

Ebenezer Regional Industrial Area Implementation Guideline

Date of Resolution

These guidelines were adopted by Council on 21 March 2014 and take effect from 28 March 2014, in accordance with section 2.3(2) of the Planning Scheme.

Purpose of the Guideline

The purpose of this guideline is to assist with the interpretation of Part 6, Division 5 - Regional Business and Industry Investigation Zone of the Ipswich Planning Scheme and to clarify Council's planning intent relating to the area identified as the Ebenezer Regional Industrial Area (ERIA).

This guideline identifies Council's planning intent at both a strategic scale (Land Use Concept Master Plan) and an 'area specific' scale (Planning Units) for the ERIA planning study area. It sets out the broad environmental, land use and infrastructure framework, to guide planning for the ERIA to achieve coordinated and integrated development outcomes. Particular regard is to be given to the management of constraints and opportunities, the provision of infrastructure services and the strategic land use outcomes.

In accordance with the Regional Business and Industry Investigation Zone, comprehensive concept plans are to be prepared to provide for integrated development of the ERIA in a progressive and coordinated manner with the appropriate management of the interfaces between different land use activities. Applications for the concept plans should be made under the IDAS process as a Preliminary Approval under Section 242 of the *Sustainable Planning Act 2009* (SPA). Section 8.0 indicates the appropriate Planning Units for master planning.

Council's Implementation Guidelines are intended to apply a standard approach to the interpretation and implementation of the relevant aspects of the Planning Scheme. They offer a degree of certainty and formality to applicants, Council and the community. This guideline does not change the level of assessment outlined in the relevant zone, or the code provisions of the planning scheme.

Where an applicant is proposing a variation to the guidelines the onus is on the applicant to demonstrate the facts and circumstances to support the variation.

Pre-lodgement Discussion and Development Assessment

It is recommended that applicants have early engagement with Council officers to identify the planning, environment, transport and infrastructure intents, key matters and outcomes that should be addressed as part of any development application within the ERIA.

Structure of the Guideline

The guideline is divided into eight (8) key sections as outlined below.

- 1.0 Introduction to the Study Area
- 2.0 Key Planning Issues (Constraints and Opportunities)
- 3.0 ERIA Preferred Land Use Concept Master Plan
- 4.0 Greenspace Framework (Conservation/Rehabilitation/Drainage/Buffer Areas)
- 5.0 Transport and Access Network Plan
- 6.0 Utilities and Services Network Plan
- 7.0 General Development Requirements Applying to the ERIA
- 8.0 ERIA Planning Units

1.0 Introduction to the Study Area

The Ebenezer Regional Industrial Area is located approximately 14km south-west of Ipswich Central and is bounded by the Bremer River to the north, Cunningham Highway to the east, Goebels Road to the south, and Mt Forbes Road and Ebenezer Road to the west. More direct road access to Toowoomba and other western regions will be provided with the construction of the Warrego Highway link (Western Ipswich Bypass) from the Cunningham Highway. Road access to Sydney and Melbourne is available via the Cunningham Highway. Freight rail access is available to the Queensland network to Acacia Ridge. In the future interstate freight rail access will be provided by the Southern Freight Rail Corridor (SFRC).

The ERIA study area covers approximately 5,800 hectares (ha) and is anticipated to yield approximately 2,753 ha of industrial development land and approximately 430 ha of land to accommodate other development. The ERIA consists of land parcels under the ownership of different companies or individuals. The scale of the study area exceeds the Port of Brisbane, the Trade Coast, and is up to triple the size of other current industrial areas in South East Queensland (refer Figure 1- Ebenezer Regional Industrial Area Planning Study Area).

The South East Queensland Regional Plan 2009-2031 identifies Ebenezer as a 'Regional Development Area' and a 'Regionally Significant Employment Area'. The ERIA was first nominated as an industry investigation area in 1993 in the former Moreton Shire Draft Strategic Plan. The Ipswich Planning Scheme includes the ERIA predominantly in the Regional Business and Industry Investigation Zone, recognising its potential regional business and industry significance, bounded by an area included in the Regional Business and Industry Buffer Zone.



A mix of existing land uses and environmental features surround the ERIA. Land immediately to the east, west and south are predominantly rural. RAAF Base Amberley is located to the northeast, the residential communities of Rosewood and Walloon-Thagoona are to the north-west, and Warrill Creek and Ten Mile Swamp are located to the east of the ERIA.

The primary existing land uses within the boundaries of the ERIA study area include the Willowbank Township, Caravan Park/Motel/Camping Ground/Relocatable Home Park, the Ipswich Motorsport Precinct, Gum Tips Nature Refuge, the Ti-Tree Bioenergy facility, Powerlink (future substation site), current and past mining activities, the Southern Freight Rail Corridor (proposed alignment) and rural residential properties on large allotments. The ERIA study area contains confirmed national and state protected koala habitat and *Melaleuca irbyana* (common name Swamp Tea-tree).

2.0 Key Planning Issues (Constraints and Opportunities)

The ERIA study area contains a number of significant constraints such as areas of Commonwealth and State environmental significance, geotechnical constraints owing to mining and flood prone land. The area also offers significant development opportunities owing to its proximity to existing and future freight transport routes that support the potential provision of a substantial proportion of the future industrial land needed for Ipswich and South East Queensland. This will benefit the economic and employment future of Ipswich, South East Queensland and the state.

The Key Planning Issues identify the opportunities and constraints that affect the study area, and where relevant, guidance is provided to assist with achieving appropriate outcomes for a concept plan.

2.1 Bushfire Risk Areas

Bushfire Risk Areas are identified over a number of properties located in the southern half of the study area. The properties identified as bushfire risk areas are shown on Overlay Map OV1- Bushfire Risk Areas. The design and location of buildings and infrastructure should have regard to areas identified as bushfire risk areas and the provisions contained in Part 11, Section 11.4.4 of the Ipswich Planning Scheme.

2.2 Key Resource Areas

The study area contains known resources, mining leases, mineral development licenses and haul routes as shown on Overlay Map OV2 - Key Resource Areas (KRA), Buffers and Haul Routes.

2.2.1 Mining Tenures

There are multiple current Mining Leases (ML), Mineral Development Licences (MDL) and Exploration Permits for Minerals, Coal and Petroleum that cover substantial parts of the study area (refer to Overlay Map OV2 and current State

government resource and mining tenure mapping available from DNRM). The mining tenures have the potential to affect the timing of future development. The conditions and expiry dates of each mining tenure vary. Depending on the particular mining tenure clauses, site rehabilitation may be required following cessation of the mining activity.

Further discussions with the Department of Natural Resources and Mines (DNRM) and Department of Environment and Heritage Protection (DEHP), and liaison with the tenure holders should be carried out prior to preparation of development applications.

2.2.2 Haul Routes and Buffers

Overlay Map OV2 identifies two haul routes in the study area. One route is located south of Coopers Road and the other is north of Paynes Road in association with the existing key resource areas and buffers. The design and location of buildings and infrastructure should have regard to the location of the haul routes.

2.3 Mining Influence

The northern and central areas of the study area are extensively affected by mining with some of the mines still active as shown on Overlay Map OV3 - Mining Influence Areas and Figure 1: Ebenezer Regional Industrial Area Planning Study Area. Overlay Map OV3 identifies the known areas affected by underground mining, surface disturbance including open cut mining, known shafts, tunnels and areas that are susceptible to influence from prior mine workings and mining activities.

Owing to the current and past mining activities, the study area has extensive areas of disturbance and there may be potential for more extractive resource activities depending upon the take-up of currently unworked mining tenures.

2.3.1 Underground mining

The study area has a history of underground mining particularly in the north eastern corner where there is a network of collieries and seams. The Jeebropilly Mt Elliot open cut mine has removed the majority of the original Mt Elliott Colliery underground mining works and the Amberfield and Moorefield Colliery has been partially removed. The Lawrieffield Colliery underground mining works have remained in situ.

2.3.2 Open cut mining

Open cut mining activity has affected approximately three quarters of the developable area of the study area, particularly in the northern and central areas. The open cut mining process involves multi-level blasting and earthmoving methods, with construction of high walls at approximately 65° above the horizontal. Discarded rocks from the mining activity have filled previously formed voids, or been spread over the natural ground.



All voids that have a maximum depth range of 10m to 85m have been backfilled to a certain extent, with some of the open cut voids having been completely backfilled. The unfilled voids contain varying amounts of water with the quality of the water unknown.

2.3.3 Disturbed Surfaces

Surface disturbance is primarily located in the northern and central areas of the ERIA, and comprise bare surfaces, extensive re-profiled and grassed surfaces (scaped or covered by excess fill or co-disposal material from the mining operations), open cut mines, open cut walls, voids and large stockpiles of bentonite clay (refer Overlay Map OV3).

Further investigations are required to determine the precise location of the high walls and the amount of settlement (fill mass) in the voids. Testing of the fill type, water table and water quality is necessary for all backfilled areas.

NOTE 2.3A

Applicants lodging a development application including land identified in Overlay Map OV3 should provide a comprehensive, site specific, geotechnical assessment (refer to Planning Scheme Policy No. 2 - Information Local Government May Request).

2.4 Contaminated Land Register and Environmental Management Register

The past and current mining, industrial and rural activities (eg. cattle dips) within the study area have resulted in a risk of contamination to the land. The mining activity contamination issues include a combination of waste mine spoil and potential acid mine drainage.

Various waste materials have historically been used to fill the former mining excavations. These waste materials often were of a putrescible nature having the potential to generate landfill gas that could be explosive and pose a risk to human health.

Full Environmental Management Register (EMR) and Contaminated Land Register (CLR) searches should be undertaken for each allotment within the study area and further inspection and detailed audit should be undertaken to determine the potential type and extent of contamination present. Advice from the Department of Environment and Heritage Protection (DEHP) should be sought for lots recorded on the registers.

2.5 Topography

The topography of the study area is predominantly flat to undulating with elevations between 30m and 98m AHD. There is a northeast running ridgeline located in the northern half of the study area. The ridgeline connects with a wider network of ridgelines that peak at Mt Walker located south of the study area in the Scenic Rim Local Government Area.

The existing topography within the study area has been substantially altered by mining and rural activities. The

topography will continue to change, particularly in the northern and central areas of the ERIA until the cessation of mining activities.

The existing mining voids have also affected the drainage pattern within the study area. The existing voids vary in size and many are constantly changing owing to the ongoing mining activities.

NOTE 2.5A

Applicants submitting a development application should include a geotechnical and soil assessment report to demonstrate acceptable levels of land stability.

2.6 Major Soil Types

The three most prevalent soil types in the study area are:-

- Dermosols – structured subsoils with minor texture contrast;
- Vertosols – cracking clays; and
- Sodosols (duplex soils) – alkaline and sodic soils with sharp texture contrast.

Dermosols

The Willowbank Township and the surrounding vicinity primarily contain Dermosols. Dermosols are highly erodible (vulnerable to dispersion) even on shallow slopes when the soil is bare, as the subsoils are clay-rich.

Vertosols

The properties traversed by or adjoining the Bremer River and Ebenezer Creek primarily contain Vertosols. Vertosols are vulnerable to sheet and gully erosion on moderate slopes.

Sodosols

Sodosols primarily make up the remainder of the study area, and are commonly found over widespread plains and low hills. The soil is highly erodible and vulnerable to sheet, tunnel and gully erosion as a result of the highly dispersive subsoils.

NOTE 2.6A

Detailed investigations are required to determine the exact soil types present on each allotment. Refer to Implementation Guideline No. 28 – Dispersive Soil Management for further information regarding the matters that need to be considered in managing development in areas containing dispersive soils.

2.7 Drainage, Flooding and Stormwater Management

The northeast running ridgeline results in two primary drainage catchments within the study area. The northern half drains towards the Bremer River and the southern half of the ERIA drains towards the Ebenezer Creek catchment (or lower western catchment of the Warrill Creek).



The study area contains a wide network of watercourses that vary in size (from stream orders 1 – 6). The Bremer River is identified as the largest waterway in the study area (stream order 6), whereas Ebenezer Creek (stream order 4) is the largest waterway that runs through the study area. The natural course of Ebenezer Creek and tributaries has been substantially altered by mining activity in the northern and central areas and particularly around the Ipswich Motorsport Precinct.

The upper northern areas of the ERIA along the Bremer River are affected by flooding, as shown on Overlay Map OV5 - Flooding and Urban Stormwater Flow Path Areas. Flooding is also identified as affecting properties to the east of the study area along Warrill Creek and the Ten Mile Swamp. Unidentified stormwater overland flow paths may have formed elsewhere in the study area as a result of altered hydrology owing to significant landform modifications.

2.7.1 Temporary Local Planning Instrument 01/2013 – Flooding Regulation

Temporary Local Planning Instrument 01/2013 – Flood Regulation (TLPI), identifies that the properties along the Bremer River and Warrill Creek are affected by the TLPI's Adopted Flood Regulation Line.

NOTE 2.7A

The TLPI 01/2013 suspends and replaces parts of the Ipswich Planning Scheme to the extent of matters stipulated in Part 7 – Effects of this TLPI under the TLPI 01/2013. Reference should be made to the TLPI regarding flooding regulations whilst the TLPI remains in effect.

2.7.2 Stormwater Management

The study area is affected by flood events and the management of stormwater quality and quantity and the maintenance of stream stability is vital in reducing further degradation to existing water resources and potential flood hazard to properties and persons.

The Ten Mile Swamp Wetlands is located external to the study area on the eastern side of the Cunningham Highway. Uses and works within the ERIA need to be cognisant of water quality and discharge issues into and around this wetland and the receiving waters of the Bremer River and Warrill Creek Catchment.

Future development must make suitable provision for stormwater management and mitigate development flows. This may be achieved at the individual lot scale, as a sub-catchment or catchment solution (including use of external solutions) or as a combined approach unless otherwise agreed to by Council. On-site stormwater treatments associated with development shall be maintained on private property.

New uses and works should demonstrate that predevelopment flows, water quality objectives and preservation of drainage corridors are achieved in accordance with Implementation Guideline No. 24 – Stormwater Management.

The implementation of Water Sensitive Urban Design (WSUD) principles should be incorporated into the design process, to ensure best practice outcomes are achieved and to support an overall reduction in water usage at ultimate development.

2.7.3 Ebenezer Preliminary Hydraulic Modelling Outcomes

In addition to the provisions associated with Overlay Map OV5 – Flooding and Urban Stormwater Flow Path Areas and the TLPI, hydraulic modelling has been undertaken for Ebenezer Creek and its catchment.

The hydraulic modelling identified that the central eastern and central southern portions of the study area are affected by flooding, with flood hazard conditions ranging from significant to extreme along Ebenezer Creek, particularly where the creek traverses through the Ipswich Motorsport Precinct, and where a channel deviates from Warrill Creek south of the Willowbank Township.

Future development should be located outside of the flood affected and drainage areas. Development which causes adverse upstream and downstream impacts on hydraulics and hydrology will not be supported (refer to Figure 2 – Ebenezer Regional Industrial Area Drainage and Flooding Extents).

NOTE 2.7B

A Stormwater Management Plan (including flooding assessment) may need to be prepared in support of a development application. Refer to Implementation Guideline 24 – Stormwater Management.

2.8 **Buffers to Highways and Regional Transport Corridors**

A buffer area along the Cunningham Highway is shown on Overlay Map OV6 - Buffers to Highways and Regional Transport Corridors. The buffer is to mitigate the visual impact of the future business and industry uses by presenting either a natural vegetated buffer, or an aesthetically pleasing built form and associated landscaped area when viewed from the Cunningham Highway.

2.9 **RAAF Base Amberley**

RAAF Base Amberley is located to the north east of the study area. The Ipswich Planning Scheme contains provisions aimed at avoiding direct or indirect conflict between the operations of RAAF Base Amberley and surrounding land uses by providing for the safety and operational efficiency of the Base and compatible development of the surrounding lands. This is discussed below in the context of the ERIA study area.



2.9.1 Defence (Area Control) Regulations and Obstruction Clearance Surfaces (OCS)

The study area is affected by Overlay Map OV7A - Defence (Areas Control) Regulations (D(AC)R) and Obstruction Clearance Surfaces (OCS) that identifies building height restrictions and ensures uses and works within the ERIA do not cause an obstruction to aircraft operations and pilot visibility. Proposed uses and works within the ERIA need to comply with the provisions of Part 11, Section 11.4.9 – Overlays of the planning scheme.

2.9.2 Wildlife Attraction and Lighting Issues

The study area is affected by Overlay Map OV7B- Operational Airspace: Wildlife Attraction and Lighting Issues. The associated planning scheme provisions are designed to protect RAAF Base Amberley's operational airspace from airborne wildlife interference and protect pilots from interference from significant (extraneous) light emissions. Proposed uses and works within the ERIA need to comply with the provisions of Part 11, Section 11.4.9 – Overlays of the planning scheme.

2.9.3 Australian Noise Exposure Forecast (ANEF)

Overlay Map OV7C – 2006 Australian Noise Exposure Forecast (ANEF) Contours identifies areas within the study area affected by significant aircraft noise.

The ANEF identified on Overlay Map OV7C relates to the former F-111 aircraft noise.

2.9.4 Australian Noise Exposure Contours (ANEC)

In 2010, the RAAF introduced the fighter aircraft F/A-18F Super Hornets to replace the F-111 at RAAF Base Amberley. The operation of the Super Hornets differs to the F-111 with regard to flight path and pattern of aircraft noise.

The Australian Noise Exposure Contours (ANEC) for the Super Hornets has been mapped and public consultation has been undertaken. However, the ANEC map currently has no official status until it is formally endorsed by Airservices Australia, when the ANEC will be recognised as the ANEF.

Future uses and works should consider the Super Hornets ANEC as the aircrafts are currently in operation at RAAF Base Amberley. Information relating to the ANEC for the Super Hornets is available from the Commonwealth Department of Defence.

2.10 **Ipswich Motor Sport Precinct Buffer**

The Ipswich Motorsport Precinct Primary Buffer Area and Secondary Buffer Area shown on Overlay Map OV8 – Motor Sports covers the majority of the study area. The Ipswich Motorsport Precinct (at Willowbank) is an existing land use within the study area. Refer to Section 2.18 - Ipswich Motorsport Precinct of this guideline.

Applicants submitting development applications within the area affected by Overlay Map OV8 are encouraged to

discuss any proposals which may contain sensitive uses with Council officers prior to lodgement of the application.

2.11 **High Pressure Pipelines**

Two high pressure oil and gas pipelines traverse the study area as shown on Overlay Map OV11 – High Pressure Pipelines.

2.11.1 Oil Pipeline and Buffer Area

A high pressure oil pipeline traverses the northern half of the study area. The high pressure pipeline is the decommissioned Moonie Oil Pipeline. The oil pipeline and associated buffer area are shown on Overlay Map OV11 – High Pressure Pipelines.

Applicants submitting development applications are encouraged to liaise with the pipeline owners to determine appropriate separation distances and treatments to the pipeline and to facilitate accessibility for maintenance purposes.

Should development affect the oil pipeline corridor, written permission from the pipeline owner is required under the *Petroleum Act 1923*.

2.11.2 Gas Pipeline and Buffer Area

A gas pipeline and buffer area is located approximately 5km to the north of the study area, as shown on Overlay Map OV11 – High Pressure Pipelines.

The study area is currently not serviced by natural gas infrastructure and there is no current planned extension of the infrastructure to service the study area. However, the natural gas trunk main contains sufficient spare capacity to service future development within the study area. It is likely the gas main would be an underground extension to service the initial development within the study area. Another connection to a natural gas main is located at Swanbank approximately 12.5km from the study area.

NOTE 2.11A

Applicants should liaise with the APA Group, the operators of the gas reticulation network to identify connection opportunities for the industrial land uses within the ERIA.

2.12 **High Voltage Electricity Transmission Lines**

A high voltage electricity corridor traverses the southern part of the study area from east to west. The corridor is shown on Overlay Map OV13 - High Voltage Electricity Transmission Lines. The high voltage electricity corridor transmission lines are energised at 275 kilovolts, and are proposed to be upgraded to 500 kilovolts.

Applicants submitting a development application where the subject land is affected by an electricity easement identified on Overlay Map OV13 are encouraged to liaise with Powerlink and Energex. Any work under an Electricity Transmission Line Easement may require the consent of the electricity entity that holds the easement title.



2.13 Electrical Supply

The study area has electrical service provision, however the network capacity is limited and is currently of a rural standard.

Powerlink has property holdings within the study area, which are intended to accommodate a regional 500kv substation as part of a network upgrade over the next 20-30 years. For general supply to the ERIA a 250 MV.A bulk supply substation is required and will potentially be co-located with the regional substation. Should development within the study area proceed before the planned Powerlink regional substation upgrade, the initial feed may be provided from either Swanbank or Amberley (dependant on the Aerospace and Defence Support Centre – Amberley (ADSC-A) development progress).

NOTE 2.13A

Applicants preparing development applications should liaise with Powerlink and Energex with respect to securing the provision of electricity supply.

2.14 Communication Services

2.14.1 Fixed Line Services

The study area has fixed line services from the exchange located at Amberley via copper lines. Only the Ipswich Motorsport Precinct is currently serviced by fibre optics. Although the existing network sufficiently services the existing community and land uses within the study area, the network is unable to service the future growth of the ERIA. A local exchange within the study area may be required to meet the telecommunication demand from the development of the ERIA.

2.14.2 National Broadband Network

In preparation for the national broadband network it is recommended that the provision of communication technology to a fibre ready standard (ie. suitably designed telecommunications conduits and pits) be incorporated in future developments in the ERIA.

2.14.3 Mobile Networks

The majority of the study area has mobile network coverage however, the existing network has limited capacity owing to the rural nature of the area. Upgrades to the existing network will be required to service the development of the ERIA, including the provision of additional mobile phone stations/towers. Detailed planning should consider possible locations for future telecommunications infrastructure.

2.15 Ti-Tree Bioenergy Facility

The Ti-Tree Bioenergy Facility is located to the north of the Ipswich Motorsport Precinct immediately west of the Cunningham Highway and is accessed from Champions Way. The complex is a waste management facility that uses bioreactor technology to rapidly stabilise waste while capturing biogas produced by the waste (mostly methane) and converts it into electricity. The facility is located in a void left over from a previous open cut coal mining operation. As the site is filled, completed areas are rehabilitated and the facility also has a Eucalypt forestry plantation that covers over 100 acres.

2.16 Cultural Heritage (Indigenous and European)

The study area currently contains sixteen (16) recorded indigenous cultural heritage sites on the DEHP Cultural Heritage Database. All significant Aboriginal cultural heritage in Queensland is protected under the *Aboriginal Cultural Heritage Act 2003*. Under the legislation a person carrying out an activity must take all reasonable and practical measures to ensure the activity does not harm Aboriginal Cultural Heritage. This applies whether or not such places are recorded in an official register and whether or not they are located in, on or under private land.

There is also the potential for the presence of a variety of as yet unrecorded cultural heritage artefacts within the study area. The banks and terraces adjacent to the Bremer River and Ebenezer Creek and relatively flat sections of ridgelines within the study area have the archaeological potential to contain additional artefacts and other items of indigenous cultural heritage significance. Comprehensive investigations at the Planning Unit and individual site level should be undertaken to identify the presence and significance of items of indigenous or non-indigenous cultural heritage and to determine appropriate mitigation/management strategies and involving early consultation with the relevant indigenous groups.

The study area also contains three (3) items of European cultural heritage listed in Schedule 2 – Character Places and one (1) item on Schedule 3 – Identified Places of Interest in the Ipswich Planning Scheme (refer to Schedule 2 and 3 of the planning scheme).

2.17 Willowbank Township

The Willowbank Township is located immediately west of the Cunningham Highway in the north-eastern corner of the study area. The township primarily consists of single residential dwellings on land zoned Large Lot Residential and Residential Low Density (RL2), a small local shopping centre and land included in the Recreation Zone. To the north, south and west of the township are properties identified in the Regional Business and Industry Buffer Zone, and to the east are properties identified in the Rural B (Pastoral) Zone and the Special Use Zone.



The township is accessible by Coopers Road, which directly connects to the Cunningham Highway. The western half of Coopers Road is identified as a haul route (refer to Overlay Map OV2) that services the heavy vehicle traffic from the mining activities located in the northern and central areas of the ERIA.

There are two areas designated in the Recreation Zone, one surrounds the local shopping centre and is identified as Heit Park, and the other is located along the western edge of the township between the Large Lot Residential Zone and the Regional Business and Industry Buffer Zone. The Recreation Zone land located on the western edge is not an official Bushland Reserve and as such, the land has not been afforded additional environmental protection.

The local shopping centre is a single storey building located in the north eastern corner of the township. The complex is small in scale and comprises a number of shops that serve the needs of the local community. Expansion of the centre will be limited owing to the site's location and the existing land uses that surround the complex. The local shopping centre will remain as a small-scale local retail and commercial centre that will serve the convenience needs of the local community.

The inclusion of the Willowbank Township within the study area is not related to extending industrial uses into this area, but to ensure appropriate consideration is given to the protection of residential amenity of the township. There is no planning intent to expand residential uses within the Willowbank Township, nor are industrial land uses encouraged in the existing township area.

The Willowbank Township is framed by land in the Regional Business and Industry Buffer Zone which provides a buffer area to protect the township from incompatible land uses and to ensure future development does not adversely impact the residential amenity of the township.

The planning for the ERIA reflects a land use pattern that transitions from low impact business and industry areas on the edge of the study area near sensitive uses (eg. residences), to medium impact and then potential high impact business and industry areas towards the centre of the study area which have greater separation distance from sensitive land uses (eg. residences). This pattern of development seeks to buffer and limit adverse impacts upon existing sensitive land uses in particular, the Willowbank Township. The Willowbank Township is further addressed in Section 8.0: ERIA Planning Units.

2.18 Ipswich Motorsport Precinct

The Ipswich Motorsport Precinct is located centrally in the study area and is bounded by the Cunningham Highway to the east. The Ipswich Motorsport Precinct is a major outdoor recreation asset for the Ipswich Local Government Area and South East Queensland. The precinct accommodates a range of different motorsport activities from local club to national and international facilities.

The Ipswich Motorsport Precinct Master Plan identifies a staged expansion of the Motorsport Precinct (particularly to the north and west), with an ultimate development outcome that will accommodate high standard motorsport facilities and activities, including ancillary and related uses. The expansion of the Motorsport Precinct is subject to ongoing land acquisition to facilitate delivery of components of the Ipswich Motorsport Precinct Master Plan. The Ipswich Motorsport Precinct Master Plan is a Council endorsed planning resource document, but does not form part of the Ipswich Planning Scheme.

New uses and works should support the ongoing operation and function of the Ipswich Motorsport Precinct and could include motorsports and specialist automotive related industrial businesses. Expansion of the Motorsport Precinct should be integrated with the surrounding land uses, infrastructure and greenspace corridors.

2.19 Southern Freight Rail Corridor (SFRC)

The proposed alignment of the Southern Freight Rail Corridor (SFRC) traverses the southern part of the study area from east to west (parallel to Paynes Road and the southern boundary of the Ipswich Motorsport Precinct). The final SFRC alignment was gazetted on the 5 November 2010, and is protected under section 258 of the *Transport Act 1994*. Accordingly, the SFRC is considered a fixed land use constraint and is a key component of future infrastructure in the study area.

The SFRC is a freight only railway corridor alignment that is approximately 55km long and 100m wide and will provide a connection between the western railway line (south of Rosewood) and the existing interstate railway line near Kagaru. The rail corridor will provide an alternative route to the existing freight centres at Acacia Ridge and the Brisbane Multimodal Terminal (Port of Brisbane).

Decisions regarding the future construction of the SFRC line will ultimately depend on a range of factors, including whether or not the proposed Melbourne to Brisbane inland rail line proceeds.

The SFRC will facilitate access to proposed logistics hubs in Ebenezer and Bromelton. Allowance has been made in the eastern extent of the SFRC alignment design for an Intermodal Freight Terminal (IFT), which may be located immediately south of the Ipswich Motorsport Precinct. The IFT will provide the central distribution, loading and unloading for the SFRC. However, the exact location, detailed design and layout of the IFT are subject to further studies and consideration by the state government.

New uses and works, particularly freight dependant businesses and industries should be located in close proximity to the IFT. Future road layouts should also maximise accessibility to the IFT. Future development should not compromise the operation of the SFRC and the IFT.



NOTE 2.19A

Further information regarding the Southern Freight Rail Corridor and the Intermodal Freight Terminal is available from the Department of Transport and Main Roads.

NOTE 2.22A

Proponents of development are required to manage and avoid environmental (fauna and flora) impacts to the Gum Tips Nature Refuge.

2.20 Powerlink

Powerlink property holdings are located centrally within the study area (adjoining the northern boundary of the Gum Tips Nature Refuge). The site is planned to contain both Powerlink and Energex substations and a training facility. There is an intent to accommodate a regional 500kv substation, with planned upgrades to the existing network over the next 20-30 years. The Powerlink site contains major regional infrastructure and the high voltage transmission lines that traverse the study area are located in Community Infrastructure Designations.

New uses and works should not interfere with or compromise the function of the high voltage transmission lines. Applicants submitting development applications may be required to contact and liaise with Powerlink and Energex.

2.21 Stone Quarry Cemetery

The Stone Quarry Cemetery (also formerly known as the 'Jeebropilly General Cemetery') is located in the north of the study area on Stone Quarry Road. The site is included in the Special Use (SU 29) Zone of the planning scheme. The cemetery has historical significance with graves dating back to at least the 1870's and is comprised of both monumental and lawn burial areas.

Development adjoining the cemetery should have appropriate regard to its cultural heritage values.

2.22 Gum Tips Nature Refuge

The Gum Tips Nature Refuge is approximately 32.5 hectares of land owned by the Moggill Koala Hospital Association and is located in the south western area of the ERIA (south of Paynes Road).

The Gum Tips Nature Refuge is a declared Nature Refuge under the *Nature Conservation Act (Protected Areas) Regulation 1994*. The Nature Refuge is also included in the Rural E (Special Land Management) Zone of the Ipswich Planning Scheme.

The nature refuge is densely vegetated primarily with koala habitat species. The Moggill Koala Hospital utilises the site as a rehabilitation and release area for injured koalas and other native animals (ie. macropods, possums, gliders, flying foxes and birds) and to grow trees to provide food required for koalas at the Moggill Koala Hospital.

The nature refuge contains some of the highest value habitat in the study area, and the protection afforded at a state and national level recognises the significance of the refuge. The *Nature Conservation Act 1992* protects the refuge from vegetation clearing.

2.23 Matters of State and National Environmental Interest

The Ipswich Planning Scheme includes parts of the study area in the Regional Business and Industry Investigation Zone. Since this zoning came into effect, significant changes to State and Commonwealth legislation and policy have occurred which require areas to be protected for environmental reasons within the study area. The State and Commonwealth legislation and policy have primacy over the Ipswich Planning Scheme. The relevant State and Commonwealth legislation and policies are discussed below.

(a) State Planning Policy 2/10 Koala Conservation in South East Queensland

State Planning Policy 2/10 - Koala Conservation in South East Queensland (SPP 2/10) applies to the Ipswich Local Government Area (LGA) as it forms part of the defined South East Queensland Koala Protection Area (SEQKPA). However, the SPP 2/10 policy does not specifically apply to the making of this implementation guideline as it is not seeking to make or amend a local planning instrument (ie. the planning scheme) in accordance with the *Sustainable Planning Act 2009*.

Notwithstanding, the SPP 2/10 policy outcomes and the SEQKPA Koala Habitat Values Map have been used to inform the planning study for the ERIA in identifying and mapping the study area's koala habitat values and strategic habitat/movement corridors and linkage opportunities and to assist in identifying and mitigating land use and infrastructure impacts on the koala population. These outcomes also align with the protection of the koala and by association koala habitat under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act).

The SEQKPA Koala Habitat Values Map identifies that the study area contains a mix of High and Medium Value Koala Bushland Habitat, and High, Medium and Low Value Koala Rehabilitation Habitat. The largest concentration of High and Medium Value Koala Bushland Habitat is located in the south western corner and partly along the western boundary of the study area. There is also a smaller isolated patch of High Value Koala Bushland Habitat located in the north eastern corner of the study area to the north of the Willowbank Township. The SEQKPA Koala Habitat Values Map indicatively identifies the location of the koala habitat however, further investigation will be required to validate the location, species, quantity and health of the koala habitat in the study area.

SPP 2/10 requires a net gain in koala habitat in South East Queensland (ie. more bushland habitat than currently exists). SPP 2/10 requires significant areas of koala habitat value (ie. bushland and high and medium value rehabilitation koala habitat) to be protected and habitat connectivity retained and



enhanced to maintain koala population viability. The SPP calls up the *Offset for Net Gain of Koala Habitat in South East Queensland Policy* (Offset Policy) which requires environmental offsets for unavoidable impacts on high quality koala habitat to contribute to a net gain in bushland habitat. The offset policy should be referred to for further information on the framework and direction for using environmental offsets to meet the objectives of SPP 2/10.

Provision of an environmental offset based upon calculation of the number of non-juvenile koala habitat trees removed is required for unavoidable impacts to koala habitat under SPP 2/10 and the Offset Policy (ie. the equivalent of 5 new koala habitat trees for every non-juvenile koala habitat tree removed; a net benefit ratio of 5:1). The Offset Policy requires that the koala offset in the first instance must be located in an area identified as high value or medium value suitable for rehabilitation as identified in the SEQKPA Koala Habitat Values Map. The ERIA Greenspace Framework (refer Section 4.0 of this guideline) protects important koala habitat values and strategic habitat/movement corridors and also identifies important areas affording potential koala offset locations where on-site offsets are unavailable/unsuitable to provide a net gain in koala habitat in accordance with SPP 2/10.

NOTE 2.23A

Applicants submitting development applications should refer to the SEQKPA Koala Habitat Values Map, and the State Planning Policy 2/10 and associated *Offset for Net Gain of Koala Habitat in South East Queensland Policy* to address the protection of koala habitat.

The policies and the SEQKPA Koala Habitat Values maps are available from the Department of Environment and Heritage Protection. Further advice and information can be sought from the Department of Environment and Heritage Protection (DEHP).

(b) Vegetation Management Act (Qld) 1999

There are fragmented patches of vegetation (particularly in the western and south western parts of the study area) identified as High Value Regrowth Vegetation and classed as Endangered, Of Concern and Least of Concern Regional Ecosystems in accordance with the State Government Regional Ecosystem Maps/Regrowth Vegetation Maps.

Ground truthing will be required to validate the location, species, quantity and health of vegetation identified on the State Government Regional Ecosystem Maps/Regrowth Vegetation Maps.

NOTE 2.23B

The study area contains Swamp Tea-tree Forest (*Melaleuca irbyana*), which is listed as endangered regional ecosystems 12.9–10.11 and 12.3.3c under the *Vegetation Management Act 1999*. Swamp Tea-tree Forest is also Commonwealth protected, refer to Section 2.23 of this guideline for further information.

Proponents of future uses and works that may potentially affect or propose the removal of mapped vegetation should refer to the *Vegetation Management Act* (VM Act), and liaise with the Queensland Government Department of Natural Resources and Mines.

NOTE 2.23C

The State Government Regional Ecosystem Maps/Regrowth Vegetation Maps are available from the Queensland Government Department of Department of Natural Resources and Mines.

(c) Environment Protection and Biodiversity Conservation Act 1999

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

The EPBC Act affects any group or individual (including for example companies, landowners, developers, industry, farmers, councils, state and territory agencies and commonwealth agencies), whose actions may have a significant impact on a matter of national environmental significance. It is also the responsibility of the individual or group to determine if any new activity or development requires referral under the Commonwealth environment law.

NOTE 2.23D

Advice should be sought from the Australian Government – Department of Sustainability, Environment, Water, Population and Communities (DSEWPAC) to determine whether the development/action triggers a referral to the Australian Government for assessment under the EPBC Act.

This implementation guideline focuses on two key matters of national environmental significance within the study area:-

- Swamp Tea-tree Forest (*Melaleuca irbyana*); and
- Koala (*Phascolarctos cinereus*).



There are potentially additional MNES within and immediately external to the study area. The Protected Matters Search Tool is available on the Australian Government – Department of Sustainability, Environment, Water, Population and Communities (DSEWPAC) website. The search tool generates a report that identifies all MNES in the specified area of interest (search area). The information provided by the Australian Government is indicative only, and site specific investigation will be required to validate the occurrence, quantity and health of the listed MNES.

- Swamp Tea-tree Forest (*Melaleuca irbyana*)

The study area contains *Melaleuca irbyana* (commonly known as Swamp Tea-tree), which are mainly concentrated in the southern areas of the study area. The Swamp Tea-tree Forest provides shelter to a variety of animals including koalas and wallabies and breeding habitats for water borne species.

Swamp Tea-tree Forest is registered as a critically endangered ecological community under the EPBC Act owing to its very restricted distribution and vulnerability to ongoing threats. The EPBC Act has granted the highest level of ecological protection for the *Melaleuca irbyana*, and any proposed interference, significant impact or removal of the tree species should be referred to the Commonwealth Government for assessment and approval (unless subject to an exemption under the EPBC Act).

New uses and works should aim to prevent further clearing, significant impact and decline of the ecological community (eg. through changes to hydrology, soil profile and sedimentation). Where removal is appropriate, offsets may be required. Where possible and appropriate, rehabilitation of the degraded ecological community should occur to contribute to its long-term survival.

- Koala (*Phascolarctos cinereus*)

The koala populations in Queensland are listed as vulnerable under the EPBC Act. There is state legislation that addresses the protection of koala habitat (refer Section 2.23 of this guideline) however, the national listing provides additional statutory protection for the koala and by association its habitat. Accordingly, both the Commonwealth and state governments require the protection of the koala population and habitat in the long-term.

The location of koala habitat identified on the SEQKPA Koala Habitat Values Map (refer to Section 2.23 of the guideline) may be used as an initial informant for further studies. Further ground truthing will be required to validate the location, species, quantity and health of koala habitat and koala population in the study area.

NOTE 2.23E

The EPBC Act provides that if the proposal ('action') is likely to have a significant impact on the koala, it must be referred to the Commonwealth Environment Minister through the Australian Government Department of Sustainability, Environment, Water, Population and Communities. Proposals referred or approved under state or local environment laws in Queensland, which have not commenced and are likely to have a significant impact on koalas, will require referral under national environment law. Certain actions are exempt from the requirement of assessment and approval under the EPBC Act. There are a number of criteria that must be satisfied to rely on any such exemptions.

2.24 ERIA Opportunities

Figure 3 – Ebenezer Regional Industrial Area Opportunities Plan shows the areas that are potentially developable for business and industry uses within the ERIA. This land is located outside major drainage and flood prone areas and important environmental and buffer areas.

The Ebenezer Regional Industrial Area provides an unparalleled opportunity to accommodate and deliver a mix of innovative, sustainable and best practice business and industrial development. The size and strategic location of the ERIA reinforces its potential as a significant contributor to the local, regional and state economies. The ERIA study area has the potential to provide a substantial proportion of the future industrial land needed for Ipswich and South East Queensland.

The ERIA offers significant development opportunities owing to its proximity to existing and future regional and national transport routes (including major highway and freight rail access) and opportunities for rehabilitation of previously mined land to accommodate future development (subject to geotechnical assessment).

The location and extensive size of the ERIA offers the flexibility to accommodate a diversity of industry types including 'difficult to locate' large footprint (land extensive) industrial uses removed from sensitive uses (eg. the Willowbank Township) without the same amenity concerns of many current industrial areas. The ERIA's location adjoining the highway network also affords opportunities for uses requiring highway visual exposure and accessibility such as highway related businesses and services.

Opportunities also exist in the ERIA study area for further motorsport development within the Ipswich Motorsport Precinct and for land uses in proximity to the precinct that are complementary to and associated with motor sports and automotive and related uses that can leverage off the Ipswich Motorsport Precinct.

The ERIA study area also provides opportunities for consolidation and linkage of substantial areas of greenspace (incorporating conservation/rehabilitation/drainage and buffer areas) which also afford potential offset receival sites.



Section 3.0 provides further detail regarding the opportunities within the ERIA study area.

3.0 ERIA Preferred Land Use Concept Master Plan

The ERIA Preferred Land Use Concept Master Plan (LUCMP) illustrates an integrated land use, environmental, transport and infrastructure framework for the ERIA (refer to Figure 4 – Ebenezer Regional Industrial Area Preferred Land Use Concept Master Plan). Four Planning Units are nominated to provide ‘area specific’ guidance, which may assist with s242 of SPA development applications (refer to Figure 8 – Ebenezer Regional Industrial Area Planning Units). The Preferred Land Use Concept Master Plan and the Planning Units are synergetic, and accordingly should not be applied independently. Further information regarding the ERIA Planning Units is outlined in Section 8.0 – ERIA Planning Units of this guideline.

The Preferred Land Use Concept Master Plan does not change or override the level of assessment of the relevant zones or code provisions in the planning scheme.

The key objectives of the Preferred Land Use Concept Master Plan include-

- providing a variety of business and industrial land development opportunities, particularly for large and ‘difficult to locate’ medium and potential high impact industries;
- strategically protecting and having regard to areas of environmental significance;
- protecting and ensuring compatibility and cohesion with existing land uses (eg. is designed so that impacts scale to the edges and are sensitive to receptors) (particularly Willowbank Township and nearby rural living lots);
- strategically identifying the availability and approach to delivery of infrastructure;
- delivering high quality built form and urban design outcomes;
- delivering innovative, sustainable, best practice development outcomes and management (including water cycle management, emission and effluent management and built form, urban design and environmental outcomes);
- allowing for centres that support the business and industry development within the ERIA and existing local community;
- strategically addressing various legislative obligations; and
- guiding the assessment of future development applications.

The LUCMP contains a number of preferred land use designations including-

- Low Impact Business and Industry Areas
- Medium Impact Business and Industry Areas
- Potential High Impact Business and Industry Areas

- Willowbank Special Opportunity Area
- Centres
 - Local Retail and Commercial Centres
 - Major Neighbourhood Centre
- Greenspace Framework (Conservation/ Rehabilitation/Drainage/Buffer Areas)
- Ipswich Motorsport Precinct
- Southern Freight Rail Corridor
- Powerlink Site
- Rural (Pastoral) Area

These land uses were designated having regard to the land’s specific context, location, nearby existing uses, physical characteristics and constraints, road network and the need for supporting facilities.

A number of the land use components identified in the LUCMP have been addressed in Section 2.0 of this guideline. Refer to the relevant section for further information.

Guidance on the designated land uses in the Preferred Land Use Concept Master Plan are outlined in the following sections.

3.1 Business and Industry Areas

Three business and industry areas have been nominated:-

- Low Impact Business and Industry Areas
- Medium Impact Business and Industry Areas
- Potential High Impact Business and Industry Areas

The low, medium and potential high impact business and industry areas reflect a land use pattern that graduates from low impact business and industry uses on the edge of the study area and near sensitive uses (eg. residences), to potential high impact uses towards the centre of the study area which have greater separation distance from sensitive land uses. This preferred pattern of development seeks to buffer and limit any adverse impact upon existing sensitive land uses in particular, the Willowbank Township and rural residential lots outside of the ERIA study area. The ERIA will not cater for ‘Noxious, Offensive and/or Hazardous Uses’.

The low, medium and potential high impact business and industry areas should accommodate development that reflects high quality design and amenity standards and achieves ecological sustainability. Co-location of similar or related industries is encouraged.

New uses and works should:-

- develop in an orderly manner without prejudicing the orderly delivery of development for the Planning Unit;
- provide trunk infrastructure in an orderly manner;
- encourage sustainable water usage, particularly where relating to water sensitive design and the use of recycled water;
- ameliorate impacts that may adversely affect or cause an unacceptable safety risk and harm to other land uses;



- not adversely affect to a significant level sensitive uses or the residential amenity and lifestyle of existing residences adjacent to the industrial development areas; and
- have regard to Overlay Map OV7A – OVC to ensure the RAAF Base Amberley operates efficiently and effectively without significant external impacts.

The built form and development outcomes achieve the following:-

- create a visually pleasing combined built form and landscaped setting particularly when viewed from major road corridors (eg. by variation in façade treatment such as use of colour, projections, materials and awnings and location of any office component facing the primary road frontage); and
- provide appropriate landscape treatments, including street planting.

Areas of environmental and ecological significance should be protected and enhanced in the identified Greenspace Framework Areas of the Preferred Land Use Concept Master Plan.

The intent of each Business and Industry land use type is described in further detail in the following sub-sections.

3.1.1 Low Impact Business and Industry

Low Impact Business and Industry uses may be required to be conducted within buildings (in order to protect the amenity of nearby residences) with the potential for negligible impacts to sensitive land uses from offsite emissions, fumes, odour and noise generation. These uses are generally limited to day time hours of operation (ie. 7am-6pm), generate low volumes of traffic and heavy vehicle usage and have consistent demands on the local infrastructure network.

Land uses in the Low Impact Business and Industry Area are to be compatible with sensitive uses (particularly nearby residential uses) and may include-

- business and industry training establishments;
- 'clean' manufacturing and high technology industries (e.g. computer, laser, robotics, electronics, medical and communications technology);
- research and laboratories;
- service trade uses (eg. car wash, machinery repairs, depot, vehicle workshop);
- storage, warehousing and distribution (within limited hours of operation);
- equipment hire;
- small scale repair and maintenance premises;
- vehicle sales premises and automotive parts sales, fitting, servicing and repairs; and
- recreation uses

3.1.2 Medium Impact Business and Industry

Medium Impact Business and Industry uses are generally conducted within buildings however, have potential for noticeable impacts to sensitive land uses owing to their large scale and offsite emissions (eg. fumes, odour and noise generation). These uses may generate moderate to high volumes of traffic, may include evening/night activities, and may generate an elevated demand on the local infrastructure network (eg. may require access to transport or rail infrastructure). The potential impacts must be appropriately ameliorated and not cause an unacceptable safety risk to sensitive land uses, particularly nearby residential uses.

The Medium Impact Business and Industry Area should accommodate a wide variety of medium to larger scale industrial activities (eg. that may be difficult-to-locate owing to the uses requiring a large footprint) and may include –

- rail, transport, timber and metal processing industries;
- research and technology industries;
- concrete batching plants;
- finishing, repairing, packaging, storing, distributing;
- wholesaling products such as wood, metal, plastic, textiles, food, beverages, construction materials, minerals;
- large scale warehouses and distribution (with 24 hours of operation);
- general industries (ie. making, assembling, dismantling, breaking up, servicing, storing or repairing);
- food and beverage manufacturing;
- freight or truck depots; and
- service trades uses.

Land uses associated with motorsports and automotive and related uses in the Medium Impact Industry Areas are also encouraged where located in proximity to the Ipswich Motorsport Precinct.

Incompatible uses to Medium Impact Business and Industry or inclusion of sensitive land uses (particularly residences) are not supported.

3.1.3 Potential High Impact Business and Industry

The areas designated for Potential High Impact Business and Industry are intended to deliver a range of industrial uses that may be land extensive, difficult to locate, operate outside standard hours of operation and have greater potential for offsite impacts and may include-

- manufacturing, processing and packaging;
- dismantling, repairing, recycling;
- storage, warehousing, distributing and wholesaling;
- treating of products; and
- general industries

The high impact business and industry uses could potentially have significant impacts to sensitive land uses owing to offsite emissions (eg. odour and noise generation). These uses may also generate high volumes of traffic, involve evening and outdoor activities and generate significant demand on the local infrastructure network (eg. require access to transport infrastructure and/or freight rail).



The impacts of the high impact business and industry land uses must be appropriately ameliorated, and not cause an unacceptable safety risk to sensitive land uses, particularly nearby residential uses.

Incompatible uses to high impact business and industry or inclusion of sensitive land uses are not supported.

3.2 Willowbank Special Opportunity Area

The Willowbank Special Opportunity Area includes land where the future use cannot be definitively stated at this time. The area acts as a land use transition and buffer from the Willowbank Township to the Cunningham Highway. The area is accessible from the Cunningham Highway, the designated major neighbourhood centre, and the surrounding business and industry areas which offers opportunities for a mix of future land uses.

Land uses that may capitalise on the proximity to the nominated Major Neighbourhood Centre and Cunningham Highway visual exposure and accessibility whilst not adversely impacting on the nearby residences in the Willowbank Township include highway related businesses and services, such as a business-park, a training centre (eg. providing specialised training and apprenticeships), trade services, a potential highway service centre (where accepted by DTMR), fast food outlets and truck rest stops. Eventually the area will be accessed via a service road once the Cunningham Highway realignment is completed.

New uses and works within the Willowbank Special Opportunity Area are to be compatible with the adjoining Willowbank Township and places of cultural heritage significance. Significant detrimental impacts upon the sensitive uses in the adjoining Willowbank Township or surrounding area are avoided with consideration to mitigation of emission of odours, noise, dust, waste products, light, electrical interference, hours of operation and traffic and noise generation.

Uses and works are located, designed and managed to—

- be sympathetic in height, form, scale, bulk, style and siting of buildings;
- create a visually pleasing combined built form and landscaped setting particularly when viewed from major road corridors (eg. by variation in façade treatment such as use of colour, projections, materials and awnings and location of any office component facing the primary road frontage);
- be compatible with the amenity and character of surrounding lands;
- avoid significant adverse effects on the greenspace framework;
- ensure the safe and efficient operation of the road network;
- have regard to Overlay Map OV7A – OVC to ensure RAAF Base Amberley operates efficiently and effectively without external impacts;

- retain existing large/mature vegetation where possible and incorporate the vegetation into the landscape design; and
- provide infrastructure in an orderly manner.

NOTE 3.2A

Land within the Willowbank Special Opportunity Area is affected by development constraints, particularly mining and with the operation of RAAF Base Amberley and the Ipswich Motorsport Precinct. Refer to Overlay Maps and Part 11 of the planning scheme to determine if a proposal is affected by an overlay.

3.3 Rural (Pastoral) Area

The Rural (Pastoral) Area is intended to accommodate land uses that are anticipated in the Rural B (Pastoral) Zone of the planning scheme. Rural based tourism (eg. eco-tourism) is also supported given the nearby Rural E zoned land and nominated areas within the greenspace framework.

The Rural (Pastoral) Area is surrounded by areas within the greenspace framework containing significant habitat values, and appropriate interface measures should be applied between new land uses and these areas.

NOTE 3.3A

Land within the Rural (Pastoral) Area is affected by development constraints, particularly the operation of RAAF Base Amberley and the Ipswich Motorsport Precinct. Refer to Overlay Maps and Part 11 of the planning scheme to determine if a proposal is affected by an overlay.

3.4 Centres

The Willowbank Township currently contains one local centre located on O'Neills Road. There is opportunity to establish another five centres as identified on the Preferred Land Use Concept Master Plan to support the convenience needs of the workforce in the ERIA and the existing community. Five of the six centres are identified as Local Retail and Commercial Centres, and one as a Major Neighbourhood Centre (designated in the Willowbank Special Opportunity Area).

The location of the centres are not fixed and are subject to detailed land use, transport and infrastructure planning. Centres are to be located so that access is from the local road network and not by direct access from the Cunningham Highway.

The intents of each centre type are outlined below.

3.4.1 Local Retail and Commercial Centres

Local Retail and Commercial Centres are intended to service the local population catchment, future ERIA local workforce and where relevant, the Ipswich Motorsport Precinct with convenience shopping, small limited specialist retail outlets,



lower order professional offices, business or personal services and local community facilities and services. They should generally be located at major entry points into the ERIA to maximise exposure and convenience. The Local Retail and Commercial Centres are nominated in the Ipswich Motorsport Precinct or within the Medium and Potential High Impact Industrial Areas and will therefore generally not include sensitive uses including childcare centres or dwellings (unless a caretaker dwelling) owing to potential significant noise and amenity impacts. The centres should provide for retail/commercial space up to 2,000m² of gross floor area.

The built form should be low rise and human-scale, which offers an attractive, comfortable and safe pedestrian environment and streetscape presentation.

3.4.2 Major Neighbourhood Centre

The Major Neighbourhood Centre should conveniently service the needs of the surrounding existing population and workforce, and contribute and enhance the attractiveness of the area through high quality design and streetscape presentation. The centre should provide a focus for community interaction and gathering. A high standard of design, character and function should be provided to reinforce the higher order of the centre within the ERIA and its relationship to the Willowbank Township.

New uses and works within the Major Neighbourhood Centre should include lower order professional offices, business, financial and personal services, medical services and pharmacy, newsagency, community services and food and beverage establishments having regard to the function and intended catchment of the centre. It should not include any permanent residential uses owing to noise from the Ipswich Motorsport Precinct and operation of RAAF Base Amberley.

The Major Neighbourhood Centre should not compromise the viability of higher order centres. The size of the centre is envisaged to be no more than 6,000m² unless a social and economic needs assessment demonstrates the need for additional floor space and uses. The Major Neighbourhood Centre should be directly accessible and visible to major roads and public transport routes, and be conveniently accessible via bikeways and footpaths. In the future this centre may be the main hub for public transport services, offering opportunities for a local bus feeder service to be established to distribute employees to the wider ERIA.

3.5 Ipswich Motorsport Precinct

The Ipswich Motorsport Precinct is a key recreational asset for the city and the wider region, and there are opportunities for the precinct to expand (particularly to the north and west) over time for motorsport and specialist automotive related industries. Expansion of the Precinct to the west should address geotechnical issues to ensure the area is suitable for the intended development and make allowance for the proposed north-south arterial road discussed in Section 5.0: Transport and Access Network Plan of this guideline.

The western half of the Ipswich Motorsport Precinct is affected by a major stormwater flow path area (refer to Figure 2 – Ebenezer Regional Industrial Area Drainage and Flooding Extents). New uses and works in the Ipswich Motorsport Precinct must adequately address flooding issues. Further detailed investigations are required to identify the extent of flooding on a site-by-site basis (refer to Implementation Guideline No. 24 – Stormwater Management).

The Precinct is currently accessed via Champions Way from the Cunningham Highway. With the Cunningham Highway upgrade, the existing T-intersection will be replaced with an underpass connecting to Clarrie Halls Road. This will separate Raceway traffic from the ERIA business and industry traffic and will also build in capacity for queuing for event traffic off the highway. An indicative industrial collector is also proposed between Champions Way and the realigned Coopers Road arterial from the future northern interchange which will offer a further alternative for access to and from the Ipswich Motorsport Precinct.

4.0 Greenspace Framework (Conservation/Rehabilitation/Drainage/ Buffer Areas)

The South East Queensland Regional Plan and state and Commonwealth legislation and policies identify matters of industrial development and environmental protection that are relevant to the ERIA. A balance has been sought in the study area to meet these obligations. The Greenspace Framework identifies an indicative preferred greenspace network with guidance in respect to achieving the intended outcomes for conservation, rehabilitation, drainage and buffer purposes for these areas. There is very limited scope for development within these greenspace areas (refer to Figure 4 – Ebenezer Regional Industrial Area Preferred Land Use Concept Master Plan).

The Greenspace Framework has been defined through desktop investigation and analysis and targeted ground truthing. It includes matters of national, state and local environmental significance in order to meet the requirements of local, state and Commonwealth legislation and policies (including those discussed in Section 2.0 of this guideline). These documents require the environmental planning principle of avoid, mitigate and offset (last option) be adopted.

In defining the Greenspace Framework consideration has been given to the following:

- extent, structural integrity and condition of vegetation;
- confirmed areas of koala habitat and *Melaleuca irbyana*;
- habitat potential (eg. opportunities for consolidation of viable habitat areas including offset and rehabilitation);
- reducing development intrusion, edge effects and fragmentation of viable habitat areas including future linear infrastructure provision such as the Southern Freight Rail Corridor;
- connectivity (within and external to the ERIA study area); and



- legislative position of the key ecological values in the ERIA.

The key environmental matters consolidated, protected and to be connected within the Greenspace Framework include:

- Matters of National Environmental Significance (MNES): protected Swamp Tea-tree (*Melaleuca irbyana*) Forest and Koala (*Phascolarctos cinereus*) (and by association its habitat) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Koala and Swamp Tea-tree are also listed under the *Nature Conservation Act 1992*;
- Koala conservation (including both population and habitat) under *State Planning Policy 2/10 Koala Conservation in South East Queensland*;
- Remnant regional ecosystems with a management status of Endangered and Of Concern and High Value Regrowth under the *Vegetation Management Act (Qld) 1999*;
- Nature refuge managed under the *Nature Conservation Act 1992*;
- Fauna habitat and movement corridors/habitat linkages;
- Land prone to flooding and major overland stormwater flow paths; and
- Areas of potential offset value.

Notwithstanding the above, areas within the study area located outside of the identified greenspace framework may also contain patches of vegetation and biodiversity values. As such further assessment at a Planning Unit and individual site level may be required to accurately locate and validate the existence of threatened, vulnerable and endangered fauna and flora species (including size, concentration and health), in accordance with relevant Commonwealth and state legislation and policies and the Ipswich Planning Scheme.

The identification of the Greenspace Framework (including its provision of opportunities for offset locations) will ensure that the developable land area of the ERIA is maximised and that where isolated or smaller clumps of vegetation (eg. of poor condition, disconnected and subject to potential safety and land use conflicts and edge effects with future development) exist outside the Greenspace Framework these lands can potentially be developed to their maximum by offsetting of removed vegetation in a dedicated offset location (where relevant national, state and local approvals have been granted) and longevity of the offset is protected to achieve a net benefit.

NOTE 4.0A

Addressing this Implementation Guideline does not remove any requirements under the *Vegetation Management Act 1999*, *Nature Conservation Act 1992* and *Environment Protection and Biodiversity Conservation Act 1999*.

The Greenspace Framework primarily consists of a consolidated core habitat area located in the south-western corner of the study area (further discussed in Section 4.1) and two major connecting greenspace corridors that also have a drainage and/or buffer sub-function. The core habitat area and the drainage and buffer areas combine to create the greenspace network for the study area (including indicative external environmental linkages), with limited intrusion from development or infrastructure. Development adjoining the core habitat area and linking greenspace corridors should address interface issues through siting and building design including setbacks, lighting control, hours of operation, noise and fencing. Esplanade Roads should be used as environmental boundaries to areas within the greenspace framework to act as firebreaks in order to reduce clearing for bushfire risk management, to minimise edge effects and creep of development influences.

The existing environmental conditions, issues and the components of the Greenspace Framework in each Planning Unit is further discussed in Section 8.0: ERIA Planning Units.

4.1 South Western Core Habitat Area

The south western corner of the ERIA adjoining the Southern Planning Unit (bounded by Mt Forbes Road to the west, Goebels Road to the south and the SFRC to the north) contains the largest expanse and concentration of existing vegetation, habitat and largely undisturbed topography and watercourses. This area has historically and is currently used mainly for rural residential purposes. The vegetation comprises large healthy areas of known koala habitat, endangered remnant vegetation and critically endangered *Melaleuca irbyana*.

The area also contains land zoned Rural D (Conservation) and Rural E (Special Land Management) including the Gum Tips Nature Refuge which is a refuge and release area for koalas. A network of watercourses also flow through the area providing existing habitat value and potential for rehabilitation. The area is affected by flooding and extensive stormwater overland flow paths particularly at the central areas (refer Figure 2 – Ebenezer Regional Industrial Area Drainage and Flooding Extents).

The south-western corner of the ERIA represents the best area ecologically within the ERIA and is central to achieving the environmental objectives of the ERIA and as required by Commonwealth and State legislation and policies. The area is intended to support the consolidation of critical environmental/ ecological values that are to be protected, rehabilitated and enhanced in perpetuity.

Rural residential uses, home based businesses and rural enterprises including low impact business activities and eco/rural tourism activities with limited environmental impacts will continue and could be accommodated in existing cleared areas where possible. Existing unformed and semi-formed roads should largely remain in their existing rural state and full construction is not required.



Some areas within this south western corner have been previously cleared of vegetation or the vegetation is fragmented. These areas provide opportunities for vegetation offset locations, rehabilitation and supplementary planting owing to the soil, geology, concentration of existing and surrounding vegetation and pre-clearing vegetation mapping which supports the re-establishment of koala habitat, and in selected areas reinstatement of Swamp Tea-tree Forests. Rehabilitating the cleared areas will strengthen the ecosystem functionality, increase core habitat and fauna movement in the area. Opportunities to offset vegetation in the cleared areas are subject to agreements between the applicant and the landowner of the potential offset receival site.

The SFRC bounds the core habitat to the north and as such provides a clear separation and edge between the core habitat and the designated business and industry area.

5.0 Transport and Access Network Plan

The Transport and Access Network Plan provides a preferred strategic road hierarchy and network within the ERIA and its connection with the wider existing and future road network (refer to Figure 5a – Ebenezer Regional Industrial Area Transport and Access Network Plan).

The future road network planning should be integrated and designed in conjunction with land use, environmental and other infrastructure planning and be delivered to meet the projected demand arising from development. The design of the road network should consider all modes of transport such as private motor vehicles, freight vehicles, public transport, pedestrians and cyclists. The final integrated road and access network should deliver an attractive, safe, efficient and functional network for a range of transport modes that successfully facilitates access to the local, regional and interstate transport networks.

The internal roads should reflect a network of thoroughfares, which serve to disperse traffic and accommodate various modes of transport. A connected and permeable network should provide various movement options throughout the ERIA whilst not compromising amenity and environmental objectives. In particular, industrial traffic within the ERIA should be separated from other forms of traffic (eg. residential and Raceway traffic) to minimise conflicts and delays and be directed away from roads in proximity to residential areas. The road network should be carefully planned, delivered in sufficient time, and designed to the required capacity in order to support the future ultimate development.

The land uses anticipated within the ERIA are likely to be dependant on both road and rail access. As the Southern Freight Rail Corridor (SFRC) is yet to be constructed, freight dependant industries will initially rely on the road network. Accordingly, the road network and land use planning should consider interim solutions and opportunities prior to the delivery of the SFRC. The road network must not

compromise the SFRC alignment and the potential Intermodal Freight Terminal (IFT).

All proposed roads within the ERIA must address matters that relate to the Defence Overlay Maps OV7A-OV7C and the associated planning scheme provisions. In particular, the proposed length, orientation and construction of the industrial roads must not mimic the appearance of a runway (especially during the night when lit) to ensure no adverse impacts to pilots and the operational airspace of RAAF Base Amberley.

The existing roads and the proposed indicative road types for the ERIA are outlined below.

5.1 External Road Network

5.1.1 Cunningham Highway

The Cunningham Highway serves as the primary access to the ERIA from the east. The highway is a state controlled road and is part of the Australian Government's National Land Transport Network. Where the Cunningham Highway bounds the ERIA, the road currently operates as a two-lane highway. It is proposed ultimately that this will be upgraded to four lanes on a new alignment.

The Department of Transport and Main Roads (DTMR) plans to upgrade the Cunningham Highway where it bounds the ERIA extending beyond the approved ADSC-A development site. The works involve upgrading, restricting and removing intersections, and providing grade separations to improve the traffic safety and provide greater efficiency in the movement of interstate and inter-regional freight movement. The Transport and Access Network Plan (refer to Figure 5a) shows the Cunningham Highway upgrade as an 'Indicative Highway Network'.

5.1.2 Indicative Proposed Service Road

It is proposed that the existing Cunningham Highway will become a service road that runs parallel to the upgraded Cunningham Highway when the highway is upgraded. Further details regarding the Cunningham Highway upgrade should be sought from DTMR. The Transport and Access Network Plan identifies the existing Cunningham Highway as an 'Indicative Proposed Service Road'.

5.1.3 Potential Highway Interchanges

In conjunction with the Cunningham Highway upgrade, there is potential for two interchange points along the highway to facilitate access to the ERIA in the north and south. The proposed northern interchange is located at the intersection of Clarrie Halls Road (external to the study area) and the Cunningham Highway and connects to Coopers Road to the north. It will remove industrial traffic from Coopers Road in proximity to the existing Willowbank Township.

The southern interchange is proposed approximately 3.5km south along the Cunningham Highway (second highway bend) (refer Figure 5a – Ebenezer Regional Industrial Area Transport and Access Network Plan). Interim arrangements



will be in place until such time as the development in the Southern Planning Unit of the ERIA generates sufficient traffic to necessitate construction of a grade separated interchange in association with the highway upgrade. The Transport and Access Network Plan identifies the indicative locations of the highway interchanges.

NOTE 5.1A

Applicants submitting development applications should liaise with the DTMR regarding the planned works for the Cunningham Highway upgrade.

5.1.4 Proposed Western Ipswich Bypass

The Western Ipswich Bypass (WIB) will provide a road connection from the Warrego Highway at Haigslea, Walloon and Amberley and connect with the Cunningham Highway at Willowbank. The WIB will be a four-lane state controlled arterial road, that will connect with a major system interchange proposed as part of the Cunningham Highway realignment at Amberley/Ebenezer.

The WIB link will increase the traffic network capacity in the Amberley Ebenezer area, facilitating movement to the north, east and west (Warrego Highway). The Transport and Access Network Plan identifies the potential location of the WIB as an 'Indicative Highway Network' (refer to Figure 5a).

5.1.5 Goebels Road

Goebels Road forms part of the southern boundary of the ERIA and runs in an east-west direction connecting with the Cunningham Highway (east) and Mt Forbes Road (west). The road is a standard sealed two-lane road and the intersection of Goebels Road and the Cunningham Highway is of a low standard, as the road geometry involves a sharp turn and a steep rise from the Cunningham Highway. The implementation guideline does not provide for industrial development fronting or accessible from Goebels Road and it is planned for this road to generally remain at its current standard primarily servicing rural and rural residential needs.

5.1.6 Mt Forbes Road

Mt Forbes Road is a sealed road that forms part of the western boundary of the ERIA. The road facilitates a partial north south transport movement external to the ERIA, and intersects with Paynes Road.

5.1.7 Ebenezer Road

Ebenezer Road forms part of the western boundary of the ERIA and connects with Coopers Road (north east) and Rosewood-Warrill View Road (west). Currently Ebenezer Road only connects as far north as Coopers Road, however the Ebenezer Road reserve is intended to connect with Ipswich-Rosewood Road. Past mining activities and the construction of the rail spur line has disrupted the Ebenezer Road and Ipswich-Rosewood Road connection. Although this area has been backfilled, the road has not been formed. The Transport and Access Network Plan shows Ebenezer Road as an 'Indicative Proposed Industrial Collector (2 lanes)' (refer Figure 5a).

5.2 Internal Road Network

5.2.1 Ipswich-Rosewood Road

Ipswich-Rosewood Road is a state controlled road that forms part of the north east boundary of the ERIA and connects with the Cunningham Highway. The Ipswich-Rosewood Road also traverses the upper northern half of the study area in an east west direction, and is a two lane undivided road where the Ipswich-Rosewood Road, Southern Amberley Road and the Cunningham Highway intersect (at the north-east boundary of the study area).

The Transport and Access Network Plan shows Ipswich-Rosewood Road as an 'Indicative Potential Arterial Road' (refer to Figure 5a).

5.2.2 Coopers Road

Coopers Road is a sealed two lane undivided road which runs east west and connects with the Cunningham Highway (east) and Rosewood-Warrill View Road via Ebenezer Road (west). It provides access to the Willowbank Township and partially serves as a haul route to the mining activities in the north and western half of the ERIA.

It is intended that Coopers Road will accommodate three road types – Indicative Proposed Industrial Arterial (4 lanes), Indicative Proposed Industrial Collector (2 lanes) and as a Residential Collector – Industrial traffic to be discouraged.

The potential arterials and collectors will primarily service the future industrial transport activity, whereas the potential residential collector will service traffic to the Willowbank Township. This will ensure future heavy vehicle movements will be redirected to limit adverse impacts upon the residential community through separation of residential and industrial traffic.

5.2.3 Champions Way

Champions Way is located centrally in the ERIA and currently provides direct access from the Cunningham Highway to the Ipswich Motorsport Precinct and the Ti Tree Bioenergy facility. Paynes Road is a gravel road that connects to the western end of Champions Way forming an east west connecting road through the ERIA. The current Champions Way and Cunningham Highway T-intersection experiences traffic congestion during major events at the Ipswich Motorsport Precinct.

Champions Way is identified as an Indicative Proposed Industrial Collector (2 lanes) (refer to Figure 5a – Ebenezer Regional Industrial Area Transport and Network Access Plan). In the long term, the Cunningham Highway upgrade will result in the removal of direct access to and from the highway to Champions Way, instead relying on an underpass to the Cunningham Highway connecting to Clarrie Halls Road (service road) on the eastern side of the highway allowing traffic to access the proposed interchanges to the north and south. This arrangement will result in the traffic from the Ipswich Motorsport Precinct avoiding potential conflicts with



the industrial traffic within the ERIA and provide additional queuing capacity for the Ipswich Motorsport Precinct, if required, alleviating pressure on the Cunningham Highway. The underpass will also allow a number of options for dispersal of Ipswich Motorsport Precinct traffic, improve the overall accessibility of the Ipswich Motorsport Precinct and provide an opportunity to enhance the entry feature into the Precinct.

5.2.4 Paynes Road

Paynes Road is an unsealed road that runs parallel to the Southern Freight Rail Corridor. The road is accessible from Mt Forbes Road from the west and access roads from the Ipswich Motorsport Precinct (east). The Transport and Access Network plan shows Paynes Road as an 'Indicative Proposed Industrial Collector (2 lanes)' (refer to Figure 5a).

5.3 **Other Key Indicative Road Opportunities**

In addition to the potential existing road upgrades outlined in sections 5.1 and 5.2, the Transport and Access Network Plan also identifies a number of indicative new road opportunities that do not currently align with existing roads/road reserves. The intent of each of the road types are outlined below.

5.3.1 Indicative Proposed Industrial Arterials (4 lanes)

There is potential for an internal north-south arterial road within the ERIA which is necessary to alleviate traffic pressure on the Cunningham Highway by removing the need for ERIA traffic to use the highway for internal trips and facilitate an efficient road network within the ERIA (refer Figure 5a – Ebenezer Regional Industrial Area Transport and Access Network Plan). The north-south arterial links Ipswich Rosewood Road in the north, crosses Paynes Road (eventual SFRC alignment) to the Southern Planning Unit and links to the proposed southern interchange to the Cunningham Highway.

The north-south arterial road alignment is indicative, generally following the current Lanes Road reserve alignment. The Lanes Road alignment will utilise existing road reserves until Coopers Road. The determination of a north-south arterial road alignment will have to consider the SFRC, existing infrastructure (eg. Powerlink site and rail spur line), and topographic and geotechnical constraints associated with current and past mining activities.

Further investigation and detailed design is required particularly in relation to the north-south arterial road's crossing of the SFRC, proximity to/crossing of the IFT and link to the Southern Planning Unit. The nominated alignment of the north-south arterial provides:

- a grade separated crossing of the SFRC;
- is located as close as practicable to the IFT;
- maximises opportunities for expansion of the Ipswich Motorsport Precinct;
- minimises impacts to and severance of the Powerlink site;

- minimises construction in areas within the Greenspace Framework (eg. drainage areas); and
- links into an Esplanade component of this indicative proposed industrial arterial within the Southern Planning Unit.

The exact location of the north-south arterial will therefore require further detailed studies including geotechnical investigations.

NOTE 5.3A

The north-south arterial road alignment and design should be undertaken in close consultation with the State Government, Ipswich City Council, Powerlink and other major stakeholders.

An indicative arterial road is also identified over the central part of Coopers Road (parallel to the rail spur line), which deviates southward and connects to the potential Cunningham Highway interchange at Clarrie Halls Road. The exact location of the indicative proposed industrial arterials require further detailed investigation and studies.

Key intersections on the industrial arterial network will generally be roundabouts unless detailed design indicates otherwise.

5.3.2 Indicative Proposed Industrial Collectors (2 lanes)

In addition to the Indicative Proposed Industrial Collectors identified in section 5.1 and 5.2, there is an indicative north south collector between the Willowbank Township and the existing rail spur line, which connects to Ipswich-Rosewood Road and Coopers Road.

This collector forms part of another wider north south internal road corridor within the study area.

An existing rail spur line services part of the Northern Planning Unit and opportunities to capitalise on this existing infrastructure as a freight facility should be investigated once current mining activities cease in the area. If the rail loop ceases operation, it may be worthy of retention or integration into future development proposals.

5.3.3 Subject to Investigation - Potential Indicative Proposed Industrial Collectors (2 lanes)

The intent of the Subject to Investigation – Potential Indicative Proposed Industrial Collector is to identify there is a potential opportunity for a collector road, however the need and exact location for the collector is subject to further investigation and should be addressed during master planning of the relevant Planning Unit.

5.3.4 Indicative Proposed Commuter Link

An indicative proposed commuter link is identified over Clarrie Halls Road, which may connect with the first potential interchange on the Cunningham Highway. The commuter link will facilitate private vehicle access to the ERIA from the east.



5.3.5 Potential Connection to Intermodal Freight Terminal

An indicative connection is nominated on Figure 5a – Ebenezer Regional Industrial Area Transport and Access Network Plan to the potential IFT. This connection is subject to further investigation and should be addressed during planning for the relevant Planning Unit.

5.4 Potential Major/Strategic Fauna Crossings

The ERIA Transport and Access Network Plan identifies the location of six potential major/strategic fauna crossings to facilitate the movement of fauna across transport infrastructure corridors (refer to Figure 5a). Four (4) of the indicated fauna crossings will need to be provided as a result of major State infrastructure projects and two (2) potentially provided as a direct result of ERIA development. The exact location, size, type and design of the fauna crossings are subject to further detailed investigation during master planning of the relevant Planning Unit. The potential fauna crossings are designated with consideration to current and potential road alignments that intersect with core habitat areas and greenspace corridors.

5.5 Public Transport Network

No passenger rail network currently services the study area, and the two nearby passenger rail stations are Rosewood and Thagoona, approximately 10km north of the study area.

The existing rail spur line located in the northern half of the study area connects with the existing Ipswich rail line north of the study area. The rail spur line only accommodates coal freight loading.

There is currently no bus service to and from the study area. The nearest bus service is provided between Amberley and the Ipswich Central Business District (CBD), with limited service hours of 6am to 7pm.

Delivering public transport in a broad acre industrial setting is difficult owing to the lack of concentration of employee numbers and split shifts. The future public transport system should connect with and serve the centres and any high employment generating major business park uses. The future predominant mode of public transport will be bus using the internal strategic road network linking to Yamanto and Ripley, Ipswich Central and Rosewood and Thagoona passenger rail stations.

5.6 Pedestrian and Cycle Network

The inclusion of a strategic pedestrian and cycle network in the ERIA study area promotes healthy and alternative commuting options. The ERIA offers important linkages to external transport nodes such as the Rosewood and Thagoona railway stations. Figure 5b – Ebenezer Regional Industrial Area Pedestrian and Cycle Network Plan identifies an indicative on-road strategic cycle and pedestrian network. The pedestrian and cycle paths will need to be well designed and located to reduce conflicts with future industrial traffic. When undertaking detailed design, consideration may be given to provision of combined pedestrian/cycle paths within

the road reserve in lieu of cycle lanes within the carriage way.

Opportunities are also identified for an off-road pedestrian and cycle network associated with future Esplanade Roads to the greenspace network including indicative key strategic links. Off-road pedestrian and cycle paths within areas in the greenspace framework may be provided depending on land ownership and consideration to habitat values. The actual location of this network will be dependant on the outcomes of detailed Planning Unit master planning. The final design and location of the off-road pedestrian and cycle network is to consider matters of visual and natural surveillance.

New uses and works should provide and enhance the pedestrian and cycle network within the study area, particularly with consideration to external key linkages (eg. improve linkages to the Rosewood and Thagoona railway stations, greenspace areas and capitalise on any existing pedestrian and cycle paths).

6.0 Utilities and Services Network Plan

The size and location of the study area presents challenges in providing trunk infrastructure. Suitable interim solutions may be required to ensure the planned ultimate population and development demands are adequately serviced.

New infrastructure to service industrial land and other development in the study area should be provided in an orderly manner to facilitate the efficient provision of necessary infrastructure to the area.

NOTE 6.0A

Queensland Urban Utilities (QUU) planning is indicative only and the identified networks are not included in the QUU 30 year Investment Plan.

6.1 Water Supply

The need to provide water infrastructure to service an ultimate demand of 95,000 Equivalent Persons (EP) has been calculated based on the Queensland Urban Utility's water demand assumptions for land uses including an industrial area development density of 30 EP per hectare.

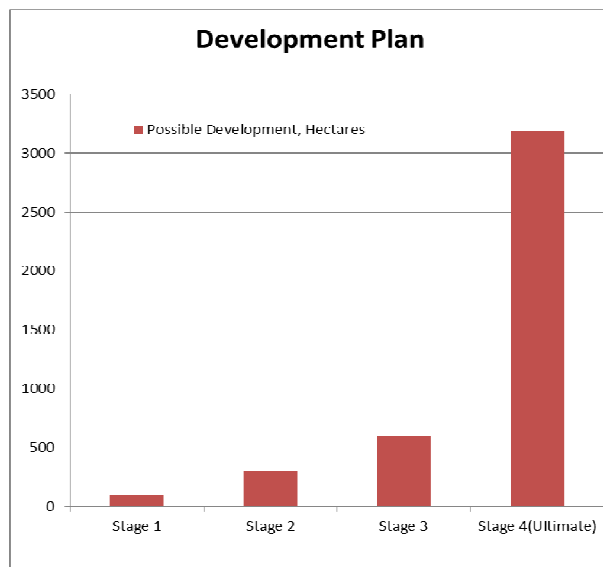
The existing water supply infrastructure in the area is insufficient to supply water to the ERIA owing to limited capacity (conveyance, supply and storage) in the existing system. The existing Willowbank booster pump station is only capable of servicing the existing Willowbank Township. In order for development to occur extensive water supply infrastructure will be required.

Currently, the nearest water supply infrastructure to Ebenezer is at the boundary of Ripley Water Supply Zone at Powell's Road. This area is supplied from the Ripley Reservoir which is approximately 6 km further to the east. Ultimately, water supply to the ERIA will be from Mt Crosby via a dedicated main with adequate capacity to meet the demand from ultimate development. The major limitation on the options for interim staging of development is the capacity



available in the Western Corridor from Mt Crosby and Southern Regional Water Pipeline (SRWP) from Ripley.

The supply allocation from the SRWP off take to Ripley is inadequate to service the zone fully (including servicing development in the Ripley Valley). Accordingly, additional supply is required from the spare capacity of the SRWP off take in Blackstone, via the South Station Road pump station or Eastern main via the Hallett Road pump station. Both of the above additional supplies need pumping with associated operational, maintenance, upgrade and replacement costs of the two pump stations. However, with the additional supply, the Ripley Zone can provide the capacity to service development in the Ebenezer water supply zone in the interim as shown in Graph 1.



Graph 1 - Water Supply Infrastructure Thresholds

The interim water supply capacity available to Ebenezer from the Ripley Zone reaches its limit when 600 hectares is developed.

The assumed sequencing allows for the commencement of development in the central, southern or northern areas of the ERIA, with the indicative staging of the provision of water supply infrastructure network shown in Figure 6a – Ebenezer Regional Industrial Area Strategic Ultimate Water Supply Network with Staging. The components of the network required to supply development will also depend on where development proceeds, with the delivery of some components of the network able to be adjusted between Stages 1, 2 and 3.

The indicative thresholds for the provision of the required interim water supply infrastructure are:

(a) Conveyance

Stage 1

A new 375 mm trunk main from Powell's Road/Cunningham Highway Junction will be required in addition to the local mains. The existing pump at Willowbank will be required to

continue to supply the Willowbank Township via the existing 300mm water main.

Rezoning of the Willowbank Township network into low level and high level zones will also be required, with a pressure reducing valve and two closed valves to maintain the Queensland Urban Utilities service levels in the existing supply network.

Development up to a total of 100 hectares can proceed in the northern, central or southern areas of Ebenezer. However, as the supply in Stage 1 is through gravity feed only (ie. no booster pumps), developments can only occur in the areas that are below the 65m contour without Stage 2 infrastructure being provided.

Stage 2

An additional 200 hectares can be developed in Stage 2 (cumulative total of 300 hectares) through installation of a new pump to replace the existing Willowbank pump to cater for the increased demand from development and from the Willowbank Township, with a by-pass to the pump (check valve) to be provided for night supply. The existing 300mm main and 375mm main provided in Stage 1 will jointly provide the conveyance capacity required for Stage 2.

Stage 3

The increased supply provided by the Stage 3 infrastructure will support the development of a further 300 hectares of land (cumulative total of 600 hectares). This will include replacing the Stage 2 Willowbank pump with a new set of pumps of larger capacity.

Stage 4 (Ultimate Development)

The indicative ultimate water supply infrastructure network including pipe sizes is shown on Figure 6b – Ebenezer Regional Industrial Area Strategic Ultimate Water Supply Network with Sizing. The required conveyance and pump station infrastructure to service ultimate development (above that provided in Stages 1, 2 and 3) is identified on Figure 6a – Ebenezer Regional Industrial Area Strategic Ultimate Water Supply Network with Staging.

Any development beyond Stage 3 will require the provision of the major infrastructure identified for the Stage 4 (Ultimate): the 525mm supply main from Mt Crosby, Booster Pump Station at Ipswich Rosewood Road in north of Ebenezer and the remaining 525mm mains from the booster Pump to the reservoir. The duplicate mains from the Ripley Zone to Willowbank, existing 300mm main and the proposed 375 mm main (in Stage 1) with the Stage 3 pumps will provide additional supply security for the ultimate development.

The ultimate alignment of the water mains is intended to be within the reserves of the road network to be developed within the ERIA.

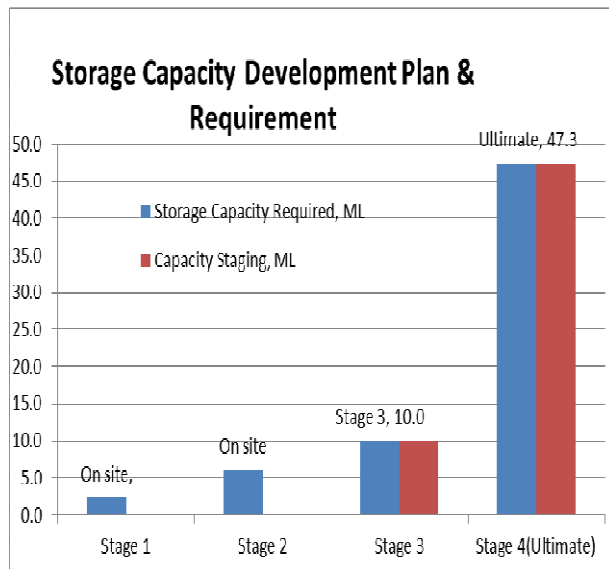
(b) Storage

No water storage is currently available in Ebenezer, with an ultimate storage capacity required of 47.3 ML to service development. The preferred Ebenezer Reservoir location is identified at 92m Contour in the south-east corner of the ERIA greenspace framework. The majority of the area below



the 65m contour in the ERIA can be serviced by the reservoir directly, while the elevated pockets in the north-western area will need a local booster pump if site re-contouring does not reduce the height of land to a serviceable level.

Ahead of the provision of the reservoir, development can proceed in the interim as indicated in Graph 2 and set out below.



Graph 2 - Storage Requirements

Stages 1 and 2

The water storage requirements for development in Stages 1 and 2 will need to be met onsite. All developments in Stages 1 and 2 will therefore need to provide onsite tanks of sufficient capacity to ensure supply security.

As water age in Stages 1 & 2 exceeds 5 days (with reduced age to 3-4 days by Stage 3) post chlorination will be required at the pump station at Willowbank to meet water quality requirements.

Stage 3

The first stage of the reservoir (10 ML capacity) and the water mains to fill the reservoir will be required as the development exceeds the cumulative total of 300 hectares (ie. prior to Stage 3). Stage 3 pumps will be controlled by the reservoir levels.

The initial provision of the reservoir and the water mains to fill the reservoir will be required as the development exceeds the cumulative total of 300 hectares (ie. prior to Stage 3). The pumps required as part of Stage 3 development will be controlled by the reservoir levels.

Ultimate

Development at Stage 4 will require the provision of additional storage capacity at the reservoir to meet the demand from ultimate development (ie. 47.3ML)

Alternative solutions including interim arrangements will only be considered where it is demonstrated to the satisfaction of Council and Queensland Urban Utilities that a connection to the ultimate water supply system in accordance with the ultimate supply strategy is not feasible.

NOTE 6.1A

Applicants are required to liaise with Queensland Urban Utilities (QUU) with respect to provision of water supply to the ERIA.

6.2 Sewerage Treatment

The ERIA is currently not connected to the sewerage network. The existing properties within the ERIA are reliant on the function of septic tanks.

The strategic ultimate sewer network to service industrial and other development in the study area is shown on Figure 7 – Ebenezer Regional Industrial Area Strategic Ultimate Sewer Network and is further discussed below.

Ultimate Development

A regional sewerage treatment plant (STP) will be required to service the development in the ERIA. Investigations are being undertaken, and if feasible, the regional STP may be located to the north west of Ebenezer (the location will be confirmed once Queensland Urban Utilities' STP Strategy is completed).

At ultimate development, pump station PS1 will be the main pump station from the Ebenezer area to the regional STP as the:

- majority of the Northern Planning Unit drains to the north west (ie. to pump station PS1) ;
- majority of the Central Western and Eastern Planning Units drains to the east (ie. to pump station PS2); and
- Southern Planning Unit drains to the north west of the unit (ie. to pump station PS7).

In determining the indicative preferred sewerage network to service development in Ebenezer the following assumptions have been made:

- to provide command to all developable land the mining voids have been filled and are developable. Consequently some sewer mains are shown as traversing mining voids;
- where possible all sewerage infrastructure is provided within the reserves of roads (existing and planned); and
- a demand has been assumed of 30 EP/ha from all developable land including that temporally constrained by mining. This will need to be substantiated as it will have an impact on the infrastructure sizing. Should land not be rehabilitated and developed this will impact on the sizing and location of sewerage infrastructure (conveyance and pump stations).

The indicative preferred sewerage network has been based on the 5 metre contour. Accordingly, the final location of sewerage infrastructure will need to be determined at the detailed planning stage based on more accurate contour information at that time and following confirmation of demand and loads from upper catchments to QUU's satisfaction. The



indicative preferred sewerage network is likely to be subject to change (ie. additional mains and pump stations or deeper sewers may be required in order to command all the developable areas).

Staging

Staging of the provision of the sewerage infrastructure in the interim will depend on the scale and rate of development as the flows generated will determine:

- whether an interim solution or the ultimate network will need to be constructed, ie whether a smaller sewer main or pump station is provided for the interim until the development in the area achieves a minimum flow to make construction of the ultimate network (or part thereof) viable and to ensure the infrastructure provided is efficient in meeting the standards of service;
- the sizing of the infrastructure provided (ie. mains, pump stations and treatment plant capacity); and
- the threshold at which upgrades from interim solutions will be required.

In the interim period before the regional STP is constructed, development in the Southern Planning Unit can be discharged to an interim STP (located in the vicinity of the Planning Unit). At ultimate development the Southern Planning Unit will be connected to the regional STP through the ultimate network (ie. via MH 3F or directly to PS1). Whether it connects to MH F or directly to PS1 will be determined by the timing and rate of development in the Northern Planning Unit.

The interim STP that will service the Southern Planning Unit may also service development in the Central Western Planning Unit in the interim, depending on sufficient capacity being available at the interim STP.

NOTE 6.2A

Applicants are required to liaise with Queensland Urban Utilities (QUU) with respect to the sewerage network.

7.0 General Development Requirements Applying to the ERIA

The following general development requirements apply to all Planning Units in the ERIA:

- (a) New uses and works should be compatible with existing land uses (including places of cultural heritage significance such as Stone Quarry Cemetery and recorded and potential indigenous cultural heritage sites), and support the planning intent and types of land uses outlined in Section 3.0: ERIA Preferred Land Use Concept Master Plan of this guideline;
- (b) New uses and works should be well designed and demonstrate a high quality built form and landscape treatment to main entry and circulation roads and the Cunningham Highway;
- (c) New uses and works should not cause an obstruction or other potential hazard (eg. through lighting, smoke, steam or gaseous plumes, building height and particularly road orientation and length) to aircraft operations and pilot visibility. These matters should be considered in early design stages, to ensure RAAF Base Amberley operates efficiently and effectively (refer to Overlay Maps OV7A-OV7C and the associated planning scheme provisions);
- (d) The TLPI Adopted Flood Regulation Line (Q100) (AFRL) has been adopted as an indicative development boundary, identified as a 'shifting boundary' on Figure 4: Ebenezer Regional Industrial Area Preferred Land Use Concept Master Plan with development not to occur within the AFRL. Flooding issues must be adequately addressed prior to development occurring to limit the risks to people and properties. As such further detailed investigations are required to identify the extent of flooding on a Planning Unit and individual site basis;
- (e) New uses and works should support the intent of the greenspace corridors to ensure their function is maintained within the ERIA and the wider context (refer to Section 4.0: Greenspace Framework (Conservation/Rehabilitation/Drainage/ Buffer Areas) of this guideline). The greenspace corridors provide opportunities for habitat rehabilitation, supplementary planting and significant potential as offset locations for koala habitat and *Melaleuca irbyana*;
- (f) New uses and works adjoining core habitat and open space and drainage corridors should mitigate development impacts through design and measures including subdivision and building layout and design, control of lighting, use of esplanade roads and fencing types, to ensure fauna and vegetation within the greenspace corridors are not adversely affected;
- (g) Esplanade Roads should be used as environmental boundaries to areas within the greenspace framework to act as fire breaks in order to reduce clearing for bushfire risk management, to minimise edge effects and creep of development influences;
- (h) Development should adopt best practice erosion and sediment control, particularly given the highly dispersive soils in the study area; and
- (i) Hazardous substances/chemicals are to be properly stored, transported and managed to avoid spills that could contaminate stormwater or land.



8.0 ERIA PLANNING UNITS

The ERIA Preferred Land Use Concept Master Plan illustrates a strategically integrated land use, environment, transport and infrastructure framework. Four (4) Planning Units are established for the ERIA which divide the Preferred Land Use Concept Master Plan into four (4) manageable master planning areas and provide 'area specific' guidance to assist in the preparation of section 242 of SPA development applications (refer to Figure 8 – Ebenezer Regional Industrial Area Planning Units). Each Planning Unit contains different characteristics and constraints with the desired outcomes for each Planning Unit outlined in this section.

The four (4) nominated ERIA Planning Units are:-

- Northern;
- Central Eastern;
- Central Western; and
- Southern

In accordance with the Regional Business and Industry Investigation Zone, comprehensive master planning is expected for each Planning Unit demonstrating an integrated land use, environment, transport and infrastructure master plan outcome for the Planning Unit and relative to other Planning Units in the ERIA. The ultimate development of each Planning Unit should contribute to overall cohesive business and industry development of the ERIA. Accordingly, the lodgement of a site specific development application without a detailed master plan for the entire Planning Unit is contrary to the intent of the Zone.

There is no identified staging or sequencing of development within the ERIA although, based on availability of infrastructure a broad sequencing with development commencing in the Southern Planning Unit and Northern Planning Unit has been assumed to plan for infrastructure. However, any of the four Planning Units may be developed at any one time, subject to adequately addressing the land use, environment, transport and infrastructure matters, orderly development of adjoining Planning Units and the overall intent for the ERIA.

8.1 Northern Planning Unit

The Northern Planning Unit is bounded by the Bremer River to the north and west, Ipswich-Rosewood Road and the Willowbank Township to the east and Coopers Road and the existing rail spur line to the south.

Owing to ongoing mining activities it is anticipated reaching ultimate development within the Northern Planning Unit will occur over a longer timeframe in comparison to the other Planning Units.

The master planning within the Northern Planning Unit should achieve the outcomes listed below.

8.1.1 Land Use Outcomes

In the short to medium term mining activities will continue in accordance with relevant legislation and approvals. At the time of cessation of mining activities, the land should be rehabilitated to achieve a geotechnical level suitable to support industrial development with no risk or hazard to future business and industry uses. After the cessation of mining activities (subject to geotechnical investigations), the Northern Planning Unit is suited to accommodation of low impact and medium impact business and industry uses. The low impact business and industry area is designated immediately west of the Willowbank Township to ensure less intense and low impact business and industry uses separate the existing residential community from medium impact activities in the remainder of the Planning Unit.

New uses and works should not compromise the existing amenity of the Willowbank Township or nearby rural residential areas. Consideration should be given to building height, scale, visual interface, noise, odour, dust, hours of operation, lighting and traffic generation. The greenspace framework provides a buffer to the Willowbank Township to the north and west ranging in width from 200 to 360 metres. The nominated Special Opportunity Area also acts as a land use transition and buffer from the Willowbank Township to the Cunningham Highway. The greenspace framework adjoins the Special Opportunity Area to the south providing additional buffering to the Willowbank Township.

A potential local retail and commercial centre is identified in the Planning Unit in the vicinity of the intersection of Ipswich-Rosewood Road and the Indicative Proposed Industrial Arterial Road. Refer to Section 3.4 for provisions applying to local retail and commercial centres.

8.1.2 Environmental Outcomes

There are two greenspace corridors affecting the Planning Unit; an open space drainage corridor within the Planning Unit along the Bremer River and an open space corridor adjoining the eastern edge of the Planning Unit. These areas are also adjacent to habitat areas external to the study area.

The northern part of the ERIA contains isolated and fragmented vegetation, particularly in areas where there has been surface disturbance by mining activities. The existing vegetation primarily consists of koala habitat and endangered remnant vegetation. Further detailed investigations will be required to validate the health, quality, quantity and vegetation types.

The Bremer River riparian corridor and flood plain are identified as an open space drainage corridor with important environmental values. The open space drainage corridor forms part of the wider greenspace network which provides connection and refuge for roaming fauna. The corridor aligns with the TLPI Adopted Flood Regulation Line (in this instance Q100) and provides a buffer between the potential developable areas and the Bremer River. The extent of the corridor for open space drainage purposes will require detailed investigation to confirm the extent of flooding. The



boundary of the corridor is therefore not fixed and is shown on the Preferred Land Use Concept Master Plan as a 'shifting boundary' depicted with a 'dotted white line'.

Future development and infrastructure works should not adversely affect or compromise the intent of the greenspace corridors. The open space drainage corridor should be rehabilitated to improve and enhance the existing water quality and provide fauna habitat and a fauna movement corridor.

The greenspace framework provides a buffer to the Willowbank Township to the north and west ranging in width from 200 to 360 metres. This open space corridor connects to a large dense area of vegetation bounded by Ipswich Rosewood Road, Mt Elliot Mine Road and O'Neills Road located to the north of the Township. This open space corridor is considered to be a core habitat linkage within the Greenspace Framework. The corridor will also provide a viable and functional buffer to the township and facilitate another principal north-south fauna movement corridor within the study area.

NOTE 8.1A

An ecological assessment/environmental study and management plan may be required with a development application to address the environmental matters of national, state and local significance.

8.1.3 Flooding and Stormwater Management Outcomes

The Planning Unit is significantly affected by past and current mining activities (both open cut and underground mining) and contains dispersive soils. New uses and works should incorporate water sensitive design outcomes and appropriate and innovative stormwater management measures (eg. use of mining voids) to ensure the Bremer River and creeks, the existing water table and salinity levels are not adversely affected (refer to Implementation Guideline No. 24 – Stormwater Management).

Streams of order 1 and 2 have been identified and may present an opportunity for retention and rehabilitation as naturalised components within the stormwater network.

8.1.4 Transport and Access Outcomes

The Northern Planning Unit is a highly accessible area with immediate connections to Ipswich-Rosewood Road and Coopers Road, that further connects to a network of existing and proposed inter-regional and interstate highway networks (ie. Warrego Highway (via the proposed WIB) and the Cunningham Highway). A high quality streetscape is to be achieved along Ipswich-Rosewood Road as a key entry route into the ERIA.

An existing rail spur line services part of the Northern Planning Unit and opportunities to capitalise on this existing infrastructure as a freight facility should be investigated once current mining activities cease in the area. If the rail loop ceases operation, it may be worthy of retention or integration into future development proposals.

The potential north-south arterial road traverses the Planning Unit providing a link between Coopers Road and Ipswich-Rosewood Road. The potential north-south arterial road is a crucial road alignment within the ERIA and the wider context with the intent to alleviate the traffic demand on the Cunningham Highway. The exact alignment of the north-south arterial road will require further detailed studies and consideration with the road network planning over the Central Western Planning Unit. Matters for consideration in relation to the north-south arterial in this Planning Unit include the need to safely cross the rail spur line, the use of Lanes Road reserve alignment where possible and geotechnical requirements. Land uses that generate heavy traffic movement should utilise the north-south arterial to travel throughout the ERIA.

Traffic movement along the eastern part of Coopers Road will be restricted primarily to residential traffic to ensure the Willowbank Township will not be adversely affected by future industry traffic. The future internal road network should support employee access to the local commercial and retail centres and the open space corridors. A pedestrian and cycle network should be integrated with the road network.

Two (2) potential strategic fauna crossings are identified along Ipswich-Rosewood Road. One crossing on Ipswich Rosewood Road near the north-south indicative proposed arterial road intersection (likely to require a fauna underpass) and the other crossing on the WIB. The exact size, location and design of the fauna crossings are subject to the detailed road network design.

8.2 Central Eastern Planning Unit

The northern and western boundary of the Central Eastern Planning Unit is formed by part of the Greenspace Framework which it shares with the adjoining Central Western Planning Unit. The Planning Unit is bounded by the Cunningham Highway to the east and the Ipswich Motorsport Precinct to the south.

The Ti-Tree Bioenergy Facility is located within the Planning Unit and occupies the majority of the Planning Unit area. The facility is expected to continue operations in the longer term (potentially until 2051) which will mean ultimate development of the Planning Unit will occur over a longer timeframe.

The master planning within the Central Eastern Planning Unit should achieve the outcomes listed below.

8.2.1 Land Use Outcomes

The Central Eastern Planning Unit is suited to accommodate medium impact business and industry uses. New uses and works should be compatible with existing land uses and support the planning intent and types of land uses outlined in Section 3.0: ERIA Preferred Land Use Concept Master Plan of this guideline. Land that has been affected by mining activities should be rehabilitated in accordance with geotechnical best practice outcomes and pose no risk or hazard to future business and industry uses. New uses and



works proximate to the greenspace corridor must address edge effect and interface issues with the vegetation and fauna within the greenspace corridors.

The Planning Unit is ideally located with immediate frontage to the Cunningham Highway and will contain the proposed northern interchange to the future Cunningham Highway. New uses and works with a frontage to the Cunningham Highway should be well designed and demonstrate high quality built form and landscape treatment. The Planning Unit is also located immediately to the north of the Ipswich Motorsport Precinct and the Planning Unit provides opportunities for potential expansion of the motorsport precinct, the location of land uses that support automotive sports and industries and build on other synergistic opportunities with the Ipswich Motorsport Precinct.

A potential local retail and commercial centre is identified in the Ipswich Motorsport Precinct at the intersection of Champions Way and the Cunningham Highway. Refer to Section 3.4 for provisions applying to local retail and commercial centres.

8.2.2 Environmental Outcomes

The Planning Unit includes part of the greenspace corridor to the north and the west. The area contains isolated patches of *Melaleuca irbyana* and koala habitat with the corridor recognised for its mix of core habitat and open space and drainage values. This greenspace corridor primarily aligns with Ebenezer Creek as shown on Figure 2: Ebenezer Regional Industrial Area Drainage and Flooding Extents.

Ebenezer Creek has been subject to major modification owing to mining activities. It is located within the greenspace corridor and will require rehabilitation, including adoption of water sensitive urban design principles as part of the development of the Planning Unit.

NOTE 8.2A

An ecological assessment/environmental study and management plan may be required with a development application to address the environmental matters of national, state and local significance.

8.2.3 Flooding and Stormwater Management Outcomes

The Planning Unit is significantly affected by flooding and stormwater overland flow particularly along the northern and western boundary of the Unit (refer to Figure 2 - Ebenezer Regional Industrial Area Drainage and Flooding Extents). These flood affected areas are contained within the designated greenspace corridors of the Greenspace Framework.

The Planning Unit is affected by open cut mining activities and contains dispersive soils. New uses and works should incorporate water sensitive design outcomes and appropriate and innovative stormwater management measures (eg. use of mining voids) to ensure Ebenezer Creek, the existing water table and salinity levels are not adversely altered (refer to Implementation Guideline No. 24 – Stormwater

Management and Implementation Guideline No. 28 – Dispersive Soils).

Streams of order 1 and 2 have been identified and may present an opportunity for retention and rehabilitation as naturalised components within the stormwater network.

8.2.4 Transport and Access Outcomes

The Planning Unit is bounded by the Cunningham Highway to the east, with a potential highway interchange at the north eastern corner of the Planning Unit. The potential interchange is fundamental to maintaining the residential amenity of the Willowbank Township as the Indicative Proposed Arterial Road over Coopers Road will deviate heavy vehicle movements away from the Willowbank Township.

New roads should consider the future design of the highway interchange and the road widening or land resumptions required to construct the highway interchange. Prior to the construction of the highway interchange interim ingress and egress solutions will be required to facilitate access to the Southern Planning Unit.

The Indicative Proposed Industrial Arterials and Collector Roads within the Planning Unit also link together to create a potential secondary north-south route that will alleviate traffic demand on the Cunningham Highway.

There is currently direct access to Champions Way from the Cunningham Highway, which immediately services the Ipswich Motorsport Precinct and the Ti-Tree Bioenergy Facility. In conjunction with the Cunningham Highway upgrade (including the interchange), Champions Way will no longer have direct access to the highway. To ensure the connection to the Ipswich Motorsport Precinct is maintained and improved, the future road configurations should be appropriately designed with consideration to the DTMR planned road works.

The future internal road network should maximise accessibility to the Ipswich Motorsport Precinct and the local commercial and retail centre by supporting employee access to the local commercial and retail centres and the open space corridors. A pedestrian and cycle network should be integrated with the road network.

A strategic fauna crossing (underpass) is nominated along the Cunningham Highway near the proposed northern highway interchange. The exact size, location and design of the fauna crossing is subject to the detailed design of the Cunningham Highway upgrade.

NOTE 8.2B

Liaison with DTMR regarding the Cunningham Highway upgrade, interchanges and potential interim transport solutions should be undertaken prior to the lodgement of a development application.



8.3 Central Western Planning Unit

The Central Western Planning Unit is bounded by the Bremer River, existing rail spur line and Coopers Road to the north, part of the Ipswich Motorsport Precinct and Paynes Road (eventual SFRC alignment) to the south, and parts of Lees Road, Higgs Road and Ebenezer Road to the west. The eastern boundary of the Planning Unit is formed by part of the Greenspace Framework which it shares with the adjoining Central Eastern Planning Unit.

The Planning Unit currently contains a mix of mining activities, residential properties and large tracts of vegetation. The Unit is envisaged to contain the most diverse business and industry land use types.

The master planning within the Central Western Planning Unit should achieve the outcomes listed below.

8.3.1 Land Use Outcomes

The Central Western Planning Unit is wholly contained within the core buffer area for the Willowbank Raceway and is suited to accommodate low impact, medium impact and potentially high impact business and industry uses. Mining activities will continue in the longer term in accordance with relevant legislation and approvals. At the time of cessation of mining activities, the land should be rehabilitated to achieve a geotechnical level suitable to support industrial development with no risk or hazard to future business and industry uses. New uses and works should be compatible with existing land uses and support the planning intent and types of land uses outlined in Section 3.0: ERIA Preferred Land Use Concept Master Plan of this guideline.

The area designated for potential high impact business and industry uses is centrally located within the ERIA and is immediately surrounded by medium impact business and industry uses, greenspace corridors, the SFRC and the Ipswich Motorsport Precinct with appropriate separation provided between the potential high impact land uses to the existing sensitive land uses. The Planning Unit will attract uses that do not require direct highway access and those seeking to maximise locations away from sensitive land uses. The Planning Unit provides opportunities for potential expansion of the Ipswich Motorsport Precinct.

The potential high impact business and industry areas provide opportunities for accommodation of difficult to locate or large footprint (land extensive) industries and uses that may potentially have 24 hour operations (eg. large scale manufacturing). New uses and works should capitalise on the close proximity and direct access to the future Intermodal Freight Terminal facility via the proposed indicative north-south arterial (eg. freight dependant and logistic business and industries).

The low impact business and industry area designation ensures less intensive business and industry uses are within proximity to the sensitive uses (eg. nearby residential uses), before transitioning to the medium and high impact business and industry uses. New uses and works within the low

impact business and industry area should not compromise the existing residential amenity of the Rural C (Rural Living) Zoned properties west of the Planning Unit, or the existing residential properties within the greenspace corridors through noise, odour, operating hours, lighting and traffic generation.

A potential local retail and commercial centre is nominated on the boundary of the Planning Unit and the Ipswich Motorsport Precinct on the future north-south industrial arterial road. The centre should generally not accommodate sensitive land uses (eg. childcare centres) owing to the high impact business and industry uses in the area and potential for significant noise and amenity impacts. Refer to Section 3.4 for provisions applying to local retail and commercial centres.

8.3.2 Environmental Outcomes

There are two greenspace corridors within the Central Western Planning Unit. The western boundary of the Planning Unit bounds the larger western greenspace corridor and the second greenspace corridor bounds the eastern boundary of the Central Western Planning Unit which it shares with the Central Eastern Planning Unit. Both greenspace corridors contain koala habitat and *Melaleuca irbyana* and connect to the wider greenspace network.

The greenspace corridor framing the western boundary of the Planning Unit provides a critical habitat link and forms a primary north-south fauna movement corridor through the ERIA. This greenspace corridor has a minimum width of 250m and generally aligns with the extent of existing vegetation. The corridor will also provide a buffer to the existing sensitive uses on land located within the Rural C (Rural Living) Zone immediately west of the Planning Unit external to the ERIA study area.

The western greenspace corridor contains areas of land cleared of vegetation. The areas of land cleared of vegetation are considered suitable for rehabilitation or supplementary planting and have potential as offset receival sites to improve the environmental and ecological function of the corridor. The extent of the corridor will require detailed investigation and as such, the boundary of the corridor is not fixed and is shown with a 'shifting boundary' depicted with a 'dotted white line' on the Preferred Land Use Concept Master Plan.

A major land bridge or overpass is likely to be required across the eventual SFRC alignment to facilitate fauna movement from the South Western Core Habitat Area (discussed in Section 5.4) to the western greenspace corridor in the Planning Unit that will need to be determined at the time of detailed design of the SFRC.

The greenspace corridor along the eastern boundary of the Planning Unit is an open space drainage corridor, which contains koala habitat and *Melaleuca irbyana*. The open space drainage corridor includes Ebenezer Creek (which has been subject to major modification owing to mining activities) and aligns with the drainage corridor shown on Figure 2 – Ebenezer Regional Industrial Area Drainage and Flooding



Extents. The vegetation within this eastern greenspace corridor is sparse and the corridor will require rehabilitation and supplementary planting as part of the development of the Planning Unit.

NOTE 8.3A

An ecological assessment/environmental study and management plan may be required with a development application to address the environmental matters of national, state and local significance.

8.3.3 Flooding and Stormwater Management Outcomes

The Planning Unit is affected by flooding and stormwater overland flow along its eastern boundary (refer to Figure 2 - Ebenezer Regional Industrial Area Drainage and Flooding Extents). These flood affected areas are contained within the designated greenspace corridors of the Greenspace Framework.

The Planning Unit is affected by open cut mining activities and contains dispersive soils. New uses and works should incorporate water sensitive design outcomes and appropriate stormwater management measures (eg. use of mining voids) to ensure Ebenezer Creek and other retained water courses, the existing water table and salinity levels are not adversely altered (refer to Implementation Guideline No. 24 – Stormwater Management).

Streams of order 1 and 2 have been identified and may present an opportunity for retention and rehabilitation as naturalised components within the stormwater network.

8.3.4 Transport and Access Outcomes

The Central Western Planning Unit will be highly accessible owing to the north-south indicative proposed arterial road running through the centre of the Planning Unit and its connection north to Coopers Road and Ipswich-Rosewood Road (and potential connection to the WIB) and to the Southern Planning Unit to the south of the SFRC.

The north-south arterial road is crucial to the long-term function of the ERIA to alleviate the traffic demand on the Cunningham Highway. Land uses that generate heavy traffic movement should capitalise on the potential north-south arterial, that will connect with the wider inter-regional and interstate highway networks.

The indicative proposed industrial collectors nominated over parts of Coopers Road, Paynes Road and Ebenezer Road will also assist in facilitating transport movement in and out of the ERIA without relying on the internal road network that links to the Cunningham Highway.

The internal road design of the Planning Unit should maximise access opportunities to the IFT, and support employee access to the local commercial and retail centres and the open space corridors. A pedestrian and cycle network should be integrated with the road network.

Two potential fauna crossings are identified within the Planning Unit, one on Paynes Road (the eventual SFRC alignment which is likely to be a critical land bridge) and the other on Ebenezer Road. Both of the fauna crossings are crucial to the movement of fauna in the area as both Paynes Road and Ebenezer Road intersect the greenspace network along the western boundary of the ERIA. The exact size, location and design of the fauna crossings are subject to the design of the future transport network.

8.4 Southern Planning Unit

The Southern Planning Unit is bounded by the Ipswich Motorsport Precinct to the north, Cunningham Highway to the east, Goebels Road and areas designated Rural Pastoral to the south, and the designated Greenspace Framework to the west. Land within the Rural E (Special Land Management) Zone are located external to the study area to the south of Goebels Road.

The Planning Unit is the least encumbered by development constraints (eg. mining activity and fixed land use constraints) and its location offers opportunities to maximise on the future Southern Freight Rail Corridor, IFT (which is contained within the Planning Unit) and has direct access to the Cunningham Highway including the future southern interchange. However, the Planning Unit is also located the furthest from existing infrastructure and will require extensive infrastructure upgrades in order to provide services or the development of stand alone solutions that service the Planning Unit.

An easement containing electricity lines runs east to west across the Planning Unit. These lines link to the Powerlink substation on land to the west of the Planning Unit.

The master planning within the Southern Planning Unit should achieve the outcomes listed below.

8.4.1 Land Use Outcomes

The Southern Planning Unit is suitable for medium and potential high impact business and industry uses owing to the Planning Unit's distance from sensitive land uses and location in the core buffer areas of the Willowbank Raceway. New uses and works should be compatible with existing land uses and support the planning intent and types of land uses outlined in Section 3.0: ERIA Preferred Land Use Concept Master Plan of this guideline.

New uses and works should capitalise on the close proximity and direct access to the future SFRC Intermodal Freight Terminal Facility via the proposed indicative north-south arterial (eg. freight dependant and logistic business and industries) and good quality access to the Cunningham Highway. Development should not preclude the opportunity for freight dependant and large scale logistics to be located proximate to the future IFT in the long term. Future development must not adversely affect the design and function of the SFRC and the IFT. Interim development outcomes (eg. land uses and design of allotment configurations) should facilitate a smooth transition to freight



dependant industries once the SFRC and the IFT is established.

The development outcomes of the medium and high impact areas should not adversely affect the amenity of residences contained in the designated Greenspace Framework area or rural residential properties (external to the Planning Unit adjoining Goebels Road) through generation of noise, odour or lighting emissions and hours of operation.

A local retail and commercial centre is nominated adjacent to the Cunningham Highway interchange/proposed industrial arterial road where it would be accessible to future employees and the wider surrounding rural community. Refer to Section 3.4 for provisions applying to local retail and commercial centres.

New uses and works must also not adversely affect the existing electricity transmission lines and their ability to be upgraded in the future.

8.4.2 Environmental Outcomes

The greenspace corridor within the Planning Unit generally aligns with the Figure 2 – Ebenezer Regional Industrial Area Drainage and Flooding Extents and generally contains isolated patches of vegetation. The corridor also adjoins the south-western core habitat area (discussed in Section 4.1).

The Planning Unit also adjoins land to the south (external to the study area) designated as Rural E (Special Land Management) Zone. Appropriate edge treatments are to be provided to address potential impacts to land in the Rural E (Special Land Management) Zone.

Future business and industry uses should consider impacts upon the existing residences and core habitat areas (eg. lighting, noise, odour and fauna movement).

8.4.3 Flooding and Stormwater Management Outcomes

The Planning Unit is affected by flooding and stormwater overland flow along its western boundary and a small area in the south eastern corner of the Planning Unit (refer to Figure 2 - Ebenezer Regional Industrial Area Drainage and Flooding Extents). These flood affected areas are contained within the designated greenspace areas of the Greenspace Framework.

The Planning Unit contains dispersive soils and appropriate stormwater management measures should be applied to ensure waterways and other significant riparian features (including Ten Mile Swamp and Warrill Creek external to the study area), the existing water table, and salinity levels are not adversely affected by future uses and works.

Streams of order 1 and 2 have been identified and may present an opportunity for retention and rehabilitation as naturalised components within the stormwater network.

8.4.4 Transport and Access Outcomes

The Southern Planning Unit provides a unique multi-modal transport opportunity given its proximity and access to a highway interchange and the SFRC IFT. Prior to the construction of the highway interchange, appropriate interim ingress and egress solutions should be established to maintain access to the Planning Unit. New development should consider and accommodate the future provision of the highway interchange and the road widening/land resumption/quarantine required to upgrade the highway.

The Planning Unit contains part of the proposed north-south indicative industrial arterial route which runs in an east-west direction through the centre of the Unit connecting the proposed future Cunningham Highway interchange to northern areas of the ERIA. The north-south arterial road is a crucial component of the long-term transport network for the ERIA and the Cunningham Highway. To achieve the north-south arterial road connection, detailed road design must be undertaken in close consultation with Powerlink and the State Government regarding the SFRC and IFT.

The exact alignment of the proposed north-south arterial road will require further detailed studies and consideration of the road network planning for the Southern Planning Unit and Central Western Planning Unit.

NOTE 8.4A

Liaison with DTMR regarding the Cunningham Highway upgrade, interchanges and potential interim transport solutions and location of the future Inter-modal Freight Terminal (IFT), should be undertaken prior to the lodgement of a development application.

The design of the internal road network should maximise the accessibility to the SFRC and the IFT. The future internal road network should also support future employee access to the local commercial and retail centre and the open space corridors.

A strategic fauna crossing is proposed on the Cunningham Highway near the proposed highway interchange. The exact size, location and design of the fauna crossing is subject to the design of the future Cunningham Highway upgrade.

