

11.0 Land Use and Planning

11.1 Introduction

This land use and planning chapter describes the existing land uses within the Study Area and identifies potential impacts that the Project may have upon existing land uses. In addition, relevant State, regional and local planning instruments are discussed in terms of their relevance and applicability to the Project.

11.2 Scope of assessment

The purpose of the assessment is to describe and characterise the existing land use values that have the potential to be affected by the Project. Several land use topics are considered as part of this chapter. These include:

- Existing land use
- Mineral licences
- Land tenure.

Planning instruments that are applicable to the Project have also been reviewed and their applicability to the Project determined.

11.3 Legislation and policy

The importance of complementing the future planning intent for the local government areas of the Western Downs Regional Council and South Burnett Regional Council has been considered through this land use and planning assessment. This has been achieved by reviewing how the Project advances the outcomes sought by the planning schemes for the Study Area, being the Kingaroy Shire Planning Scheme (South Burnett Regional Council), Wambo Shire Planning Scheme and Draft Western Downs Planning Scheme (Western Downs Regional Council).

The planning assessment has undertaken a review of the sections of relevance to the Project from the following policies and plans:

- State
 - State Planning Policy, 2014
 - Wide Bay Burnett Regional Plan, 2011
 - Darling Downs Regional Plan, 2013.
- Local
 - Wambo Shire Planning Scheme, 2005
 - Kingaroy Planning Scheme, 2006
 - Draft Western Downs Planning Scheme, 2016
 - Draft South Burnett Planning Scheme, 2016.

Section 11.5 and Section 11.6 provide further details on these policies and plans.

11.4 Existing environment

11.4.1 Land Use

The existing land use within and around the Project is predominantly rural, characterised largely by cattle grazing within the localities of Cooranga North, Bilboa, Boyneside and Ironpot (refer to Figure 11.1, Volume 2). The largest nearby townships include Kingaroy to the north-east (with a significant peanut and navy bean industry, and more recently, an expanding wine industry), Dalby to the south and Jandowae to the south-west (crops grown in this area include wheat, sorghum, oats and cotton). Small settlements are located throughout the region, including the towns of Bell and Kumbia which are the closest communities to the Project Site.

The State's capital, Brisbane, is located approximately 180 km south-east from the Project Site and is the closest major city. Brisbane is directly accessible from the Project Site via the Bunya and Warrego Highways.

South-east of the Study Area is the Bunya Mountains National Park – Queensland's second-oldest National Park, containing the largest stand of Bunya Pines in the world. Other significant reserves in proximity to the Project include Jandowae State Forest and Mahen State Forest to the west, and Diamondy State Forest to the north-west.

The Project Site is bounded to the east by the Bunya Highway, between Cooranga North and Kingaroy. Local roads provide access to properties from the Highway, with major connecting roads including Niagara Road, Jarail Road and Cooranga North Niagara Road.

The nature of land use in the general locality, and the Surat Basin area, has changed significantly over time and is likely to continue to change due to the increase in mining operations and other larger non-rural activities. This change has generally affected rural and agricultural activities and the nature of their supporting townships.

11.4.2 Mining licences and permits

Local Area Mining Permit Reports obtained for Western Downs Regional Council and South Burnett Regional Council in March 2014 indicates that there is one current permit within the Study Area:

- Coal Exploration Permit – Exploration Permit (Coal) (EPC) 2056 (granted November 2010) held by Coalbank Ltd.

The location of the Project on the ridge line and the topography of the surrounding area is likely to mean that this permit will not affect the wind turbines.

There are no other active licences or permits within close proximity to the Study Area.

11.4.3 Land tenure

The land tenure of the Study Area is predominantly freehold (see Figure 11.2, Volume 2). Exceptions to this are:

- Road reserves throughout the Study Area
- A stock route (unused) located within the road reserve of Ironpot Creek Road, north of the intersection with Niagara Road, until the intersection of Sarum Road, where the stock route follows the road reserve north out of the Study Area
- Easements for electricity transmission.

AGL has entered into agreements with all freehold landowners. Consent to use land is yet to be obtained for easements and road reserves.

A substation and switchyard will be located on the eastern edge of the Project Site on up to 4 ha of freehold property (LotPlan 92BO469) (Figure 2.1, Volume 2). The property will be subdivided under an agreement with the landowner.

11.5 Relevant State planning instruments

Planning instruments that are applicable to the Project include the Queensland State Planning Policy (SPP), the Wide Bay Burnett Regional Plan, and the Darling Downs Regional Plan. This section gives consideration to the requirements of these policies particularly in relation to the Project.

It is noted that there are no State Planning Regulatory Provisions that are relevant to this Project.

11.5.1 State Planning Policy

As part of ongoing reforms to the Queensland planning system, a single SPP has been developed to address all state interests which must be reflected when preparing planning schemes, designating land for community infrastructure and undertaking development assessment. This single SPP came into force in December 2013 and replaces all previous SPPs. The most current version of the SPP was published in April 2016.

Table 11.1 provides a commentary regarding the range of State interests under the SPP for the Project.

Table 11.1 Applicable SPP State Interests

SPP State Interest	Relevance to the Project
Planning for liveable communities and housing	
Liveable communities	Not applicable – the Project does not involve the development of a new residential community or redevelopment of an existing community.
Housing supply and diversity	Not applicable – the Project does not involve the provision of land for housing purposes. It is expected that the construction workforce will be largely sourced locally and accommodated in existing hotels, motels, camps and rental accommodation in surrounding towns. The operational workforce will likely be locally based, residing within existing housing in surrounding township areas.
Planning for economic growth	
Agriculture	<p>Applicable – the prominent land use throughout the Study Area is rural and much of the Study Area is mapped as Class A and Class B land under the Agricultural Land Classification (ALC). To achieve the state interest, Class A and Class B land should be protected from fragmentation, inappropriate development and land degradation.</p> <p>The Project layout has been developed so that existing property owners can continue agricultural uses in conjunction with the development and ongoing operation of the Project. Owners of properties containing the wind farm infrastructure are willingly involved in the Project and will continue agricultural activities on their properties. The physical footprint of wind turbines and access road infrastructure is relatively minor and will not cause significant severance of productive land. In this manner, the Project supports the ongoing sustainable use of Class A and Class B lands.</p> <p>The Project Site is mapped as containing a small portion of Important Agricultural Areas (IAAs). The significance of IAAs is acknowledged and as such, the Project proposes to co-locate existing agricultural activities with the wind farm to mitigate perceived impacts. Impacts upon existing agricultural practices within the Study Area are anticipated to be minimal, and largely restricted to the sites of installed infrastructure. Construction activities will need to be coordinated with the landowners directly involved (AGL has agreements with these landowners) with the Project to minimise disruptions to their existing agricultural activities. In the long-term, these landowners will benefit from improved access around their properties due to the access roads constructed for the Project. The Project is therefore not expected to adversely affect the long-term viability of agriculture in IAAs within the region.</p>
Development and construction	Not applicable – the Project is not located on land identified for industrial purposes and does not involve the development of commercial or industrial uses.
Mining and extractive resources	Applicable – the Project is located in an area subject to a Coal Exploration Permit (EPC 2056 - Coalbank Ltd). The Queensland SPP includes a State interest for mining and extractive resources. Mineral, coal, petroleum, gas and extractive resources should be appropriately considered in order to support the productive use of resources, a strong mining and resource industry, economical supply of construction materials, and avoidance of land use conflicts wherever possible. The Coal Exploration Permit within the Study Area does not reflect a proven resource at this stage and it is therefore not possible to quantify how a resource may be affected by development of the Project. Feedback from the proponent of EPC 2056 in relation to the Project will be sought during the public submission periods for the Project.
Tourism	<p>Applicable – the natural areas throughout the region represent the main tourism assets. There are a number of scenic drives and walking trails in the Study Area which include:</p> <ul style="list-style-type: none"> - Bunya Mountains Walking Trails - Dingo Fence Tourist Drive - Great Bunya Drive.

SPP State Interest	Relevance to the Project
	<p>In order to perform their function effectively, wind turbines are likely to be tall and frequently located in open or elevated landscapes. Whilst the Project will likely change the landscape character it is not expected that it will detract from existing natural areas of tourism value. A secondary outcome of the Project is that it may serve to act as a tourist attraction in its own right.</p>
Planning for the environment and heritage	
Biodiversity	<p>Applicable – the Study Area contains ecological features of national and state significance.</p> <p>The Project has been referred to the Department of the Environment and Energy on four occasions for determination of controlled action status. On each occasion a decision was returned that the Project was “not a controlled action”. The proposed new wind turbine layout and Project Site has been refined to further minimise potential impact on MNES.</p> <p>The Project is located in a highly cleared landscape where much of the original vegetation and habitat has been removed for grazing and cropping. The Project Site has been refined to minimise impact on flora and fauna values.</p> <p>This aside, impacts on flora and fauna will occur during the Project’s construction phase, when vegetation and habitat removal will occur. The main impacts associated with the construction phase of the Project will be:</p> <ul style="list-style-type: none"> - Removal of native vegetation comprised of both remnant and High Value Regrowth (HVR) elements - Potential disturbance or removal of flora and fauna species, most significantly conservation significant flora and fauna that are ‘confirmed’, ‘likely’ or ‘possible’ to occur within the Study Area - Construction activity and noise impacts to fauna - Vegetation fragmentation/edge effects - Potential for sedimentation and erosion - Potential for spread of declared plants. <p>Decisions on the final location of infrastructure (micro-siting) will allow for the protection of species and features of localised conservation significance. This process of continual refinement demonstrates a commitment to minimising the impacts of the Project through avoidance. For further detail of potential impacts and mitigation measures refer to Chapter 12 Flora and Fauna.</p>
Coastal environment	<p>Not Applicable – the Project is not located within the coastal zone.</p>
Cultural heritage	<p>Applicable – it is highly unlikely that the Project will adversely impact any places of historic cultural heritage value.</p> <p>A search of Commonwealth, State and local heritage registers did not identify any recorded historical sites within the Study Area. The closest historical heritage site is the State and locally listed (South Burnett Regional Council) Wylarah Homestead, which is located approximately 10 km to the north of the Study Area.</p> <p>Whilst there are no listed places of non-indigenous cultural heritage within the Study Area, a number of mitigation measures such as stop work procedures for unexpected finds and cultural heritage induction requirements have been outlined in Chapter 18 Cultural Heritage.</p> <p>A search of the Cultural Heritage Database and Register identified four cultural heritage sites – a stone artefact scatter and three isolated finds – within in the Study Area. A further nine recorded places, including grinding grooves and artefact scatters, are located within one kilometre of the Study Area.</p> <p>Given the extent of the Project, and the involvement of multiple Aboriginal Parties, a CHMP under Section 7 of the ACH Act will be developed and negotiated for the Project. These</p>

SPP State Interest	Relevance to the Project
	<p>negotiations will be undertaken concurrently with the coordinated project process and the CHMP agreed to prior to the commencement of construction of the Project.</p> <p>Further detail regarding potential cultural heritage impacts and management measures are contained in Chapter 18 Cultural Heritage.</p>
Water Quality	<p>Applicable – the Project has the potential to affect the water quality of the local creeks and catchments during the construction process, predominantly through:</p> <ul style="list-style-type: none"> - Erosion and sediment runoff during: <ul style="list-style-type: none"> • construction of access roads, in particular near waterway crossings • earthworks for hardstands • excavation for foundations • trenching for underground electrical reticulation. - Mishandling of hazardous materials. <p>The Project is not anticipated to cause significant impacts on the condition of either the Burnett or Upper Condamine River catchments. Any potential impacts on water quality are likely to be minor in nature and localised in extent. Works are unlikely to encounter acid sulfate soils as mapping indicates there is either no known occurrence or low probability.</p> <p>A CEMP will be developed incorporating measures to control erosion and sediment and the handling of hazardous materials.</p> <p>Further information regarding potential water quality impacts and mitigation measures is contained in Chapter 14 Surface Water.</p>
Planning for hazards and safety	
Emissions and hazardous activities	<p>Applicable – the Project does not involve the development of sensitive uses on major hazard facilities or involve the storage or dangerous goods and combustible liquids. It does, however, have the potential to generate noise and vibration emissions during construction. During operation, the Project has the potential to generate noise emissions.</p> <p>Part D of the SPP does not specify any parameters for noise and vibration emissions. This aside, a noise and vibration assessment has been undertaken for the Project which includes a description of potential impacts and mitigation measures. For further information refer to Chapter 4 Noise and Vibration.</p>
Natural hazards, risk and resilience	<p>Applicable – the Project is not subject to coastal hazards. The Study Area is however subject to localised flooding, bushfire and landslide natural hazards. Infrastructure such as wind turbines which are located on ridgelines will not be affected by large-scale flooding, however infrastructure such as access roads have the potential to increase the risk of localised flash flooding at waterway crossings (bridges, culverts). Waterway crossings would be designed so that any afflux as a result of the Project would not cause significant adverse impacts to neighbouring property owners.</p> <p>In order to capitalise on high quality wind resources it is necessary to locate turbines and associated infrastructure such as access roads on ridgelines. This locational requirement means that it is not possible to completely avoid areas of bushfire and landslide hazard. The Project is located within an area mapped as medium bushfire hazard and in some areas containing slopes in excess of 15%.</p> <p>Infrastructure such as turbines and access roads will be designed and constructed to provide safety and stability in areas of steep slopes. Infrastructure will also be designed and constructed to function effectively in the event of a bushfire. A Bushfire Management Plan will also be prepared for the construction and operation of the wind farm to satisfy the matters outlined under the state interest for natural hazards.</p>

SPP State Interest	Relevance to the Project
Planning for infrastructure	
Energy and water supply	<p>Applicable – the Project is not located within a water supply catchment or in proximity to bulk water supply infrastructure. It does however represent the provision of sustainable energy infrastructure of significance within the region. The Project is located near Cooranga North and has one of the best wind resources in Queensland.</p> <p>The Project is also able to efficiently connect into the existing electricity transmission and distribution network. There are currently three electrical transmission lines crossing the site. These include:</p> <ul style="list-style-type: none"> - Braemer to Tarong 275 kV transmission line - Western Downs to Halys 275 kV transmission line - Ergon Energy 132 kV sub-transmission. <p>The excellent wind resource and direct access to a major transmission corridor through the Project site, all situated in proximity to the South East Queensland load centre, represents an efficient development of both wind resources and connections to the National Electricity Market. Designation of the site will support the objectives of the state interest for energy and water supply under the SPP.</p>
State transport infrastructure	<p>Not Applicable – the Project is not located adjacent to any State transport infrastructure and networks. This aside, it is noted that the following elements of the State Controlled Road network will be utilised during the construction phase to transport equipment, materials and personnel:</p> <ul style="list-style-type: none"> - Gateway Arterial Road (Gateway Motorway South) - Cunningham Highway (Ipswich Motorway) - Cunningham Highway (Ipswich – Warwick) - Warrego Highway (Ipswich – Toowoomba) - Warrego Highway (Toowoomba – Dalby) - Bunya Highway - Dalby-Jandowae Road - Kingaroy-Jandowae Road. <p>The Project will not affect the safety and structural integrity of state transport infrastructure. Chapter 13 Traffic and Transport provides further details regarding characteristics of the transport network as well as potential impacts and mitigation measures for the Project.</p>
Strategic airports and aviation facilities	<p>Applicable – whilst the Project is not located in a local government area that contains or is impacted by a strategic airport identified in Table 2 of the SPP, it is within a local government (South Burnett Regional Council) which is impacted by aviation facilities in the following locations identified in Appendix 1 of the SPP Guideline: Strategic Airports and Aviation Facilities:</p> <ul style="list-style-type: none"> - Kingaroy (-26.578644, 151.844364) - AirServices Australia Site Eastside Mt Mowbullen (-26.898419, 151.620253). <p>The nearest strategic airport identified in Table 2 of the SPP is the Army Aviation Centre Oakey which is located in Toowoomba Regional Council, over 50 km from the Project.</p> <p>The state interest for strategic airports and aviation facilities seeks to protect the operation of strategic airports and aviation facilities from development and activities which may create incompatible intrusions or compromise safety in operational airspace.</p> <p>The certified aerodrome at Kingaroy is approximately 45 km east-north-east of the Study Area and therefore there are no issues regarding the possibility of any penetration of the obstacle limitation surfaces (OLS) of this aerodrome.</p> <p>The AirServices Australia Site Eastside Mt Mowbullen is located approximately 20 km south-east of the Study Area. No elements of the Study Area are located within the</p>

SPP State Interest	Relevance to the Project
	<p>Building Restricted Area of this facility.</p> <p>Whilst the Project does not directly impact facilities to which the SPP state interest applies, there are a number of other aviation facilities located in the wider Study Area. There is therefore still a need for consultation with CASA, AirServices Australia and the Department of Defence. Further details regarding aviation facilities have been provided in Chapter 8 Aviation.</p>
Strategic ports	Not Applicable – the Project is not located within a local government to which the state interest applies.

11.5.2 Wide Bay Burnett Regional Plan, 2011

The Wide Bay Burnett region consists of Bundaberg, Fraser Coast, Gympie, North Burnett and South Burnett Regional Councils, as well as Cherbourg Aboriginal Shire Council. The Project is situated partially within South Burnett Regional Council, and therefore is subject to any statutory regional planning processes for the Wide Bay Burnett region.

The Wide Bay Burnett Regional Plan 2011 (WBBRP) seeks to manage regional growth and change by shaping and supporting the future growth of communities in the region. Some of the major challenges identified in the WBBRP as being applicable to the region in the future include population growth (and an increasingly-ageing population), limited economic catalysts, responses to climate change, sustaining strong communities, and infrastructure and service delivery across a dispersed settlement pattern.

The South Burnett Regional Council local government area falls within the Wide Bay Burnett region. The South Burnett subregion has largely maintained settlement formations established during European habitation for early industries, including sheep grazing, dairying, timber and peanut farming. The rich soils of the subregion make the continuation and expansion of agricultural pursuits in the area a practical economic strategy, in conjunction with the intended broadening of the local economic and industrial activities for the area.

The desired regional outcomes in the WBBRP articulate the preferred direction for the development and land-use outcomes for the region, and include specific policies and programs to manage the growth of the region over the next two decades. Desired regional outcomes within the WBBRP that are relevant to the Project are identified in Table 11.2.

Table 11.2 Principles, policies and programs within the WBBRP that are relevant to the Project

Principle	Relevance to the Project
<p>Desired Regional Outcome 1: Sustainability, climate change and natural hazards</p> <p>The region grows and changes in a sustainable manner— generating prosperity, maintaining and enhancing quality of life, minimising the use of resources, providing high levels of environmental protection, reducing greenhouse gas emissions, and increasing resilience to natural hazards and the anticipated effects of climate change.</p>	
<p>1.1 Sustainability</p> <p>Decision-making supports ecologically sustainable development.</p>	<p>Ecologically sustainable development is defined as “...<i>development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends</i>” (National Strategy for Ecologically Sustainable Development, 1992). The Project is an example of development that seeks to improve quality of life both now and in the future (through energy provision) whilst minimising impacts on ecological processes by harnessing energy generated by a renewable resource.</p>
<p>1.2 Climate change</p> <p>The generation of greenhouse gases is reduced through land-use planning and development design.</p>	<p>The annual greenhouse gas emissions displaced by the Project is estimated to be approximately 1,490,952 tonnes of carbon dioxide equivalent (CO₂-e) (see Chapter 19 Sustainability and Climate Change). Additionally, the development could supply power to service approximately 236,000 households or would be the equivalent to taking approximately 438,515 petrol cars off the road each year (see Chapter 19 Sustainability and Climate Change).</p>

Principle	Relevance to the Project
	As a renewable energy development, energy supplied from the Project will have a minimal greenhouse footprint when compared to large greenhouse gas emissions resulting from energy supplied by coal or gas fired power stations.
<p>1.3 Planning for climate change Long-term climate change impacts are considered in planning decisions.</p>	<p>The Project will contribute to reducing Queensland's greenhouse gas emissions, contributing to the avoidance of climate change. As discussed in Chapter 19 Sustainability and Climate Change, infrastructure with long life spans, such as wind farms, will be impacted by climatic conditions including natural disasters and the effects of climate change. Design, construction, operation and maintenance of the Project will take these changes into account to avoid any significant adverse impacts and to ensure the wind farm is able to continue to operate effectively and efficiently in a changing climate.</p> <p>The development of the Project is likely to contribute to planning for the long-term mitigation of climate change and will increase the local provision of renewable energy and low emission technology for the Wide Bay Burnett region.</p>
<p>1.4 Mitigating hazards The resilience of communities, development, essential infrastructure, natural environments and economic sectors to recognised hazards, including the anticipated effects of climate change is increased.</p>	<p>The Project will increase resilience of energy supplies through infrastructure diversification. It is also not dependent on external fuel sources to operate and can continue to operate during disaster events. The impact of climate change on the Project in the form of natural hazards and risks is likely to include an increase in days over 35°C, increasing average temperature and increases in wind speeds (refer to Chapter 19 Sustainability and Climate Change).</p> <p>Chapter 19 Sustainability and Climate Change provides a comprehensive list of the likely mitigation measures required to mitigate natural hazards and risks arising from climate change. Importantly the wind farm will be designed, constructed and operated to provide for continued operational effectiveness and efficiency in a changing climate.</p>
<p>Desired Regional Outcome 2: Environment A healthy and resilient natural environment supports the region's rich biodiversity and ecosystem services which contribute to the economic development and social and cultural identity of the region.</p>	
<p>2.1 Biodiversity The region's natural assets, biodiversity values and ecological services are protected, managed and enhanced to improve their resilience to the anticipated effects of climate change and other threats.</p>	<p>The biodiversity and ecological values and natural assets within the Study Area have been investigated in Chapter 12 Flora and Fauna. This Chapter presents the biodiversity and ecological values of the Study Area and identifies the potential impact the Project may have on these values.</p> <p>The Project Site has been defined to take into account, and avoid where possible, areas of high ecological, natural and biodiversity value. Where impacts cannot be avoided, mitigation will be provided.</p>
<p>2.3 Air quality and noise The environment is protected to maintain the health and wellbeing of the community and the natural environment through effective management of air and noise.</p>	<p>It is considered that there will be negligible impacts upon the air quality during construction and operation of the Project.</p> <p>With respect to noise impacts from the Project it is noted that there may be noise impacts during construction and operation. An assessment of construction and operational noise and vibration related to the Project has been carried out. This assessment found:</p> <ul style="list-style-type: none"> - Construction noise will represent a short term impact and is anticipated to include a range of noise sources. To minimise the impacts of construction noise a Construction Noise and Vibration Management Plan will be prepared which will outline the methodology and monitoring procedures for noise and vibration

Principle	Relevance to the Project
	<p>to be put in place for the duration of the works.</p> <ul style="list-style-type: none"> - Operational noise would be limited to operational wind turbine noise and infrastructure noise. Using an appropriate level of modelling, a noise-compliant wind turbine layout has been generated. The modelling results indicate that the noise levels due to the Project will comply with the relevant criteria at each sensitive location for all operational wind speeds. <p>More detailed noise and vibration information and assessment is provided in Chapter 4 Noise and Vibration.</p>
<p>2.4 Regional landscapes Regional landscape values and areas are managed to maintain or enhance their ability to contribute to the region's liveability, lifestyle, health and economy.</p>	<p>There are few landscapes in which a wind farm will not introduce a new and distinctive feature. In order to perform their function effectively, wind turbines are likely to be tall, frequently located in open landscapes, difficult to conceal and therefore likely to be highly visible and incongruent with the existing landscape character. Accordingly, all wind farms will result in some significant changes to the landscape and visual resource due to their size and prominence.</p> <p>However, when this change and impact is considered in the context of the wider Project assessment, the impact is considered generally acceptable. This is due to the significance of this ecologically sustainable development that will contribute positively to the ecological, social and economic context of the region.</p>
<p>Desired Regional Outcome 3: Natural resource management Regional natural resources and primary production areas continue to provide cultural, social, economic and environmental values to the region, while being protected, managed, enhanced and used sustainably.</p>	
<p>3.1 Natural resource management The management and use of natural resources enhance community, economic and landscape values.</p>	<p>Wind is a natural resource and harnessing it for the Project will have a positive economic impact for the community with financial compensation for land owners and job creation in the local community. These benefits have also been considered against potential impacts to landscape values.</p> <p>Economic considerations and the potential community impacts have been addressed in Chapter 10 Socio-economics. Landscape values are discussed in Chapter 5 Landscape and Visual.</p>
<p>3.2 Ecosystem-dependent economic resources Ecosystems are sustainably managed, ensuring their cultural, social, economic and environmental services and values are protected.</p>	<p>The Project will use the wind resource of this location to create an economic resource.</p>
<p>3.4 Planning and managing agricultural land The region's primary production areas are protected and sustainably managed to ensure their continuing contribution to the economy, and to mitigate the anticipated effects of climate change.</p>	<p>The impact on agricultural land will be minimal in most locations. Owners of involved properties have existing agreements with AGL with the intent of having wind turbines on their property.</p> <p>The property owners' existing rural and agricultural activities and the wind farm can co-exist as the Project does not preclude on-going rural and agricultural activities such as horticulture or animal husbandry.</p> <p>Discussion of potential agricultural business impacts is provided in Chapter 10 Socio-economics.</p>
<p>3.7 Water quality, waterway health and wetlands The ecological health, environmental values and water quality of coastal, surface and ground waters are protected.</p>	<p>The Study Area straddles the boundary of the Burnett and Condamine Groundwater Basins and is underlain by the sediments of the Great Artesian Basin.</p> <p>The Project is not expected to have any significant impact on the overall condition of the groundwater basins. Potential impacts associated with the Project would be localised, and consist with the</p>

Principle	Relevance to the Project
	<p>extraction of water supplies for construction and operational purposes, and mishandling of hazardous materials; both during the construction and operational phases of the Project.</p> <p>Chapter 14 Surface Water and Chapter 15 Groundwater discuss these impacts further and provide mechanisms to further protect the water quality and waterway health. The mitigation measures include:</p> <ul style="list-style-type: none"> - Obtaining relevant groundwater extraction entitlements - Development of a Materials Handling Plan (MHP) - Inclusion of an erosion and sediment control in the CEMP.
<p>Desired Regional Outcome 4: Rural futures The region's rural community is strong and resilient, with a sustainable economy that contributes to the overall liveability of the region.</p>	
<p>4.1 Sustainable rural economy The rural economy capitalises on the region's advantages and responds positively to changing circumstances.</p>	<p>The advantageous wind environment within the local area provides the opportunity for the local community to benefit from the Project through financial compensation for land owners and job creation in the local community.</p>
<p>4.2 Rural growth Rural communities benefit from growth and are serviced by appropriate levels of infrastructure and support services.</p>	<p>The Project will support the local area through sourcing employees locally and up-skilling these employees. Additionally, there is a potential flow on economic effect from locally based employees who live and conduct other business within the community.</p>
<p>Desired Regional Outcome 5: Strong communities The region has vibrant, inclusive, safe, active and healthy communities, where a range of social services are accessible by all, and where unique cultural heritage and diversity is acknowledged, valued and celebrated.</p>	
<p>5.1 Social planning Social planning is incorporated into planning processes to manage and respond to changing communities, and support community wellbeing and quality of life.</p>	<p>AGL have a strong commitment to developing working relationships and communication channels with the community as this builds trust which is considered important to the success of the Project.</p> <p>As part of the community engagement process for the Project, AGL has established a Project Community Consultative Committee (CCC). The aim of the CCC is to help strengthen the community engagement process so that any arising community issues can be appropriately addressed.</p> <p>Chapter 10 Socio-economics discusses community engagement for this Project specifically.</p>
<p>5.5 Heritage, arts and cultural development The region's unique heritage places and experiences are identified, protected and valued, with further opportunities for arts and cultural development provided.</p>	<p>Aboriginal Cultural Heritage:</p> <p>As discussed in Chapter 18 Cultural Heritage, the most efficient way to manage Aboriginal cultural heritage as a part of a development is to engage in a formalised arrangement with the relevant Aboriginal Party(s). Given the extent of the Project, and the involvement of multiple Aboriginal Parties, a Cultural Heritage Management Plan (CHMP) under Section 7 of the ACH Act will be carried out. A CHMP provides a statutory framework that will facilitate consultation with the multiple Aboriginal parties, and remains binding should the Aboriginal parties for the area change. This will protect and value the Aboriginal cultural heritage values of the location.</p> <p>Historic Cultural Heritage:</p> <p>There are currently no heritage listed sites, nor known sites of potential heritage significance within the Study Area. As such, it is unlikely that Project activities will impact on any places of historical heritage significance. However, given the history of the area as a part of the Jingi Jingi and Cooranga Pastoral runs, there is a chance that</p>

Principle	Relevance to the Project
	<p>historical archaeological deposits exist in the area.</p> <p>If archaeological or other unexpected historical finds are encountered during construction, 'Stop Works' procedures should be instituted to identify, protect and value the historic cultural heritage item.</p> <p>The heritage places and experiences within the Study Area have been further discussed in Chapter 18 Cultural Heritage.</p>
<p>Desired Regional Outcome 7: Managing growth An efficient and sustainable settlement pattern that supports the efficient use of land and infrastructure, supports housing choice and affordability, and provides opportunities for well-planned growth now and in the future.</p>	
<p>7.1 Efficient use of land Land and infrastructure are used efficiently, while impacts on the environment and the use of natural resources are appropriately managed.</p>	<p>Wind as a resource is only viable in certain locations and the Study Area has a high wind resource, particularly in relation to other central southern Queensland areas. Use of land in the area for wind energy production is therefore an efficient and sustainable renewable energy source. This is supported by the proximity of the Project to a pre-existing transmission line (Powerlink 275 kV) which will allow the Project to generate energy and provide this directly to existing infrastructure.</p> <p>Additionally, the Project and the existing rural and agricultural activities can co-exist, utilising the land concurrently for two uses (refer to Chapter 10 Socio-economics for further discussion of this co-existing use).</p> <p>This overriding suitability is further supported by site specific refinement evaluating impact on high value vegetation and geology, land usage patterns and efficient land use, geotechnical investigations, engineering requirements and topographical constraints.</p> <p>It is unlikely that the Project would preclude the use of the land for another purpose in the future as the infrastructure does not impact upon the land's long term viability.</p>
<p>Desired Regional Outcome 9: Strong economy A thriving regional economy that is sustainable, resilient and robust, and advances the prosperity and liveability of communities within the region.</p>	
<p>9.1 Strong economic leadership Strong economic leadership attracts and drives regional economic development and investment.</p>	<p>The Project is a significant investment in the local economy. It provides the opportunity for sustainable development and investment in the area.</p>
<p>9.2 Infrastructure supporting job creation and business opportunities Suitable land, infrastructure and facilities are available to enable economic and employment growth in the region.</p>	<p>As discussed in Chapter 10 Socio-economics, construction workers are likely to be sourced from local areas and any additional workers will be accommodated in local towns in proximity to the site (such as Bell, Jandowae, Kumbia, Kingaroy or Dalby). As local workers will be preferred for construction, it is not expected that the introduction of non-local construction workers will result in anything more than a temporary and minor local impact on the population for the duration of the Project's construction.</p> <p>During operation of the Project, it is likely that one full-time job will be required for every 4-6 wind turbines. Consequently, it is expected that the Project will generate approximately 10-20 full-time jobs throughout the operational life of the Project. These maintenance jobs are generally provided to local people seeking employment, who are trained appropriately by the proponent.</p>

Principle	Relevance to the Project
	It is anticipated that the settlement pattern within the towns surrounding the Project, including the townships of Kingaroy, Dalby, Jandowae, Kumbia and Bell, will provide the opportunity to accommodate anticipated economic and employment growth both during construction (short term) and operation (longer term).
<p>9.3 Diverse and strong business and industry Business and industry grows through diverse and strong sectors building on the region's competitive advantages, including its extensive environmental assets.</p>	In conjunction with the mining regions of Central Queensland and Western Downs, the Project presents opportunities for its sustained economic contribution to the region, particularly in relation to maximising the wind asset of the region.
<p>9.4 Employment and skills development An entrepreneurial economy is fostered by focusing on innovation and technological capabilities to enhance existing and emerging business and industry.</p>	<p>As discussed above, the Project will support the local area through sourcing employees locally, and up-skilling these employees where necessary. AGL's community charter for this Project states that AGL "...will positively discriminate in favour of local suppliers providing they have the necessary skills and competencies and are competitive with alternate providers."</p> <p>Additionally, there is a potential flow on economic effect from locally based employees who live and conduct other business within the community.</p>
<p>9.5 Tourism Development The existing commercial tourism market is complemented by a diverse range of new sustainable tourism opportunities to build the local economy and employment sector.</p>	<p>The Project may represent an attraction for tourists, but tourism will be a secondary outcome of the Project. The financial success of the Project will not be reliant on tourism visitations.</p> <p>Regardless, the tourism associated with the Project has the opportunity to support the local economy and employment sector.</p>
<p>Desired Regional Outcome 10: Infrastructure The region's communities have access to well-planned, coordinated, accessible, sustainable and reliable infrastructure.</p>	
<p>10.1 Infrastructure planning Efficient, well-planned infrastructure supports population growth, economic opportunities and service provision in a sustainable manner.</p>	The Project has been rigorously planned and designed. This has included choosing a location with an identified wind asset such as the Coopers Gap area which has a high wind resource, particularly in relation to other central southern Queensland areas. In addition, it has included site specific refinement through evaluating impact on vegetation, land use, geotechnical, engineering requirements and topographical constraints.
<p>10.2 Protecting key sites and corridors Current and future infrastructure sites and corridors are identified, protected and appropriately managed.</p>	The very nature of this Project is to identify and protect an area for the provision of infrastructure and to appropriately manage its delivery.
<p>10.3 Energy Energy is reliably provided to support growth in an economically and ecologically sustainable manner.</p>	<p>The Project will be an economically and environmentally viable source of renewable energy.</p> <p>The Project site has been identified as containing significant potential for harnessing renewable wind energy for Queensland.</p>

Based on the broad themes of ecologically sustainable development, direct and indirect stimulation of the subregional and regional economy, ongoing Project Site refinement, land owner's willingness in being involved and provision of renewable energy, the Project advances the interests of the WBBRP. Additional benefits are likely to accrue from employment generation (construction and operation), in addition to some potential tourism generation (inter-regional and intra-regional) for the local area.

11.5.3 Darling Downs Regional Plan – October 2013

The Darling Downs region includes the local government areas (LGAs) of Balonne Shire Council, Goondiwindi Regional Council, Maranoa Regional Council, Southern Downs Regional Council, Toowoomba Regional Council and Western Downs Regional Council.

The Darling Downs Regional Plan was released in October 2013 and provides strategic direction and policies to deliver regional outcomes which alignment with the State's interests in planning and development. As a statutory regional plan, it takes precedence over the previous non-statutory Surat Basin Regional Planning Framework which covered Maranoa Regional Council, Western Downs Regional Council and Toowoomba Regional Council.

The Darling Downs region has some of Queensland's most productive and resource rich terrain featuring prime agricultural land and extensive deposits of thermal coal, coal seam gas, petroleum and other minerals. The region has some of the state's best assets, with high value scenic and natural amenity, vibrant towns and strong communities underpinned by a diverse range of cultural values. The region encompasses a variety of regional landscapes, including urban and rural holdings, agricultural production, resource and mine sites, and national and state parks.

The plan provides policy responses to resolve the region's most important issues affecting its economy and the liveability of its towns. The plan specifically provides direction to resolve competing state interests relating to the agricultural and resources sectors, and to enable the growth potential of the regions towns.

Table 11.3 provides a commentary of the Project with respect to regional outcomes and regional policies outlined in the plan.

Table 11.3 Regional Outcomes and Policies of the Draft Darling Downs Regional Plan of relevance to the Project

Regional Outcome	Regional Policy	Relevance to Project
<p>Protecting Priority Agricultural Land Uses while supporting co-existence opportunities for the resources sector</p> <p>Agriculture and resources industries within the Darling Downs region continue to grow with certainty and investor confidence</p>	1. Protect Priority Agricultural Land Uses within Priority Agricultural Areas.	The Project is located within the Proposed Priority Agricultural Area.
	2. Maximise opportunities for co-existence of resource and agricultural land uses within Priority Agricultural Areas.	The impact on agricultural land will be minimal. Owners of involved properties have existing agreements with AGL with the intent of having wind turbines on their property.
<p>Providing certainty for the future of towns</p> <p>The growth potential of towns within the Darling Downs region is enabled through the establishment of Priority Living Areas. Compatible resource activities within these areas which are in the communities' interest can be supported by local governments.</p>	3. Safeguard the areas required for the growth of towns through establishment of Priority Living Areas.	The property owners' existing rural and agricultural activities and the Project can co-exist as a wind farm does not preclude on-going rural and agricultural activities such as horticulture or animal husbandry.
	4. Provide for resource activities to locate within a Priority Living Area where it meets the communities' expectations as determined by the relevant local government.	Discussion of potential agricultural business impacts is provided in Chapter 10 Social-economics.
		The Project will not be located within Priority Living Areas.
		The Project will not be located within Priority Living Areas.

11.6 Relevant local government planning instruments

It is important that the Project complements the future planning intent for the local government areas of Western Downs Regional Council and South Burnett Regional Council. This is to be achieved by reviewing how the Project advances the outcomes sought by the planning schemes for the area, being the Kingaroy Shire Planning Scheme (South Burnett Regional Council), Wambo Shire Planning Scheme and Draft Western Downs Planning Scheme (Western Downs Regional Council). The desired environmental outcomes and strategic outcomes expressed by the planning schemes are designed to advance the achievement of ecological sustainability within the local government area, and are the basis upon which all other aspects of the planning scheme are implemented.

11.6.1 Wambo Shire Planning Scheme

The Wambo Shire Planning Scheme came into effect in April 2005 and remains the planning scheme for the former Wambo Shire Council local government area within the Western Downs Regional Council. Desired environmental outcomes within the planning scheme are listed in Table 11.4, and a comment is provided on the relevance to the Project.

Table 11.4 Wambo Shire Planning Scheme desired environmental outcomes and their relevance to the Project.

Desired environmental outcomes	Relevance to the Project
Natural Environment	
<p>Development is managed to minimise the adverse impacts on air and water quality, to prevent land degradation, loss of habitat and biodiversity and to protect riparian areas.</p>	<p>The development of the Project aims to minimise adverse impacts upon the environment as a whole and has the ability to provide positive impacts for the community, region and state.</p> <p>It is additionally noted that involved property owners have willingly entered into agreements with AGL and that the property owners' existing rural and agricultural activities and the wind farm can co-exist. The Project does not preclude on-going rural and agricultural activities such as horticulture or animal husbandry.</p> <p>It is unlikely that the Project would preclude the use of the land for another purpose in the future as the infrastructure does not impact upon the land's long term viability.</p> <p>The Project is not expected to have any significant impact on the overall condition of the groundwater basins. Potential impacts associated with the Project would be localised, and consistent with the extraction of water supplies for construction and operational purposes, and mishandling of hazardous materials, both during the construction and operational phases of the Project. Further discussion on the mitigation of these localised impacts is provided in Chapter 15 Groundwater.</p> <p>The habitat and biodiversity values within the Study Area have been investigated and are presented in Chapter 12 Flora and Fauna. This includes identification of the high value vegetation, fauna habitat, essential habitat and wetlands and watercourses in the Project Site. The identification process found that remnant vegetation and other areas of high ecological value comprises only a small percentage of the Study Area. Where areas containing habitat and biodiversity values may be impacted this can be largely mitigated through micro-sitting of turbines, offsetting and rehabilitation.</p> <p>In addition to the above, site specific refinements have been undertaken so that the Project does not significantly degrade the land, habitats and biodiversity. The refinements evaluated impact on high value vegetation and geology, land usage patterns and efficient land use, geotechnical investigations, engineering requirements and topographical constraints</p>

Desired environmental outcomes	Relevance to the Project
Protected areas (including Bunya Mountains and Lake Broadwater) and areas and items of cultural significance (including areas along watercourses) are identified to ensure their environmental and landscape values and historic significance are protected and enhanced through compatible development.	The Project avoids all protected areas, including the nearby Bunya Mountains. A cultural heritage due diligence assessment has been undertaken for this EIS (refer to Chapter 18 Cultural Heritage). The findings of this due diligence assessment will form the basis of a comprehensive cultural heritage management process that will occur prior to construction. The findings and recommendations generated by this process will help to inform the detailed design of the Project.
Economic Development	
The Planning Scheme reinforces the role of Jandowae as the principal place for business and commerce within the Shire.	The Project will likely use Jandowae as the principal place of business. Jandowae is likely to receive a positive economic impact from the Project from increase local spending and sourcing Project components locally, where possible.
The local service roles of Macalister, Warra, Jimbour, Bell and Kaimkillenbun are protected and enhanced.	It is possible that Jandowae would be the primary local service centre for the Project, while Bell and other towns in the surrounding district will likely provide day-to-day services for the wind farm both during construction and operation.
Productive rural land (such as the Jimbour floodplain), rural industries (such as intensive animal industries, cotton and grain processing) and natural features (including mineral and extractive resources and tourist resources such as the Bunya Mountains and Lake Broadwater) are protected to reflect and enhance their continued economic potential and viability.	The Project will have minimal direct and indirect impacts on rural land and rural industries. Extractive resources (Key Resource Areas) will not be impacted by the Project. It is not expected that the Project will have an adverse effect on tourism resources; rather evidence in other parts of Australia suggests that there is the potential for the Project to add an extra element to the tourism industry in the region, through being a point of interest.
The industrial area in Jandowae is consolidated and protected and its role as the key area for industrial activity is reinforced.	N/A
Community and Services	
The built environment reflects community expectations and contributes to the amenity and rural character of Wambo Shire.	The nature of rural amenity is multi-faceted and is comprised of a wide range of quantitative and qualitative elements. The entirety of this EIS addresses various aspects of rural amenity and the chapters have evaluated the potential impacts on the rural amenity (that is, a largely rural residential and agricultural area) of the Study Area. The various chapters in this EIS have assessed the impact to rural amenity in the Project's context and have generally found that where an impact exists, the impact will be consistent with appropriate standards or can be minimised with appropriate mitigation measures.
People are connected to public spaces and community services through an appropriate land use structure and the provision of infrastructure, particularly within the urban centres of the Shire.	N/A

Desired environmental outcomes	Relevance to the Project
Development contributes to the health and safety of people and provides a diverse range of housing types, services and facilities.	The Project is not expected to have any impacts on the health or safety of the surrounding community. Refer to Chapter 10 Socio-economics for further details.
Infrastructure (including water and sewerage and roads) reflects community expectations and engineering standards and is provided in an orderly and logical sequence to ensure cost effectiveness.	The Project is considered to be an example of logical and efficient infrastructure provision.

Table 11.4 suggests that the Project generally advances the achievement of the desired environmental outcomes within the Wambo Shire Planning Scheme.

The Project is located within the Rural zone of the Wambo Shire Planning Scheme. Intended outcomes of the Rural Zone Code are based on the shire-wide desired environmental outcomes as outlined in Table 11.5.

Table 11.5 Wambo Shire Rural Zone Code Outcomes

Outcome	Relevance to Project
1. The Shire has an appropriate land use structure that is in accordance with the environmental characteristics of the locality and that avoids conflict between incompatible uses	<p>The Project will represent a change to the existing land use structure of the area. It is generally considered that this change takes into account the environmental characteristics of the Study Area and is unlikely to create a conflict between the existing and proposed uses. This is because:</p> <ul style="list-style-type: none"> - The biodiversity and ecological values and natural assets within the Study Area have been investigated to understand any potential impact the Project may have on these values. High value areas inform the location of certain turbines and minimise the impacts upon valuable habitats and natural assets. Micro-siting will be undertaken during detailed design to further minimise impact on the areas of remnant vegetation where possible - The advantageous wind environment within the local area provides the opportunity for the local community, and surrounding townships, to benefit from the Project through financial compensation for land owners and job creation in the local community - The Project will support the local area through sourcing employees locally, and up-skilling these employees where necessary. Additionally, there is a potential flow on economic effect from locally based employees who live and conduct other business within the community - Involved property owners have willingly entered into agreements with AGL with the intention that the property owner's existing rural and agricultural activities and the wind farm can co-exist. As discussed in Chapter 10 Socio-economics, the Project does not preclude on-going rural and agricultural activities such as horticulture or animal husbandry. <p>It is particularly noted that the Project Site has been refined to take into account, and avoid where possible, areas of high ecological, natural and biodiversity value to consider efficient layout and land use; geotechnical requirements for stability, engineering requirements for construction and operation and topographical constraints.</p>

Outcome	Relevance to Project	
2. The Rural Zone retains its viability as an area of primary production	<p>The Project will occupy approximately 1% of the land available for development on host properties allowing the continuation of existing rural activities. Regardless, it is noted that the Project and agricultural activities can co-exist and one does not preclude the other.</p> <p>It is additionally noted that it is unlikely that the Project would preclude the use of the land for another purpose in the future. The construction and operation of the Project is unlikely to impact upon the land's long term viability, particularly for future agricultural uses.</p>	
3. Future rural activities are appropriately located within the Rural Zone and existing and future rural activities are not prejudiced by inappropriate development	<p>The primary uses within the Rural Zone are rural residential living and agricultural activities, including cropping and horticultural and grazing and animal husbandry. The Project is appropriately located and is unlikely to prejudice future uses because:</p> <ul style="list-style-type: none"> - The Study Area has a high wind resource, particularly in relation to other central southern Queensland areas - Involved property owners have willingly entered into agreements with AGL and the Project will not be displacing any rural residences and properties - The existence of wind turbines on a rural property does not preclude on-going rural and agricultural activities such as horticulture or animal husbandry. In particular, there will likely be no impact on intensive cropping and horticultural properties due to the topography and soils and grazing and livestock breeding will be able to continue - The construction and operation of the Project is unlikely to impact upon the land's long term viability, particularly for future rural and agricultural uses - Rural residential activities will still be able to occur outside of the Project Site. <p>Therefore, the Project is unlikely to prejudice or adversely impact upon the viability of agricultural activities, businesses and residences.</p>	
4. Within the Rural Zone, development:	a. Maintains the environment, including soil, air and water, compatible with healthy natural systems and ensures public health and safety;	Specific technical assessments have been undertaken to identify and mitigate potential adverse impacts on the specific environmental features of the Project Site.
	b. Protects Good Quality Agricultural Land (GQAL) from fragmentation, alienation or encroachment of incompatible land uses in accordance with State Planning Policy 1/92 – Development and Conservation of Agricultural Land;	A review has been undertaken to identify potential impacts upon GQAL. Generally, the Project will occupy a negligible percentage of rural land in the region and will not result in severance of productive areas.
	c. Is located, designed and operated in a manner that protects and enhances the predominant rural scale, intensity, form and character;	<p>Chapter 5 provides a landscape and visual assessment. The assessment discusses that even well-sited and designed wind farms result in changes to the existing environment and that the key issues are the changes in the character of the landscape close to the site and visual impacts on individual properties nearest the Project.</p> <p>The assessment identifies potential visual amenity impacts and provides appropriate mitigation strategies for the Project.</p>
	d. Maintains the rural amenity;	Specific technical assessments for Landscape and Visual Amenity and Noise and Vibration have been undertaken to minimise potential impacts upon the acoustic and visual values of the area.

Outcome	Relevance to Project	
	e. Does not prejudice or impact adversely on other uses including those within other zones;	See the discussion provided above for Outcome 3.
	f. Does not prejudice extractive or mining resources;	<p>The proposed siting of turbines has considered the location of Key Resource Areas in accordance with SPP 2/07 – Protection of Extractive Resources.</p> <p>The Study Area is presently subject to one granted exploration permit (refer to Section 11.4.1). The location of the Project on the ridge line and the topography of the surrounding area is likely to mean that this permit will not affect the wind farm infrastructure.</p>
	g. Has an appropriately designed access to the road network, and traffic generated by the development does not impact adversely on the local road network;	<p>The Project will include access tracks which provide landholders with enhanced internal connectivity on their properties.</p> <p>Chapter 13 Transport provides an assessment of potential transport related impacts. The assessment found that there will likely be a more significant impact during construction due to traffic generation over the construction period of the Project. It is generally considered that with the implementation of a Traffic Management Plan (TMP) that these impacts could be appropriately mitigated.</p> <p>Importantly, Chapter 13 Transport finds that significant impacts are not expected during the operation and maintenance of the Project.</p>
	h. Protects areas and sites of conservation importance, including cultural and high landscape values;	<p>The Project avoids all protected areas, including the nearby Bunya Mountains. A cultural heritage due diligence assessment has been undertaken for this EIS (refer to Chapter 18 Cultural Heritage). The findings of this due diligence assessment form the basis of a comprehensive cultural heritage management process that will occur prior to construction. The findings and recommendations generated by this process will help to inform the detailed design of the Project.</p>
	i. Is undertaken in an orderly and logical sequence to achieve an efficient provision of infrastructure;	<p>As wind resources are only viable in particular locations, identifying appropriate locations for wind farm development is the first very important step in their planning. The Study Area has a high wind resource, particularly in relation to other central southern Queensland areas. This initial identification has been complemented with the fact that the existing Powerlink transmission network now has a 275 kV transmission line. The Energy generated by the Project will be provided directly into this existing infrastructure. Therefore, it is considered that a logical progression is being followed for this proposed Project.</p>

Outcome	Relevance to Project	
	j. Maintains the integrity of the Condamine floodplain;	N/A – The Project is not located within the Condamine floodplain.
	k. Is located and designed in ways that minimise the need for flood, bushfire and landslide mitigation, and to protect people and premises from such natural events;	<p>The Study Area contains areas of bushfire hazard and exceeding 20° slope. The location of the turbines on ridgelines means the Project is not subject to flood hazard. It is considered that the Project will be designed and constructed appropriately to adequately mitigate the risk to the Project and the surrounding area. In particular:</p> <ul style="list-style-type: none"> - That the Project will be designed and constructed to function effectively in an area of high bushfire risk, and a Bushfire Management Plan (BMP) must be prepared to manage and mitigate risks - Slopes within the Study Area vary significantly, from very shallow to gradients greater than 20° - The location of the Project is at the top of ridge lines on plateau areas, and is likely to preclude the possibility of flooding directly affecting the wind turbines and associated infrastructure.
	l. Has water supply, stormwater disposal, sustainable effluent and waste disposal and power, to appropriate standards, adequate for the use; and	<p>During construction, the working crews will have mobile ablution facilities and appropriate management plans (including a CEMP) will be implemented to mitigate potential stormwater, waste and water supply issues.</p> <p>Any permanent facilities will be connected to all relevant utilities.</p>
	m. Does not impact adversely on infrastructure.	<p>The Project is unlikely to have a long lasting adverse impact on infrastructure. It is considered that the Project will increase resilience of energy supplies through infrastructure diversification. It is also not dependant on external fuel sources to operate and can continue to operate during disaster events.</p> <p>During construction there may be an impact on local roads, including increased traffic volumes, large vehicles and increased maintenance requirements. Further discussion of the potential impacts and associated mitigation measures on the road infrastructure is discussed in Chapter 13 Transport.</p>
5. Within the Rural Zone, the Rural Zone Code allows for:	a. Tourist-related uses (bed and breakfast premises and visitor accommodation) and home businesses where they are of a small scale and are compatible with surrounding uses;	<p>Wind farms are not currently anticipated by the planning scheme due to the relatively low levels of development for wind farms. The underlying use for rural and agricultural activities is not precluded by the wind farm and they can continue on site.</p> <p>For any development, if a use has not been anticipated, it is important to confirm how the development complements the strategic directions of the zone and desired environmental outcomes</p>
	b. The protection of existing intensive animal industries and extractive industries from	

Outcome	Relevance to Project	
	incompatible uses;	for the planning scheme. It is generally considered that with appropriate mitigation of amenity impacts, short term increases in traffic generation and limiting impacts on high value natural assets, the Project broadly complements the future planning intent for the local government areas of Western Downs Regional Council.
	c. Intensive animal industries and extractive industries, where located and operated so as to ensure no detrimental impact on surrounding uses or on the environment; and	
	d. Limited industrial uses, where it can be demonstrated those uses are associated with rural production and cannot reasonably be established in the Industrial Zone.	

Table 11.5 demonstrates that the Project will be generally consistent with the requirements of the Rural zone of the Wambo Shire Planning Scheme.

11.6.2 Kingaroy Planning Scheme

The Kingaroy Planning Scheme was gazetted in July 2006 and is the relevant planning scheme for the Project Site within the South Burnett Regional Council LGA. Desired environmental outcomes within the planning scheme are listed in Table 11.6, and a comment is provided on the relevance to the Project.

Table 11.6 Kingaroy Planning Scheme DEOs and their relevance to the Project.

Desired environmental outcomes – The nature, location, design and operation of development...	Relevance to the Project
a. ...protects the environmental values of the Shire's natural features, significant native vegetation, land resources, geological attributes, natural resources and non-renewable resources from any adverse effects from disturbance, pollution or degradation.	<p>The Project will represent a change to the existing environment of the area however, it is generally considered that this will be done in an orderly, well-planned way that has considered and minimised potential adverse impacts from disturbance, pollution or degradation.</p> <p>The impact on agricultural uses, land and resources will be minimal in most locations. Owners of involved properties have existing agreements with AGL with the intent of having wind turbines on their property.</p> <p>The property owners' existing rural and agricultural activities and the Project can co-exist as a wind farm does not preclude on-going rural and agricultural activities such as horticulture or animal husbandry.</p> <p>The biodiversity and ecological values and natural assets within the Study Area have been investigated in desktop and field based studies to understand any potential impact the Project may have on these values.</p> <p>Further discussions of potential impacts on flora and fauna values (Chapter 12), water quality (Chapters 14 and 15), and land (Chapter 16) are discussed in this EIS.</p>
b. ...minimises adverse effects upon the quality and quantum of surface and ground waters suitable for servicing needs in the region.	<p>The Burnett and Condamine Groundwater Basins are straddled by the Project Study Area. The Study Area is underlain by the sediments of the Great Artesian Basin.</p> <p>The Project is not expected to have any significant impact on the overall condition of the groundwater basins. Potential impacts associated with the Project would be localised, and consist of the extraction of water supplies for</p>

Desired environmental outcomes – The nature, location, design and operation of development...	Relevance to the Project
	<p>construction and operational purposes, and mishandling of hazardous materials; both during the construction and operational phases of the Project.</p> <p>Chapter 15 Groundwater discusses these impacts further and provides mechanisms to further protect the water quality and waterway health. Mitigation measures for the localised impacts include:</p> <ul style="list-style-type: none"> - Obtaining relevant groundwater extraction entitlements; - Development of a MHP; and - Including erosion and sediment control in the CEMP. <p>It is considered that the Project is unlikely to adversely impact the quality and amount of groundwater such that there would be an impact on water supply to the region.</p>
<p>c. ...minimises risks to the safety and wellbeing of people, property and the natural environment (as resulting from impacts from natural, technological and development related hazards) to an acceptable level.</p>	<p>Throughout the development of the Project and the coordinated project process the safety and wellbeing of people, property and the natural environment has been a key consideration.</p> <p>Specifically, impacts to people, property and environment have been considered through the socio-economic, landscape and visual, noise and vibration, shadow flicker and electromagnetic interference chapters.</p> <p>Although the Project is in a natural hazard risk area for bushfire, it is considered that the Project will be designed and constructed appropriately to adequately mitigate the risk to the Project and the surrounding area (refer to Chapter 9 Hazards, Health and Safety).</p>
<p>d. ...protects the economic values of extractive and mineral resources, good quality agricultural land, water and land resources and timber resources, so facilitating their availability for sustainable use to satisfy the needs for these resources in the region.</p>	<p>The Project aims to capitalise on the advantageous wind resource environment within the local area and will do so in a sustainable manner.</p> <p>The Project does not significantly impact the extractive and mineral resource sectors. The Study Area includes some land classified as Priority Agricultural Areas; however it is expected that property owners will be able to continue agricultural uses in conjunction with the development and ongoing operation of the Project. Owners of properties containing wind farm infrastructure are willingly involved in the Project and will continue agricultural activities on their properties, should they wish to do so.</p>
<p>e. ...provides a benefit to, and fulfils an economic demand from, the community and makes good any detriment to the residents of the area in which it is located as a result of:</p> <ol style="list-style-type: none"> i. Existing or planned services; or ii. People being put in jeopardy by the development due to physical or financial causes. 	<p>Wind farms are compatible with other land uses and do not affect the productive capacity of the land. There is significant opportunity for local employment during the construction and operation of the Project. Furthermore, wind farms provide an on-going financial boost to the local economy during the life of the wind farm through land-related payments and contribution to a local community fund.</p> <p>As discussed in Chapter 10 Socio-economics, construction workers are likely to be sourced from local areas and any</p>

Desired environmental outcomes – The nature, location, design and operation of development...	Relevance to the Project
	<p>additional workers will be accommodated in local towns in proximity to the site (such as Bell, Kumbia, Jandowae, Kingaroy or Dalby). As local workers will be preferred for construction, it is not expected that the introduction of non-local construction workers will result in anything more than a temporary and minor local impact on the population for the duration of the Project's construction.</p> <p>During operation of the Project, it is likely that one full-time job will be required for every 4-6 wind turbines. Consequently, it is expected that the Project will generate approximately 10-20 full-time jobs throughout the operational life of the Project. These maintenance jobs are generally provided to local people seeking employment, who are trained appropriately by the wind farm developer.</p> <p>Additionally, there is a potential flow-on economic effect from locally based employees who live and conduct other business within the community.</p>
f. ...minimises conflicts between activities, traffic and infrastructure elements, and maintains the existing and planned character and amenity of the area in which development is located.	<p>Traffic impacts will need to be managed effectively during the construction phase, through the implementation of a TMP.</p> <p>The rural character and amenity of the area will remain. Chapter 13 Transport provides a discussion on potential traffic impacts associated with the Project. Importantly, Chapter 13 Transport finds that significant impacts are not expected during the operation and maintenance of the Project.</p>
g. ...ensures that demands on community and emergency services are met to a level which is commensurate with standards for environmental health and public wellbeing.	<p>The Queensland Department of Community Safety (DCS) will be consulted prior to construction of the Project, and notified of likely timeframes for construction. The Project detailed design will be in accordance with relevant standards, including requirements for emergency vehicle access. A CEMP will be prepared that comprehensively deals with any issues raised by DCS (refer to Chapter 20 Project Commitments).</p>
h. ...occurs where services and facilities required in respect of the development are existing, planned or provided by the developer, ensuring efficient, cost effective, orderly, equitable and environmentally sound use or provision of physical infrastructure so acceptable standards for environmental health and public wellbeing are maintained.	<p>The Project represents the efficient and environmentally sound provision of energy infrastructure.</p>
i. ...contributes positively towards the efficient, orderly and integrated use and expansion of the Shire's movement systems, for safe, non-discriminatory and convenient access and movement within and around the Shire.	N/A
j. ...contributes positively towards maintaining a strong, productive economy built on: i. Protecting the competitive advantages of the primary industry sectors;	<p>The Project is compatible with primary industries and only uses approximately 1% of the land available for development. The Project presents the potential to diversify the region's tourism industry (although it is noted</p>

Desired environmental outcomes – The nature, location, design and operation of development...	Relevance to the Project
<ul style="list-style-type: none"> ii. Diversifying primary and secondary industry sectors; iii. Supporting the infrastructure sectors and information technology; iv. Diversifying tourism products on the basis of sustainable use of natural, historic, indigenous, water and rural based attributes supported by a range of services and facilities appropriate to the natural and rural setting, and which meet the needs of visitors to the region; and v. Protecting the local employment and skills development sectors. 	<p>that tourism will be a secondary outcome of the Project and the financial success of the Project will not be reliant on tourism visitations), and to enhance the local employment levels and skill base (through providing jobs during construction and operational phases).</p> <p>The Project has been designed and refined through a process of filtering possible impacts, such as impact on high value vegetation and geology, land usage patterns and efficient land use.</p> <p>It is particularly noted that the Project Site has been refined to take into account, and avoid where possible, areas of high ecological, natural and biodiversity value.</p>
<ul style="list-style-type: none"> k. ...protects and consolidates the commercial and community services provided through business and commercial centres identified in the planning scheme so that the centres: <ul style="list-style-type: none"> i. Support the rural, resource and tourism sectors; and ii. Satisfy the community's needs for the goods, services and facilities reasonably expected to cater to rural, rural residential and urban localities. 	<p>It is noted that the Project may represent an attraction for tourists, but tourism will be a secondary outcome of the Project. The financial success of the Project will not be reliant on tourism visitations.</p> <p>Regardless, the tourism associated with the Project has the opportunity to support the local economy and employment sector.</p> <p>There is significant opportunity for local employment and procurement during the construction and operation of the Project. Furthermore, wind farms provide an on-going financial boost to the local economy during the life of the wind farm through land-related payments and contribution to a local community fund.</p>
<ul style="list-style-type: none"> l. ...protects the built and street environments. 	N/A
<ul style="list-style-type: none"> m. ...protects the indigenous and non-indigenous cultural heritage values of the places, features and landscapes that reflect the community's history and identity. 	<p>A cultural heritage due diligence assessment has been undertaken for this EIS (see Chapter 18 Cultural Heritage). The findings of this assessment will form the basis of a comprehensive cultural heritage management process that will occur in parallel with the coordinated project process. The findings and recommendations generated by this process will help to inform the detailed design of the Project and will continue to do so throughout the Project's further detailed design and construction.</p>
<ul style="list-style-type: none"> n. ...provides reasonable access to appropriate and affordable housing to meet the differing needs of residents within the Shire. 	N/A
<ul style="list-style-type: none"> o. ...facilitates equity of access to a range of community, recreational and open space facilities and services which effectively maintain social standards. 	N/A
<ul style="list-style-type: none"> p. ...protects the scenic values of the diverse rural and natural landscapes in the Shire, particularly relative to these seen from major transport corridors and vantage points. 	<p>There are few landscapes in which a wind farm will not introduce a new and distinctive feature. In order to perform their function effectively, wind turbines are likely to be tall, frequently located in open landscapes, difficult to conceal and therefore likely to be highly visible and incongruent with the existing landscape character. Accordingly, all wind farms will result in some significant changes to the landscape and visual resource due to their size and</p>

Desired environmental outcomes – The nature, location, design and operation of development...	Relevance to the Project
	<p>prominence.</p> <p>However, when this change and impact is considered in the context of the wider Project assessment, the impact is considered generally acceptable. This is due to the significance of this ecologically sustainable development that will contribute positively to the ecological, social and economic context of the region.</p>

The Project is generally supportive of the desired environmental outcomes of the Kingaroy Planning Scheme. As discussed in Table 11.6, the Project provides an opportunity for economic diversification in the community, potentially promoting the viability of existing rural enterprises. In this way, the Project is likely to help achieve the desired environmental outcomes of the Kingaroy Planning Scheme. Table 11.7 describes how the Project will be generally consistent with the requirements of the rural locality of the Kingaroy Shire Planning Scheme.

Table 11.7 Kingaroy Shire Rural Locality Code Outcomes

Outcome	Relevance to Project
<p>i. Development is comprised predominantly of rural and non-urban uses, supported by rural industries and provided with utility services reasonably expected to service or locate in a rural area;</p>	<p>The Project will occupy approximately 1% of the total land area available on host properties, allowing the continuation of existing rural activities. It is noted that a wind farm and agricultural activities can co-exist and one does not preclude the other.</p> <p>Development of the Project will not change the predominant use of land for rural purposes.</p>
<p>ii. Except for low key activities which support the rural tourism or primary industry sectors, other commercial activities, community services, recreational facilities and industries servicing the rural community are provided in the town and village areas;</p>	<p>N/A</p>
<p>iii. Development for other than rural uses and uses which directly support rural activities and rural communities occurs only in response to demonstrable need from the area in which it is proposed to locate;</p>	<p>It is acknowledged that wind farms would not be considered to fit within any of the “allowed” development type for a Rural Locality. However, wind farms will introduce a new use into the area and this has not been anticipated by the planning scheme due to the relatively low levels of development for wind farms. The new underlying use for rural and agricultural activities is not precluded by the wind farm and can continue on site.</p> <p>Importantly, as for any development, if a use has not been anticipated, how the development complements the strategic directions and outcomes of the locality and desired environmental outcomes for the planning scheme is important. It is generally considered that with appropriate mitigation measures the Project broadly complements the future planning intent for the South Burnett Regional Council LGAs.</p>
<p>iv. Non-rural use of lots under 5ha in area is minimised;</p>	<p>N/A</p>
<p>v. Uses and works are compatible with the amenity and character of adjacent areas, including the amenity and character of close settled areas at interface locations;</p>	<p>Amenity and character are multi-faceted and comprised of a wide range of quantitative and qualitative elements. This EIS addresses the rural context of its location as a key issue and the various chapters completed as part of the assessment have evaluated the potential impacts in the Project context, that is, a largely agricultural area. The various chapters in this report have assessed the impact to rural amenity in the</p>

Outcome	Relevance to Project
	<p>Project's context and have generally found that where an impact exists, the impact will be consistent with appropriate standards or can be minimised with appropriate mitigation measures.</p> <p>There are certain impacts that may not meet a particular standard and cannot be fully mitigated. This is considered generally acceptable in the context of the wider Project due to the significance of this ecologically sustainable development that will contribute positively to the ecological, social and economic context of the region.</p>
<p>vi. Uses and works maintain the safety of people and property as reasonably expected for rural areas;</p>	<p>The Study Area contains areas of bushfire hazard and exceeding 20° slope. The location of the turbines on ridgelines means the Project is not subject to flood hazard. It is considered that the Project will be designed and constructed appropriately to adequately mitigate the risk to the Project and the surrounding area. In particular:</p> <ul style="list-style-type: none"> - The Project will be designed and constructed to function effectively in an area of high bushfire risk, and a BMP must be prepared to manage and mitigate risks. - Slopes within the Study Area vary significantly, from very shallow to gradients greater than 20°. - The location of the Project at the top of ridge lines on plateau areas is likely to preclude the possibility of flooding directly affecting the wind turbines.
<p>vii. Adverse effects from development are minimised to an acceptable level so the environmental, scenic, economic, cultural heritage, indigenous and land/water resource values characterising the area, its productivity and the capacity of existing infrastructure are protected;</p>	<p>Throughout the development of the Project and the coordinated project process, the potential for adverse impacts will be identified and appropriate mitigation measures developed to minimise impacts from the Project.</p> <p>There are few landscapes in which a wind farm will not introduce a new and distinctive feature. In order to perform their function effectively, wind turbines are likely to be tall, frequently located in open landscapes, difficult to conceal and therefore likely to be highly visible and incongruent with the existing landscape character. Accordingly, all wind farms will result in changes to the landscape and visual resource due to their size and prominence. However, this change is considered generally acceptable due to the significance of this ecologically sustainable development.</p> <p>The environmental values (flora and fauna) within the Study Area have been investigated and are presented in Chapter 12 Flora and Fauna. This chapter identifies the high value vegetation, fauna habitat, essential habitat and wetlands and watercourses occurring within the Project Site. Desktop and field assessments have shown that remnant vegetation and other areas of high ecological value comprise only a small percentage of the Study Area. Where environmentally sensitive areas may be impacted this can largely be mitigated through micro-siting of turbines and rehabilitation.</p> <p>The economy of the local area is unlikely to be adversely impacted as there is significant opportunity for local employment during the construction and operation of the Project. Furthermore, wind farms provide an on-going financial boost to the local economy during the life of the wind farm through land-related payments and contribution to a local</p>

Outcome		Relevance to Project
		<p>community fund.</p> <p>A cultural heritage due diligence assessment has been undertaken for this EIS (refer to Chapter 18 Cultural Heritage). The findings of this assessment will form the basis of a comprehensive cultural heritage management process that will occur in parallel with the coordinated project process. The findings and recommendations generated by this process will help to inform the detailed design of the Project and will continue to do so throughout the Project's further design and construction.</p> <p>The Project is not expected to have any significant impact on the overall condition of the groundwater basins. Potential impacts associated with the Project would be localised, and consist with the extraction of water supplies for construction and operational purposes, and mishandling of hazardous materials; both during the construction and operational phases of the Project (see Chapter 15 Groundwater).</p> <p>The Project does not preclude on-going rural and agricultural activities such as horticulture or animal husbandry.</p> <p>It is unlikely that the Project would preclude the use of the land for another purpose in the future as the infrastructure does not impact upon the land's long term viability.</p> <p>In addition to the above, a site specific refinement evaluating impact on high value vegetation and geology, land usage patterns and efficient land use, geotechnical investigations, engineering requirements and topographical constraints has been undertaken to ensure the Project does not significantly degrade the land, habitat and biodiversity.</p>
viii. Reconfiguring if for bona fide reasons associated with:	a. Realising the productivity of land for rural purposes; or	N/A
	b. Supporting viability of rural activities in rural areas;	N/A
ix. Reconfiguring maintains median farm sizes, and		N/A
x. Development does not result in a proliferation of individual property accesses onto major roads or at the outskirts of towns and villages; or		The Project will integrate with existing owner access tracks and will provide landowners with enhanced internal connectivity on their properties.
xi. The Open Space preferred land use area is protected from intensive development that degrades its natural state or adversely affects its landscape, cultural heritage, indigenous or conservation values.		The Project is not located within the Open Space preferred land use area.

The subdivision of up to 4 ha of freehold land for the proposed substation will trigger a code assessable development application seeking a Development Permit for reconfiguring a lot under Part 3 Division 2 Table 3B of the Kingaroy Planning Scheme. An assessment will be undertaken of the compatibility of the lot reconfiguration with the applicable codes and other relevant planning instruments in accordance with Section 313 of the *Sustainable Planning Act 2009*.

11.6.3 Draft Western Downs Planning Scheme

The Draft Western Downs Planning Scheme was initially released for public comment in mid-2012. An Amended Draft Western Downs Planning Scheme was released for public notification in late 2016 following State Government review. Once finalised, the planning scheme will replace the six planning schemes for the former local government areas of Chinchilla, Dalby, Murilla, Tara, Taroom and Wambo.

The policy direction for the scheme is set by the strategic plan which is comprised of five themes. There are a range of strategic outcomes and supporting elements expressed under each theme. Table 11.8 provides a summary of the strategic outcomes and their relevance to the Project.

Table 11.8 Draft Western Downs Planning Scheme strategic framework themes and elements

Themes and strategic outcomes	Relevance to the Project
Liveable Communities and Housing	
<p>(1) The settlement pattern of the Western Downs supports, enhances and consolidates the existing network of communities and Urban areas located on the Warrego highway as the primary locations for future urban growth and service delivery.</p> <p>(2) The settlement pattern manages projected population growth and distribution by ensuring sufficient urban land is available that avoids biophysical constraints and natural hazards, protects natural resources, maintains the character and integrity of individual communities and ensures the delivery of necessary infrastructure and services.</p> <p>(3) The settlement pattern contains urban development within identified boundaries to create compact, diverse and vibrant communities. Significant urban development for residential purposes takes advantage of the access to existing facilities and services. The settlement pattern maximizes the utilisation of existing infrastructure and maintains and enhances access to services, employment opportunities and recreational and social infrastructure for all residents.</p> <p>(4) The settlement pattern provides opportunities for industrial growth to cater for the increase in local businesses required to service the needs of the resource and agricultural sectors. Industrial development is directed to areas separated from land uses that are considered to be sensitive or at risk from the impacts of industrial activity. Industrial land is located in accessible locations supported by transport infrastructure and necessary urban services to efficiently service the needs of the community.</p> <p>(5) Rural residential development provides an alternative style of living that meets the diverse lifestyle needs of the regions residents. Rural residential development has good access to necessary infrastructure and services and contained to limit the further fragmentation of productive rural lands. Rural residential development is also located in nodes to avoid longterm constraints to the expansion of Urban areas.</p> <p>(6) The settlement pattern of the Western Downs</p>	<p>The Project will introduce new infrastructure within rural areas however it will not drive or facilitate any changes to the desired settlement pattern within the Western Downs Regional Council area. Existing rural and agricultural land use and activities can co-exist with wind farm infrastructure.</p> <p>It is envisaged that the construction workforce will be accommodated within motels, caravan parks and camps within existing townships.</p>

Themes and strategic outcomes	Relevance to the Project
<p>contributes to the achievement of sustainable and resilient communities. Urban development is compact and walkable with pedestrian and cycle linkages connecting residential areas with service and employment nodes minimizing the reliance on private vehicle use.</p> <p>(7) The future pattern identifies and protects future Urban areas that may potentially accommodate future urban growth beyond the anticipated life of the planning scheme. Future urban, Rural residential and industrial investigation areas are identified in the event that this land is protected outside the life of the planning scheme.</p> <p>(8) Where development is not consistent with the purpose and intent of the zone, overriding community need will need to be demonstrated as well as valid planning justification provided as to why the proposed use cannot be reasonably established in a more appropriate zone.</p> <p>(9) The unique identity of the urban centres and rural townships in the Western Downs is recognised and strengthened through complementary development that positively contributes to the regional identity of the Western Downs.</p> <p>(10) The provision of diverse social and community infrastructure, open space and sport and recreation facilities network across the Western Downs promotes a happy, active, healthy, and connected community.</p> <p>(11) The health, wellbeing and safety of the community are fundamental elements of the identity and character of the communities of the Western Downs. All residents, both temporary and permanent, participate in the rich community life of the region and generate high levels of social capital that promotes community cohesion.</p>	
Environment and Heritage	
<p>(1) The natural environment including its unique natural features, ecological processes and biodiversity values are conserved, enhanced and restored to maintain their biological capacity for the benefit of present and future generations.</p> <p>(2) The productive soils that sustain life supporting ecosystem services and rural production are identified as a valuable resource that is to be protected against the deleterious impacts of urban and incompatible land uses.</p> <p>(3) The hydrological network of the Western Downs contributes to the scenic amenity and biodiversity of the region and downstream catchments including the Murray Darling. The health of the waterways, wetland and the water table of the region is protected from the negative impacts of development to maintain high</p>	<p>Development of the Project will be undertaken in an orderly and well planned manner, based upon the findings of various specialist investigations. Summaries of relevant investigations can be found in the following chapters:</p> <ul style="list-style-type: none"> - Chapter 12 Flora and Fauna, - Chapter 14 Surface Water, - Chapter 15 Groundwater, and - Chapter 16 Topography, Geology and Soils. <p>Based on the findings of these investigations, appropriate management measures and design responses will be implemented to address potential adverse impacts on the natural environment.</p> <p>A cultural heritage due diligence assessment has been undertaken for this EIS (see Chapter 18 Cultural Heritage). The findings of this assessment will form the</p>

Themes and strategic outcomes	Relevance to the Project
<p>standards of ecological health and water quality.</p> <p>(4) The western downs enjoys clean air and quiet ambience that contributes to the health and wellbeing of the community and this high level amenity is protected from the impacts of noise, particulate or odor emitting land use and development.</p> <p>(5) The Western Downs celebrates its indigenous and non-indigenous heritage through the preservation and active use of heritage items and places to create a tangible link with the regions history and past.</p> <p>(6) The distinctive and attractive landscape qualities of the Western Downs including its waterways, mountain peaks, upland and lowland landscape character areas are retained as part of the fabric and identity of the Western Downs and provides a unique sense of place and identity.</p>	<p>basis of a comprehensive cultural heritage management process that will occur in parallel with the coordinated project process. The findings and recommendations generated by this process will help to inform the detailed design of the Project and will continue to do so throughout the Project's detailed design and construction.</p> <p>In relation to landscape qualities it is important to note that there are few landscapes in which a wind farm will not introduce a new and distinctive feature. In order to perform their function effectively, wind turbines are likely to be tall, frequently located in open landscapes, difficult to conceal and therefore likely to be highly visible and incongruent with the existing landscape character. Accordingly, all wind farms will result in changes to the landscape and visual resource due to their size and prominence. However, this change is considered generally acceptable due to the significance of this ecologically sustainable development. Refer to Chapter 5 Landscape and Visual Assessment for further details.</p>
Economic Growth	
<p>(1) The Western Downs supports a diversified and prosperous economy that builds on the existing economic strengths of the region including agriculture and forestry, energy and resource development, manufacturing, tourism and transport.</p> <p>(2) The Western Downs has an abundance of natural resources, including agricultural, extractive, minerals, coal seam gas, biological, energy and water resources. Natural resources including mineral and energy and extractive resources (MEER) are valued, protected and sustainably managed to ensure the benefits of the resources are equitably distributed across all parts of the region and future generations.</p> <p>(3) Traditional industries centered on natural resources development and rural production are adaptable and resilient in response to changing market demands and capitalize on the strategic location of the Western Downs to South East Queensland metropolitan markets and assist in responding to strategies to maintain local and national food security.</p> <p>(4) Rural production and supporting industries remain the predominant economic sector in the Western Downs through the protection and enhancement of ALC Class A and B land that is critical to the sustainability of the sector.</p> <p>(5) The growth of the resource sector is balanced with environmental protection, social responsibility and advancement in other sectors of the regional economy, fostering a skilled and locally based workforce to improve the economic resilience and employment</p>	<p>The impact on agricultural uses, land and resources will be minimal in most locations. Participating landowners have existing agreements with AGL with the intent of having wind turbines on their property.</p> <p>The landowners' existing rural and agricultural activities and the wind farm can co-exist as the wind farm does not preclude on-going rural and agricultural activities such as horticulture or animal husbandry.</p> <p>The Project is compatible with primary industries and only uses approximately 1% of the land available for development. The Project presents the potential to diversify the region's tourism industry (although it is noted that tourism will be a secondary outcome of the Project and the financial success of the Project will not be reliant on tourism visitations), and to enhance the local employment levels and skill base (through providing jobs during construction and operational phases).</p>

Themes and strategic outcomes	Relevance to the Project
<p>capital in the region.</p> <p>(6) The industrial and manufacturing capacity of the Western Downs supports opportunities for growth in the primary production and resource sectors of the regional economy. Industrial development is consolidated in the easily urbanized and accessible locations to maximise the utilisation of transport and other infrastructure.</p> <p>(7) Business and commercial activities respect and reinforces the hierarchy of the Western Downs Activity centre Network. Employment generating activities and business services support the needs of the urban centres and Townships of the region, with clusters of business and industry sectors co-locating and achieving synergies and economies of scale that support economic expansion.</p> <p>(8) Tourism and recreation activity development capitalizes on the intrinsic natural assets of the Western Downs. Strategic tourism and recreation focus areas offer attractive urban and natural/rural settings that are protected to facilitate the provisions of attractions, services, facilities and accommodation needs for visitors; and</p> <p>(9) Home based business economic activity provides complementary employment opportunities and entrepreneurship.</p>	
Infrastructure	
<p>(1) The efficient and timely provision of infrastructure and services across the region is aligned with development to ensure that infrastructure is provided in an orderly and sequential manner.</p> <p>(2) The provision of infrastructure is consistent with reasonable expectations for the servicing of Urban, Rural residential, and Rural areas.</p> <p>(3) The Urban areas of Chinchilla, Dalby, Jandowae, Miles, Tara and Wandoan and located in the Priority Infrastructure Area of Part 4 - Local Government Infrastructure Plan (LGIP) identifies the Urban areas of Dalby, Jandowae, Miles, Tara, W are provided with a higher standard of service across the greatest number of infrastructure and service networks, including access to reticulated water supply, sewerage and stormwater networks, due to the favorable costs of infrastructure provision in compact urban form.</p> <p>(4) Outside the LGIP areas, a limited range of infrastructure networks may be provided and infrastructure shortfalls are met by development on a site-by site bases.</p> <p>(5) Rail networks are protected from encroachment and incompatible development to ensure the safe and efficient transport of resources.</p>	<p>The Project represents the efficient and environmentally sound provision of sustainable energy infrastructure.</p> <p>The effect of the project upon existing transport infrastructure will require management during the construction phase, through the implementation of a TMP.</p>

Themes and strategic outcomes	Relevance to the Project
<p>(6) Air transportation provides a fast and convenient regional links and supports the fly-in/fly-out workforce as well as increasing business and tourism travel numbers.</p> <p>(7) Road transport networks connect communities, business and industry to local and interregional destinations and promotes active transport with Urban areas.</p> <p>(8) The following major infrastructure corridors and sites that provide an essential service to the residents of the Western Downs are protected from development that would compromise their function and designed for co-location where possible:</p> <ul style="list-style-type: none"> (a) Water and wastewater pipelines; (b) Major electricity infrastructure and substations; (c) Transmission substations (d) Power stations' (e) Gas pipelines; and (f) Utility installations of local significance to the Western Downs, including water and sewerage treatment and waste management facilities. <p>(9) Renewable energy generation consistent with a low carbon economy and the natural, rural and amenity values of the Western Downs represents a growing proportion of energy production.</p> <p>(10) Telecommunication infrastructure is provided that supports the local economy.</p> <p>(11) The provision of infrastructure across the Western Downs Region avoids adverse environmental and amenity impacts.</p> <p>(12) Development in and adjacent to stock routes is managed to prevent or minimise impacts on the continued and future use of the stock route.</p>	
Safety and Resilience to Hazards	
<p>(1) The Western Downs is a vast region that is vulnerable to a range of natural hazards including flood and bushfire. It is expected that the extreme weather events that drive these natural hazards will be more prevalent in the future due to the predicted impacts of climate change. To ensure the safety of residents and infrastructure, development avoids establishing in these areas.</p> <p>(2) The potential impacts of climate change and natural hazards can have detrimental impacts to our regions communities. The location, scale and intensity of development is considered in all land use decisions to minimise the exposure of people and property to natural hazards.</p> <p>(3) Development within the Western Downs does not</p>	<p>The Project is not considered to present a significant hazard or risk to people or property following the application of practical mitigation, control and management measures.</p> <p>The Project Site is situated within land identified to have a medium to very high level of potential bushfire hazard due to the nature of the surrounding environment. Consideration of appropriate design and construction measures; provisions for emergency services; personal protective measures; and maintenance and monitoring programs will mitigate both the impact of a bushfire event to the Project and the risk of a fire starting at the Project Site.</p> <p>Infrastructure with long life spans, such as wind farms, will be impacted by climatic conditions including</p>

Themes and strategic outcomes	Relevance to the Project
<p>expose land to contamination and sensitive land uses are not located near existing contaminated land sites.</p> <p>(4) Waste management is undertaken utilising best practice and landfill sites are protected from encroachment incompatible land use and development.</p> <p>(5) Development involving storage and disposal of hazardous materials and hazardous chemicals, dangerous goods and flammable or combustible substances, is to be located and managed to avoid and mitigate potential adverse impacts on surrounding uses, and minimise the health and safety risks to communities and individuals.</p> <p>(6) Protecting explosive facilities or explosives reserves from encroachment by development that would compromise the ability of these land uses to function safely and effectively.</p>	<p>natural disasters and the effects of climate change. A range of adaptation strategies are outlined in Chapter 19 Sustainability and Climate Change which seek to manage the potential risks to the Project due to climate change.</p> <p>The Project will include a number of activities that have a relatively high potential to cause contamination if not managed effectively. Construction and operational activities such as waste management, chemical and fuel handling and storage have the potential to release contaminants. A range of mitigation measures have been developed for the Project in relation to contamination and are described in Chapter 16 Topography, Geology and Soils.</p> <p>Generation of waste will occur throughout the construction, operation and decommissioning of the Project. Project activities will generate solid and liquid wastes. AGL will use a hierarchical approach to waste management, from the most preferable (reduce, reuse or recycle wastes) to the least preferable (disposal), and prioritise waste management strategies to avoid waste generation. Where waste cannot be avoided, waste materials will be segregated by type for collection and removal (for processing or disposal) by licensed contractors. It is not anticipated that on-site treatment of water will occur and there will be no controlled releases of water or wastewater to the environment by the Project.</p>

11.6.4 Draft South Burnett Planning Scheme

The Draft South Burnett Planning Scheme was released for public consultation in August 2016. Once finalised, the planning scheme will replace the schemes for the former local government areas of Kingaroy, Murgon, Nanango and Wondai Shires. The policy direction for the scheme is set by the strategic framework which is comprised of six themes. There are a range of strategic outcomes expressed under each theme. Table 11.9 provides a summary of the strategic outcomes and their relevance to the Project.

Table 11.9 Draft South Burnett Planning Scheme strategic framework themes and elements

Summary of strategic outcomes	Relevance to Project
Settlement pattern	
<p>(1) Forecasts suggest moderate growth throughout the Region, prompting incremental increases in urban growth areas around most towns. However, possible growth influences, such as that associated with the Bowen Basin, may occasion larger growth areas.</p> <p>(2) Kingaroy will continue to accommodate the greater proportion of the Region's population, commercial development and major facilities.</p> <p>(3) Kingaroy develops as the main activity centre for the Region with the highest level of commercial, industrial, community and municipal services. Other towns develop at a scale that supports Kingaroy's role while providing a more localised level of service.</p> <p>(4) Increases in population densities are facilitated</p>	<p>The Project will introduce new infrastructure within rural areas however it will not drive or facilitate any changes to the desired settlement pattern within the South Burnett Regional Council area. Existing rural and agricultural land use and activities can co-exist with wind farm infrastructure.</p> <p>It is envisaged that the construction workforce will be accommodated within motels, caravan parks and camps within existing townships.</p> <p>In relation to landscape qualities it is important to note that there are few landscapes in which a wind farm will not introduce a new and distinctive feature. In order to perform their function effectively, wind turbines are likely to be tall, frequently located in open landscapes, difficult</p>

Summary of strategic outcomes	Relevance to Project
<p>where suitable access to services is available.</p> <p>(5) Industrial, commercial and other high-employment generating activities are located in areas of high accessibility, but in a way that minimises their visual influence on the character of their host towns.</p> <p>(6) The settlement pattern is well serviced by a range of safe and efficient transport options that promotes the accessibility and mobility of the wider community.</p> <p>(7) The boundary between urban and rural areas is well-defined, particularly along the main approaches to Kingaroy and the other towns where that characteristic is already established. Further strip development is discouraged and buffering is utilised to minimise land use conflicts.</p> <p>(8) Rural villages provide country town lifestyle options, access to services, opportunities for employment and economic activity at a local level.</p> <p>(9) The Bunya Mountains village serves a primarily tourist function that will continue to be enhanced by its alpine village architectural character.</p> <p>(10) The risk to life and property from bushfire, flood, landslide and man-made hazards is avoided or mitigated.</p>	<p>to conceal and therefore likely to be highly visible and incongruent with the existing landscape character. Accordingly, all wind farms will result in changes to the landscape and visual resource due to their size and prominence. However, this change is considered generally acceptable due to the significance of this ecologically sustainable development. Refer to Chapter 5 Landscape and Visual Assessment for further details.</p>
Rural futures	
<p>(1) The capacity of important agricultural areas, as shown on Strategic Framework map and rural activities that contribute to the Region's economy is protected from incompatible land uses to optimise agricultural development opportunities.</p> <p>(2) The rural production base of the Region is broadened to accommodate the widest diversity of productive rural activities.</p> <p>(3) Non-rural activities are ancillary or subsidiary to principal rural land uses to widen the economic base for rural production provided that rural production in surrounding areas is not compromised and rural character is maintained.</p> <p>(4) Rural areas can potentially accommodate major industries, infrastructure projects, resource extraction enterprises and transport and aviation related opportunities involving land close to Kingaroy airport. However, they must be of a nature that is unable to be accommodated in towns, brings major local or regional economic benefits and respects overriding considerations of rural character and production values, scenic values and water quality and has direct access to substantial urban areas via high quality roads.</p> <p>(5) Extractive resources in rural areas are protected for effective and sustainable exploitation consistent</p>	<p>The impact on agricultural uses, land and resources will be minimal in most locations. Owners of participating properties have existing agreements with AGL with the intent of having wind turbines on their property.</p> <p>The property owners' existing rural and agricultural activities and the wind farm can co-exist as the wind farm does not preclude on-going rural and agricultural activities such as horticulture or animal husbandry.</p>

Summary of strategic outcomes	Relevance to Project
<p>with demonstrated planning need.</p> <p>(6) Small-scale, low impact accommodation is facilitated on land alongside railway corridors.</p> <p>(7) The function, connectivity and pasture productivity of the stock route network is maintained for sustainable use by travelling stock on hoof. The stock route network is protected from developments with potential for conflicting with it.</p>	
Strong economy	
<p>(1) The Region's economy is founded on strength and diversity of industry and service provision that capitalises on its location advantages and natural assets, improving the Region's employment opportunities and maximising regional economic activity.</p> <p>(2) The Region's major industries are sustained and grown through diversification, clustering of complementary businesses, and expansion of secondary industries and protection from the establishment and intensification of incompatible land uses.</p> <p>(3) The contribution of tourism to the Region's economy is complemented by a diverse range of activities that respect the natural environment and productive rural resources.</p> <p>(4) The role of major employers, including the Tarong Power Station, Swickers Kingaroy Bacon Factory Pty Ltd, the Peanut Company of Australia (PCA), Bean Growers Australia Ltd in the regional economy is supported.</p> <p>(5) Economic development is enhanced by infrastructure that strengthens and develops linkages with the Southeast Queensland, the Darling Downs and the Wide Bay/Fraser Coast.</p>	<p>The Project is compatible with primary industries and only uses approximately 1% of the land available for development. The Project presents the potential to diversify the region's tourism industry (although it is noted that tourism will be a secondary outcome of the Project and the financial success of the Project will not be reliant on tourism visitations), and to enhance the local employment levels and skill base (through providing jobs during construction and operational phases).</p>
Natural systems and sustainability	
<p>(1) The values of the Region's National Parks, State Forests and all matters of State environmental significance are protected from incompatible development to avoid or otherwise minimise adverse impacts on their biodiversity values.</p> <p>(2) The water, land, vegetation and air resources of the Region are managed on a sustainable basis, maintaining their availability for sustainable use and facilitating their contribution to the Region's ecosystem health, liveability and prosperity.</p> <p>(3) New development acknowledges the potential impacts of climate change and is designed to reduce the carbon footprint of the Region by reducing car and electricity use.</p>	<p>Development of the Project will be undertaken in an orderly and well planned manner, based upon the findings of various specialist investigations. Summaries of relevant investigations can be found in the following chapters:</p> <ul style="list-style-type: none"> - Chapter 12 Flora and Fauna, - Chapter 14 Surface Water, - Chapter 15 Groundwater, and - Chapter 16 Topography, Geology and Soils. <p>Based on the findings of these investigations, appropriate management measures and design responses will be implemented to address potential adverse impacts on the natural environment.</p> <p>The Project represents the efficient and environmentally</p>

Summary of strategic outcomes	Relevance to Project
<p>(4) Overlays identify natural hazards and prescribe criteria for avoiding and mitigating their effects on people and property.</p>	<p>sound provision of sustainable energy infrastructure. The Project has been designed and refined through a process of filtering possible impacts, such as impact on high value vegetation and geology, land usage patterns and efficient land use.</p> <p>The Project is not considered to present a significant hazard or risk to people or property following the application of practical mitigation, control and management measures.</p> <p>The Project Site is situated within land identified to have a medium to very high level of potential bushfire hazard due to the nature of the surrounding environment. Consideration of appropriate design and construction measures; provisions for emergency services; personal protective measures; and maintenance and monitoring programs will mitigate both the impact of a bushfire event to the Project and the risk of a fire starting at the Project Site.</p>
Strong communities	
<p>(1) The towns and villages retain the country look and feel that has created their individual social character and contributed to their desirability as places to live. The role of Kingaroy as the major regional centre is not compromised.</p> <p>(2) Development occurs in a manner that provides access to a range of employment, commercial, cultural, recreational, education and community opportunities in serviceable locations that respond to community needs.</p> <p>(3) A range of dwelling types in keeping with desired neighbourhood character enables residents to remain in the same community when their housing needs change, maintaining their existing lifestyle and social contacts.</p> <p>(4) The Region's cultural heritage is acknowledged and protected to maintain the link between the current community and the historic values that contributed to its establishment.</p> <p>(5) Re-use and redevelopment of heritage places occurs in a way that is compatible with their heritage values and mitigates adverse impacts on the heritage significance.</p> <p>(6) The role of visual character in defining township identity and creating traditional streetscapes is reinforced.</p> <p>(7) Community health and safety, sensitive land uses and the natural environment are protected from the potential adverse impacts of hazardous air, noise and odour emissions from higher impact uses.</p> <p>(8) Sensitive land uses are protected from the impacts of previous activities that pose a risk to people or</p>	<p>The Project will not affect the function or appearance of existing township areas. The Project will also provide opportunities to increased economic and employment diversity.</p> <p>A cultural heritage due diligence assessment has been undertaken for this EIS (see Chapter 18 Cultural Heritage). The findings of this assessment will form the basis of a comprehensive cultural heritage management process that will occur in parallel with the coordinated project process. The findings and recommendations generated by this process will help to inform the detailed design of the Project and will continue to do so throughout the Project's detailed design and construction.</p> <p>Detailed assessments on the critical matters identified by the Project's terms of reference are provided in this EIS. No significant impacts on community health and safety are considered likely.</p>

Summary of strategic outcomes	Relevance to Project
<p>property.</p> <p>(9) Extractive industry sites are available for re-use for other activities or revert to their natural state upon cessation of extraction.</p>	
Infrastructure and servicing	
<p>(1) New development occurs in a manner that allows for the efficient and affordable provision and on-going maintenance of utility infrastructure.</p> <p>(2) To maintain its major regional centre status, Kingaroy is the recipient of most investment in urban infrastructure, so is best suited to accommodating major urban development.</p> <p>(3) The relationship between development and utility infrastructure recognises that Blackbutt, Nanago, Wondai and Murgon require a level of infrastructure provision appropriate to the circumstances.</p> <p>(4) Public and active transport options contribute to reduced greenhouse gas emission and increase the community's well-being.</p> <p>(5) The investment in the provision of major infrastructure, particularly the Tarong Power Station and its associated entities, is protected from the implications of incompatible development.</p> <p>(6) Urban development is planned, designed, constructed and operated to manage stormwater and waste water in ways that help protect the environmental values of waters, including the biodiversity and functioning of freshwater ecosystem.</p> <p>(7) New development occurs in a manner that allows for the efficient and affordable provision and on-going maintenance of utility infrastructure.</p>	<p>The Project represents the efficient and environmentally sound provision of sustainable energy infrastructure.</p> <p>The effect of the project upon existing transport infrastructure will require management during the construction phase, through the implementation of a TMP.</p>

Should the planning scheme be finalised prior to approval of the Project, the subdivision of up to 4 ha of freehold land for the proposed substation will trigger an impact assessable development application seeking a Development Permit for reconfiguring a lot under Section 5.6 of the Draft South Burnett Planning Scheme. An assessment of the compatibility of the lot reconfiguration with the planning scheme will be undertaken, specifically taking into account the strategic outcomes related to the rural future of the region, and infrastructure and servicing requirements.

11.7 Summary and conclusions

This assessment has determined that the Project is largely supportive of relevant regional planning initiatives such as those outlined in the Wide Bay Burnett Regional Plan and the Darling Downs Regional Plan, through delivering ecologically sustainable development and renewable energy to the region.

Some changes to the rural amenity of the area are to be expected as a result of the Project (through the introduction of wind turbines in a generally undeveloped rural area), however it is not expected that this will cause a significantly adverse impact.

No significant adverse impacts upon existing agricultural activities in the area are expected. The Project presents an opportunity for the economic diversification of the community, which may promote the viability of existing rural enterprises within the Study Area. Impacts associated with an increase in traffic during the construction phase of

the Project will be managed through a TMP and CEMP, which is to be prepared prior to construction of the Project.

There are certain land use and planning impacts that may not meet a particular standard and cannot be fully mitigated. However, this is considered generally acceptable given the positive contribution to the ecological, social and economic attributes of the area. The Project has been refined to take into account, and avoid where possible, areas of high ecological, natural, and biodiversity value.

11.8 References

Department of Local Government and Planning. (2011). *Wide Bay Burnett Regional Plan*. Bundaberg: Queensland Government.

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