



Gateway Upgrade Project



4. Land Use

4

4. Land Use

4.1 Introduction

TOR Requirements:

- Detailed description of existing land uses and planning frameworks relevant to the project area and proposed works addressing the following issues:
 - Identify current land use within and adjacent to the area of proposed project;
 - Identify various tenures of the project corridor, in particular areas subject to Native Title;
 - Identify current planning designations within and adjacent to the area of proposed works as per the relevant Planning Scheme;
 - Identify current planning designations in the Brisbane Airport Master Development Plan and implications for the road project;
 - Discuss the Project in relation to the Brisbane River Management Plan strategies and other relevant local management plans;
 - Determine compatibility of the Project with the desired intent of the planning scheme as per the relevant planning scheme provisions; and
 - Identify and assess potential changes in land use during construction and operation phases of the Project.

TOR Requirements (Potential Impacts & Mitigation Measures):

This section should discuss the potential impacts of the Project on existing land uses including an assessment of the implications that the road project may have on the planning intentions for Brisbane Airport and discuss the compliance of the project with relevant planning policies and provisions. In assessing the implications of the road project on the planning intentions for Brisbane Airport, outline any constraints or limitations that the motorway may impose on future airport development intentions outside of the road corridor. Any impacts that involved setbacks from elevated road embankments, limitations on height or scale or buildings or constraints on any on-airport road upgrade works particularly at the Lomandra Drive/Airport Drive intersection would need to be determined. The EIS should address any impact on existing residential development in the vicinity of the Gateway Motorway that will arise from the project's construction and operation. This assessment should include any possible land resumptions, feeder street closures or widening, and construction of noise barriers adjacent to residential areas.

An assessment has been undertaken to identify the land use impacts of the proposed GUP. The safety and efficiency of the GUP can be adversely impacted upon by nearby land uses and both the construction and operational phases of the GUP have the potential to affect land uses within, adjacent and near the project corridor. The land use assessment addresses the following:

- the existing land use environment within, adjacent and near the project corridor;
- the existing statutory land use controls that have control of future development during the construction and operations phases of the project;
- the level of compatibility of the project with the existing statutory land use controls;
- the existing land tenure of properties within the corridor;
- likely and planned future land use environment within, adjacent and near the project corridor prior to, during and after the construction phase of the project;
- potential impacts of the proposed project on land uses within, adjacent and near the project corridor, and
- the various preventative measures and mitigation measures required, such as identifying what measures need to be taken to monitor land use changes during the construction and operation of the proposed project.

The following TOR requirements are addressed in other sections:

- Areas subject to Native Title (refer Section 18);
- Waterway strategies and other relevant local management plans (refer Section 8); and
- Noise mitigation measures for adjacent noise sensitive receptors (refer Section 15).

4.2 Methodology

This section firstly examines the general statutory land use controls that apply to the entire project corridor. Secondly, the following issues are examined in detail for each of the three sections (Northern Section, Bridge Section, and Southern Section) of the project corridor:

- Existing land use;
- Existing tenure;
- Future land use;
- Statutory land use controls;
- Potential impacts; and
- Specific mitigation measures.

After examining the above issues on a project corridor section basis, the general mitigation measures for the entire project corridor are detailed, followed by a conclusion from the findings.

4.2.1 Existing Land Use

Investigations along the extent of the project corridor included the following activities:

- Site inspections;
- Reviewing relevant mapping and aerial photography;
- Identification of the resumed properties;
- Identification of the existence of any sensitive land uses near or adjacent to the corridor; and
- Estimation of the separation distance of sensitive land uses from the project corridor.

4.2.2 Existing Tenure

The existing tenure of properties within the corridor was determined by conducting title searches of all these properties. No title searches were conducted for properties near or directly adjacent to the project corridor.

4.2.3 Future Land Use

A review was conducted of the strategic planning sections of the following statutory land use instruments:

- *Brisbane City Plan 2000*; and
- *Brisbane Airport 2003 Master Plan*.

The Strategic Plan is the applicable part of Brisbane City Plan, when determining likely future land uses, as it aims to guide how Brisbane is intended to develop until 2011. The Business and Industry Land Development (Section 13) of the Brisbane Airport 2003 Master Plan is the applicable section of the Master Plan in determining planned future land uses for Brisbane Airport.

Due to the comparatively undeveloped nature of land within and adjacent of the project corridor, and the consolidated nature of the property holdings, the northern section of the corridor required a more detailed analysis of future land uses. This involved reviewing several reports that provide further detail on either Brisbane Airport, the old airport site (part of TCC) and Kedron Brook floodplain, including:

- *Outlet Centre – Draft Major Development Plan* (February 2004); and
- *TradeCoast Central: Master Plan Report* (May 2003).

4.2.4 Statutory Land Use Controls

A review was conducted of the following statutory land use controls that apply to land both within and directly adjacent to the project corridor:

- *Brisbane City Plan 2000*; and
- *Brisbane Airport 2003 Master Plan*.

In addition, a third document contains statutory land use controls that apply to Strategic Port Land located near the project corridor, being the Port of Brisbane Corporation (PBC) *Land Use Strategy*. This is detailed in Section 8, but has no immediate impact on GUP as there is no strategic port land either within or directly adjacent to the project corridor.

4.2.5 Potential Impacts

For the purposes of this section, the potential impacts of the project on adjacent land use, have been assessed by:

- Identifying what properties are directly affected by the GUP; and
- Identifying what sensitive land uses could potentially be affected by GUP, if the proper preventative measures or mitigation measures are implemented.

Sensitive land uses are defined as residential uses (noise sensitive land use – dwelling), sensitive community and commercial uses (noise sensitive land uses other than a protected area or a dwelling) or environmentally significant areas.

Environmentally Sensitive Land Uses include:

- “Protected Areas” (as defined under the *Nature Conservation Act 1992*);
- “Critical Habitat” (as defined under the *Nature Conservation Act 1992*);
- Koala Coast Area (as defined under *Conservation of Koalas in the Koala Coast — State Planning Policy 1/97*); and
- Waterways.

Noise sensitive land uses are as defined in Main Roads’ Road Traffic Noise Management Code of Practice 2000, which states:

“Noise-Sensitive can be applied to:

- *A dwelling; or*
- *A library , child care centre, kindergarten, school, college, university, or other educational institution; or*
- *A hospital, surgery or other medical centre; or*
- *A protected area, or an area identified under a conservation plan as a critical habitat or an area of major interest under the Nature Conservation Act 1992;*

- *A public park or gardens that is open to the public (whether or not on payment of a fee) for use other than for sport or organised entertainment. “*

4.3 Statutory Land Use Controls over the Project Corridor

Brisbane City Plan 2000 (City Plan) was prepared under the *Integrated Planning Act 1997*, and seeks to achieve ecological sustainability, in accordance with the purpose of the *Integrated Planning Act 1997*. City Plan contains two main statutory controls that aim to produce ecological sustainable development outcomes and area based assessment process and Local Plans. For the area based assessment process, City Plan divides land within BCC into areas such as Industrial or Residential, with measures containing appropriate development outcomes for development within these areas. City Plan also contains Local Plans that provide detailed guidelines for development within a particular locality, and override the requirements of all other sections of City Plan. They contain more specific local land use outcomes for each relevant local area.

The relevant Local Area Plans (LAPs) of City Plan that apply to land within the project corridor are:

- the Carina/Carindale Local Plan;
- the Cannon Hill Local Plan; and
- the ATC Local Plan.

Note that the Nundah Local Plan is adjacent to part of the northern section of the corridor but does not cover any land within the project corridor.

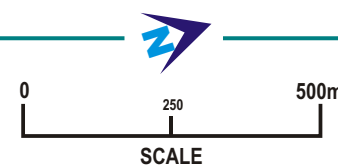
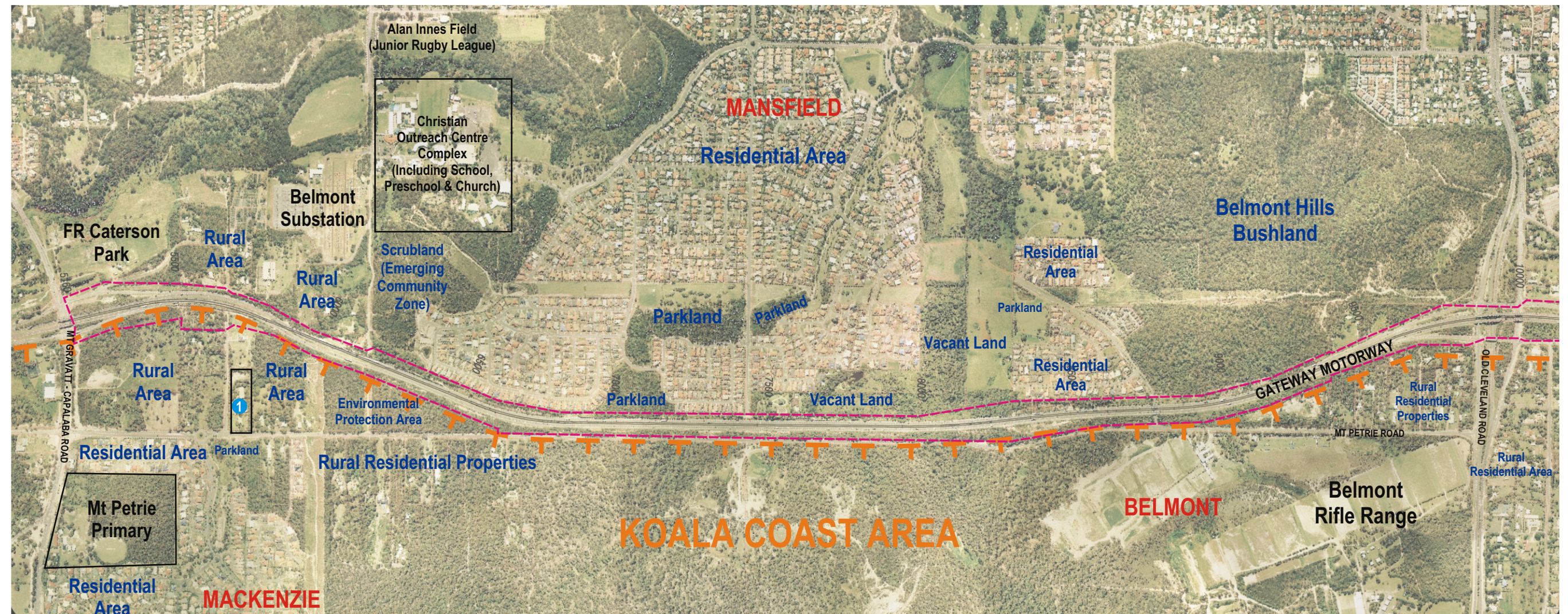
There are no LAPs that apply to the eastern side of the Gateway Motorway between Mt Gravatt-Capalaba Road and Bulimba Creek. The Carina/Carindale Local Plan applies to all land on the western side of the Gateway Motorway from Wecker Road to Old Cleveland Road, while the Cannon Hill Local Plan applies to all land on the western side of the Motorway from Minnippi Parklands to Bulimba Creek. Between these two LAPs there is land not covered by a LAP. From Bulimba Creek, the ATC Local Plan applies to land to the east and west of the existing Motorway, overlapping the Cannon Hill Local Plan in the Queensport Road area. The area covered by each LAP is shown on Figures 4.2 and 4.3.

The Strategic Plan is the applicable part of City Plan, when determining likely future land uses, as it aims to show how Brisbane is intended to develop until 2011. The Business and Industry Land Development section (Section 13) of the Brisbane Airport 2003 Master Plan (BA Master Plan) is the applicable section of the BA Master Plan in determining planned future land uses for Brisbane Airport.

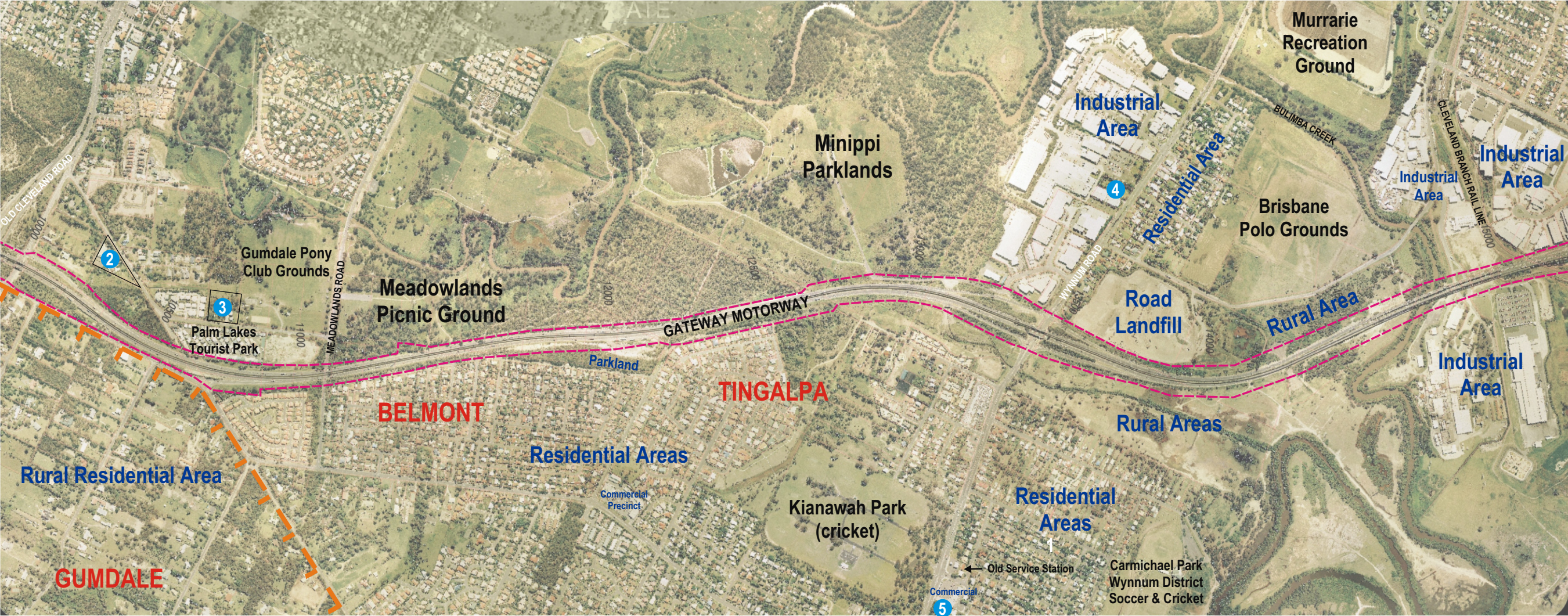
4.4 Mt Gravatt–Capalaba Road to Cleveland Branch Rail Line (Southern Section)

The southern section of the project corridor spans the length of the Motorway, generally within the existing Gateway Motorway road reserve from Mt Gravatt – Capalaba Road to Cleveland Branch Rail Line. The project corridor is located within the middle and lower reaches of the Bulimba Creek catchment, a tributary of the Brisbane River. Figures 4.1a and 4.1b illustrates the land uses adjacent to the project corridor.

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- KEY**

 - T T T Koala Coast Area Boundary
 - Project Corridor
 - 2 Kingdom Hall of Jehovah's Witnesses
 - 3 Belmont Girl Guides
 - 4 Church and Cemetery
 - 5 Tingalpa State School

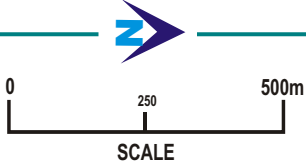


FIGURE 4.1b
Existing Land Uses
 Old Cleveland Road to Cleveland Branch Rail Line

4.4.1 Existing Land Uses

Existing land uses are shown on Figures 4.1a to 4.1c and are discussed below.

Mt Gravatt-Capalaba Road to Wecker Road

The corridor is confined to the existing Motorway road reserve boundary on the western side, but crosses over into adjacent rural residential land in Mackenzie on the eastern side of the Motorway. All the properties near or adjacent to the corridor on the eastern side are also rural residential uses, up to Mt Petrie Road, with the exception of a small park and the Southgate Wesleyan Methodist Church. On the other side of Mt Petrie Road is the Mt Petrie Primary School, residential housing estates and associated recreational parks. On the western side of the corridor is the suburb of Mansfield, which includes the FR Caterson Park sporting grounds, small scale rural uses and the Belmont Power Station.

Wecker Road to Old Cleveland Road

The corridor between these two roads is confined to the existing Motorway road reserve. On the eastern side of the corridor in the suburb of Belmont, are conservation areas associated with the Koala Coast Area, private rural residential properties, the Belmont Rifle Range and Mt Petrie Road. On the western side of the corridor in the suburbs of Mansfield and Carindale are residential areas, vacant land, parkland, and conservation areas.

Old Cleveland Road to Meadowlands Road

The corridor in this section is confined to the existing Motorway road reserve. On the eastern side of the corridor in the suburb of Gumdale, are private rural residential properties, a service station and a residential housing estate. On the western side of the corridor in the suburb of Carindale are several churches, residential areas, vacant residential land, budget accommodation, and sporting and recreation facilities such as the Gumdale Pony Club Grounds and the Belmont Girl Guides.

Meadowlands Road to Wynnum Road

The corridor between these two roads is confined to the existing Motorway road reserve. On the eastern side of the corridor in the suburbs of Belmont and Tingalpa, there are parkland, and sporting and recreation areas associated with the Meadowlands Picnic Ground and Minnippi Parklands, as well as an industrial area directly adjacent. On the western side of the corridor in the suburb of Carina there are residential properties, small bushland areas and undeveloped floodplain land adjacent to the corridor.

Wynnum Road to Cleveland Branch Rail Line

The corridor covers both the existing Motorway road reserve and adjacent land to east of the Motorway. On the eastern side of the corridor in the suburb of Murarrie, the corridor includes industrial areas (no buildings) as well as road reserve. Directly adjacent areas include rural and parkland uses in the Bulimba floodplain and industrial uses. On the western side of the corridor, also in the suburb of Murarrie, there are several uses on the floodplain of Bulimba Creek, including a landfill site, grazing uses, sport and recreation (Brisbane Polo Grounds, Murarrie Recreation Ground), residential areas along Wynnum Road and Murarrie Road, and Bulimba Creek. There are also nearby industrial areas.

4.4.2 Future Land Uses

The areas adjacent to the southern section of the project corridor are predominantly low density residential areas; rural residential areas with environmental significance; recreational parks and facilities; and conservation areas. As there are comparatively few areas of undeveloped land that are not set aside for recreational or conservation purposes, it is highly likely that the development of future land uses near or adjacent to the southern section will continue to be predominantly residential development with supporting commercial and community facilities.

The largest development that will occur near the project corridor is BCC's Minnippi Community Links development at Cannon Hill. This proposed development occupies land on the west bank of Bulimba Creek, which separates the development site from Minnippi Parklands. The proposed development would include a residential community of up to 180 dwellings on approximately 13ha of land, with an 18 hole golf course and associated facilities, and significant open space areas.

Table 4.1 details the planning intentions of BCC City Plan's Strategic Plan for future land use adjacent to the southern section. As all of these land uses are currently present, the plan represents no real change in future land use.

Table 4.1 BCC Strategic Plan (Southern Section)

BCC Strategic Plan	Summary of Issues
<i>Map A: City Structure</i>	Green space and residential areas predominate along the whole of the southern section with the exception of the industrial uses near the Cleveland Branch Rail Line.
<i>Map B: Green Space System Values</i>	The map identifies the whole range of green space system values present both within and adjacent to this section corridor, with: <ul style="list-style-type: none"> • Biodiversity values; • Rural, semi-rural/semi-natural and open landscape values; • Recreational values; • Natural scenic values; • Corridor values; and • Key koala habitat area.
<i>Map C: Brisbane Green Space System</i>	Identifies: <ul style="list-style-type: none"> • Conservation and recreation components; • Environmental protection components; • Rural Components; and • Green space corridors.
<i>Map D: Movement System</i>	The map identifies only one major change, with Old Cleveland Road identified as a potential extension to a major busway corridor

4.4.3 Existing Land Tenure

The majority of land within the project corridor, outside of the existing road reserve, is freehold, with small sections of Railway Reserve. The total area of additional land required is approximately 2.5ha.

Table 4.2 provides a breakdown of land tenure and number of properties required for the GUP.

Table 4.2 Land Tenure (Southern Section)

Tenure	Number of Lots
Freehold	11
Crown Land	1
Total	12

4.4.4 Statutory Land Use Controls

Local Plans

For the southern section, the Carina/Carindale Local Plan, the Cannon Hill Local Plan, and the ATC Local Plan all apply to land within and adjacent to the GUP corridor. The area covered by these LAPs for this section is shown on Figures 4.2a to 4.2c.

The Carina/Carindale Local Plan identifies “*Environmental and Waterways corridors, Areas subject to environmental and scenic constraint, Broad hectare land, and Urban nature parkland*” on its maps as being adjacent to the existing Motorway. Other than the development principles shown on the maps, there are no specific provisions that apply to the project, other than the need to protect riparian vegetation associated with Bulimba Creek’s tributaries.

The Cannon Hill Local Plan contains no specific provisions relating to the Motorway, but does note the importance of maintaining the environmental values of Bulimba Creek.

The ATC Local Plan applies to land on both sides of the Gateway Motorway from Bulimba Creek onwards, until the end of the section. The ATC LAP clearly identifies the proposed new Motorway deviation as a “Proposed future state controlled transport corridor”, and clearly states that direct access to the Motorway from adjacent land uses is not to be permitted.

The ATC Local Plan identifies fifteen precincts, two of which, (the Murarrie and Queensport precincts) apply specifically to land within the southern section of the corridor. These precincts contain no specific provisions relating to the Motorway, but do note that land in Murarrie precinct is suitable for General Industry, and land in the Queensport precinct is suitable for both General Industry and Light Industry.

Area Classifications

The general area classifications for this section are shown on Figures 4.2a to 4.2c.

Mt Gravatt-Capalaba Road – Wecker Road

All the rural residential properties within or adjacent to the corridor on the eastern side are classified Rural or Low Density Residential. There is also a bushland lot that is classified (zoned) an Environmental Protection Area. On the western side of the corridor FR Caterson

Park sporting grounds is classified a Sporting and Recreation Area, small scale rural uses are classified Rural, and the Belmont Substation is classified Community Use.

Wecker Road to Old Cleveland Road

On the eastern side of the corridor are conservation areas associated with the Koala Coast Area, the private rural residential properties are classified either Environmental Protection Areas or Emerging Community Areas. The Belmont Rifle Range is classified a Sporting and Recreation Area, and the bushland area is classified a Conservation Area. On the western side of the corridor in the suburbs of Mansfield and Carindale are areas classified Residential Area, Emerging Community Areas, Parkland Areas, Community Use, and Conservation Areas.

Old Cleveland Road to Meadowlands Road

On the eastern side the private rural residential properties are classified Environmental Protection Areas, the service station is classified a Rural Area, and the residential housing estate is classified an Emerging Community Area. On the western side of the corridor there are several churches, budget accommodation, residential areas and vacant residential land classified predominantly as Emerging Community Areas with some residential areas classified as Low Density Residential Areas. The Gumdale Pony Club Grounds and the Belmont Girl Guides are classified Sporting and Recreation Areas.

Meadowlands Road to Wynnum Road

On the eastern side, in the suburbs of Belmont and Tingalpa, the Meadowlands Picnic Ground and Minnippi Parklands are classified Parkland and Sporting and Recreation areas, while the industrial area is classified a General Industry area. On the western side of the corridor in the suburb of Carina the areas directly adjacent to the corridor are classified Low Density Residential, Parkland, and Low to Medium Residential.

Wynnum Road to Cleveland Branch Rail Line

On the eastern side of the corridor in the suburb of Murarrie, the industrial areas are classified General Industry Areas. Other directly adjacent areas are classified Rural Areas, Sporting and Recreation Areas, and General Industry Areas. On the western side of the corridor, also in the suburb of Murarrie, the landfill site is classified Sporting and Recreation area, while the scrubland is classified a Rural Area, the residential areas are classified Low Density Residential areas.

4.4.5 Potential Impacts

Direct Property Impacts

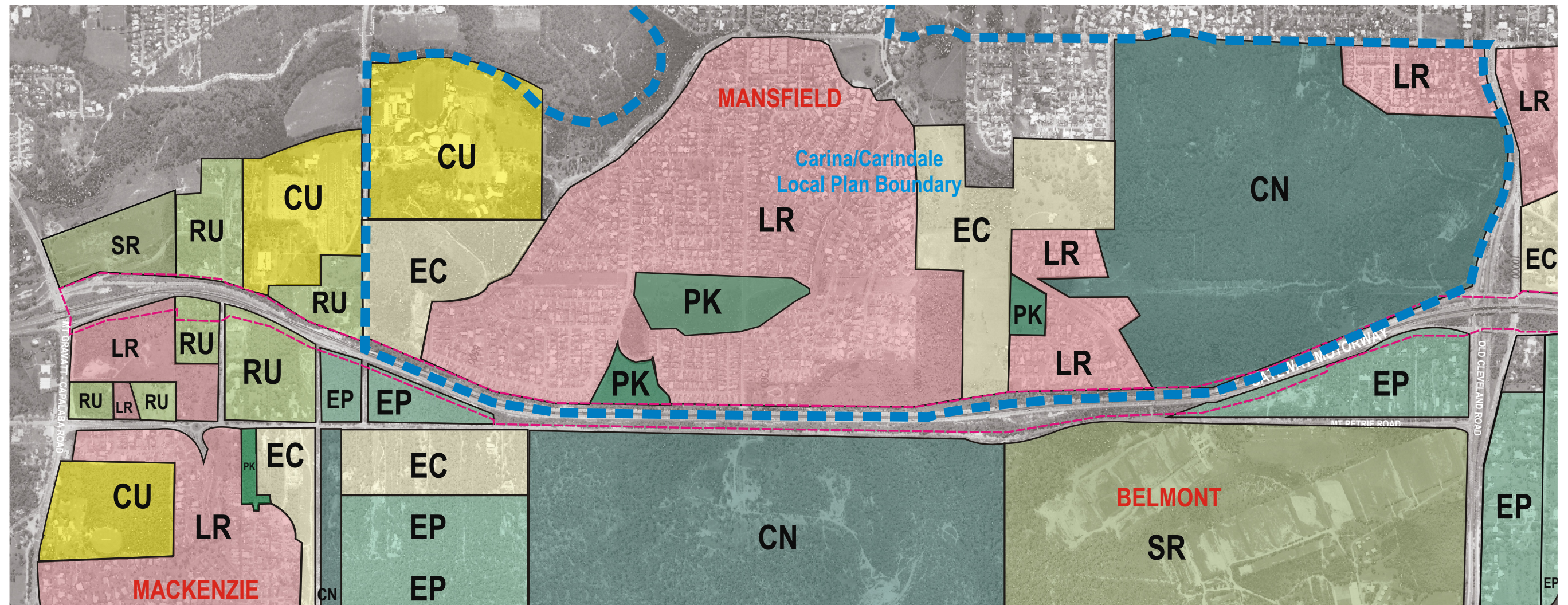
Mt Gravatt-Capalaba Road – Wecker Road

In this part of the southern section, there are areas where the road reserve is of insufficient size to cater for the road widening. Those properties affected are rural residential properties between Mt Gravatt – Capalaba Road and Wecker Road.

Wecker Road to Old Cleveland Road

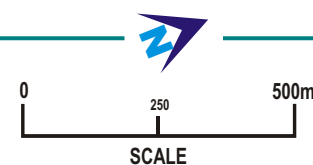
In this part of the southern section, the project corridor will be largely constructed within the road reserve, minimising the resumption of properties, with the six laning of the existing Motorway able to occur within the vacant road reserve between the existing carriageways.

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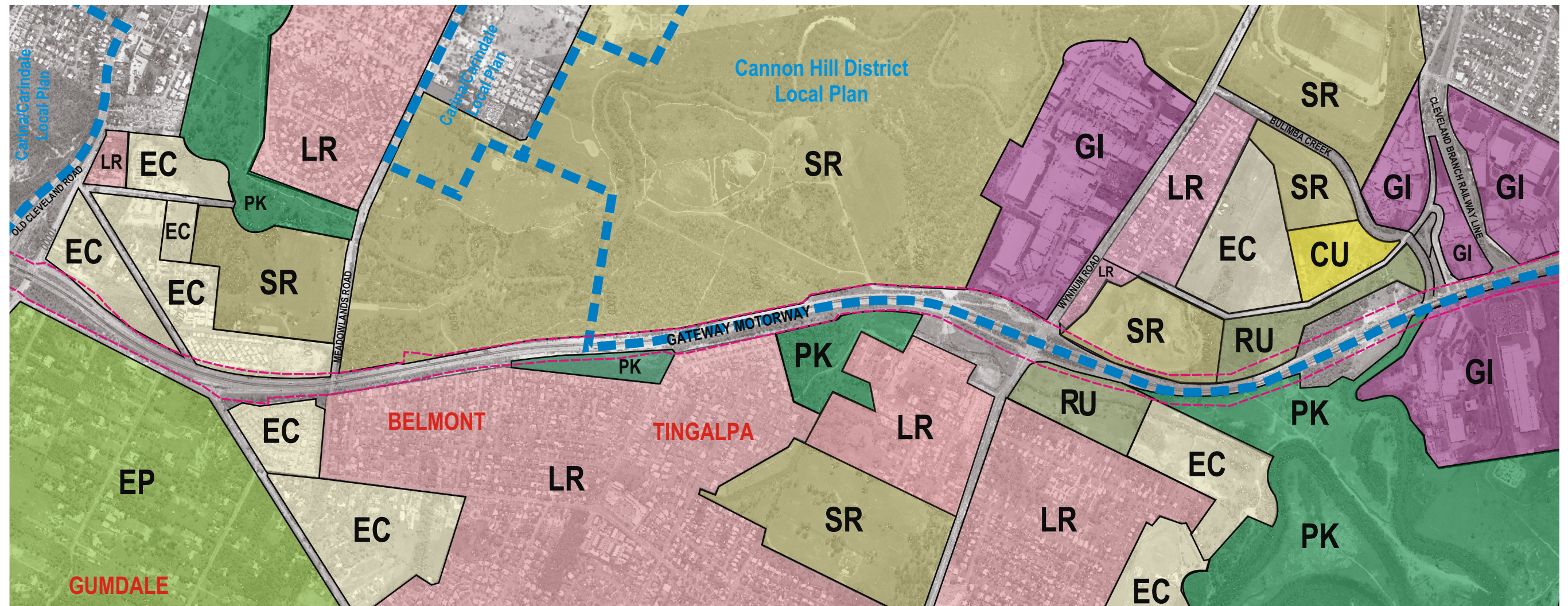


KEY

RU Rural	EP Environmental Protection	PK Park Land
CN Conservation	SR Sport and Recreation	CU Community Uses
EC Emerging Communities	LR Low Density Residential	Project Corridor
		Local Plan Boundary

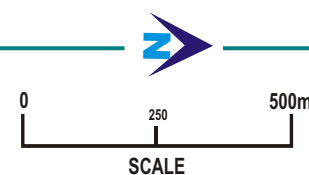


Gateway Upgrade Project ..



KEY

GI General Industry	CU Community Uses	PK Park Land	--- Project Corridor
FI Future Industry	SR Sport and Recreation	RU Rural	--- Local Plan Boundary
EC Emerging Communities	LR Low Density Residential	EP Environmental Protection	



Old Cleveland Road to Meadowlands Road and Meadowlands Road to Wynnum Road

As for the previous section the project corridor will be largely constructed within the vacant road reserve between the existing carriageways in these sections.

Wynnum Road to Cleveland Branch Rail Line

In this part of the southern section, the project corridor will be largely constructed within the road reserve, minimising the resumption of properties. Those lands affected are in areas where the road reserve is of insufficient size to cater for the road widening due to the proposed eight laning of the existing Motorway. Those properties affected are largely industrial properties on the eastern side of the Motorway between Bulimba Creek and the Cleveland Branch Rail Line.

There will be no significant impact on these industrial land uses. Only undeveloped land along the road property boundary is required and there are no significant buildings or structures being required for the project, with the existing industrial uses on affected properties able to continue unimpaired.

Sensitive Community and Commercial Land Uses (Southern Section)

There are several parkland areas (such as FR Caterson Park, Meadowlands Picnic Ground and Minnippi Parklands) that are directly adjacent to the Motorway and have the potential to be impacted during the construction and operational phases of the project. Two churches, the Lighthouse Baptist Church and Gateway Life Centre are also located in close proximity to the Motorway. The sensitive community and commercial land uses within the vicinity of the Gateway Motorway have been summarised in Table 4.3.

Table 4.3 Sensitive Community and Commercial Land Uses (Southern Section)

Sub-Section	Facility Name	Approximate Distance to Existing Motorway (m)
Mt Gravatt-Capalaba Road – Wecker Road	FR Caterson Park (sports Fields)	50
	Mt Petrie Primary School	450
	Southgate Wesleyan Methodist Church	300
	Mansfield Primary School	560
	Mansfield High School	700
Wecker Road to Old Cleveland Road	Christian Outreach College, Mansfield	250
	Allan Inness Fields (Easts Junior Rugby League Club)	600
	Belmont Primary School	850
Old Cleveland Road to Meadowlands Road	Church, 35 Wright Street, Carindale (Jehovah's Witnesses)	130
	Gateway Life Centre, 1374 Old Cleveland Road, Carindale (Assemblies of God)	100
	Palm Lakes Resort	Directly Adjacent
	Gumdale Pony Club Grounds	150
	Belmont Girl Guides	150

Sub-Section	Facility Name	Approximate Distance to Existing Motorway (m)
Meadowlands Road to Wynnum Road	Meadowlands Picnic Ground	100
	Minnippi Parklands	30
	Model Aero Club	160
	Church and Cemetery	500
	Lutheran Church	850
	Kianawah Park	400
	Christ Church, Tingalpa (Anglican)	390
Wynnum Road to Cleveland Branch Railway Line	Brisbane Polo Grounds	200
	Murarrie Recreation Ground	550
	Tingalpa State School	900
	Wynnum District Cricket and Soccer	400

Some of these sensitive community and commercial areas are setback less than 100m from the existing Motorway, however these are adjacent to the corridor where widening inside the existing carriageways is proposed. With the exception of the Palm Lakes Resort, none of the above land uses are expected to be adversely impacted upon by the project, except by possible air and noise impacts which are addressed in Sections 14 and 15, respectively.

Sensitive Residential Land Uses

Residential areas that are either near or directly adjacent to the west of this section of the project corridor include the following nearby suburbs:

- Mansfield;
- Carindale;
- Carina; and
- Murarrie

There are also some residential areas that are either near or directly adjacent the east of this section of the project corridor:

- Mackenzie;
- Belmont; and
- Tingalpa.

With the exception of Mackenzie and Murarrie, there are some residential areas in these suburbs that are setback less than 100m from the existing Motorway, however these are adjacent to the corridor where widening inside the existing carriageways is proposed. None of the above residential areas are expected to be adversely impacted upon by the project, except by possible air and noise quality impacts which are addressed in Sections 14 and 15, respectively.

Environmentally Significant Areas

There are potential impacts from the GUP on the terrestrial flora and fauna of remnant vegetation areas within and adjacent to the GUP corridor including the Koala Coast Area and the Belmont Hills Bushland. These matters are addressed in Section 16 (Terrestrial Flora and Fauna). The GUP is consistent with the Koala Coast State Planning Policy (refer Appendix D2).

There are also potential impacts from the GUP on the water quality of Bulimba Creek. These can occur during both the construction phase (eg erosion and sediment rich run off) from activities such as pylon driving, and the operation phase (run off entering Bulimba Creek containing fuel, and wear and tear from motor vehicles eg rubber from tyres). Water quality impacts are addressed in Section 12.

4.4.6 Mitigation Measures

Where land takes are necessary private property owners will be compensated for the acquisition of their land through the resumption process.

Mitigation measures for potential impacts on the terrestrial flora and fauna of adjacent remnant vegetation areas especially on the Koala Coast Area and the Belmont Hills Bushland, are addressed in Section 16 (Terrestrial Flora and Fauna).

Issues associated with impacts on Bulimba Creek (water quality and potential acid sulfate soils and the effective mitigation measures required to address these potential impacts, are addressed in Section 10.3 (Acid Sulphate Soils) and Section 12 (Surface Water Quality).

4.5 Cleveland Branch Rail Line to Pinkenba Rail Line (Bridge Section)

In this section, the corridor includes industrial land and existing road reserve. The corridor crosses over several key transport links, including the Brisbane River, Port of Brisbane Motorway, Lytton Road, and Kingsford Smith Drive. Figure 4.1c illustrates the land uses adjacent to the project corridor.

4.5.1 Existing Land Uses

Cleveland Branch Rail Line to Brisbane River (North Bank)

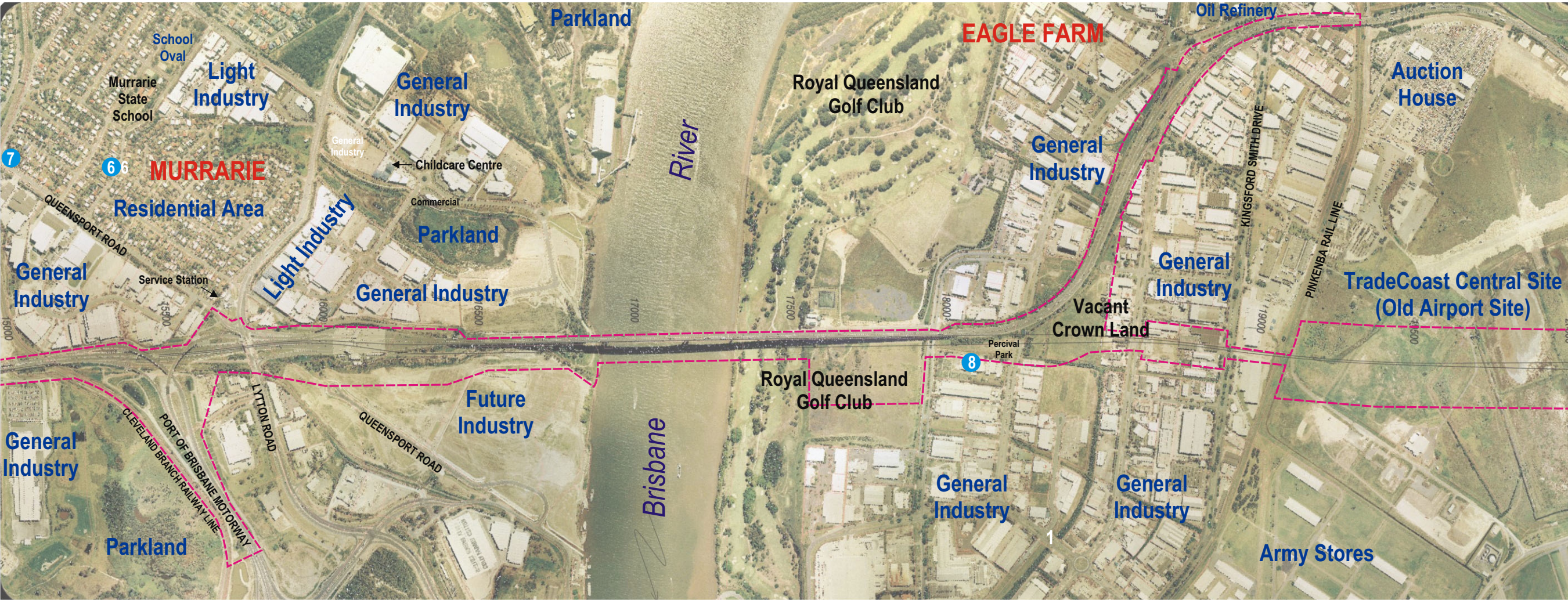
From the Cleveland Branch Rail Line, the bridge section traverses industrial areas, with the Incitec rail line on the eastern side and the Queensport Road industrial area to the west. The corridor then crosses under Lytton Road, with the Metroplex Industrial area to the west and vacant industrial land accessing off Queensport Road to the east, until the Brisbane River. The corridor then crosses the Brisbane River, parallel and to the east of the existing bridge, where the new bridge is proposed.

The corridor is centred on the existing Motorway, but also includes land to the east of the Motorway. All of the land that is not road reserve within this part of the corridor is used for either industry or transport purposes.

Brisbane River (North Bank) to Curtin Avenue

From the Brisbane River to Curtin Avenue, the land within and adjacent to the project corridor includes the Royal Queensland Golf Club and Percival Park.

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- KEY**
- 6 Murrarie Community Church
 - 7 Murrarie Progress Association Community Hall
 - 8 Help Industries
 - Project Corridor

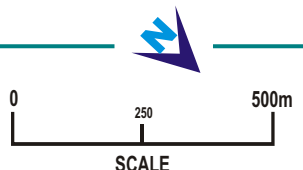


FIGURE 4.1c
Existing Land Uses
Cleveland Branch Rail Line to Pinkenba Rail Line

Curtin Avenue to Pinkenba Rail Line (Deviation Section)

The deviation section starts at Curtin Avenue, and crosses several land uses until reaching Kingsford Smith Drive, including:

- The northern section of Percival Park;
- Industrial land adjacent to the park;
- Vacant industrial Crown Land;
- Various industrial uses; and
- Lavarack Avenue.

The corridor then crosses industrial land owned by G James Glass, with the corridor located entirely between existing buildings, then crosses the Pinkenba Branch Rail Line.

Curtin Avenue to Pinkenba Rail Line (Existing Gateway Section)

The existing Gateway section also starts at Curtin Avenue and after crossing vacant industrial Crown Land, it traverses developed industrial areas, with the Brisbane Institute of TAFE's Gateway Campus adjacent. The project corridor includes both existing Motorway road reserve, and also portions of adjacent industrial land.

4.5.2 Future Land Uses

Table 4.4 details the planning intentions of BCC City Plan's Strategic Plan for future land uses adjacent to the bridge section.

Table 4.4 BCC Strategic Plan (Bridge Section)

BCC Strategic Plan	Summary of Issues
<i>Map A: City Structure</i>	The map identifies Royal Queensland Golf Club as being part of the Brisbane Green Space System, and the remainder of the land within and adjacent to the corridor as being industrial locations.
<i>Map B: Green Space System Values</i>	<p>The map identifies Royal Queensland Golf Club as having recreational values, Brisbane River as having natural scenic value and the Pinkenba Rail Line as having Corridor value.</p> <p>The Strategic Plan identifies these values as:</p> <p>"recreational value – active and passive recreational opportunities including public open space, formal sporting fields and major recreation complexes."</p> <p>"natural scenic value – the City's characteristic landscape including bushland and wetlands, forested ridges and foothills, the Brisbane River and its surrounds."</p> <p>"corridor value – providing for wildlife movement and refuges, habitat connectivity, maintenance, regional green space links, enhancement of biodiversity and ecosystem functioning, water quality protection, viability of ecological processes, screening or separation between incompatible activities, drainage/floodway areas with recreation resource potential, and linking lands with open space and recreation value."</p>

BCC Strategic Plan	Summary of Issues
Map C: Brisbane Green Space System	Highlights that Royal Queensland Golf Club as a conservation and recreation component, the Pinkenba Rail Line as having corridor value, as well as identifying the Brisbane River corridor. <i>“conservation and recreation components – These components act as flora and fauna habitats, provide recreational opportunities and form distinctive and significant landscape features of the City. Also included are more formal recreational and open space such as golf courses, major sporting fields and complexes, open space corridors, ornamental parklands, major natural areas such as Mt Coot-tha, and private lands with publicly accessible recreation and sporting facilities”.</i>
Map D: Movement System	The map identifies the main transport elements of the area, including the Gateway Motorway, Port of Brisbane Motorway, Lytton Road, and Kingsford Smith Drive.

While the Strategic Plan identifies significant land holdings in the vicinity of the project corridor and the main characteristics and values of these land holdings, it does not identify any significant changes in land use.

The sections below identify the likely future land uses for the various sub-sections of the bridge section of the project corridor.

Cleveland Branch Rail Line to Brisbane River (North Bank)

There are no significant changes in land use anticipated for most of this sub-section of the project corridor, with the adjacent properties already fully developed industrial properties. There is however an industrial estate and marina planned for the vacant land to the east of the project corridor between Lytton Road and Brisbane River. A new section of Queensport Road north of Lytton Road has been fully constructed, in order to provide access to the proposed industrial estate. Other significant site works have also been carried out. The proposed marina will occupy a significant part of the proposed industrial estate, with an overall site area of approximately a quarter of the entire estate, occupying the section of the estate along the south bank of the Brisbane River, which stretches from the project corridor in the west to Paringa Road in the east.

Brisbane River (North Bank) to Curtin Avenue

From the Brisbane River to Curtin Avenue, the land within and adjacent to the project corridor is the Royal Queensland Golf Club (RQGC), so all future land use involves upgrading facilities associated with the Golf Course.

RQGC have recently submitted an application for operational works approval to BCC. This application proposes an upgrade of the existing course with proposed new fairways and water features, involving the complete relocation of all existing fairways to the western side of the existing Motorway. The land to the east of the existing Motorway would be used for up to 3 years by MR for construction activities for the GUP, upon the project's commencement.

Curtin Avenue to Pinkenba Rail Line (Deviation and Existing Gateway Section)

There are no significant changes in land use anticipated for these sub-sections of the project corridor, with the adjacent properties already fully developed for industrial purposes.

4.5.3 Existing Land Tenure

The majority of land required for the project is freehold. The land required for the project also includes leasehold and Crown land. The total area of additional land required for this section is approximately 26.7ha.

Table 4.5 provides a breakdown of land tenure and number of properties required for the project for the bridge section.

Table 4.5 Land Tenure (Bridge Section)

Tenure	Number of Lots
Freehold	26
Leasehold	2
Crown Land	24
Total	52

4.5.4 Statutory Land Use Controls

Local Plans

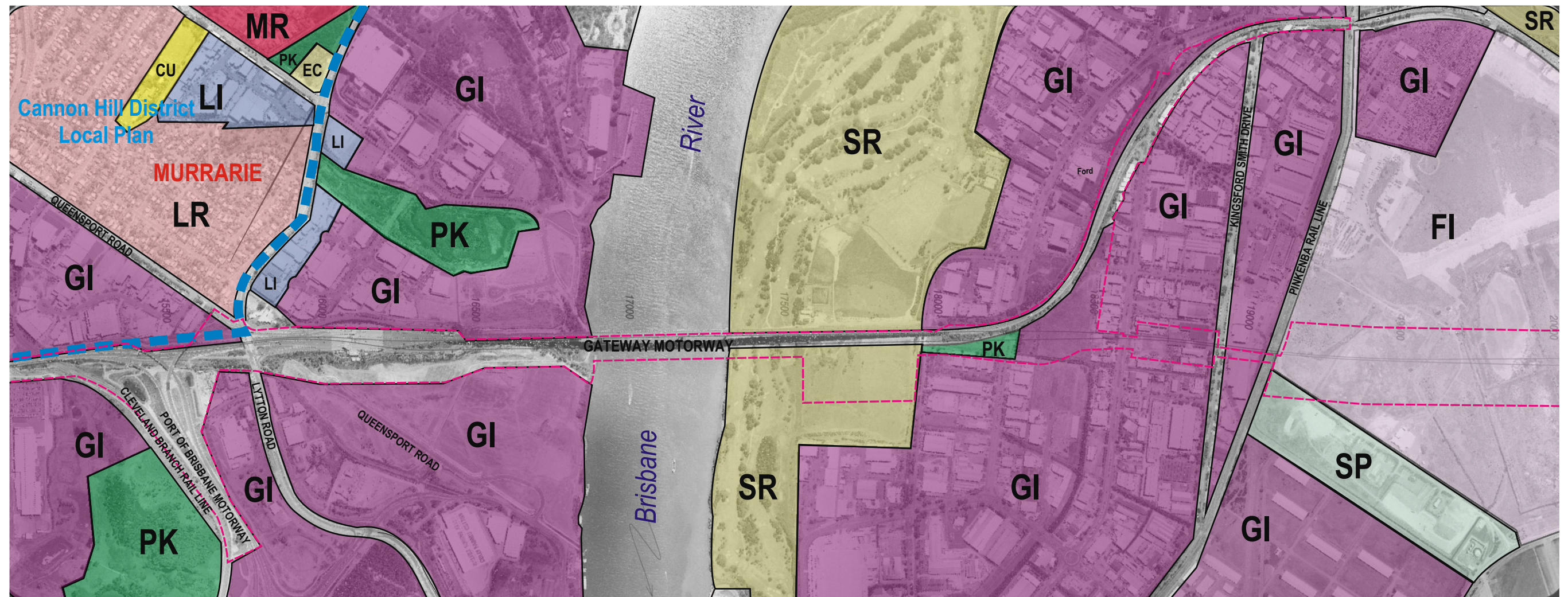
The relevant Local Plans for the bridge section are the Cannon Hill Local Plan and the ATC Local Plan. The area covered by these LAPs for this section is shown on Figure 4.2c.

The Cannon Hill Local Plan contains no specific provisions relating to the Motorway, but does note the importance of maintaining the environmental values of Bulimba Creek.

The ATC Local Plan clearly identifies the proposed new Motorway deviation as a “Proposed future state-controlled transport corridor”, and clearly states that direct access to the Gateway Motorway from adjacent land uses is to be not permitted.

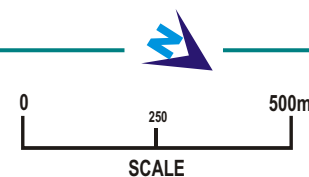
The ATC Local Plan identifies fifteen precincts, three of which, the Murarrie, Queensport and Eagle Farm East Precincts apply to the bridge section of the corridor. These precincts contain no specific provisions relating to the Motorway, but do note that land in these precincts is suitable for General Industry, and that some land in the Eagle Farm East precinct is under the statutory control of PBC.

Gateway Upgrade Project ..



KEY

SP Special Purpose Centres	LI Light Industry	LR Low Density Residential	CU Community Uses
GI General Industry	EC Emerging Communities	PK Parkland	Project Corridor
FI Future Industry	SR Sport and Recreation	MR Medium Density Residential	Local Plan Boundary



Area Classifications

The bridge section of the project corridor does not have a wide range of Area Classifications (zonings) for land directly adjacent, due to the predominantly industrial nature of the surrounding land uses. The general area classifications for this section are shown on Figure 4.2c.

The zonings located either within or adjacent to the bridge section of the project corridor include Sport and Recreation, Community Use, Light Industry, General Industry, Conservation, Parkland, and Heavy Industry.

Cleveland Branch Rail Line to Brisbane River (South Bank)

The vast majority of the land both within and adjacent to this section of the corridor is General Industry. There are also three other zonings adjacent to this section of the corridor. On the eastern side of the existing Motorway there is an industrial rail line that is classified (zoned) Community Use Area Railway. There is also a park associated with Metroplex Industrial Estate that is classified Parkland area. Finally, there is also a small piece of land that is classified Conservation, which is located on the Brisbane River on the western side of the existing Motorway.

Brisbane River (North Bank) to Curtin Avenue

The majority of the land both within and adjacent to this section of the corridor is classified Sport and Recreation, all part of the RQGC. The southern section of Percival Park is the only area within the corridor classified Parkland, and will be required for the proposed new alignment.

Curtin Avenue to Pinkenba Rail Line (Deviation Section)

The majority of the land both within and adjacent to this section of the corridor is General Industry. The northern section of Percival Park is classified Parkland. The Pinkenba Rail Line is classified as Community Use Area Railway.

Curtin Avenue to Pinkenba Rail Line (Existing Gateway Section)

The vast majority of the land both within and adjacent to this section of the corridor is General Industry. There are also small areas classified as Community Use Area by Brisbane City Plan 2000 that exist near the existing Motorway. The Pinkenba Rail Line is classified as Community Use Area Railway. There are several other lots classified Community Use Areas, which include a Community Use Area Emergency Services and Community Use Area Utility Services. There is one small piece of land that is classified Heavy Industry, which is located within the corridor, and is required for the proposed widening of the existing Motorway.

4.5.5 Potential Impacts

Direct Property Impacts

Cleveland Branch Rail Line to Brisbane River (South Bank)

For the first part of the bridge section, the GUP does not require significant resumptions on the western side of the existing Motorway, with the project corridor confined to the existing road reserve boundary. The resumption of part of the vacant industrial land to the east of the existing Motorway will be required for the proposed new bridge crossing. This land is being developed as an industrial estate including a marina. The new duplication of the Gateway Bridge will have

negligible impact on the navigation channels in Brisbane River as the piers are located in line with the existing Gateway Bridge piers.

Brisbane River (North Bank) to Curtin Avenue

The Royal Queensland Golf Course is both within the project corridor and directly adjacent to the corridor on both sides. While the majority of the course and associated facilities are on the western side of the existing Motorway, some parts of the course are on the eastern side of the Motorway well within the corridor. The GUP will require RQGC to relocate these existing holes on the eastern side of the existing bridge to the western sides. RQGC submitted an application to Council to relocate all facilities to the western side of the course and in the process upgrade the course layout facilities.

Curtin Avenue to Pinkenba Rail Line (Deviation Section)

This section of the project has the most severe affects on existing land use, with the project corridor crossing fully developed industrial areas, which will require resumption of a number of properties. From Curtin Avenue to Lavarack Avenue, the project corridor will require the resumption of Percival Park, vacant Crown land, part of a nursery and several industrial properties. While only a small part of the nursery land will be required for resumption, there is potential for overshadowing from the Motorway structure on parts of the site currently used for plant cultivation. The potential for adverse impacts caused by shadowing is low due to the existing shadowing impact caused by the existing bridge. The proposed new bridge will likely bring shadowing of the nursery in winter months forward by approximately 15 minutes.

From Lavarack Avenue to Kingsford Smith Drive, the project corridor will require the resumption of a number of industrial businesses.

From Kingsford Smith Drive to Pinkenba Rail Line, the project corridor will require the resumption of land from G James Glass which occupies all of the land between these two points. The impact on G James Glass will need to be carefully managed, as the project corridor passes between onsite buildings and facilities. No buildings or facilities on the G James Glass site will be required to be removed, and connectivity will be maintained as the new deviation will be on concrete piers at this point, of a sufficient height to allow ease of cross movement below.

Curtin Avenue to Pinkenba Rail Line (Existing Section)

In the existing section, the GUP will be predominantly constructed within the road reserve, minimising the resumption of properties. Several industrial properties however will be affected.

Sensitive Community and Commercial Land Uses

There are relatively few sensitive land uses either within or directly adjacent to the bridge section of the project corridor. There are sensitive uses associated with the residential parts of the suburb of Murarrie and the Metroplex Industrial Estate. The sensitive non residential uses within the vicinity of the Motorway and their approximate distance to the Motorway has been summarised in Table 4.6.

Table 4.6 Sensitive Community and Commercial Land Uses (Bridge Section)

Sub-Section	Facility Name	Approximate Distance to Project Corridor
Cleveland Branch Rail Line to Brisbane River	Murarrie Progress Association Community Hall	600m
	Murarrie State School	750m
	Murarrie Community Church	600m
	ABC Learning Centre	550m
	Zac's Place Bistro	400m
	Brisbane River	Within Corridor
Brisbane River to Curtin Avenue	Royal Queensland Golf Course	Within Corridor
Curtin Avenue to Pinkenba Rail Line (Deviation Section)	Percival Park	Within Corridor
	Help Enterprises (Nursery)	Within and Adjacent to Corridor
Curtin Avenue to Pinkenba Rail Line (Existing Section)	Brisbane Institute of TAFE (Gateway Campus)	Directly Adjacent

None of the uses identified in Table 4.6 are expected to be adversely impacted by the project, other than as already discussed above.

Residential Areas

South of the Brisbane River, residential areas exist at the suburb of Murarrie, on the western side of the existing Gateway Motorway, to the south of Lytton Road, and west of Queensport Road. North of the Brisbane River, residential areas exist at Ascot and Hamilton, suburbs to the west of the widening section of the existing Motorway between Doomben Racecourse and Kingsford Smith Drive. None of the above residential areas are expected to be adversely impacted by the project.

Environmentally Significant Areas

There are potential impacts from the GUP on the water quality of the Brisbane River. This can occur during both the construction phase (eg erosion and sediment rich run off) from activities such as pylon driving, and the operation phase (run off containing fuel) and wear and tear from motor vehicles (eg rubber from tyres) entering the Brisbane River. Section 12 discusses potential impacts upon the water quality of the Brisbane River.

4.5.6 Mitigation Measures

Main Roads has been working closely with RQGC to mitigate the impact of the second Gateway Bridge. Redesign of the existing course layout to accommodate all 18 holes on the western side of the bridge is well advanced.

Investigations into the impacts of the GUP on the nursery have been investigated and the potential impacts will be addressed through an agreement with Main Roads. Consultation on this issue will continue as part of the next phase of the project.

Consultation is to continue with the Regional Harbour Master regarding the Gateway Bridge duplication to ensure that navigational issues are addressed during detail design and construction activities within Brisbane River.

Effective mitigation measures are required to address the potential impact upon the water quality of the Brisbane River and these are addressed in Section 12.

4.6 Pinkenba Rail Line to Nudgee Road (Northern Section)

The northern section of the project corridor starts at the northern side of the Pinkenba Rail Line and finishes at the existing Motorway south of Nudgee Road. The first part of this section is the new deviation. The corridor covers land that is not within a road reserve. The second part of this section, which is predominantly the proposed new interchange between the proposed deviation and the existing Motorway, is predominantly in the existing road reserve. Figures 4.1c and 4.1d illustrates the land uses within the northern section of the project.

4.6.1 Existing Land Uses

Pinkenba Rail Line to Gateway Motorway

The northern section commences at the southern boundary of the old airport site, and Brisbane Airport. The old airport site is presently vacant land owned by BCC (the majority of proposed TCC), and the Brisbane Airport land in this area is industrial land generally used for fuel storage adjacent to BAC's Export Park. The corridor only affects a small piece of the Brisbane Airport land within this subsection, but bisects the old airport site, emerging on the northern side of the old airport in the vicinity of the property boundary between the old airport and Number 1 Airport Drive precinct of Brisbane Airport.

The corridor then crosses Airport Drive, before crossing vacant Brisbane Airport land and onto the floodplain area of Kedron Brook, that is owned by BCC. The corridor then crosses Kedron Brook Floodway, traversing the Kedron Brook floodplain, before rejoining the existing Motorway.

Northern Bifurcation to Nudgee Road

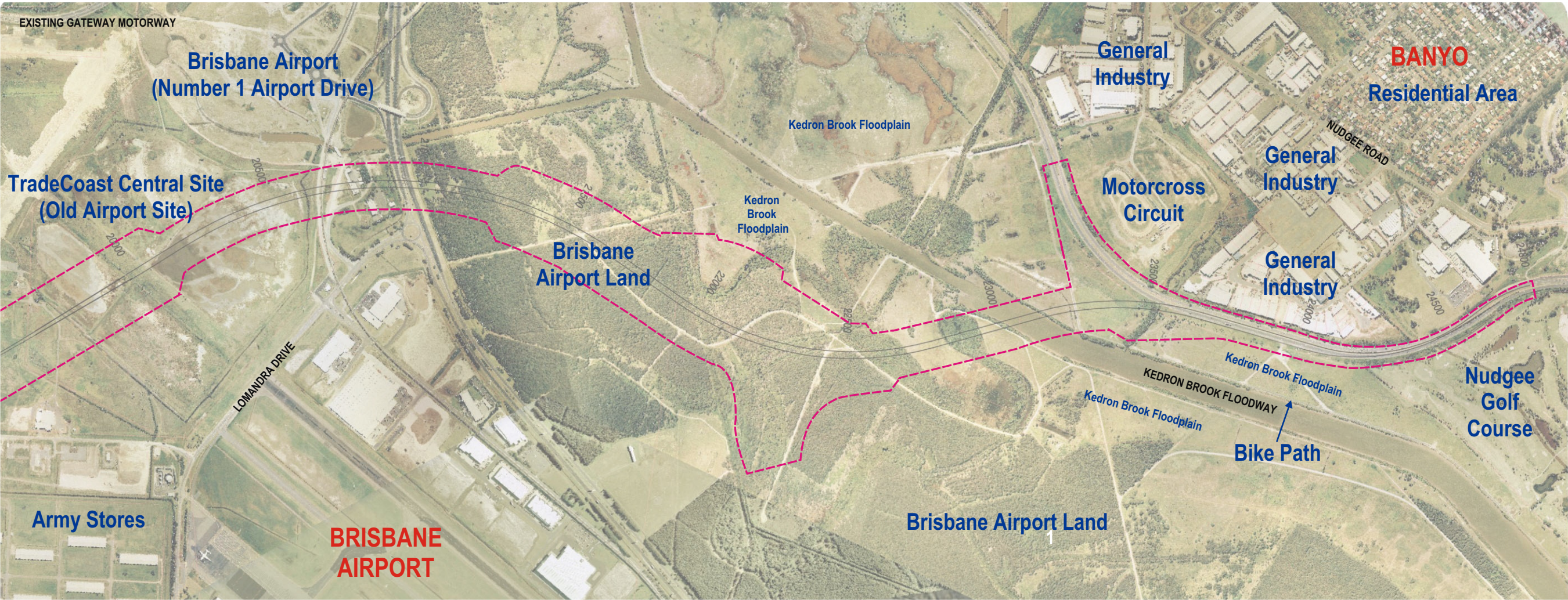
The corridor at this point includes the proposed interchange of the proposed northern bifurcation and the existing Motorway, from Raubers Road to the Nudgee Golf Course. Aside from the Kedron Brook floodplain, no developed land uses are within the project corridor for this sub section.

There are several land uses adjacent to the Motorway in this area of the corridor, but aside from the floodplain they are predominantly non sensitive. Directly adjacent land uses, on the western side of the Motorway from Raubers Road to the end of the northern section are: a Motocross Circuit, a general industry area, parkland, and a light industry area. The last three uses predominantly gain access from Buchanan Road. Although not directly adjacent to the corridor, the Nudgee Service Centre is also in close proximity to the northern limit of the project. On the eastern side of the Motorway only the Kedron Brook floodplain and the Nudgee Golf Course are directly adjacent.

4.6.2 Future Land Uses

Table 4.7 below details the planning intentions of BCC City Plan's Strategic Plan for this section of the corridor.

Gateway Upgrade Project ..



KEY
----- Project Corridor

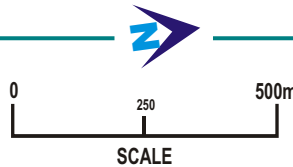


FIGURE 4.1d
Existing Land Uses
Airport Drive to Nudgee Road

Table 4.7 BCC Strategic Plan (Northern Section)

BCC Strategic Plan	Summary of Issues
<i>Map A: City Structure</i>	Map A identifies Brisbane Airport, and designates the Kedron Brook floodplain as an Investigation Area. The map also identifies the remainder of this section of the project corridor as being industrial.
<i>Map B: Green Space System Values</i>	The map identifies BCC Open Space Area as having 'Rural, semi-rural/semi-natural and open landscape value', Royal Queensland Golf Club and Nudgee Golf Course as having recreational values, Brisbane River as having natural scenic value and the Pinkenba Branch Rail Line as having corridor value.
<i>Map C: Brisbane Green Space System</i>	<p>The map highlights that Royal Queensland Golf Club as a recreation component and the Pinkenba Branch Railway Line as having Green Space corridor value. The green space corridor located in the project corridor commences at the Pinkenba Railway Line, then west along the railway line, then north along the existing Gateway Motorway until the point where the Schulz Canal crosses the Gateway Motorway.</p> <p><i>“green space corridors – are also intended to serve as physical breaks and buffers in the urban area, to increase the sense of identity for local communities and to serve floodway and drainage functions.</i></p> <p><i>Green space corridors are to allow wildlife movement, provide access to refuges or alternative habitat, provide habitats in their own right, connect areas of wildlife habitat and maintain and enhance biodiversity and the viability of ecosystem functioning generally.</i></p>
<i>Map D: Movement System</i>	The map identifies the main transport elements of the area, including the Gateway Motorway, and Airport Drive.

While the Strategic Plan identifies the significant land holdings in the vicinity of the project corridor, and the main characteristics and values of these land holdings, it does not identify any significant changes in land use. Known changes in future land use are discussed below.

Old Airport Site (Part of TradeCoast Central)

The old airport site is 157ha of land owned by BCC, that together with 5ha of land to the west of the existing Motorway forms TCC.

The TCC Master Plan analyses three possible options for developing the site: manufacturing, logistics and a turf racing centre. All options incorporate a conceptual route of the GUP where it crosses the site. The TCC Master Plan concludes that the option that meets the report's designated 'key results areas' is the manufacturing option. After allowing for roads drainage and land for GUP, there will be approximately 105ha available for industrial subdivision. This will be broken up into basic lots of 1 to 2ha, but flexibility will be retained to create larger lots if required. These lots will likely be developed for: clean/high technology/biotechnology manufacturing, manufacturers, service industry, neighbourhood centres (to support the staff working in the industrial uses), and a waste reuse facility.

One of the 'key result areas is:

"KRA: A key result area for the master plan will be developing solutions to integrate TCC with transport networks. This will also involve integrating the staging of development with the provision of transport infrastructure, particularly the Gateway Motorway Duplication."

Figure 6.1: TradeCoast Central Master Plan of the TCC Master Plan clearly shows the proposed Motorway corridor of interest where it crosses the site, grade separated from all proposed access roads through the site.

In summary, TCC is planned by BCC to be developed from vacant land into a manufacturing hub. Planning for this future use, incorporates planning for the GUP and protects the integrity and function of the route, by restricting access to the proposed duplication.

Kedron Brook Floodplain

The Kedron Brook floodplain is owned by BCC. The area is unclassified (unzoned), and is identified as an "investigation area". BCC has however undertaken several investigations of existing and potential future water and land uses for the area including the North East Wetlands Recreation Study (1999) by EDAW. These investigations propose utilising the floodplain for a wide variety of recreational uses, with the intensity of the uses restricted by the environmental values of the floodplain.

Proposals for future water uses for the bay entrance area include additional fishing facilities, horse swimming facilities, and motorised boating; while for the upper reaches of Kedron Brook Floodway low intensity uses such as non motorised boating and fishing activities are considered to be more suitable due to the comparatively narrow width of the channel and the highly disturbed bank area.

Possible facilities to the east of the proposed GUP duplication on the Nudgee bank side of the floodplain are less intensive recreation land uses and include pedestrian and cycle paths, as well as boating facilities. There has also been proposals to extend Nudgee Golf Course. Proposed facilities to the west of the GUP alignment, on the Nudgee bank side of the floodplain, are more intensive recreation land uses such as mountain bike riding. On the airport bank side proposals include establishing this part of site for equestrian activities, including the provision for picnic facilities.

While the future land and water uses of the Kedron Brook floodplain have not been determined, there have been several planning investigations conducted into the recreational and environmental value of the area. While BCC has not yet made any formal conclusions, there are a wide range of possible recreational land and water uses varying in intensity, proposed for the different parts of Kedron Brook Floodway and the surrounding floodplain. These proposed activities are compatible with GUP, but the GUP will only marginally reduce the amount of land available for these activities whilst maintaining access across the corridor.

Brisbane Airport

BAC plans to transform the Brisbane Airport from a city airport into an airport city, capitalising on future growth of airport related industries requiring land in close proximity to the airport. The airport has approximately 2,700ha of land, with only 20% of this land currently developed. The BA Master Plan has set aside 1,000ha of undeveloped land for future development.

The BA Master Plan divides the airport area into seven precincts, with Domestic Precinct and International Precinct already highly developed and largely restricted to core airport activities, but with five other precincts designated for strong growth.

BAC intend to develop:

- Export Park precinct for a range of freight and aviation activities, with BAC developing a major aviation training campus, with Virgin Blue and Aviation Australia already committed to projects in this precinct.
- Banksia Place precinct, as a business park for uses such as express freight (which would have access to the apron areas), aviation and avionics support, with those areas facing Airport Drive to be more commercial in nature.
- Aerotech Park precinct as a dedicated aerospace and aviation hub. With a wide variety of existing aviation tenants, BAC is aiming to get Virgin Blue to build B737 maintenance hangers in this precinct, with an option to construct additional hangers later.
- Airport Industrial Park precinct for both light industry and general industry purposes.
- 'Number 1 Airport Drive' precinct as a mix of business and commercial opportunities, as opposed to the remainder of the airport which is to be developed for industrial purposes or core airport activities. Number 1 Airport Drive has been formed with bulk earthworks, and is located at the intersection of the existing Gateway Motorway with Airport Drive.

As identified in the No: 1 Airport Drive Draft Major Development Plan, BAC plan to develop a 5.76 ha 'Outlet Centre' in the precinct. This Outlet Centre will comprise two buildings (Building 1 with a gross floor area of 10,267m², Building 2 with a gross floor area of 9,804m²). These buildings will be:

"comprised of independent discount shops arranged around an internal mall system. The term "Outlet Centre" means a building comprised of many centrally managed, separately leased retail outlets in which the majority of outlets consistently offer for sale a substantial proportion of stock which is:

- *Sold below normal retail prices; and/or*
- *Surplus, out of season, seconds or samples."*

Outlet Centre – Draft Major Development Plan February 2004. P.1

Access for the proposed development will be from Airport Drive, with no direct access from the proposed Motorway, but the development will increase traffic generation to Brisbane Airport from the Gateway Motorway.

The future development of Brisbane Airport as an airport city will require a safe and efficient transport network. The BA Master Plan states:

“Brisbane Airport’s role as a Gateway airport, an integrated transport hub, and as an emerging Airport City demands timely, stageable, flexible and cost effective development of supporting surface transport systems to ensure that growth in passenger numbers, industry developments, particularly tourism, and related employment are not constrained, enhancing the airports role as a key economic driver for South East Queensland.

A critical success factor in this key development object is an effective regional road network and public transport system. It is noted that the major road networks in the vicinity of the airport and between the Airport and Brisbane City centre are already at or close to capacity” (p169, BA Master Plan).

In summary, Brisbane Airport has a large amount of undeveloped land that BAC proposes to allow to be developed for predominantly industrial uses, as well as a large commercial precinct at Number 1 Airport Drive, which will significantly increase demand for an upgraded transport network.

4.6.3 Existing Land Tenure (Northern Section)

Land required in this section includes freehold, Commonwealth and Crown land.

The total area of additional land required for this section is approximately 41.6ha.

Table 4.8 provides a breakdown of land tenure and number of properties required for the project in this northern section.

Table 4.8 Land Tenure (Northern Section)

Tenure	Number of Lots
Freehold	5
Commonwealth Land	1
Crown Land	1
Total	7

4.6.4 Statutory Land Use Controls

Both the *Brisbane City Plan 2000* and the *Brisbane Airport 2003 Master Plan* apply to this section of project corridor.

Local Plans

The relevant Local Area Plan for the northern section is the ATC Local Plan. The area covered by this LAP is shown on Figure 4.3. The ATC LAP clearly identifies the proposed new Motorway deviation as a “Proposed future state controlled transport corridor”, and clearly states that direct access to the Motorway from adjacent land uses is not to be permitted.

The ATC LAP identifies fifteen precincts, two of which, the Airport Precinct and the Old Airport Precinct apply specifically to the northern section of the corridor. These precincts contain no specific provisions relating to the Gateway Motorway, but do note that land in the Airport Precinct is controlled by BAC and that all development must comply with the BA Master Plan.

Area Classifications

Due to the size of the property holdings and nature of the land uses within and adjacent to the northern section of the project corridor, there is a relatively narrow range of classifications that apply. The general area classifications for this section are shown on Figure 4.2.

Pinkenba Branch Rail Line to Gateway Motorway

Within the northern section of the corridor there are only three different classifications, one for each of the three main land uses, the airport (Special Purpose – Airport Zone), old airport (Future Industry Zone) and Kedron Brook floodplain (Special Investigation Area).

Northern Deviation to Nudgee Road

For the land uses adjacent to the existing Motorway, between Raubers Road and Nudgee Road, there are only three classifications, Sport and Recreation, Light Industry and General Industry.

The area classification of land directly adjacent to the project corridor are shown on Figure 4.3 and in Table 4.9.

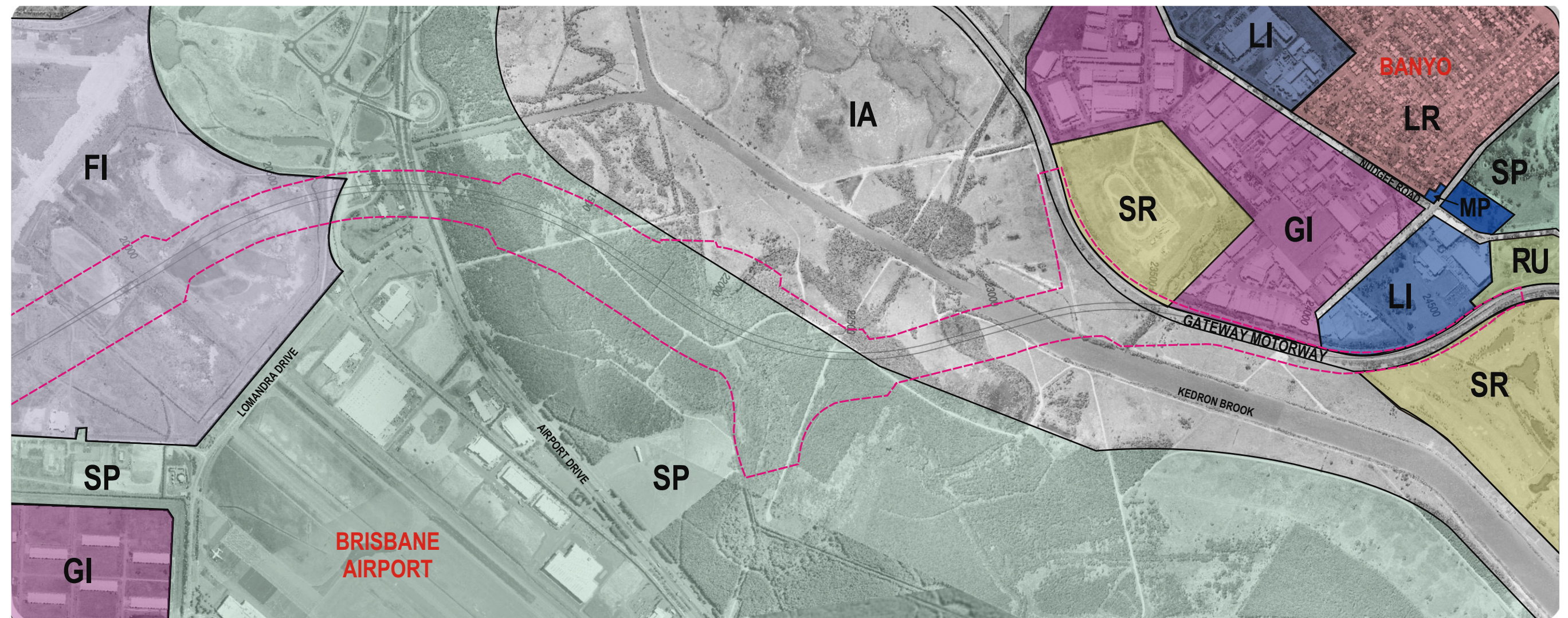
Table 4.9 Existing Land Uses (Northern Section)

Existing Land Uses	Existing Zoning	Proximity
Pinkenba Railway Line until Kedron Brook		
Old Airport Site (Part of TCC)	Future Industry	Within Corridor
Brisbane Airport	Special Purpose	Within Corridor
Kedron Brook Floodplain	Investigation Area	Within Corridor
Proposed Northern Bifurcation to Nudgee Road		
Motocross Circuit	Sport and Recreation	Adjacent
Waterway	Sport and Recreation	Adjacent
Buchanan Road General Industry Precinct	General Industry	Adjacent
Hunington Place Light Industry Precinct	Light Industry	Adjacent
Nudgee Golf Course	Sport and Recreation Area	Adjacent

Brisbane Airport 2003 Master Plan

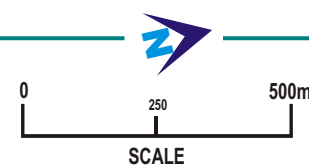
Under the *Airports Act 1996* (Cth), if there is an airport lease for an airport, there must be a final master plan in respect of the airport (a final master plan being a draft master plan which has been approved by the Minister). A master plan must relate to a period of 20 years, but it is to remain current for a period of five years. The 90 day public display period for the BA Master Plan process ended on 11 December 2003 and the 2003 Master Plan was approved by the Minister on 7 May 2004.

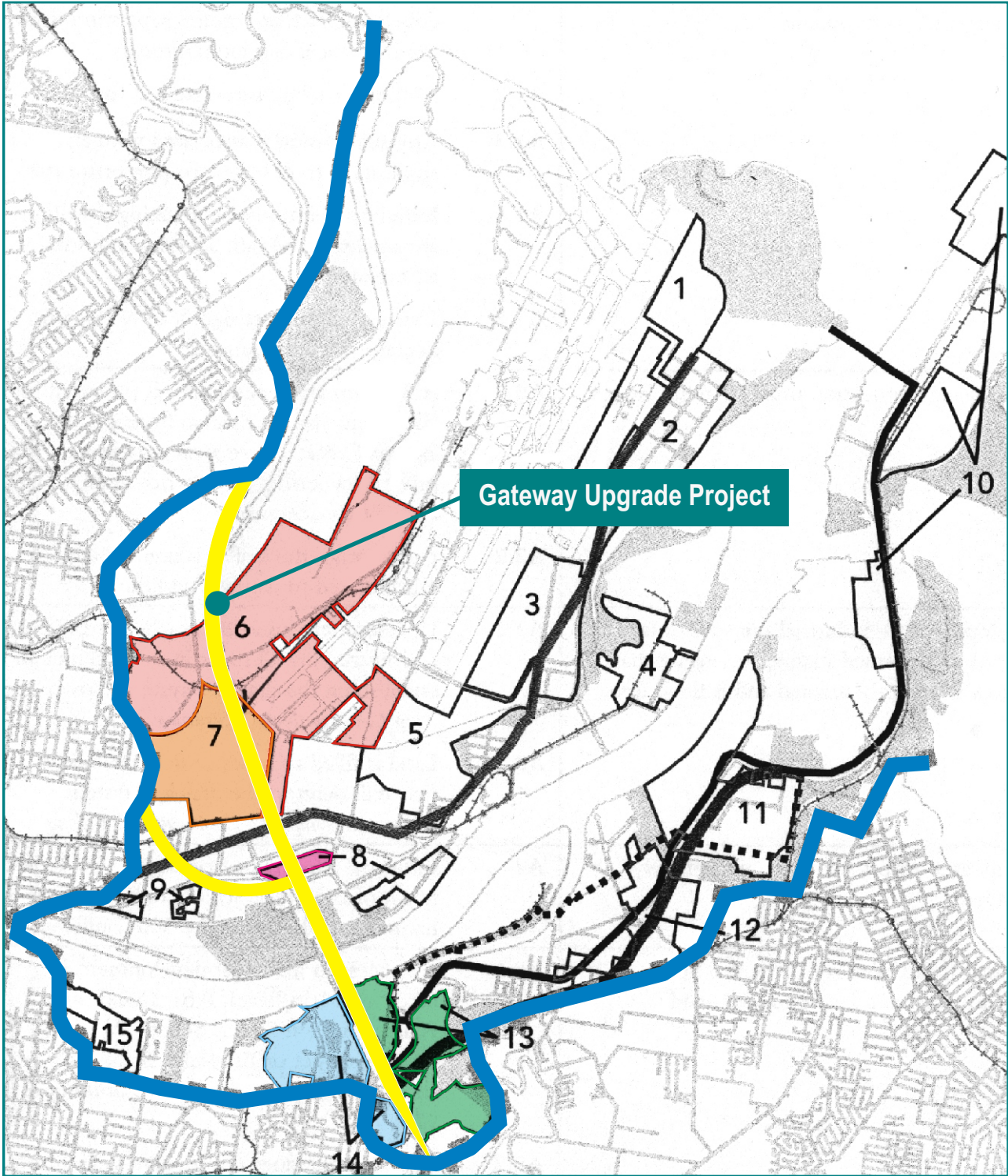
Gateway Upgrade Project ..











KEY

SP Special Purpose Centres	SR Sport and Recreation	IA Investigation Area	Project Corridor
GI General Industry	LR Low Density Residential	MP Multi-Purpose Centre	Local Plan Boundary
FI Future Industry	RU Rural	LI Light Industry	





PRECINCTS

	Local Plan boundary		Port of Brisbane Motorway	4	Bulwer Island	10	Fisherman Islands
	Precinct boundary		Northern arterial road	5	Pinkenba	11	Lytton
	Green Space		Proposed future state controlled transport corridor	6	Airport	12	Hemmant
	Trunk infrastructure corridor	1	Luggage Point	7	Old Airport	13	Murrarie
	Secondary infrastructure corridor	2	Myrtletown	8	Eagle Farm East	14	Queensport
		3	Boggy Creek	9	Eagle Farm West	15	Colmslie

Source: Brisbane City Plan 2000

The most relevant aim of the Brisbane Airport 2003 Master Plan, to the GUP, is BAC's proposals for land use and related development of the airport site. This is important because Brisbane Airport includes not just the core airport itself but a large 2,700ha land area. With a long term lease over the site, BAC plans to transform the Brisbane Airport from a city airport into an airport city, capitalising on future growth of airport related industries requiring land in close proximity to the airport. Due to the strategic importance of the airport as an economic driver for the SEQ region, it is critical that development and expansion of the Brisbane Airport area occurs efficiently.

To achieve these land use development objectives, the BA Master Plan divides the airport area into seven precincts:

- Domestic Precinct (Domestic Terminal);
- International Precinct (International Terminal);
- Number 1 Airport Drive (Business, Retail and Airport Centre);
- Export Park (International Air Freight);
- Banksia Place (Express Freight and Apron Operations);
- Aerotech Park (Aviation Maintenance); and
- Airport Industrial Park (Industry).

Within these seven precincts, the BA Master Plan divides land into three principal land use categories:

- Business;
- Light industry; and
- General industry.

The northern section of the project corridor predominantly traverses land classified (zoned) Business Areas, as well as a small amount of land classified General Industry Areas, (Fuel Storage and Distribution Area) of the Export Precinct. No other precincts are affected by the project corridor. The Master Plan's maps, (such as Figure 13.4 – Land Use Areas) show the proposed alignment of the future Gateway Motorway deviation as traversing Business Areas of the Export Precinct (including Export Park West).

The intent for Business Areas is:

"The Business area envisages broad and flexible land uses which will support a range of retail, business, community, leisure, entertainment, recreation and light and service industries" (p193).

The intent for the Export Park Precinct is:

"The Export Park precinct covers one of the largest areas within the airport, and accommodates major freight orientated uses. The intent is to develop a precinct that caters for a diverse range of business and industry uses. Attractive highway/boulevard orientated business developments will be encouraged in areas adjacent to Airport Drive.

This precinct also has frontage to airport apron areas with links to taxiways and runways. Tenants requiring direct airside access could be targeted for establishing in this precinct.

This could include airline cargo and freight handling facilities including warehouses and distribution centres.

Export Park will also incorporate BAC's vision of creating a high quality training and educational area on airport. Already, Virgin Blue have begun construction of its Simulator Centre. Aviation Australia, supported by the Queensland Government, also has opened a training centre for aircraft maintenance and technical trades students.

BAC intends to pursue additional campus and educational facilities which may include lecture rooms, workshops, cafes, service orientated facilities, conference facilities and function rooms. While BAC's preference will be to locate recreational facilities and campus accommodation within Number 1 Airport Drive, the Master Plan retains the option of locating these facilities also within Export Park where associated with training and/or educational uses. The existing road network may be altered to provide a more pedestrian-friendly ambience incorporating a boulevard type design" (p199).

While neither of the Business Area intent or the Export Park Precinct intent have any provisions relative to the GUP, the BA Master Plan is heavily supportive of the project. It identifies that the vast majority of traffic accessing the airport from both the north and south, utilise the existing Gateway Motorway, and that efficient access to the Motorway is essential. The BA Master Plan states:

"A number of opportunities have been identified which have guided BAC in planning the future development of airport land. These are:

- ...*
- convenient access to Brisbane and South-East Queensland (Gold and Sunshine Coasts) population centres via the Gateway Motorway, major suburban routes as well as public transport;*
- enhanced road access through the Gateway Motorway duplication and Airport Drive sliplanes into the site;"*
- ...' p192*

Completion of the GUP is mentioned as a priority in the Master Plan's short and medium term development goals as shown below.

"Short Term Development 2003 – 2008 Developments required to facilitate forecast growth of traffic demand and business and industry attraction are expected to include but not be limited to:

- ...*
- preliminary works associated with the potential staged delivery of elements of the Gateway Motorway Deviation project including a link to a possible stand-alone Airport Northern Access Interchange.*
- ...' p217*

'Medium Term Development 2008 – 2013 Developments required to facilitate forecast growth of traffic demand and business and industry attraction are expected to include but not be limited to:

- ...
completion of the on-airport road network associated with linkages to the completed Gateway Motorway Deviation and Airport Northern Access Interchange.
..." p218

In summary, the provisions of the Brisbane Airport 2003 Master Plan are highly supportive of the project particularly the proposed Motorway deviation and second airport access interchange. Under the BA Master Plan a separate Major Development Plan (MDP) process is likely to be required (refer Section 8) for the GUP.

4.6.5 Potential Impacts

As the northern section of the project corridor traverses large amounts of vacant industrial land within the Brisbane Airport and old airport sites, GUP will interact with planned future development and transport networks in these areas. The impact of the project on sensitive land uses near the project corridor also needs to be considered.

Direct Property Impacts

Unlike the other two sections of the project corridor, the northern section of the corridor does not follow the existing alignment of the Motorway, rather it involves a complete duplication of the corridor. This will involve a significant amount of land to be resumed for the corridor. Due to the consolidated nature of the land holdings in this section, however, land acquisitions would be predominantly limited to the old airport site, Kedron Brook floodplain and Brisbane Airport. Aside from these properties, it is likely that only seven other properties will be required on Cassia Place, Nudgee Beach Road and Raubers Road.

The planning intentions for both Brisbane Airport and the old airport site already incorporates provision for the project corridor, and the proposed future development of land use and transport infrastructure for these sites have been planned for accordingly. For the old airport site (part of TCC), the project corridor traverses through the site, providing a potential impediment to cross movement. For the central section of the old airport site, the proposed deviation will be on a raised embankment. This section of the duplication, would cut access for transport and utilities for this part of the site. Planning for the development of the site incorporates the GUP corridor, and the provision for efficient access to transport and utility networks for future developments on the site.

The proposed road hierarchy for the TCC site plans for two major links that cross the project corridor. The first is a proposed major access link from Qantas Drive to the existing Motorway, and the second is a minor access link that would connect Viola Place and Schneider Road. Both these proposed links are not cut off by the proposed duplication, as at both the northern and southern ends of the old airport site, the proposed duplication would be an above grade motorway on concrete piers, allowing for transport links underneath the proposed Motorway. The stormwater management concept for the site also for movement and retention systems that allow for the central part of the site having a new embankment impeding drainage.

Another potential impact of the GUP on the future development of the site, is the acquiring of volumetric title of the air both above and below the proposed future carriageways on structure and for land that is within a few metres of either side of the carriageways. This would prevent development within and immediately adjacent to the project corridor for this section. Due to the restrictions of Obstacle Limitation Surface (OLS) of Brisbane Airport, the potential impact of acquiring the volumetric titling are far less than they would otherwise have been.

Aside from land between Cassia Place and Lomandra Drive, the project corridor does not cross developed land, so there is minimal impact on existing land uses. The project corridor will also have no adverse impact on the existing transport infrastructure servicing Brisbane Airport (eg Airport Drive and Lomandra Drive). The project will however have a very significant positive impact on the safety and efficiency of the transport network of Brisbane Airport, with the construction of a second interchange to the proposed new GUP deviation. This will allow BAC to construct an internal access road to connect with this new interchange, enabling more efficient access arrangements to the airport. Presently Airport Drive carries almost all traffic accessing the airport, and is near capacity at present.

Where the corridor crosses Airport Drive, the proposed duplication will be above grade, on concrete piers, with the spacing of the piers allowing for future upgrading of Airport Drive (such as widening). The alignment of the proposed duplication is to the west of the intersection of Airport Drive and Lomandra Drive, and will have no impact upon the intersection.

The significant amount of land required for the GUP on the Brisbane Airport site is offset by the need to greatly improve access to the airport, in order to ensure efficient access in the future given the significant projected increases in air passenger transport usage. The BA Master Plan states:

"Increased capacity of the external road network will be essential to secure future passenger accessibility to the airport to meet traffic demand for the airport and for the Region" BA Master Plan", (p183 BA Master Plan 2003).

Given the benefits of the GUP in improving future access to Brisbane Airport, the positive impacts would definitely outweigh the relatively minor negative impacts of the project, in reducing the amount of industrial land available for future development. Considering that the Brisbane Airport land to be resumed, north of Airport Drive is presently vacant, the negative impacts of the acquisition of this land can be readily dealt with in the resumption process.

Residential Uses

Due to the project corridor largely being confined to the three large holdings of the old airport site, Brisbane Airport and the Kedron Brook floodplain, there are no existing or proposed residential areas either within or directly adjacent to this section of the project corridor.

However, residential areas exist at the following nearby suburbs west of the Motorway:

- Banyo, west of Motorway between Raubers Road and the Nudgee Waterhole Reserve; and
- Nudgee, to the north of Banyo.

The residential areas in Banyo are setback at least 400m from the Gateway Motorway, with no residential areas east of Nudgee Road, while the residential areas in Nudgee are setback at least 1,100m from the project corridor, with no residential areas east of Earnshaw Road. There are industrial areas between the nearest residences and the GUP corridor, which provide a

buffer. The GUP will not significantly decrease the distance between the Motorway and these areas.

Residential areas also exist directly adjacent to the western side of the existing Gateway Motorway, between the Pinkenba Rail Line and Raubers Road, which is not part of the project corridor at:

- Ascot (including Doomben), north of Lamington Avenue and south of Raceview Avenue;
- Hendra, south of the East West Arterial Road;
- Nundah (including Toombul), north of the East West Arterial Road; and
- Northgate, west of Nudgee Road, south of Raubers Road.

Initially, the GUP will have a positive impact on these residences by reducing the amount of traffic on the existing Motorway, with traffic instead utilising the proposed duplication, which is significantly increasing the distance between noise sensitive uses and a significant noise generator. However, it is anticipated that overtime, traffic volumes on the existing Motorway would return to current levels.

Sensitive Community/Commercial Uses

Due to the project corridor largely being confined to the three large holdings of the old airport site, Brisbane Airport and the Kedron Brook floodplain, there are relatively few community or commercial uses that could be adversely affected by GUP. Sensitive community and commercial uses within the vicinity of the northern section for the project corridor and their approximate distance to the project corridor are summarised in Table 4.10.

Table 4.10 Sensitive Community and Commercial Land Uses (Northern Section)

Sub-Section	Facility Name	Approximate Distance to Project Corridor
Pinkenba Rail Line to Gateway Motorway	Kedron Brook floodplain	Within Corridor
Gateway Motorway Interchange (Raubers Road to Nudgee Road)	Parkland on Buchanan Road	Directly Adjacent
	Banyo Seminary	400m

The impacts on the Kedron Brook floodplain have been discussed previously in this section, and also below under Sensitive Environmentally Significant Areas.

The adverse potential impacts on the Banyo Seminary and the parkland on Buchanan Road are likely to be restricted to increased noise during the construction of the GUP. The potential impacts of the GUP on these areas is discussed in Section 15.

Construction activities associated with the GUP on the Kedron Brook floodplain have the potential to disrupt the operation of the existing bikeway along the floodplain. Measures will be implemented during construction to ensure that the bikeway remains operational during construction of the GUP (refer Section 6).

Sensitive Environmentally Significant Areas

There are potential impacts from the GUP on the water quality of Kedron Brook Floodway. These can occur during both the construction phase (eg erosion and sediment rich run off, acid sulfate soils) from activities such as pylon driving, and the operation phase (run off containing fuel, and wear and tear from motor vehicles (eg rubber from tyres) entering the Brisbane River. Refer to Section 12 for information of potential impacts upon the water quality of the Brisbane River.

4.6.6 Mitigation Measures

It is anticipated that BCC and BAC will be compensated for the acquisition of their land, through the resumption process and agreements with Main Roads. The potential beneficial impact of the GUP on providing safe and efficient access to the future land uses of these areas, will result in a situation however where further mitigation measures (apart from potential environmental impacts) are not required.

Investigations into the potential impacts of the GUP on Kedron Brook Floodway (water quality and potential acid sulfate soils) and the surrounding floodplain (potential acid sulphate soils) will be investigated and the potential impacts determined. Effective mitigation measures are required to address these potential impacts upon the Kedron Brook Floodway, and these are addressed in Section 10.3 (Acid Sulphate Soils) Section 12 (Surface Water Quality).

4.7 Conclusion

The planning process for GUP prior to the EIS has ensured that many of the major land uses (eg Brisbane Airport, TCC and G James Glass) have planned for the project corridor allowing the project to proceed with minimal impact on existing land uses, and proposed future development (including transport links and utilities).

There are however land use impacts within the bridge section of the project corridor that cannot be prevented, especially to the Royal Queensland Golf Course, which will require redevelopment of the existing course, the planning for which is well advanced. The industrial properties between Curtin Avenue and Kingsford Smith Drive within the project corridor will require resumption for the project. Impacts on the southern section of the project corridor are relatively minor, with the project corridor largely restricted to the existing Motorway road reserve. Adverse impacts on the northern section of the project corridor are offset by the positive impacts on improving access to the ATC area. Impacts on the Kedron Brook Floodway and associated floodplain, Brisbane River and Bulimba Creek will require the effective implementation of a range of mitigation measures in both the construction and operation phases to avoid a decrease in water quality, and damage from acid sulphate soils.

As the Gateway Motorway is a limited access motorway, and with GUP not increasing access to the Motorway aside from Brisbane Airport, there will be minimal localised transport implications for land uses near or adjacent to the project corridor, aside from improved efficiency of the Gateway Motorway itself.

Properties within the project corridor and that are required for the GUP, whether full or partial, would be acquired by agreement or in accordance with the *Acquisition of Land Act 1967* and the MR resumption process. All legitimate claims to compensation would be settled in accordance with the *Acquisition of Land Act 1967* and established court precedents. If agreement to compensation cannot be reached, either party can refer the matter to the Land Court for determination.

During the detailed design stage, particular detail should be given to minimising direct and indirect land use impacts on nearby property.

The management of land use changes adjacent to the GUP corridor and for remnant parcels will be guided by City Plan and its associated land use controls (area classifications, local plans) and the BA Master Plan. MR should ensure that during planning and construction phases continued liaison occurs with both BCC and BAC to ensure appropriate and consistent development of existing and future development patterns. This would involve continued liaison with BCC as property owner of the old airport site (part of TCC) and Kedron Brook floodplain, to ensure that any future development of the site is consistent with the GUP. This would also involve ensuring that BCC's Development Assessment Teams automatically inform the GUP team of all development applications on land adjacent to the GUP corridor.