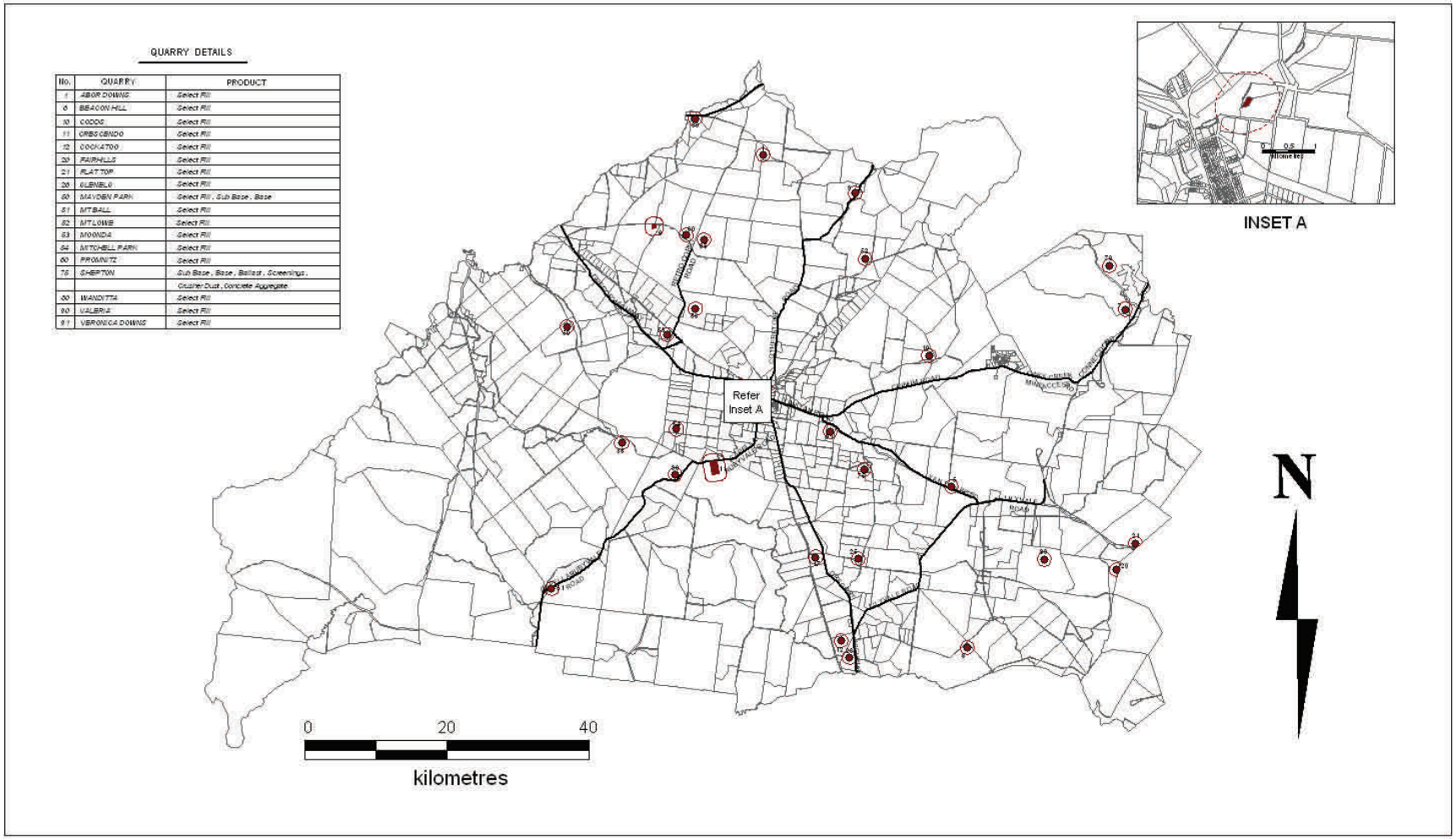
- KEY RESOURCE AREA
- MINING LEASE
- WATER (OCEAN/RIVER/CREEK)

BRANNOCK & ASSOCIATES | planning consultants

Land Use Strategy for Environmental Impact Statement
GLNG Project— URS Australia

Key Resource Areas—Calliope Shire

Figure 28a



LEGEND

- Quarry Location
- 1000 m Area of Influence
- 500 m Area of Influence

PEAK DOWNS SHIRE COUNCIL PLANNING SCHEME

ECONOMIC RESOURCES OVERLAY

RES3 - EXTRACTIVE INDUSTRIES OVERLAY

September 2005

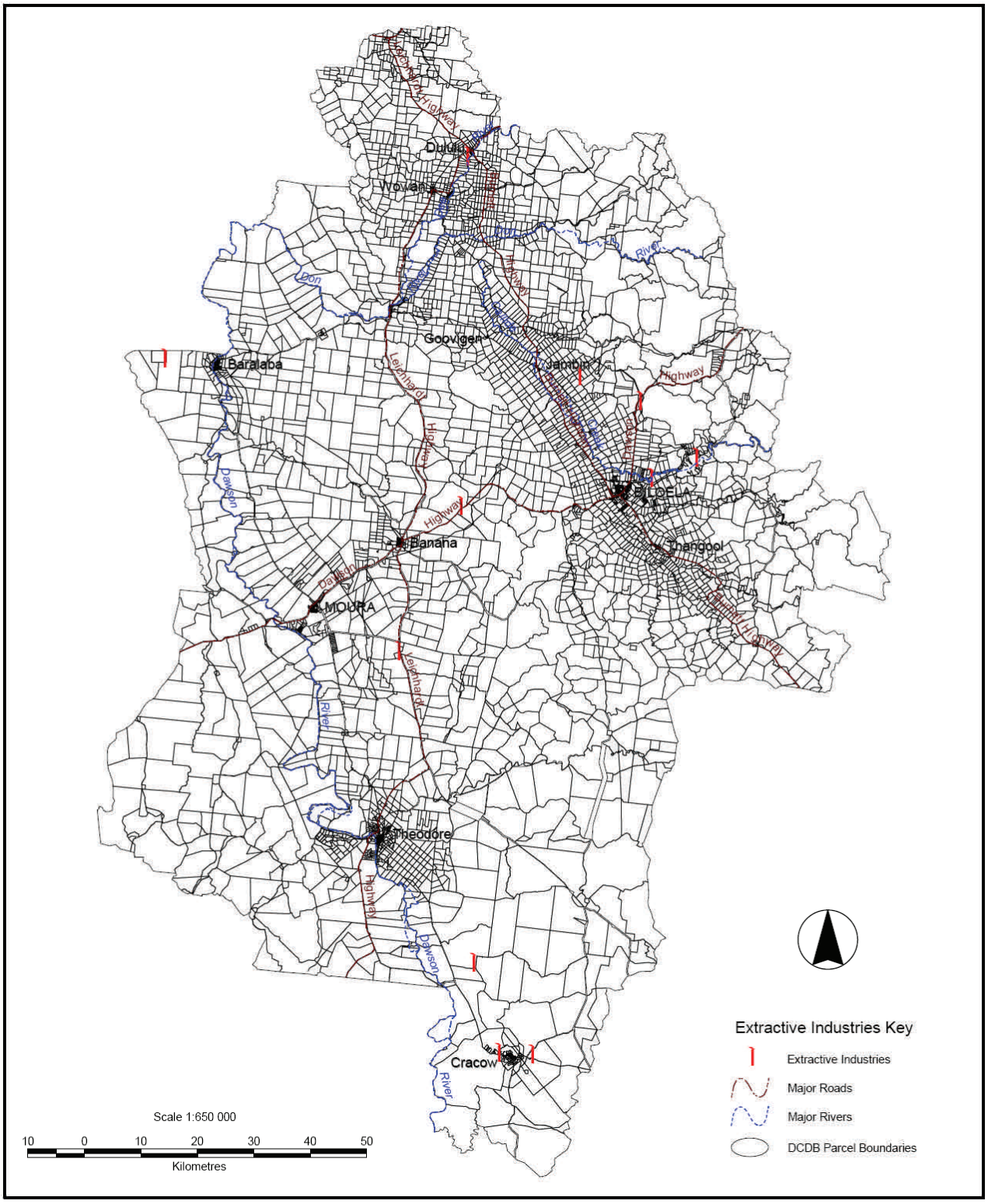
Map Source: Peak Downs Shire Planning Scheme

Land Use Strategy for Environmental Impact Statement
GLNG Project— URS Australia

BRANNOCK & ASSOCIATES | planning consultants

Key Resource Areas—Peak Downs Shire

Figure 28b



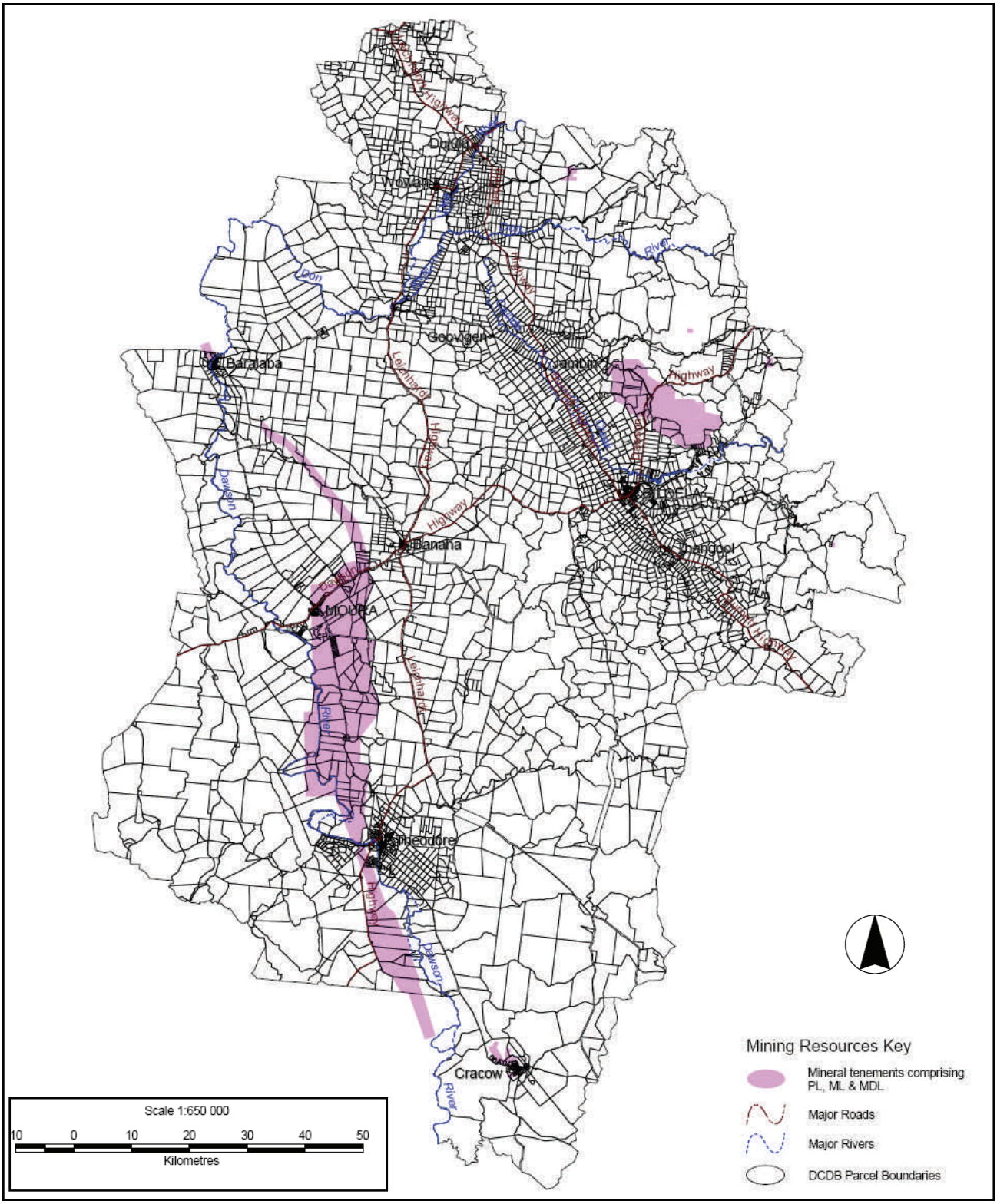
Map Source: Banana Shire Planning Scheme

BRANNOCK & ASSOCIATES | planning consultants

Land Use Strategy for Environmental Impact Statement
GLNG Project— URS Australia

Extractive Industries Overlay—Banana Shire

Figure 28c



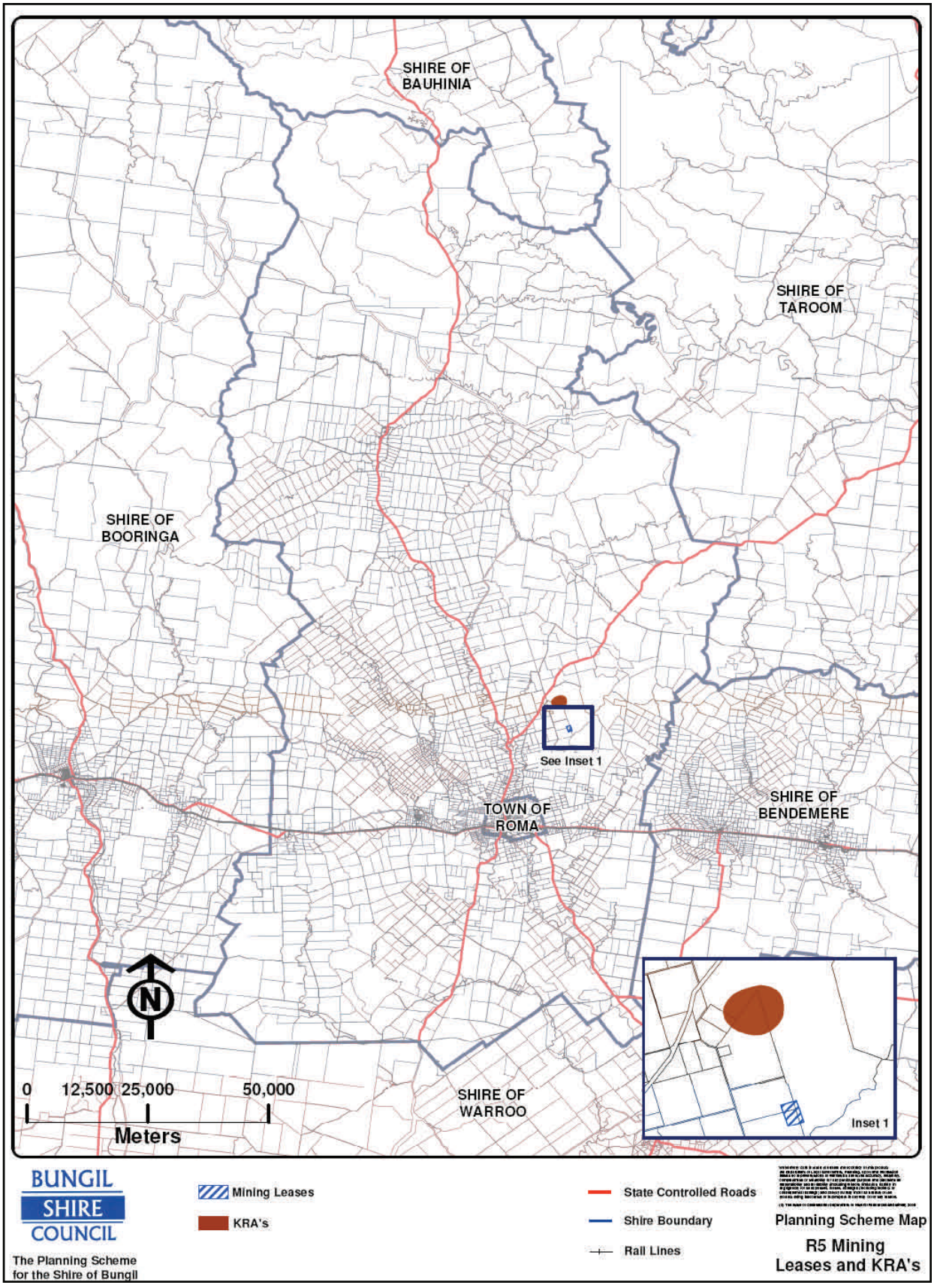
Map Source: Banana Shire Planning Scheme

BRANNOCK & ASSOCIATES | planning consultants

Land Use Strategy for Environmental Impact Statement
GLNG Project— URS Australia

Mining Resources Overlay—Banana Shire

Figure 28d



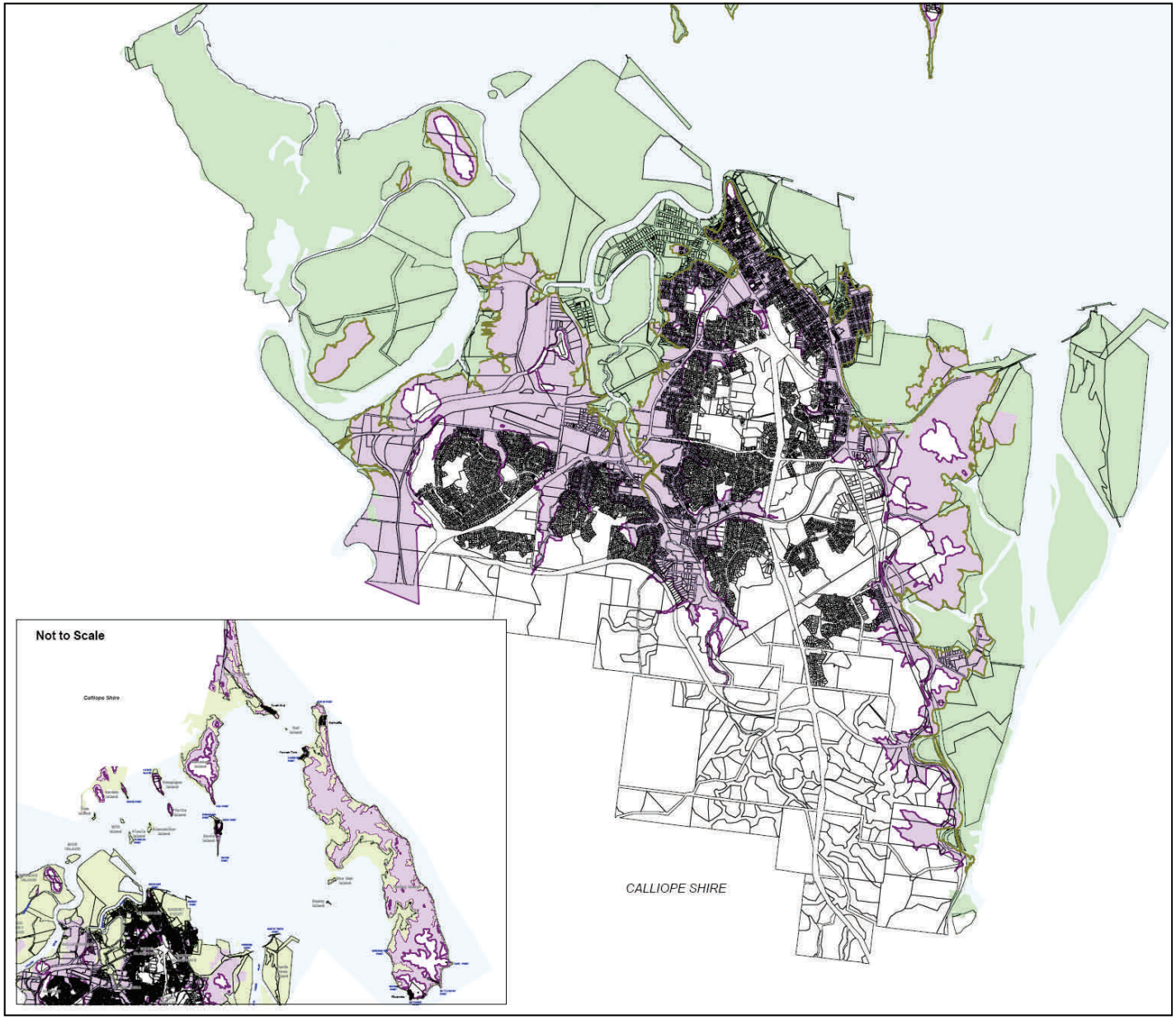
Map Source: Bungil Shire Planning Scheme

Land Use Strategy for Environmental Impact Statement
GLNG Project— URS Australia

BRANNOCK & ASSOCIATES | planning consultants

Key Resources Areas—Bungil Shire

Figure 28e



LEGEND

- Area Located Between 5m & 20m AHD
- 5m Contour
- Area Below 5m AHD
- Allotment Boundaries
- Water (Ocean / River / Creek)

BRANNOCK & ASSOCIATES | planning consultants

Land Use Strategy for Environmental Impact Statement
GLNG Project—URS Australia

Acid Sulphate Soils

Figure 29

Map Source: Gladstone Planning Scheme

APPENDIX 10

Land Use Tables

URS – Summary of Local Government Zonings & Levels of Assessment

New Local Government	Planning Scheme	Zoning	Level of Assessment	Land Use
CENTRAL HIGHLANDS REGIONAL COUNCIL	**Emerald Shire Planning Scheme 2006**	Rural Zone	Exempt	Animal Husbandry (where on Stock Route)
			Self Assessable	Agriculture Animal Husbandry (where off Stock Route)
			Code Assessable	Caravan Park Low Impact Industry
			Impact Assessable	Caravan Park; - In other locations to those specified for Code Assessable, including the Rural Living Area.
	Peak Downs Planning Scheme 2005	Rural Zone (Rural Use Class)	Exempt	Animal Husbandry (on Stock Route)
			Self Assessable	Agriculture Animal Husbandry (off Stock Route)
			Code Assessable	Low Impact Industry
	Bauhinia Planning Scheme 2006	Rural Zone	Exempt	Animal Husbandry (on Stock Route)
			Self Assessable	Agriculture Animal Husbandry (off Stock Route)
			Code Assessable	Accommodation Building Low Impact Industry

URS – Summary of Local Government Zonings & Levels of Assessment

New Local Government	Planning Scheme	Zoning	Level of Assessment	Land Use
			Impact Assessable	Low Impact Industry if the circumstances for code assessable do not apply
		Open Space Zone	Exempt	Animal Husbandry (where on a Stock Route)
			Self Assessable	Animal Husbandry where – 1. not conducted on a Stock Route; or 2. For the purposes of keeping of bees or grazing; and located in a State Forest or Timber Reserve
			Impact Assessable	Animal Husbandry if the circumstances for Exempt or Self Assessable do not apply
DRAFT BANANA SHIRE PLANNING SCHEME		Rural Zone	Exempt	Animal Husbandry where conducted on a Stock Route
			Self Assessable	Agriculture Animal Husbandry where not conducted on a Stock Route.
			Impact Assessable	Low Impact Industry – if the criteria for Code Assessable do not apply All other uses
		Open Space	Exempt	Animal Husbandry (where on a Stock Route)

URS – Summary of Local Government Zonings & Levels of Assessment

New Local Government	Planning Scheme	Zoning	Level of Assessment	Land Use
		Zone	Self Assessable	Animal Husbandry where – 1. not conducted on a Stock Route; or 2. For the purposes of keeping of bees or grazing; and 3. Located in a State Forest or Timber Reserve
			Impact Assessable	Animal Husbandry – if the criteria of Exempt or Self assessable do not apply
ROMA REGIONAL COUNCIL	**Roma Town Planning Scheme 2006**	Rural Area	Exempt	Agriculture and Grazing
			Code Assessable	Forestry Industry Temporary Workers Accommodation - where the number of persons to be accommodated is 30 or less
		Urban Area	Code Assessable	Industry in Industrial Zone
	Bungil Shire Planning Scheme	Rural Zone	Exempt	Agriculture and Grazing
		Town Zone	Code Assessable	Industry (low/medium)
	Warroo Shire Council Planning Scheme	Rural Zone	Self Assessable	Agriculture where complying with the Acceptable Solutions of the Applicable Codes – Code Assessable otherwise.
GLADSTONE REGIONAL	**Calliope Planning Scheme**	Rural Zone	Exempt	Minor Infrastructure

URS – Summary of Local Government Zonings & Levels of Assessment

New Local Government	Planning Scheme	Zoning	Level of Assessment	Land Use
COUNCIL			Code Assessable	Intensive Rural Activities (except where Intensive Agriculture which is self assessable) Temporary Use
			Impact Assessable	Extractive Industry Industry (Low Impact) Industry (high Impact) Intensive Animal Husbandry Residential Other Residential Secondary (Except Relatives Apartment which is Code) Residential Temporary (except Workers Accommodation which is Code)
		Gladstone State Development Area (GSDA)		The Calliope Planning Scheme only applies to "Other Development" where on land within the GSDA and has no force or effect in regards to a Material Change of Use where on land within the GSDA. The uses include operational works, building work and the like.
	Gladstone Planning Scheme	(pipeline not located within Gladstone City)		
	Miriam Vale Shire Planning Scheme	Rural Zone	Self Assessable	Agriculture Forestry

URS – Summary of Local Government Zonings & Levels of Assessment

New Local Government	Planning Scheme	Zoning	Level of Assessment	Land Use
				Grazing Intensive Animal Husbandry
			Code Assessable	Caravan Park Rural Workers Accommodation Multiple Rural Occupancy for sites exceeding 10ha
			Impact Assessable	Accommodation Building Dual Occupancy Multiple Dwelling Multiple Rural Occupancy
		Conservation zone	Impact Assessable	**Residential Uses** Accommodation Building Caravan Park Dual Occupancy Multiple Dwelling Multiple Rural Occupancy Rural Workers Accommodation **Industrial Uses** Extractive Industry Special Industry

URS – Summary of Local Government Zonings & Levels of Assessment

New Local Government	Planning Scheme	Zoning	Level of Assessment	Land Use
				Industry Waste Facility **Rural Uses** Agriculture Forestry Grazing Intensive Animal Husbandry Rural Service Industry
DALBY REGIONAL COUNCIL	**Dalby Planning Scheme**	Pipeline is not located with Dalby Town Centre		
	Murilla Shire Planning Scheme	Rural Zone	Self Assessable	Agriculture – where complying with the acceptable solutions in the Rural "Zone" Code Grazing – where complying with the acceptable solutions in the Rural "Zone" Code Visitor Accommodation – where complying with the acceptable solutions in the Rural "Zone" Code
			Code Assessable	Agriculture – if the acceptable solutions are not met Grazing - if the acceptable solutions are not met Industrial Activities – where having a Total Use

URS – Summary of Local Government Zonings & Levels of Assessment

New Local Government	Planning Scheme	Zoning	Level of Assessment	Land Use
				Area less than 150m2 Visitor Accommodation – if the acceptable solutions are not met
			Impact Assessable	Accommodation Building Intensive Animal Industry Multiple Dwelling
	Wambo Planning Scheme	Rural Zone	Self Assessable	Agriculture – where complying with the acceptable solutions in the Rural "Zone" Code Grazing – where complying with the acceptable solutions in the Rural "Zone" Code Visitor Accommodation – where complying with the acceptable solutions in the Rural "Zone" Code
			Code Assessable	Agriculture – if the acceptable solutions are not met Grazing - if the acceptable solutions are not met Industrial Activities – where having a Total Use Area less than 150m2 Visitor Accommodation – if the acceptable solutions are not met
			Impact Assessable	Accommodation Building Intensive Animal Industry

URS – Summary of Local Government Zonings & Levels of Assessment

New Local Government	Planning Scheme	Zoning	Level of Assessment	Land Use
				Multiple Dwelling
	Chinchilla Planning Scheme	Rural Zone	Impact Assessable	Agriculture Industrial Activities Multiple Dwelling Industrial Activities Intensive Animal Industry Multiple Dwelling Accommodation Building
				Accommodation Building
				Agriculture
	Tara Planning Scheme	Rural Zone	Exempt	As listed in section 2 of the Planning Scheme or Schedule 8 of IPA
			Self Assessable	1. Agriculture and Animal Husbandry 2. Camping grounds – *where not involving building work and only involving 3 sites.*
			Code Assessable	1. Agriculture and Animal Husbandry – where not complying with the acceptable solutions of the applicable code. 2. Rural Worker Accommodation Units 3. Temporary Residential Accommodation.
	Taroom Planning Scheme	Rural Zone	Self Assessable	Agriculture – where complying with the acceptable solutions in the Rural "Zone" Code Grazing – where complying with the acceptable solutions in the Rural "Zone" Code

URS – Summary of Local Government Zonings & Levels of Assessment

New Local Government	Planning Scheme	Zoning	Level of Assessment	Land Use
				Visitor Accommodation – where complying with the acceptable solutions in the Rural "Zone" Code
			Code Assessable	Agriculture – if the acceptable solutions are not met Grazing - if the acceptable solutions are not met Industrial Activities – where having a Total Use Area less than 150m2 Visitor Accommodation – if the acceptable solutions are not met
			Impact Assessable	Accommodation Building Intensive Animal Industry Multiple Dwelling

Gladstone State Development Area

Schedule 1

Column 1	Column 2		
	Land Use that the Coordinator-General May Approve		
	Column 2a	Column 2b	Column 2c
Use designation	**Uses that are considered highly likely to meet the purpose of the land use designation**	**Uses that may meet the purpose of the land use designation**	**Uses that are considered likely to compromise the purpose of the land use designation**
Yarwun and Aldoga Precincts	Agriculture Animal Husbandry Caretakers Residence Hazardous Industry Industry Materials Transport Infrastructure Offensive Industry Public Utility Special Use Waste Disposal (Aldoga Precinct) Ancillary uses that benefit the objectives of the Development Scheme	All other land uses not specified in Columns 2a and 2c	Accommodation Unit Caravan Park Dependent Accommodation Duplex Dwelling Dwelling House Educational Establishment Hospital Hotel Indoor Entertainment Institution Institutional accommodation unit Mobile Home Park Motel Multiple Dwelling Outdoor Entertainment Place of Public Worship Resort Showroom Wholesale/retail Market

Schedule 2

Column 1	Column 2		
	Land Use that the Coordinator-General May Approve		
	Column 2a	Column 2b	Column 2c
Use designation	**Uses that are considered highly likely to meet the purpose of the land use designation**	**Uses that may meet the purpose of the land use designation**	**Uses that are considered likely to compromise the purpose of the land use designation**
Materials Transportation and Services Corridor	Agriculture Animal Husbandry Materials Transport Infrastructure Public Utility Special Use	All other land uses not specified in Columns 2a and 2c	Accommodation Unit Caravan Park Day Care Centre Dependent Accommodation Duplex House Dwelling House Educational Establishment Family Day Care Home Farm Cottage General Store Hazardous Industry Hospital Host Farm Hotel Indoor Entertainment Industry Institution Institutional accommodation unit Manufacturers Shop Mobile Home Park Motel Multiple Dwelling Offensive Industry Place of Public Worship Plant Nursery Resort Shop Showroom Waste Disposal Wholesale/retail Market

Schedule 3

Column 1	Column 2		
	Land Use that the Coordinator-General May Approve		
	Column 2a	Column 2b	Column 2c
Use designation	**Uses that are considered highly likely to meet the purpose of the land use designation**	**Uses that may meet the purpose of the land use designation**	**Uses that are considered likely to compromise the purpose of the land use designation**
Corridor Buffer Area	Agriculture Animal Husbandry	All other land uses not specified in Columns 2a and 2c	Accommodation Unit Bulk Store Caravan Park Caterer's Rooms Catering Shop Commercial Premises Day Care Centre Dependent Accommodation Duplex House Dwelling House Educational Establishment Family Day Care Home Farm Cottage General Store Hazardous Industry Hospital Host Farm Hotel Indoor Entertainment Industry Institution Institutional accommodation unit Liquid Fuel Depot Manufacturers Shop Mobile Home Park Motel Multiple Dwelling Offensive Industry Outdoor Entertainment Place of Public Worship Plant Nursery Recreation Resort Service Station

			Shop Showroom Warehouse Waste Disposal Wholesale/retail Market

Schedule 4

Column 1 Previous Approval	Column 2 Use	Column 3 Conditions
Calliope Shire Council Permit number 360	Extractive Industry (hard rock) and associated facilities.	The conditions specified in permit number 360.
Calliope Shire Council development application 00/109	Commercial premises being temporary professional engineering office and site office (as specified in the documents referenced in section 1 of the approval schedule and the approved plans)	The following conditions specified in the approval schedule: Section 3.1 – condition 1 and 2
Calliope Shire Council development application 99/0471	Comalco Alumina Project (as specified in the documents referenced in section 1 of the approval schedule and the approved plans) comprising: • An Alumina Refinery with an initial production capacity of approximately 1 million tonnes of alumina per annum with the potential to expand to approximately 4 million tonnes. Energy sources to be either coal seam methane and coal or gas alone. • A cogeneration facility • Alumina project infrastructure • Residue storage • Related purposes (for the alumina refinery, cogeneration facility, alumina project infrastructure and residue storage).	Section 3.1 - Conditions 1-38 Section 3.2 - Conditions A1-A2 Conditions B1-B3 Conditions C1-C6 Condition D1 Conditions E1-E2 Conditions F1-F2
Environmental Protection Agency Development Permit CG0004DA	Extracting rock and other material (100,000t or more per year) for premises described as Lots 7 and 8 on SP111748 County of Clinton Parish of Calliope	The conditions specified in Development Permit CG0004DA

Schedule 5

Column 1	Column 2		
	Land Use that the Coordinator-General May Approve		
	Column 2a	Column 2b	Column 2c
Use designation	**Uses that are considered highly likely to meet the purpose of the land use designation**	**Uses that may meet the purpose of the land use designation**	**Uses that are considered likely to compromise the purpose of the land use designation**
Targinie Precinct	**A.** Within 5 years from the declaration of the extension of the GSDA to include the Targinie Precinct. Existing approvals under the Planning Scheme for the Calliope Shire.	All other land uses not specified in Columns 2a and 2c	Accommodation Unit Caravan Park Dependent Accommodation Duplex Dwelling Dwelling House Educational Establishment Hospital Hotel Indoor Entertainment Institution Institutional Accommodation Unit Mobile Home Park Motel Multiple Dwelling Outdoor Entertainment Place of Public Worship Resort Showroom Wholesale/retail Market Any other uses that may, in the opinion of the Coordinator-General, compromise the intent for future land uses within the Targinie Precinct. This includes any intensification of existing uses that would result from a reconfiguration of a lot.
	B. Subsequent to 5 years from the declaration of the extension of the GSDA to include the Targinie Precinct. Caretakers Residence General Industry Hazardous Industry Industry Materials Transport Infrastructure Offensive Industry Public Utility Special Use Waste Disposal Ancillary uses that benefit the objectives of the Development Scheme		

Definitions

Roma Town Council

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
(ii) generation, hours of operation, appearance, the emission of noise, vibration, light,
(iii) odours, fumes, steam, soot, ash, dust, waste products, electrical interference or
(iv) 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 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:
(a) the ancillary storage of flammable or combustible liquids in accordance with the
(b) *Dangerous Goods Safety Management Regulation 2001*, Part 4 Flammable and
(c) Combustible Liquids, but not in quantities that would require licensing under that
(d) regulation; and

(e) 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:

(a) 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;
(b) are likely to generate noise greater than Labg.T +5db(A) at any boundary of the site; or
(c) require a licence under the *Dangerous Goods Safety Management Regulation 2001*, Part 4 Flammable and Combustible Liquids, and are within 200m of land Aread Urban or Rural Residential.

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

Temporary Accommodation: means an approved 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.

Warroo Shire Council

Special Uses: Any premises used for:

(a) Federal Government purposes
(b) State Government purposes
(c) Local Government purposes
(d) Statutory Authority purposes
(e) Government owned Corporation purposes; and
(f) Any other public purposes

Calliope Shire Council

Extractive Industry: means the use of premises for the purpose of winning, by any means, of any rock, gravel, sand or soil from the earth; the processing of such material whether or not such processing occurs on the same premises from which the material was originally won; and the removal of any such material from the place from which it was won or processed.

The term does not include the winning and processing of minerals authorised under the *Minerals Resources Act 1989* and the *Petroleum Act 1923* or operational work associated with a construction site.

Local Industry (Industry Low Impact): means the use of premises for the purpose of handling, manufacturing, processing, treating and the ancillary storage, of light materials and products where:

(i) the total floor area engaged in the use is less than 2,000 m^2 GFA; and

(ii) the activity does not impose additional demands upon the local infrastructure network or the local environment because of its scale, intensity, nature, quantity or type of wastes produced or traffic flows generated.

(iii) the activity serves the needs of the local community or supplies materials and services in small quantities to major industries.

Major Industry (Industry High Impact): means the use of premises for the purpose of any industrial activity such as fabricating, handling, manufacturing, processing, treating and the ancillary storage, of heavy materials, products or machinery and including the packaging, repair, storage or maintenance of any item, machine or product, which activity involves one or more of the following:

(i) the emission of intense noise, light, heat, waste material or by-products of any kind;

(ii) the generation of high traffic flows in the context of the locality or the road network;

(iii) an elevated demand for services such as treated water, sewerage and solid waste disposal, electricity, supply, roads, stormwater drainage and the like.

(iv) a total floor area of 2,000 m^2 GFA or more;

(v) the activity requires the provision of additional infrastructure or the augmentation of existing infrastructure; or

(vi) the activity has the potential to impose impacts on the environment, such that a license issued pursuant to the *Environment Protection Act 1994* is required for it to operate.

The term does not include a "local industry", "service trades" or "waterfront industry" as described in this Planning Scheme.

Transport and Storage

Marina (Transport and Storage): means the use of premises for the purpose of mooring of boats, or storing of boats above or adjacent to the water. The term may include the repair, refuelling and maintenance of boats and boat accessories. The term may also include the sale of chandlery goods by retail, facilities for the administration and management of the marina, and shore-based facilities and amenities for people travelling by boat or living on board boats moored in the marina.

Port Facilities (Transport and Storage): means the use of premises for the purpose of handling, loading, unloading or storage of materials on to ships for transportation elsewhere. The term also includes facilities for the berthing, maintenance, storage and repair of boats and ships. The term does not include transport infrastructure situated on other premises.

Storage Depot (Transport and Storage): means the use of premises for the purpose of the storage of goods in small individual rental units managed by a single entity. The term includes offices for administration purposes and staff amenities.

Warehouse (Transport and Storage): means the use of premises solely for the purpose of the storage of goods, merchandise or processed materials in large quantities pending their distribution, or sale in other commercial premises. The term also includes the ancillary storage on site of transport vehicles and equipment directly associated with the use.

Workers Accommodation (Residential Temporary): means the use of premises comprising any group of dwelling units and rooming units for the purpose of accommodation of a temporary nature for employees, and their families or dependants, of major industrial projects.

Miriam Vale Shire Council

Will not allow me to enter website for planning scheme

Murilla Shire Council

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

(1) “Extractive industry”;
(2) “Industry”;
(3) “Noxious industry”;
(4) "Service station";
(5) "Storage facility"; and
(6) "Transport terminal".

Wambo Shire Council

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

(1) “Extractive industry”;
(2) “Industry”;
(3) “Noxious industry”;
(4) "Service station";
(5) "Storage facility"; and
(6) "Transport terminal".

Chinchilla Shire Council

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

(1) “Extractive industry”;
(2) “Industry”;
(3) “Noxious industry”;
(4) "Service station";
(5) "Storage facility"; and
(6) "Transport terminal".

Tara Shire Council

Rural Workers Accommodation Units: means a premises, as part of a rural holding, to be used as living quarters by persons primarily employed in rural production on that holding.

Temporary Residential Accommodation: means the provision of temporary residential accommodation on a site while the construction of permanent accommodation is being undertaken.

Taroom Shire Council

Accommodation building: means “Premises” comprising primarily of “accommodation units” such as motels, boarding-houses, guest-houses, hostels, unlicensed hotels, nursing homes, serviced rooms, or residential clubs and attached accommodation for the owner or the manager but does not include “Caretaker's residence”, “Detached house”, “Hotel”, “Multiple dwelling” or “Visitor accommodation”.

APPENDIX 11

Code Requirements

Planning Scheme Codes relating to Accommodation camps and temporary workers accommodations

Banana shire Planning Scheme

About the Caravan Park and Worker's Accommodation Code

- The Caravan Park and Worker's Accommodation Code regulates Caravan Park, and Worker's Accommodation uses, whether they are Self assessable, Code assessable or Impact assessable.
- The Code regulates the location, siting and scale of such uses, the facilities for occupants, as well as the potential impacts on the amenity of the surrounding area.

(1) Caravan Park and Worker's Accommodation Code

The provisions in this division comprise the Caravan Park and Worker's Accommodation Code. They are—

1. The Purpose of the Caravan Park and Worker's Accommodation Code – Section (2); and
2. The Specific Outcomes, Probable Solutions and Acceptable Solutions for Caravan Park and Worker's Accommodation development – Table 6.5.1.

(2) The Purpose of the Caravan Park and Worker's Accommodation Code

The purpose of the Caravan Park and Worker's Accommodation Code is to achieve the following overall outcomes:

1. Caravan Parks:
a) are provided in a manner that is of a high standard of health, safety and amenity for visitors and residents;
b) are located where they best serve the accommodation needs of users, particularly visitors to the Shire;
c) are located and designed to be compatible with the locality in which they are situated and do not adversely impact upon surrounding residential premises; and
d) contribute positively to the streetscape and town character.

2. Worker's Accommodation accommodation:
a) is provided in a manner that is of a high standard of health, safety and amenity for residents;
b) is located where they best serve the accommodation needs of residents;

c) is located and designed to be compatible with the locality in which they are situated: and
d) does not adversely impact on the amenity of the area due to residential densities, traffic generation, hours of operation, built form, or associated on-site facilities.

TABLE 6.5.1 CARAVAN PARKS & WORKER'S ACCOMMODATION

COLUMN 1	COLUMN 2
Specific outcomes (S) for Code and Impact assessable development	**Probable Solutions (P) for Code and Impact assessable development;**
All Caravan Parks and Worker's Accommodation	
Site characteristics	
S1 **Caravan Parks and Worker's** Accommodation are located on parcels of land of an area that are suitable for the siting of buildings, landscaped open space to screen living and recreation areas, and vehicle manoeuvring and parking, having regard to the following: 1. The existing development in the area; 2. The existing and proposed amenity of the area; 3. The topography of the site; 4. The number of roads to which the site has frontage; and 5. The Guidelines on Good Design for Caravan Parks and Relocatable Home Parks – Solutions for Queensland 1997, DCILGPS.	**P1.1** **Caravan Parks have:** 1. A minimum site area of 4000m2; and 2. A landscaped setback width of at least 5m along all road frontages. **P1.2** **Worker's Accommodation has:** 1. A minimum site area of 5000m2; and 2. A landscaped setback width of at least 10m along all road frontages.
Access	
S2 Access to the development is of a standard and location that does not compromise traffic safety.	**P2.1** Combined entry and exit driveways have a minimum width of 8m. **P2.2** Vehicular access points are located away from any boundary shared with an existing use in the Residential Use Class or land in the Town – Residential Precinct as follows:

	1. Caravan Park – minimum of 5m; 2. Worker's Accommodation – minimum of 10m. **P2.3** All caravan, relocatable home, tent or cabin sites have access via the internal road/driveway system and not directly to a public road.
Amenity	
S3 Buildings and facilities are located and designed so as to minimise potential noise impacts beyond the property boundaries, particularly where adjoining residential premises. Air conditioning units and pool filters are located, enclosed, of a type, or otherwise installed such that they are least likely to cause an environmental nuisance to any adjoining premises.	**P3.1** Outdoor recreational buildings or facilities eg. Barbeques, pools, gazebos etc associated with the use are located centrally on the site.
S4 Buildings and facilities are located and designed so as to maintain, and where possible enhance, the amenity of the area as viewed from public places. Air conditioning units and other service equipment and areas eg. Bin storage, clothes lines, pool filters are located such that they do not present an unsightly view to the street or other public place.	**P4.1** No Solutions Specified
Caravan Parks	
Site characteristics	
S5 Caravan Parks are located in those parts of the Shire that are normally frequented by visitors and tourists, or are adjacent to roads normally travelled by tourists to or through the Shire.	**P5.1** Caravan Parks are located: 1. in the Town – Tourism Precinct, Town – Commercial Precinct, Town – Highway Precinct or Village Zone; or 2. not more than 500 m from the Town – Recreation Precinct.
Worker's Accommodation	
Site characteristics	
S6 Worker's Accommodation is: 1. located in close proximity to, or on, the site on which workers are employeed; or	**P/A6.1** No solutions specified

2. located in the town closest to the site on which workers are employeed; and 3. are not visually obtrusive as viewed from public land or roads, due to the use of landscaping to screen the use.	
Amenity	
S7 On site facilities including: 1. bus pickup/setdown, parking or turning areas; 2. resident car parking areas; 3. dining halls; and 4. indoor recreation facilities; are located and designed so as to: 1. take account of their usage in unusual hours; and 2. minimise potential noise impacts beyond the property boundaries, particularly where adjoining residential premises.	**P7.1** Resident car parking areas are setback a minimum of 15m from any boundary shared with an existing use in the Residential Use Class or land in the Town – Residential Precinct. **P7.2** Dining Halls and indoor recreation rooms are setback at least 20m to any boundary shared with an existing use in the Residential Use Class or land in the Town – Residential Precinct.

Bauhinia Shire Planning Scheme

About the Caravan Park and Worker's Accommodation Code

- The Caravan Park and Worker's Accommodation Code regulates Caravan Park, and Worker's Accommodation uses, whether they are Self assessable, Code assessable or Impact assessable.
- The Code regulates the location, siting and scale of such uses, the facilities for occupants, as well as the potential impacts on the amenity of the surrounding area.

(1) Caravan Park and Worker's Accommodation Code

The provisions in this division comprise the Caravan Park and Worker's Accommodation Code. They are—

1. The Purpose of the Caravan Park and Worker's Accommodation Code – Section (2); and
2. The Specific Outcomes, Probable Solutions and Acceptable Solutions for Caravan Park and Worker's Accommodation development – Table 6.5.1.

(2) The Purpose of the Caravan Park and Worker's Accommodation Code

The purpose of the Caravan Park and Worker's Accommodation Code is to achieve the following overall outcomes:

1. Caravan Parks:
   a) are provided in a manner that is of a high standard of health, safety and amenity for visitors and residents;
   b) are located where they best serve the accommodation needs of users, particularly visitors to the Shire;
   c) are located and designed to be compatible with the locality in which they are situated and do not adversely impact upon surrounding residential premises; and
   d) contribute positively to the streetscape and town character.

2. Worker's Accommodation accommodation:
   a) is provided in a manner that is of a high standard of health, safety and amenity for residents;
   b) is located where they best serve the accommodation needs of residents;
   c) is located and designed to be compatible with the locality in which they are situated: and
   d) does not adversely impact on the amenity of the area due to residential densities, traffic generation, hours of operation, built form, or associated on-site facilities.

TABLE 6.5.1 CARAVAN PARKS & WORKER'S ACCOMMODATION

COLUMN 1	COLUMN 2
Specific outcomes (S) for Code and Impact assessable development	**Probable Solutions (P) for Code and Impact assessable development;**
All Caravan Parks and Worker's Accommodation	
Site characteristics	
S1 **Caravan Parks and Worker's** Accommodation are located on parcels of land of an area that are suitable for the siting of buildings, landscaped open space to screen living and recreation areas, and vehicle manoeuvring and parking, having regard to the following: 1. The existing development in the area; 2. The existing and proposed amenity of the area; 3. The topography of the site; 4. The number of roads to which the site has frontage; and 5. The Guidelines on Good Design for Caravan Parks and Relocatable Home Parks – Solutions for Queensland 1997, DCILGPS.	**P1.1** **Caravan Parks have:** 1. A minimum site area of 4000m2; and 2. A landscaped setback width of at least 5m along all road frontages. **P1.2** **Worker's Accommodation has:** 1. A minimum site area of 5000m2; and 2. A landscaped setback width of at least 10m along all road frontages.
Access	
S2 Access to the development is of a standard and location that does not compromise traffic safety.	**P2.1** Combined entry and exit driveways have a minimum width of 8m. **P2.2** Vehicular access points are located away from any boundary shared with an existing use in the Residential Use Class or land in the Town – Residential Precinct as follows: 1. Caravan Park – minimum of 5m; 2. Worker's Accommodation – minimum of 10m. **P2.3** All caravan, relocatable home, tent or cabin sites have access via the internal road/driveway system and not directly to a public road.

Amenity	
S3 Buildings and facilities are located and designed so as to minimise potential noise impacts beyond the property boundaries, particularly where adjoining residential premises.	**P3.1** Outdoor recreational buildings or facilities eg. Barbeques, pools, gazebos etc associated with the use are located centrally on the site. **P3.2** Air conditioning units and pool filters are located, enclosed, of a type, or otherwise installed such that they are least likely to cause an environmental nuisance to any adjoining premises.
S4 Buildings and facilities are located and designed so as to maintain, and where possible enhance, the amenity of the area as viewed from public places.	**P4.1** Air conditioning units and other service equipment and areas eg. Bin storage, clothes lines, pool filters are located such that they do not present an unsightly view to the street or other public place.
Caravan Parks	
Site characteristics	
S5 Caravan Parks are located in those parts of the Shire that are normally frequented by visitors and tourists, or are adjacent to roads normally travelled by tourists to or through the Shire.	**P5.1** Caravan Parks are located in the Town – Commercial Precinct.
Design and Layout	
S6 Caravan Parks have a design and layout that is efficient, safe and provides a high level of amenity to park guests.	**P6.1** No solution specified.
Worker's Accommodation	
Site characteristics	
S7 **Worker's Accommodation is:** 1. located in close proximity to, or on, the site on which workers are employeed; or 2. located in the town closest to the site on which workers are employeed; and\ 3. are not visually obtrusive as viewed from public land or roads, due to the use of landscaping to screen the use.	**P7.1** No solutions specified.
Amenity	
S8	**P8.1**

On site facilities including: 1. bus pickup/setdown, parking or turning areas; 2. resident car parking areas; 3. dining halls; and 4. indoor recreation facilities; are located and designed so as to: a) take account of their usage in unusual hours; and b) minimise potential noise impacts beyond the property boundaries, particularly where adjoining residential premises.	Resident car parking areas are setback a minimum of 15m from any boundary shared with an existing use in the Residential Use Class or land in the Town – Residential Precinct. **P8.2** Dining Halls and indoor recreation rooms are setback at least 20m to any boundary shared with an existing use in the Residential Use Class or land in the Town – Residential Precinct.

Bungil Shire Planning Scheme

Rural Zone Code
- Specific Land Uses

Temporary Workers 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 Maps P Whole of Shire - Rural Zone1 and R1 State Controlled Roads.
PC 66 Separation Distance The establishment of the camp does not unduly affect existing residential premises.	**AS 66.1** **No camp is established within:** - 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:** - 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:** - 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.

Peak Downs Shire Planning Scheme

About the Caravan Park and Worker's Accommodation Code

- The Caravan Park and Worker's Accommodation Code regulates Caravan Park, and Worker's Accommodation uses, whether they are Self assessable, Code assessable or Impact assessable.
- The Code regulates the location, siting and scale of such uses, the facilities for occupants, as well as the potential impacts on the amenity of the surrounding area.

(1) Caravan Park and Worker's Accommodation Code

The provisions in this division comprise the Caravan Park and Worker's Accommodation Code. They are—

1. The Purpose of the Caravan Park and Worker's Accommodation Code – Section (2); and
2. The Specific Outcomes, Probable Solutions and Acceptable Solutions for Caravan Park and Worker's Accommodation development – Table 6.5.1.

(2) The Purpose of the Caravan Park and Worker's Accommodation Code

The purpose of the Caravan Park and Worker's Accommodation Code is to achieve the following overall outcomes:

1. Caravan Parks:
   a) are provided in a manner that is of a high standard of health, safety and amenity for visitors and residents;
   b) are located where they best serve the accommodation needs of users, particularly visitors to the Shire;
   c) are located and designed to be compatible with the locality in which they are situated and do not adversely impact upon surrounding residential premises; and
   d) contribute positively to the streetscape and town character.

2. Worker's Accommodation accommodation:
   a) is provided in a manner that is of a high standard of health, safety and amenity for residents;
   b) is located where they best serve the accommodation needs of residents;
   c) is located and designed to be compatible with the locality in which they are situated: and
   d) does not adversely impact on the amenity of the area due to residential densities, traffic generation, hours of operation, built form, or associated on-site facilities.

TABLE 6.5.1 CARAVAN PARKS & WORKER'S ACCOMMODATION

COLUMN 1	COLUMN 2
Specific outcomes (S) for Code and Impact assessable development	**Probable Solutions (P) for Code and Impact assessable development;**
All Caravan Parks and Worker's Accommodation	
Site characteristics	
S1 Caravan Parks and Worker's Accommodation are located on parcels of land of an area that are suitable for the siting of buildings, landscaped open space to screen living and recreation areas, and vehicle manoeuvring and parking, having regard to the following: 1. The existing development in the area; 2. The existing and proposed amenity of the area; 3. The topography of the site; 4. The number of roads to which the site has frontage; and 5. The Guidelines on Good Design for Caravan Parks and Relocatable Home Parks – Solutions for Queensland 1997, DCILGPS.	**P1.1 Caravan Parks have:** 1. A minimum site area of 4000m2; and 2. A landscaped setback width of at least 5m along all road frontages. **P1.2 Worker's Accommodation has:** 1. A minimum site area of 5000m2; and 2. A landscaped setback width of at least 10m along all road frontages.
Access	
S2 Access to the development is of a standard and location that does not compromise traffic safety.	**P2.1** Combined entry and exit driveways have a minimum width of 8m. **P2.2** Vehicular access points are located away from any boundary shared with an existing use in the Residential Use Class or land in the Town – Residential Precinct as follows: 1. Caravan Park – minimum of 5m; 2. Worker's Accommodation – minimum of 10m. **P2.3** All caravan, relocatable home, tent or cabin sites have access via the internal road/driveway system and not directly to a public road.

Amenity	
S3 Buildings and facilities are located and designed so as to minimise potential noise impacts beyond the property boundaries, particularly where adjoining residential premises. Air conditioning units and pool filters are located, enclosed, of a type, or otherwise installed such that they are least likely to cause an environmental nuisance to any adjoining premises.	**P3.1** Outdoor recreational buildings or facilities eg. Barbeques, pools, gazebos etc associated with the use are located centrally on the site.
S4 Buildings and facilities are located and designed so as to maintain, and where possible enhance, the amenity of the area as viewed from public places. Air conditioning units and other service equipment and areas eg. Bin storage, clothes lines, pool filters are located such that they do not present an unsightly view to the street or other public place.	No solutions specified
Caravan Parks	
Site characteristics	
S5 Caravan Parks are located in those parts of the Shire that are normally frequented by visitors and tourists, or are adjacent to roads normally travelled by tourists to or through the Shire.	**P5.1** Caravan Parks are located in the Town – Tourism Precinct, Town – Commercial Precinct, or Town - Highway Precinct.
Design and Layout	
S6 Caravan Parks have a design and layout that is efficient, safe and provides a high level of amenity to park guests.	**P6.1** No solution specified.
Worker's Accommodation	
Site characteristics	
S7 **Worker's Accommodation is:** 1. located in close proximity to, or on, the site on which workers are employeed; or 2. located in the town closest to the site on which workers are employeed; and	**P7.1** No solutions specified.

3. are not visually obtrusive as viewed from public land or roads, due to the use of landscaping to screen the use.	
Amenity	
S8 **On site facilities including:** 1. bus pickup/setdown, parking or turning areas; 2. resident car parking areas; 3. dining halls; and 4. indoor recreation facilities; are located and designed so as to: (a) take account of their usage in unusual hours; and (b) minimise potential noise impacts beyond the property boundaries, particularly where adjoining residential premises.	**P8.1** Resident car parking areas are setback a minimum of 15m from any boundary shared with an existing use in the Residential Use Class or land in the Town – Residential Precinct. **P8.2** Dining Halls and indoor recreation rooms are setback at least 20m to any boundary shared with an existing use in the Residential Use Class or land in the Town – Residential Precinct.

Warroo Shire Planning Scheme

There is no code in this planning scheme relating to Workers / Temporary Accommodation.

Bendemere Shire Planning Scheme

Rural Zone Code

B. Specific Land Uses

Temporary Workers Accommodation	
PC 59 Fire Safety The use should ensure high levels of fire safety.	**AS 59.1** No solution specified.
PC 60 Road Access Council road network is not unduly affected by the establishment of the camp.	**AS 60.1** Construction machinery and other vehicular traffic do not access the camp by travelling on or across the shire road network as identified on **Maps P1 and R1.**
PC 61 Separation Distance The establishment of the camp does not unduly affect existing residential premises.	**AS 61.1** No camp is established within: - 30 metres of existing of existing residential premises; and - 15 metres of a roadway. -
PC 62 Amenity The camp buildings, layout and construction do not substantially detract from the amenity of the surrounding area.	**AS 62.1** All building's external cladding is not damaged; and **AS 62.2** The age of any building is no older than 5 years; and **AS 62.3** The layout of the buildings is: - located at least 3 metres apart; - are sited in clusters with no more than 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 62.4** Car parking is provided: - on site; - at 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.

Roma Town Planning Scheme

Rural Area Code

- Specific Land Uses

Temporary Workers Accommodation	
PC 69 Fire Safety The use should ensure high levels of fire safety.	**AS 69.1** No solution specified.
PC 70 Road Access Council road network is not unduly affected by the establishment of the camp.	**AS 70.1** Construction machinery and other vehicular traffic do not access the camp by travelling on or across the local government road network as identified on ***Map R1 – State Controlled Roads***
PC 71 Separation Distance The establishment of the camp does not unduly affect existing residential premises.	**AS 71.1** No camp is established within: a) 30 metres of existing of existing residential premises; and b) 15 metres of a roadway.
PC 72 Amenity The camp buildings, layout and construction do not substantially detract from the amenity of the neighbourhood.	**AS 72.1** All building's external cladding is not damaged; and **AS 72.2** The age of any building is no older than 5 years; and

	AS 72.3 The layout of the buildings is: a) located at least 3 metres apart; b) are sited in clusters with no more than 6 buildings per clusters; c) space between cluster is no less than 10 metres; and d) buildings occupy no more than 30% of the site area. **AS 72.4** Car parking is provided: a) on site; b) at 1 parking space for each bed provided in the camp, unless private transport is provided by the camp manager; and c) which is paved with minimal dust producing materials or sealed.

Gladstone

Division 16 – Caravan and Relocatable Home Park Code

11.71 Application

The Caravan & Relocatable Home Park Code applies to the whole of the City of Gladstone and is applicable to development for the purposes of Caravan and Relocatable Home Park.

11.72 Caravan & Relocatable Home Park Code

(1) The provisions of this division comprise the Caravan & Relocatable Home Park Code are as follows:

(a) Compliance with the Caravan Park & Relocatable Home Park Code (**Section 11.73**);

(b) Overall outcomes for the Caravan & Relocatable Home Park Code (**Section 11.74**); and

(c) Specific outcomes and probable solutions for the Caravan & Relocatable Home Park Code (**Section 11.75**).

(2) For the purposes of this code the following terms have the specific meaning assigned to them:

(a) *'plot'* is defined as the individual area of land for use by a single relocatable home, caravan, cabin or tent.

(b) "Workers Accommodation" means any group of dwelling units and rooming units used to provide accommodation of a temporary nature for employees, and their families or dependants, of major industrial projects".

11.73 Compliance with the Caravan & Relocatable Home Park Code

(1) For assessable development, compliance with the Caravan & Relocatable Home Park Code is achieved when development is consistent with the specific outcomes in **Table 11-17**.

(2) For self assessable development, compliance with the Telecommunications Code is achieved when development is consistent with the acceptable solutions in **Table 11-17**.

11.74 Overall Outcomes for the Caravan & Relocatable Home Park Code

(1) The overall outcome is the purpose of the Caravan & Relocatable Home Park Code.

(2) The overall outcome sought for the Caravan & Relocatable Home Park Code is to provide for Caravan Parks & Relocatable Home Parks that:

(a) are designed and operated to be compatible with the desired amenity, character and scale of the surrounding area;

(b) provide for temporary accommodation on greenfield sites for workers associated with major industrial projects until such time as residential housing is available for their use;

(c) result in accommodation with a high standard of amenity with suitable services and facilities; and

(d) be appropriately located in regards to infrastructure, existing residential uses, accessibility to major development sites.

11.75 Specific outcomes and probable solutions for the Caravan & Relocatable Home Park Code

The specific outcomes sought for the Caravan & Relocatable Home Park Code are included in Column 1 of **Table 11-17** and the probable solutions in Column 2 of **Table 11-17**.

Caravan, Camping Ground and Relocatable Home Park	
Layout	
Assessable Development	
1. The premises is designed to ensure that all buildings and 'plots' are setback from property boundaries to ensure sufficient visual, noise and odour buffering for residents.	1.1 Buildings and 'plots' having a minimum setback of: (i) 6 metres to any adjoining road frontage; and (ii) 5 metres to any side or rear boundary.
2. The entrance and exit points and road leading to them have adequate width to allow two vehicles towing caravans to safely pass.	2.1 The minimum road widths being: (i) 7 metres for two-way entrance / exit; (ii) 7 metres for one-way entrance; (iii) 5 metres for a one-way exit; and (iv) a holding area with dimensions of 4 m x 20 m as a separate bay or as part of an entrance road.
3. The internal road system is designed to cater for all anticipated vehicle use enabling suitable manoeuvrability and safety whilst avoiding congestion.	3.1 Internal roads being constructed to a bitumen seal standard being a minimum of: (i) 4 metres wide for a one-way road or cul-de-sac; and (ii) 6 metres wide for a two-way road. 3.2 Emergency vehicles have direct access to within 50 m of all 'plots' and buildings.
4. The internal road system is designed to create a safe, legible and convenient environment for all persons including pedestrians, cyclists and the disabled.	4.1 Pedestrian / cycle paths having a minimum width of 1.2 metres connect the 'plots' to all common buildings and areas.

Calliope

Rural Code

- Division 16 - Relocatable Home and Caravan Park Code

Specific Outcomes and Probable and Acceptable Solutions for the Relocatable Home and Caravan Park Code

Column 1 **Specific Outcomes**	**Column 2** **Probable Solutions**
Workers Accommodation Accommodation Densities	
Assessable Development	
O1. Accommodation is provided at densities that maintain a reasonable standard of residential amenity for residents of the workers accommodation.	**S1** Accommodation is provided at a maximum rate of: (i) 1 rooming unit per 150 sqm of site area; and (ii) 1 dwelling unit per 450 sqm of site area

Appendix B - Homestead Locations

Appendix B Homestead Locations

Table B-1 Homesteads - CSG Area

	Tenement Region Name							
Homestead Name	Arcadia Valley	Comet	Dennison	Eastern Surat Basin	Fairview	Other Area	Roma	Grand Total
Allambee			1					1
Amby Downs							1	1
Arcturus Downs			1					1
Bardloming							1	1
Bedourie	1							1
Benala							1	1
Bendemere							1	1
Bengalla							2	2
Berrima							1	1
Binbinette							1	1
Bindaroo							1	1
Blythewood							1	1
Bomar							1	1
Bondzana				1				1
Bonnie Doon			1					1
Bonnie Doon (Ruins)					1			1
Bottle Tree			1					1
Broadmere						1		1
Broken Plains			1					1
Bundaleer			1					1
Carslea							1	1
Combarngo							1	1
Cooreela							1	1
Craig-Gowan							1	1

Homestead Locations

Appendix B

	Tenement Region Name							
Homestead Name	Arcadia Valley	Comet	Dennison	Eastern Surat Basin	Fairview	Other Area	Roma	Grand Total
Crowman			1					1
Derwent Park							1	1
Dundonnell							1	1
East Lynne			1					1
Eurella							1	1
Fairfield							1	1
Fairlands							1	1
Fairview					1			1
Fearnlee				1				1
Garlands			1					1
Ghinghinda						1		1
Girriwa			1					1
Glen Isle							1	1
Glenidal			1					1
Helen Downs			1					1
Hillview							1	1
Home Paddock			1					1
Homestead	1		4	1	1		9	16
Ingledowns							1	1
Inniscraig							1	1
Iona							1	1
Iron Pot		1						1
Jamar			1					1
Kerwongah Park						1		1
Kevington					1			1
Killaloe				1				1

Appendix B Homestead Locations

	Tenement Region Name							
Homestead Name	Arcadia Valley	Comet	Dennison	Eastern Surat Basin	Fairview	Other Area	Roma	Grand Total
Killoran			1					1
Landor							1	1
Lariston							1	1
Lewah							1	1
Lindsey Downs			1					1
Lochiel							1	1
Lomeah				1				1
Loomeah							1	1
Lorraine				1				1
Luckona							1	1
Maffra							1	1
Mau Lau			1					1
Mau-Lar			1					1
Megine							1	1
Miawood							1	1
Moonah					1			1
Moonie Housing				10				10
Mount Hutton					1			1
Murtle Vale					1			1
Myrtle Vale					1			1
Nunbank						1		1
O.k Station					1			1
Orion Downs			1					1
Overseer Cottage					1			1
Pasenda							1	1
Pinetree							1	1

Homestead Locations

Appendix B

	Tenement Region Name							
Homestead Name	Arcadia Valley	Comet	Dennison	Eastern Surat Basin	Fairview	Other Area	Roma	Grand Total
Planet Downs		1						1
Pony Hills					1			1
Pringle Downs							1	1
Redbank							1	1
Richmond Downs							1	1
Ridgeland			1					1
Rockybank							1	1
Roma Downs							1	1
Savannah							2	2
Scattering Plains							1	1
South Maffra							1	1
Springwater					1			1
Summerhope							1	1
Taber							1	1
Taber (Man)							1	1
Tally Ho			1					1
Taratha				1				1
Tarrebar							1	1
The Bend							1	1
The Rockies							1	1
Thelamite							1	1
Timor			1					1
Towrie	1							1
Trafford Park							1	1
Verbena Park						1		1
Waddy Brae					1			1

Appendix B Homestead Locations

	Tenement Region Name							
Homestead Name	Arcadia Valley	Comet	Dennison	Eastern Surat Basin	Fairview	Other Area	Roma	Grand Total
Wallabella							1	1
Warrinilla			1					1
Waterview					1			1
Weemilah							1	1
Wellesly							1	1
Whynot							1	1
Wilga Park						1		1
Wununa							1	1
Wyoming							1	1
Wyseby			1					1
Yandina			1					1
Yarawonga							2	2
Grand Total	3	2	29	17	14	6	70	141

Homestead Locations

Appendix B

Table B-2 Homesteads - Pipeline

Homesteads within Gas Transmission Pipeline Corridor	Homesteads within 2.5-5km of Gas Transmission Pipeline Corridor
Homestead	Murtle Vale
Springwater	Myrtle Vale
Overseer Cottage	Moonah
Bonnie Doon (Ruins)	Fairview
Waddy Brae	Mau-Lar
Waterview	Homestead
Homestead	Korcha
Boxvale	Linga-Longa
Towrie	Glenidal
Wallaroo	Purbrook
Bundaleer	Greycliffe
Bottle Tree	Uldra
Allambee	Wycheproof
Bauhinia Downs	
Laurel Hills	
Oombabeer	
Avoca	
Walba	
Coolibah	
Spier	
Kilburnie	
Vale Royal	
Inverness	
Benopai	
Wyalla	
Rockfield	
Voewood	
Upper Calliope	

Appendix C - Land Use Strategies & Framework

Land Use Strategies & Framework

Appendix C

C.1 Central Queensland Strategy For Sustainability (CQSS)

The Central Queensland Strategy for Sustainability (CQSS) has been developed by the Fitzroy Basin Association. The aims of the CQSS are to:

- Provide a framework for achieving the sustainable use of natural resources and protection of the natural environment in Central Queensland;
- Encourage the active participation of all stakeholders in natural resource and environmental planning, decision-making and management; and
- Guide investment in natural resource and environmental management in Central Queensland

The strategy sets out major regional issues to be resolved to achieve ecologically sustainable development, objectives and outcomes, and strategies to achieve the objectives. The following table outlines the key issues relevant to the project, corresponding objectives, and how the Project influences these issues and objectives towards sustainability.

Appendix D - Land Use and Tenure Analysis

Table D-1 QLUMP Land Use Coverage - CSG Study Area

Land Use	Arcadia Valley		Comet		Dennison		Eastern Surat Basin		Fairview		Mahalo		Other Area		Roma		Scotia	
	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%	Ha	%
Cropping	1894.4	1.0	3267.2	1.9	95409.3	16.1	3463.6	9.6	0.0	0	0.0	0.0	6926.6	5.3	97962.5	11.7	17834.4	23.7
Grazing natural vegetation	80467.9	41.6	137415.9	80.2	431093.8	72.9	32467.6	89.6	90521.7	78.1	51308.1	82.1	113367.0	86.1	678707.0	81.0	56690.8	75.3
Intensive animal production	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86.0	0.0	29.1	0.0
Irrigated cropping	0.0	0.0	0.0	0.0	7834.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1036.5	0.1	0.0	0.0
Irrigated perennial horticulture	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.3	0.0	0.0	0.0
Lake	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	236.1	0.2	158.6	0.0	0.0	0.0
Managed resource protection	2236.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0	420.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Manufacturing and industrial	0.0	0.0	0.0	0.0	14.2	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	191.3	0.0	0.0	0.0
Marsh/wetland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	114.1	0.1	221.1	0.0	0.0	0.0
Mining	0.0	0.0	0.0	0.0	431.0	0.1	0.0	0.0	156.3	0.1	0.0	0.0	0.0	0.0	11.4	0.0	0.0	0.0
Nature	73044.2	37.7	228.5	0.1	8894.9	1.5	0.0	0.0	6410.1	5.5	0.0	0.0	473.4	0.4	0.0	0.0	0.0	0.0

Appendix D Land Use and Tenure Analysis

Land Use	Arcadia Valley		Comet		Dennison		Eastern Surat Basin		Fairview		Mahalo		Other Area		Roma		Scotia	
conservation																		
Other minimal use	4.5	0.0	34.2	0.0	3293.6	0.6	99.4	0.3	0.0	0.0	0.0	0.0	31.1	0.0	0.0	0.0	590.5	0.8
Perennial horticulture	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	0.0
Production forestry	35990.8	18.6	30346.9	17.7	40400.9	6.8	0.0	0.0	18339.8	15.8	11190.9	17.9	10279.5	7.8	55641.6	6.6	0.0	0.0
Reservoir/dam	7.8	0.0	31.8	0.0%	1508.2	0.3	196.6	0.5	0.0	0.0	20.2	0.0	179.2	0.1	1365.1	0.2	36.4	0.0
Residential	0.0	0.0%	0.0	0.0%	2051.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1471.3	0.2	104.8	0.1
Services	0.0	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	743.8	0.1	0.0	0.0
Transport and communication	11.9	0.0%	0.0	0.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	216.6	0.0	13.1	0.0
Utilities	0.0	0.0%	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
Waste treatment and disposal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.1	0.0	6.1	0.0
Grand Total	193657.8	100.0	171324.5	100.0	590945.6	100.0	36244.0	100.0	115847.9	100.0	62519.2	100.0	131607.1	100.0	837924.9	100.0	75305.1	100.0

(Source – QLUMP, 2008)

Land Use and Tenure Analysis | Appendix D

Table D-2 Land Tenure - CSG

Tenure	Arcadia Valley		Comet		Dennison		Eastern Surat Basin		Fairview		Mahalo		Roma Other		Roma		Scotia		Grand Total	
	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%
FH	349.4	18.2	600.8	35.5	2939.5	50.8	296.5	84.2	490.1	43.6	267.7	42.9	647.2	50.3	6215.2	78.2	576.2	78.7	12382.5	57.7
HL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL	427.4	22.2	782.5	46.2	2301.1	39.8	54.2	15.4	272.0	24.2	163.3	27.2	522.6	40.6	1139.4	14.3	147.9	20.2	5816.5	27.1
NP	750.7	39.0	2.3	0.1	101.5	1.8	0.0	0.0	67.5	6.0	0.0	0.0	5.8	0.4	0.0	0.0	0.0	0.0	927.7	4.3
RE	1.7	0.1	6.3	0.4	27.2	0.5	1.4	0.4	2.9	0.3	0.0	0.0	7.2	0.6	44.0	0.6	7.3	1.0	98.1	0.5
RY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF	357.8	18.6	300.1	17.7	402.4	7.0	0.0	0.0	182.6	16.2	111.9	18.0	102.6	8.0	545.5	6.9	0.0	0.0	2002.8	9.3
SL	36.1	1.9	0.0	0.0	16.6	0.3	0.0	0.0	109.7	9.8	74.4	11.9	1.1	0.1	0.8	0.0	0.6	0.1	239.3	1.1
Grand Total (without road easements)	1923.0	100.0	1692.1	100.0	5788.4	100.0	352.1	100.0	1124.7	100.0	623.4	100.0	1286.5	100.0	7944.9	100.0	732.0	100.0	21466.9	100.0

(Source: DCDB, February 2009)

Appendix D Land Use and Tenure Analysis

Tenure	Arcadia Valley		Comet		Dennison		Eastern Surat Basin		Fairview		Mahalo		Roma Other		Roma		Scotia		Grand Total	
	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%	Km^2	%
FH	349.4	18.0	600.8	35.0	2939.5	49.6	296.5	81.8	490.1	42.2	267.7	42.7	647.2	49.1	6215.2	75.7	576.2	76.5	12382.5	56.3
HL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LL	427.4	22.0	782.5	45.6	2301.1	38.8	54.2	14.9	272.0	23.4	169.3	27.0	522.6	39.7	1139.4	13.9	147.9	19.6	5816.5	26.4
NP	750.7	38.7	2.3	0.1	101.5	1.7	0.0	0.0	67.5	5.8	0.0	0.0	5.8	0.4	0.0	0.0	0.0	0.0	927.7	4.2
RE	1.7	0.1	6.3	0.4	27.2	0.5	1.4	0.4	2.9	0.3	0.0	0.0	7.2	0.5	44.0	0.5	7.3	1.0	98.1	0.4
RY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SF	357.8	18.4	300.1	17.5	402.4	6.8	0.0	0.0	182.6	15.7	111.9	17.9	102.6	7.8	545.5	6.6	0.0	0.0	2002.8	9.1
SL	36.1	1.9	0.0	0.0	16.6	0.3	0.0	0.0	109.7	9.4	74.4	11.9	1.1	0.1	0.8	0.0	0.6	0.1	239.3	1.1
Easements	17.1	0.9	24.4	1.4	134.7	2.3	10.3	2.8	36.0	3.1	3.1	0.5	30.5	2.3	261.0	3.2	21.4	2.8	538.6	2.4
Grand Total (with road easements)	1940.1	100.0	1716.5	100.0	5923.1	100.0	362.4	100.0	1160.6	100.0	626.4	100.0	1317.0	100.0	8205.9	100.0	753.5	100.0	22005.5	100.0

(Source: DCDB, February 2009)

Table D-3 QLUMP Land Use Coverage – Gas Transmission Pipeline Corridor

Area	Main Pipeline Alignment	
Land Use	Area Km^2	Percent of Total Length
Cropping	270.7	9.8
Grazing natural vegetation	2,298.5	83.0
Intensive animal production	0.1	0.0
Irrigated cropping	4.6	0.2
Irrigated perennial horticulture	2.7	0.1
Manufacturing and industrial	4.9	0.2
Marsh/wetland	26.9	1.0
Mining	1.0	0.0
Nature conservation	21.7	0.8
Other minimal use	22.4	0.8
Plantation forestry	0.1	0.0
Production forestry	112.7	4.1
Reservoir/dam	1.0	0.0
Residential	0.3	0.0
River	2.7	0.1
Services	0.1	0.0
Transport and communication	0.0	0.0
Utilities	0.0	0.0
Grand Total	2,770.4	100.0

Source: QLUMP – DNRW, 1999

Appendix D Land Use and Tenure Analysis

Table D-4 Land Tenure Pipeline Study Area (Without Easements)

	Pipeline Corridor	
Tenure	Ha	%
FH	168679.4	69.8
LL	79550.6	23.1
NP	2064.6	0.3
RE	1294.4	0.4
RY	4.7	0.0
SF	9033.8	2.2
SL	5255.3	3.1
TR	2314.4	1.1
Grand Total	268197.1	100.0

(Source: DCDB, February 2009)

Table D-5 Land Tenure Pipeline Study Area (With Easements)

	Pipeline Corridor	
Tenure	Ha	%
FH	142371.4	66.7
LL	47031.1	22.0
NP	611.3	0.3
RE	772.4	0.4
RY	4.7	0.0
SF	4545.7	2.1
SL	6267.1	2.9
TR	2294.9	1.1
Easements	9601.4	4.5
Grand Total	213500	100.0

(Source: DCDB, February 2009)

Appendix E - Calliope Planning Scheme

Calliope Planning Scheme Appendix E

E.1 Calliope Planning Scheme Use Definitions

Aspects of the development are classified under the Calliope planning scheme are as follows:

- Plant Operations **-** *Noxious Offensive or Hazardous Industry" (Industry (High Impact))* - means the use of premises for the purpose of handling, processing, treatment, recycling or storage of any materials, whether or not such materials are considered to be hazardous, where such activity typically gives rise to such noxious, offensive or hazardous effects as excessive smoke, fumes odours, liquid or solid wastes and the like, all of which require special management. Many such uses are by their nature, offensive to the general public, and may involve an element of public risk in their conduct or, when not adequately managed, involve detrimental effects to the environment.
- Jetty and port facilities – *"Port Facilities" (Transport and Storage)* means the use of premises for the purpose of handling, loading, unloading or storage of materials on to ships for transportation elsewhere. The term also includes facilities for the berthing, maintenance, storage and repair of boats and ships. The term does not include transport infrastructure situated on other premises.
- Accommodation camps could be defined as *Caravan and Relocatable Home Park (Residential Temporary)* means the use of premises for the purpose of residential accommodation of a permanent or temporary nature which:

  (a) comprises the establishment of caravans, relocatable homes, tents or the like; and

  (b) includes ancillary activities such as the use of buildings, recreation and entertainment facilities and kiosks which cater exclusively for the residents of the premises and a managers office and residence; or
- *"Workers Accommodation" (Residential Temporary)*" - the use of premises comprising any group of dwelling units and rooming units for the purpose of accommodation of a temporary nature for employees, and their families or dependants, of major industrial projects.

Residential and Recreational Areas

Appendix F

Appendix F Residential and Recreational Areas

The tables below outline the various aspects, namely; features, localities, facilities, built up areas and parks / recreational areas, which fall into the different study areas, i.e. CSG field (within and 5km buffer), gas transmission pipeline corridor (2.5km and 7km buffer) and the LNG facility (buffer of 30km). Where it was possible, region names have also been provided.

Table 6-1: Features within the CSG fields (per Region)

Within CSG Field		
Region Name	**Features**	**Number**
Comet	Mine or Quarry	1
Dennison Trough	Primary School	3
	Public Toilet	2
	Racecourse	1
	Place of Worship	1
	Police Station	1
	Mine or Quarry	8
	Library	1
Eastern Surat Basin	Mine or Quarry	1
Fairview	Mine or Quarry	1
Other Area	Public Toilet	1
Roma	Public Toilet	14
	Primary School	4
	Ambulance Station	2
	Airport	1
	Bowling Centre	1
	Caravan Park / Camping	4
	Place of Worship	9
	Police Station	4
	Pre-school	1
	Racecourse	1
	Sport Facility	6
	Rifle Range	1
	Waste Disposal	1
	Fire Station	4
	Mine or Quarry	4
	Golf Course	2
	Cemetery / Crematorium	3
	Combined School	3
	Government Administration	1
Scotia	Public Toilet	3
	Place of Worship	1
	Police Station	1
	Racecourse	1
	Combined School	1

Appendix F Residential and Recreational Areas

Within CSG Field		
	Fire Station	1
	Golf Course	2
	Ambulance Station	2
	Caravan Park / Camping	1

The table above outlines the features, with their number / quantity, in each region within the CSG fields.

Table 6-2: Localities and Parks / Recreational Areas within the CSG Fields

Within CSG Fields				
Region Name	**Localities**		**Parks / Recreational Areas**	
Arcadia Valley	Pyramid Hill	Bedourie	Beilba State Forest	Belington Hut State Forest
			Expedition National Park	Expedition Resources Reserve
			Presho State Forest	Stephenton State Froest
Comet	Dromedary		Expedition National Park	Expedition State Forest
			Mount Nicholson State Forest	
Denison Trough	Wyseby	Yoothappinna	Bandana State Forest	Boxvale State Forest
	Orion	Westgrove	Carnarvon National Park	Doonkuna State Forest
	Orion Downs	Mau Lau	Expedition National Park	Forrest State Forest
	Warrinilla	Glenidale	Howe State Forest	Nuga Nuga National Park
	Crowman	Home Paddock	Serocold State Forest	
	Hutton Creek	Kildare		
	Lowesby	Arcturus Downs		
	Coorumbene	Rolleston		
	Girriwa	Simmie		
	Arcadia	Ridgeland		
	Baffle West	Garlands		
Fairview	Myrtle Vale	Mount Hutton	Beilba State Forest	Doonkuna State Forest
	Waterview	Beilba	Expedition National Park	Expedition Resources Reserve
			Hallett State Forest	Stephenton State Forest
Mahalo	Humboldt		Expedition State Forest	Shotover State Forest
Other Area	Broadmere	Nunbank	Gwambagwine State Forest	Lake Murphy Conservation Park
	Ghinghinda		Theodore State Forest	
Roma	Wununa	Blythdale	Apex Park	Brucedale State Forest
	Komine	Eurella	Gubberamunda State Forest 1	Inglebogie State Forest
	Amby Downs	Summerhope	Park	Recreation Reserve
	Bindango	Bendemere	Roma Bowling Greens	Roma Golf Course
	Yuleba	Wallumbilla North	Roma Sports Complex	Roma Sports Ground
	Dargal Road	Hodgson	Tinowon State Forest	Trinidad State Forest 1

Appendix F Residential and Recreational Areas

Within CSG Fields				
Region Name	**Localities**		**Parks / Recreational Areas**	
	Bungeworgorai	Yingerbay	Trinidad State Forest 2	Wallabella State Forest 1
	Dargal	Kingull	Wallabella State Forest 2	Wallumbilla Showground
	Eumina	Blairgowrie	Yalebone State Forest 1	Yalebone State Forest 2
	Gunnewin	Highland Plains		
	Wallumbilla	Rockybank		
	Myall Park	Warkon		
	Megine	Bon Accord		
	Combamgo	Inniscraig		
	Dulacca	Amby		
	Wallabella	Tingun		
	Wallumbilla South	Jackson South		
	Yuleba South	Parlado		
	Nareeten	Miawood		
	Roma Downs	Roma		
	Pickanjinnie	Bungil		
	Euthulla	Mooga		
	Orange Hill			
Scotia	Wandoan			

Table 6.2 represents the localities per region as well as the parks and recreational areas. As National Parks and Reserves are included and these can be of considerable size, some may appear in more than one Region.

Table 6-3: Built Up Areas and Facilities with the CSG Fields

Within CSG Fields		
Region Name	**BUA**	**Facilities**
Roma	Roma	Westlands Plaza
		Roma Hospital
		Wallumbilla Hospital
Scotia	Wandoan	Wandoan Hospital

Table 6-4: Built Up Areas and Features within a 5km Buffer of the CSG Fields

Within CSG Fields (5km Buffer)		
BUA	**Features**	**Number**
Taroom	Mine or Quarry	12
	Police Station	2
	Public Toilets	4
	Ambulance Station	2
	School	4
	Primary School	1

Appendix F Residential and Recreational Areas

Within CSG Fields (5km Buffer)		
BUA	**Features**	**Number**
	Sewage Treatment Plant	1
	Place of Worship	4
	Racecourse	1
	Fire Station	2
	Taroom Shire	1
	Leichhardt Villa	1

The table above shows the main BUA, Taroom, within the 5km buffer of the CSG fields along with the number / quantity of features.

Table 6-5: Facilities, Localities and Parks / Recreational Areas within the 5km Buffer of the CSG Fields

Within CSG Fields (5km Buffer)				
Facilities	**Localities**		**Parks / Recreational Areas**	
Injune Health Service	Rewan	Arcadia Valley	Brucedale State Forest	Southwood National Park
Injune District General Hospital	Purbrook	Canberra	Injune Oval	Eden State Forest
Taroom Hospital	Blairmack	Mount Hutton	Howe State Forest	Mount Pleasant State Forest
	Woodlawn	Bendoba	Shotover State Forest	Blackdown Tableland National Park
	Bongwarra	Spring Hill	Woodduck State Forest	Combabula State Forest
	Massey Downs	Merivale	Mebir State Forest	Mundell State Forest
	Arcturus	Bogandilla	Tinowon State Forest	Yalebone State Forest 1
	Dulacca West	Jackson North	Yalebone State Forest 2	
	Yuleba North	Muckadilla		
	Mount Bindango	Orallo		
	Hornet Bank	Currawong		
	Eurombah	Clissold Downs		
	Muggleton	Hollyrood		
	Beldene	Rostock		
	Tinowon	Jackson		
	Albinia	Mungabunda		
	Taroom	Baroondah		
	La Palma	Two Up		
	Mapala	Warndoo		
	Roeburne	Gwambegwine		
	Coorada	Injune		
	Wondaree	Banjo Gully		
	Thornborough	Minka		
	Moorta			

Appendix F Residential and Recreational Areas

Region names were not available for the 5km buffer and therefore, Facilities, Localities and Parks / Recreational Areas have just been listed in the table above.

Table 6-6: Built Up Areas, Localities and Features within the 7.5km Buffer of the Gas Transmission Pipeline Corridor

Within Gas Transmission Pipeline Corridor (7.5km Buffer)			
BUA	**Localities**	**Features**	**Number**
Gladstone	Arcadia Valley	Mine or Quarry	12
	Purbrook	School	2
	Glenidale		
	Myrtle Vale		
	Dromedary		
	Oombabeer		
	Bauhinia		
	Beckersley		
	Argoon		
	Greycliffe		
	Orange Creek		
	Greycliffe		
	Earlsfield		
	Koonkool		
	East End		
	Dumgree		
	Targinie		
	Mount Alma		

The table above outlines the BUA, localities and features found within 7.5km of the gas transmission pipeline corridor. Table 6.7 below shows the localities and features, with number / quantity, found within a 2.5km buffer of the gas transmission pipeline corridor.

Table 6-7: Localities and Features within the 2.5km Buffer of the Gas Transmission Pipeline Corridor

Within Gas Transmission Pipeline Corridor (2.5km Buffer)		
Localities	**Features**	**Number**
Pyramid Hill	Mine or Quarry	3
Bauhinia Downs	School	2
Laurel Hills	Public Toilet	1
Waterview		
Beilba		
Walba		
Mungi		
Callide		
Aldoga		

Appendix F Residential and Recreational Areas

Within Gas Transmission Pipeline Corridor (2.5km Buffer)		
Localities	**Features**	**Number**
Yarwun		

Table 6-8: Features with the 30km Buffer of the LNG Facility

LNG Facility (30 km Buffer Distance)		
Distance	**Feature**	**Number**
6 – 10km	Public Toilets	18
	Police Station	1
	Mine or Quarry	3
	School	6
	Pres-school	1
	College	2
	Caravan Park	2
	Place of Worship	5
	Showgrounds	1
	Administrative Centre	1
	Library	1
	Ambulance Station	1
	Fire Station	1
	Salvation Army	1
	Sports Ground	1
	Airport	1
	Golf Course	1
11 – 15km	School	5
	Sportsground	2
	Public Toilets	1
	Caravan Park	2
	Ambulance Station	1
	College	2
	Place of Worship	5
	Mine or Quarry	3
16 – 20km	Airport	1
	School	1
	Mine or Quarry	1
21 – 25km	Public Toilets	19
	Mine or Quarry	3
	Ambulance Station	5
	Police Station	3
	Fire Station	2
	Place of Worship	6
	School	5