



3 Land Use and Infrastructure



3.1 Introduction

The proposed upgrade of the railway line between Landsborough and Nambour will occur within the western part of the Sunshine Coast Region. It traverses six townships which have strong identities based on their history as railway towns. These towns are Landsborough, Mooloolah, Eudlo, Palmwoods, Woombye and Nambour. Overall, the project area consists of a mix of residential, rural residential, rural, commercial, open space and recreation, community, and industrial areas. Its tenure is predominantly freehold land with reserves, national parks, State forest, and State land.

The *South East Queensland Regional Plan* (2005) (SEQR) identified all towns, with the exception of Eudlo, as those within the urban footprint. This signals the intent for future growth to occur in these areas, subject to physical and environmental constraints. The SEQR also identified Nambour as a Major Activity Centre. The increase in future development in the town centres will be able to benefit from the rail services and commercial activities.

The purpose of identifying a corridor that allows for up to four tracks is to provide long term land use certainty and future flexibility, should part or all of the corridor be upgraded to more than two tracks. Also, by identifying the corridor for future upgrading now, this can pre-empt and guide future planning and development.

Additionally, the concurrence powers of the Department of Transport and Main Roads under the *Integrated Planning Act 1997* and the identification of the corridor provide the Department of Transport and Main Roads with the scope to ensure future development along corridor is compatible with the project.

This chapter details the existing land uses and the planning framework for the areas associated with the project. It also describes the potential land use impacts and opportunities arising from the construction and operation of the project.

3.1.1 Methodology

Several reports relevant to the project area were reviewed and used for general background information which includes:

- “ Landsborough to Nambour Rail Corridor Study: Route Identification Report (2008), Queensland Transport (now the Department of Transport and Main Roads)
- “ Caboolture to Landsborough Rail Upgrade Study, Stage 3a Working Paper - Preferred Rail Upgrade Option Report (2005), Queensland Transport (now the Department of Transport and Main Roads)
- “ Caboolture to Beerburrum Rail Corridor Study - Final Assessment Report (2006), Queensland Rail Limited (for the community infrastructure designation process)

- “ relevant legislation, planning schemes and policies as outlined in Section 1.10 of Chapter 1, Introduction and the Sunshine Coast Regional Council Growth Management Position Paper (July 2008).

The following data has been used in the identification and analysis of project impacts and issues:

- “ local government and Department of Environment and Resource Management GIS data, including zoning, cadastre and tenure information overlays
- “ cadastre (Department of Environment and Resource Management, 2007)
- “ 2007 aerial photography (Department of Transport and Main Roads)
- “ *South East Queensland Regional Plan* (2005) (SEQR)
- “ *Maroochy Plan 2000*, *Caloundra City Plan 2004* and non-statutory plans prepared by the local governments.

3.1.2 Field investigations and consultation

Field investigations were undertaken in order to identify the constraints, opportunities and impacts associated with the project. Consultation with the community and Sunshine Coast Regional Council (SCRC) has also provided valuable information to the study team. This also included comprehensive community consultation with local residents within the project area. Issues raised during community consultation are addressed in Section 3.4.

3.1.3 Assumptions and limitations

The most recent available versions of datasets and aerial photography have been used for this assessment; however these represent a 'point in time' assessment and do not account for future development that may occur in the project area prior to the commencement of construction. The Department of Transport and Main Roads (or its agent/s) will be responsible for securing all subsidiary approvals required to facilitate the development activities. Information collected and analysed as part of this EIS will need to be maintained and any key changes identified when they arise. Depending on the timing and method of delivery chosen for the construction of the project, further investigations may be required into specific matters necessary to obtain these approvals.

The two planning schemes applicable to the project area are the *Maroochy Plan 2000* and *Caloundra City Plan 2004*. However, it must be noted that these planning schemes will be superseded in the future due to the amalgamation of Maroochy Shire Council and Caloundra City Council into the SCRC¹. It has however been assumed that the amalgamated SCRC will have similar vision for the project area in the future.

¹ Along with Noosa Shire Council

3.1.4 Impact significance

The impact of the project on each aspect of land use and infrastructure has been described, and mitigation or management measures are defined. Where there is a residual impact (i.e. an impact remains after the mitigation or management strategies have been applied) the significance of the impact is assigned in accordance with the approach outlined in Table 3.1.4.

Table 3.1.4: Impact significance criteria for land use and infrastructure

High Adverse	<ul style="list-style-type: none"> irreversible and significant adverse change to the function of the State's interests in the region permanent and total loss of income and livelihood to residents in the project area due to impacts to land uses (without compensation) permanent closure of a commercial precinct within a township total and permanent severance of communities in the area from facilities, services or severance of the community itself relocation of a community facility of regional value to a less optimum location serious unavoidable damage or conflict to one or more items of infrastructure permanent road closures.
Moderate Adverse	<ul style="list-style-type: none"> long-term closure of some roads and long-term impediments to local or regional access permanent displacement or relocation of a number of houses or businesses total and permanent severance of individuals in the area from facilities, services or severance of the community itself relocation of a community facility of local value to a less optimum location permanent damage to state forest.
Minor Adverse	<ul style="list-style-type: none"> temporary disruption of land uses with minimal loss of productivity temporary and short-term disruption to traffic on some roads temporary severance of communities from services, facilities or severance of the community itself.
Negligible	<ul style="list-style-type: none"> impacts to land use, access and infrastructure not noticeable to landowners or other stakeholders and with no long-term effects momentary disruption to traffic on some roads during construction.
Beneficial	<ul style="list-style-type: none"> commercial and community areas within close proximity to the project's railway station improved connection of residential areas, recreation and community facilities to the town centre opportunities for surplus rail land to be used for open space, recreation and conservation, or commercial or mixed use purposes promote commercial and future residential development in the railway townships improved land productivity improved access.

3.2 Description of environmental conditions: Land use

3.2.1 Tenure

As shown in Figure 3.2a, the majority of the land within the project area is freehold land in private tenure. Several parcels of State-owned land are also situated in the area. Lands leased include the existing railway corridor and the Woombye Lawn Bowls Club on Hill Street.

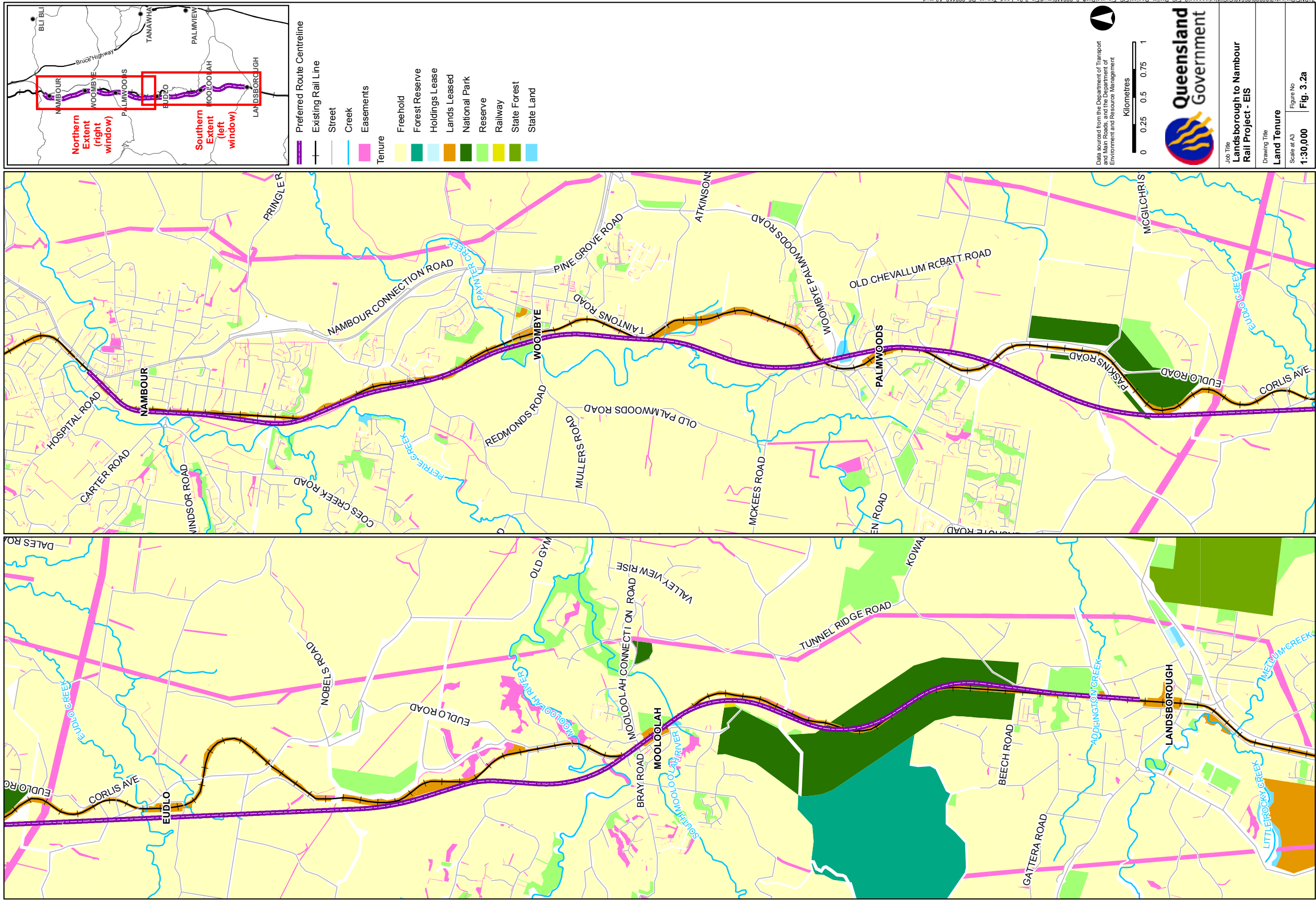
There are three protected tenures within the project area:

- Dularcha National Park
- Marie Higgs Conservation Park
- Eudlo Creek National Park.

A large area of forest reserve, which is also a protected tenure is located to the west of Dularcha National Park.

There are also several small reserves within the project area, which are predominantly near or within the townships. These reserves are generally close to watercourses and were likely to be provided through land subdivisions.

Figure 3.2a: Land Tenure



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3.2.2 Land use and zoning

Figure 3.2b provides an overview of the identified land uses along the route. For the purposes of the EIS, the differing zones and terminologies from the Caloundra City and Maroochy Shire planning schemes have been re-labelled to achieve common land use terms.

Land use in the project area is characterised by residential development clustered around economic and community service centres in each of the towns. The density of residential areas disperses on the town fringes into a rural landscape, which comprises mostly rural residential allotments. The SEQRP seeks to reinforce this pattern of development, particularly to protect the rural landscape from urban encroachment.

Landsborough

Land Use	Description
Residential	Small residential lots generally extend on both sides of the railway line to north of Dularcha National Park's boundary. Rural residential areas are located along Whites Road, Mount Mellum Road, and south of Dularcha National Park.
Commercial and Industrial	To the west of the existing railway station is the local business centre where small-scale commercial uses serve the needs of the local residents. Industrial uses such as the Energex Depot are located to the east of the station (on Tytherleigh Avenue). Landsborough also provides services such as galleries and accommodation facilities to visitors attracted by Dularcha National Park and Ewen Maddock Dam.
Community and Special Purposes	Community uses in Landsborough include Landsborough Primary School, a small magistrate's court and emergency services.
Rural	As the density of development decreases on the edges of the Landsborough and Mooloolah townships, land uses are mostly rural residential properties. In Landsborough, areas with horticulture and grazing activities are located to the east of Dularcha National Park, north of Gympie Street North and northeast of Myla Road.
Open Space, Recreation and Conservation	Large open space, recreation and conservation areas are located throughout Landsborough and its surrounding area. These include: <ul style="list-style-type: none"> • Peace Memorial Park • Pioneer Park • Ben's Sanctuary • Vidler Park • Landsborough Recreation Reserve • Landsborough Sports and Recreation Club • Ewen Maddock Dam • Dularcha National Park • Mount Mellum.

Mooloolah

Land Use	Description
Residential	The majority of residential uses in Mooloolah, which include a retirement village, are located to the west of the existing railway line. The density of residential areas disperses on the town fringes into a rural landscape with rural residential properties.
Commercial and Industrial	Local businesses in Mooloolah are located in the town centre, and appear to be focused on providing services for residents and visitors rather than being tourism-focused. These businesses include a supermarket, butcher, chemist, bakery, newsagent, post office, liquor store, hardware, hairdressers, estate agents, service station and takeaway, and are within walking distance to the existing railway station.
Community and Special Purposes	Mooloolah has a wide variety of community facilities such as Mooloolah Primary School, Special School, kindergarten, fire station, medical centre, a community hall and country club. The town is also serviced by the Mobile Library.
Rural	Horticulture and grazing occur in Mooloolah, particularly on Diamond Valley Road, Andersen Road, to the west of Neill Road and to the east of Mooloolah-Eudlo Road.
Open Space, Recreation and Conservation	Mooloolah has several open space, recreation and conservation areas. The Martin Rungert Park and the 'Village Green' are located to the north and south of Bray Road respectively. Mooloolah Recreation Grounds, South River Park, Suzen Court Park and Marie Higgs Conservation Park are located to the east of the railway. Other open spaces are located on Diamond Valley Road, South River Drive and Birdsong Drive. Sporting and recreational facilities include Mooloolah Pony Club, tennis club, swimming pool, bike and skate park.

Eudlo

Land Use	Description
Residential	Eudlo has a limited residential area due to its small Urban Footprint. It features some small residential lots primarily situated to the east of Rosebed Street.
Commercial and Industrial	Eudlo has a small business centre to the east of Rosebed Street. It remains a small rural township relying on surrounding towns for many local services.
Community and Special Purposes	Eudlo's community facilities which include Eudlo Primary School, a community hall and a church are generally located within the business centre.
Rural	A significant proportion of land from Eudlo to Palmwoods is for rural and rural residential uses. As Eudlo has a small Urban Footprint, the majority of the land is used for rural activities such as small-scale horticulture and grazing. Such activities in Eudlo can be found on either side of the existing railway, including rural properties on Highlands Road, Eudlo School Road, McGilchrist Road, Mooloolah-Eudlo Road and Eudlo Road.

Land Use	Description
Open Space, Recreation and Conservation	Eudlo has three main recreational areas. These are the skate park and tennis courts located in the town centre, and Eudlo Horse and Pony Club located on the corner of Mossybank Road and Highlands Road.

Palmwoods

Land Use	Description
Residential	Palmwoods has a low density residential area, predominantly located to the west of the existing railway. Its rural residential areas can be found to the east of the township and southeast of Eudlo Creek National Park. Palmwoods also has a retirement village called Palmwoods Garden Village, which is situated to the west of Jubilee Drive.
Commercial and Industrial	The main commercial area in Palmwoods is situated on Margaret Street and Main Street, which is to the west of the existing railway. It comprises local shops, restaurants, cafés and a local pub.
Community and Special Purposes	Community facilities for the local residents and visitors in Palmwoods include Palmwoods Primary School, religious buildings and the bowls club.
Rural	Palmwoods has a larger Urban Footprint in comparison to Eudlo. Rural and rural residential properties used for cattle and horticulture (primarily tree crops) are found on the outer edges of the Urban Footprint. Some of these rural properties are on Spackman Lane, Woombye-Palmwoods Road, Abbotts Road, Rifle Range Road and Paskins Road.
Open Space, Recreation and Conservation	Palmwoods has a number of open spaces and areas for recreation and conservation purposes. It has an abundance of parks, such as Jubilee Park, Kolora Park (the 'duck pond'), Briggs Park and Federation Park. Other areas are used for skateboarding, cricket, football, soccer, tennis, and lawn bowls. As for conservation areas, Eudlo Creek National Park is located to the south of the township.

Woombye

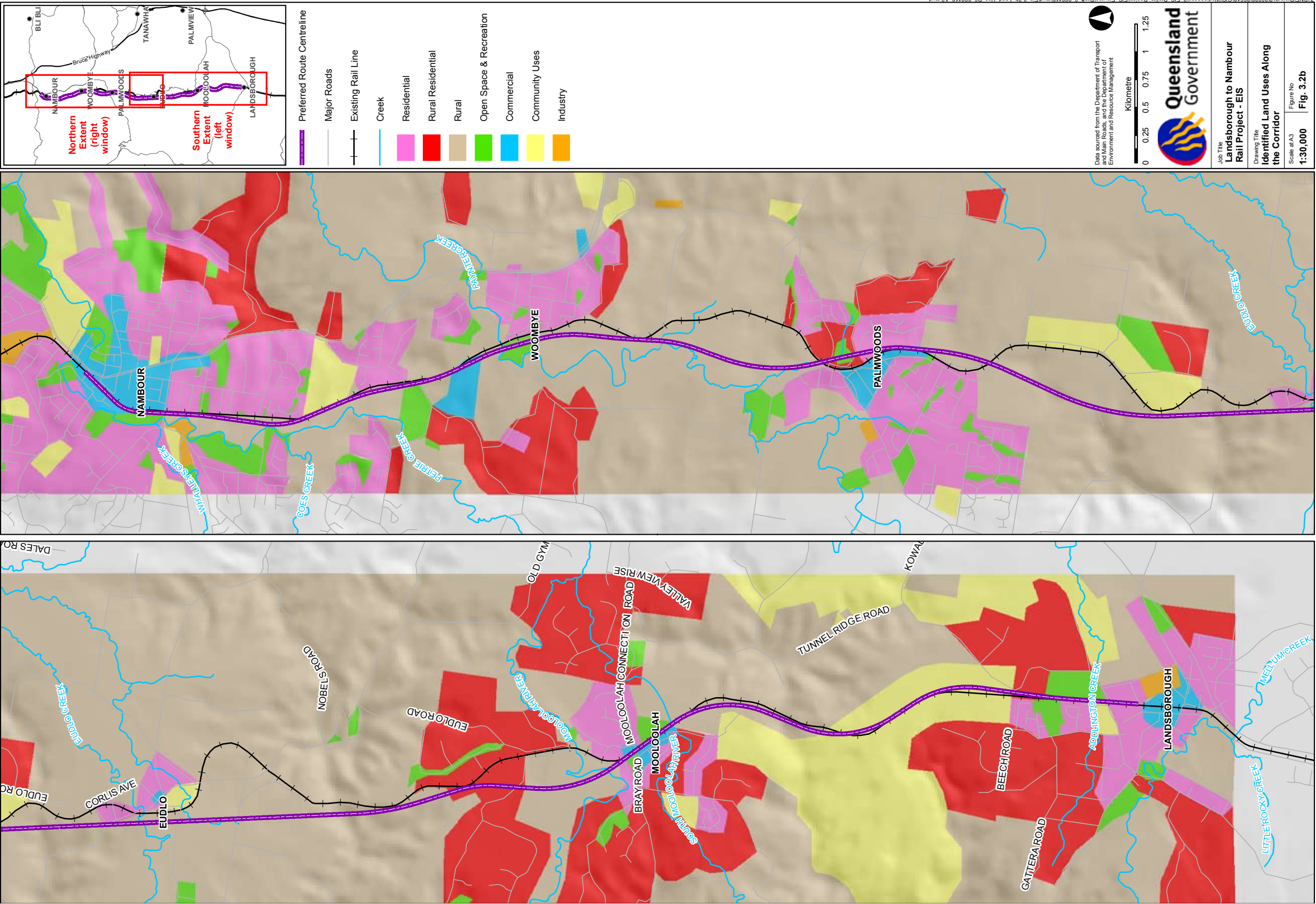
Land Use	Description
Residential	Woombye has small residential lots which are generally located to the east of the existing railway line. Its rural residential properties are predominantly located to the west of the existing railway, with the exception of some properties on Diddilbah Road, Upper Wakefield Street, Wilson Lane and Bunya Pine Place, which are located to the east of the existing railway.
Commercial and Industrial	The business centre in Woombye is situated along Blackall Street running generally from the existing railway station to the east. Examples of these businesses are retail shops, grocery stores, restaurants, caravan parks and motels.

Land Use	Description
Community and Special Purposes	Woombye has a variety of community facilities to serve its local residents and visitors. It has three schools: Suncoast Christian College, Woombye Primary School and Nambour Christian College. Other community facilities located to the east of the existing railway station are a library, churches and the Woombye Pub (the Criterion).
Rural	Rural activities in Woombye include cattle grazing and horticulture. These are primarily located to the east and west of Nambour Connection Road and the existing railway respectively.
Open Space, Recreation and Conservation	The town has a number of parks, such as the Memorial Park in Blackall Street, McCarthy Drive Park, Paynter Park, June Court Park and Victory Park. Nambour Pony Club and Soccer Club are located to the east of the railway station on Back Woombye Road.

Nambour

Land Use	Description
Residential	Nambour has the largest residential area in the project area. It comprises small residential lots and retirement villages that surround the town centre. Nambour's rural residential areas are primarily located to the east of Lamington Terrace.
Commercial and Industrial	Nambour is both the service and administrative centre of Maroochy Shire, which is now part of the SCRC. Its businesses support local residents and those in surrounding townships. Some businesses also support the tourism industry in the region. Nambour's primary industry has been sugar, with extensive cane fields surrounding the town, and the Moreton Sugar Mill in the town centre. However, the mill was closed in 2003, and the long-term future of the sugar industry in the area is in doubt. Currently, industrial uses are located on adjacent land to the west of the existing alignment, on the corner of Arundell Avenue and extending along Perwillowen Road.
Community and Special Purposes	Nambour has a wide range of facilities which serve not only the township but also the whole of Sunshine Coast region. Health facilities such as Nambour Hospital and Nambour Selangor Private Hospital are located north of the existing railway station. Educational facilities, shops, library, parks and sporting clubs are also situated in Nambour.
Rural	Rural land in Nambour is located between the existing railway and Petrie Creek, Panorama Drive and Pringle Road. These include cattle grazing and horticulture.
Open Space, Recreation and Conservation	Nambour has a wide range of open space and recreation areas, such as Moss Day Park, Noel Day Tennis Complex, Koala Park, Jubilee Park, and Huntingdale Park.

Figure 3.2b: Identified Land Uses Along the Corridor



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3.2.3 Extractive resources

Searches of the Department of Mines and Energy Interactive Mines and Tenures Mapping database have identified that there are none of the following active in the project area:

- “ mining leases
- “ mineral development licenses
- “ petroleum leases
- “ mining claims.

A historical exploration permit (coal) was in place for the Nambour Basin in the 1980s but this is no longer active.

A number of sand and gravel extractive activities are located in the region, including:

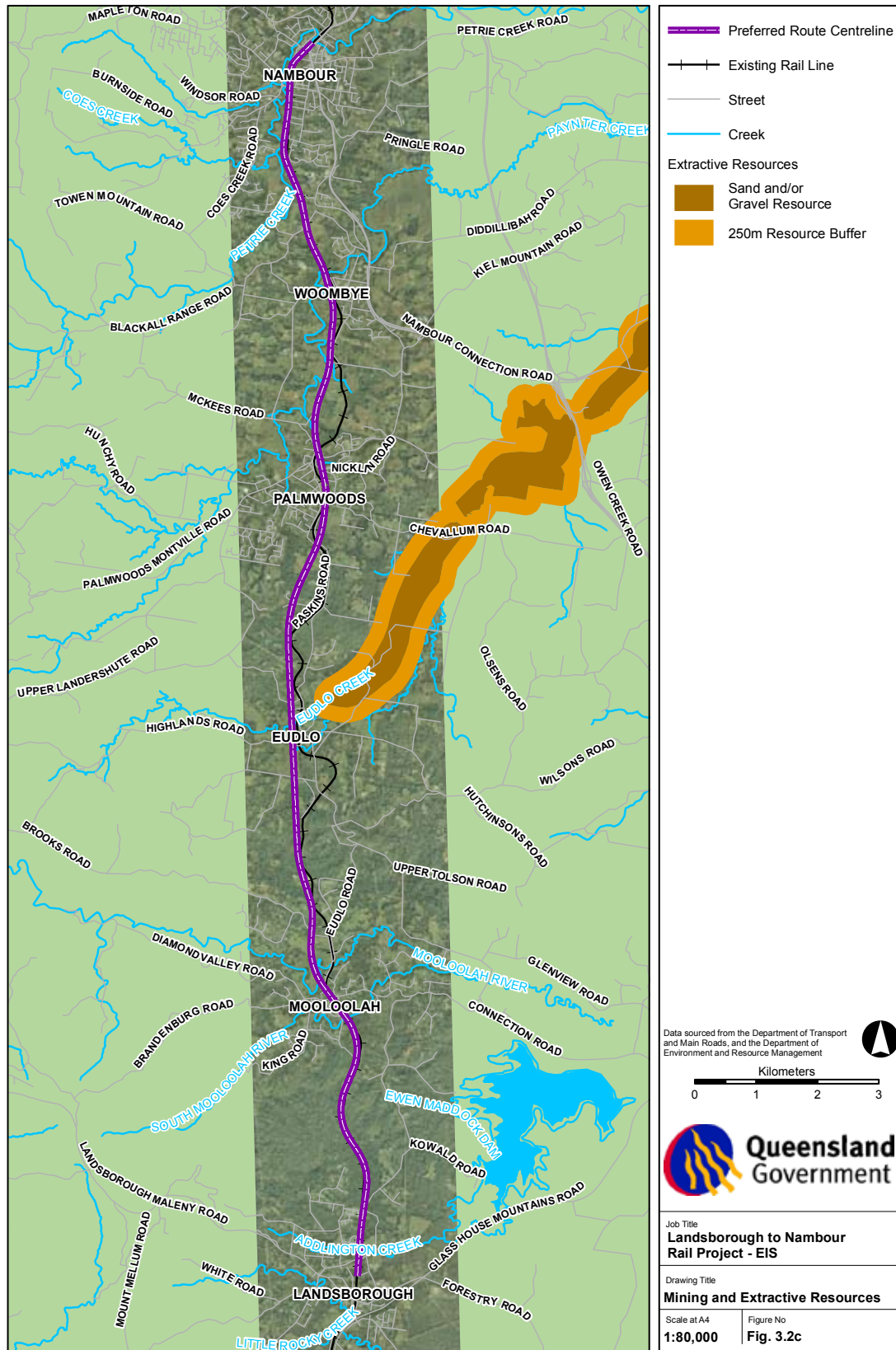
- “ The Glenview Key Resource area is located approximately 5 km to the east of Mooloolah, well outside the project area.
- “ The Image Flat Key Resource area is located approximately 3 km north of Nambour, well outside the project area.
- “ A sand and gravel extraction site is located approximately 500 metres northeast of Eudlo and 2 km southeast of Palmwoods.

The Parklands blue metal extractive area is located approximately 3 km north of Nambour, and is generally used for rail ballast.

These areas are shown on Figure 3.2c.

The project does not directly impact on land areas associated with or adjoining these sites.

Figure 3.2c: Mining and Extractive Resources



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3.2.4 Future planned land use

South East Queensland Regional Plan

As shown in Figure 3.2d, the Urban Footprint in the *South East Queensland Regional Plan* (SEQRP) includes the township areas and some adjacent rural residential and rural lands within the project area. The exception to this is Eudlo, which is highly constrained. In principle, land included in the Urban Footprint can be developed for acceptable urban purposes such as:

- .. housing
- .. industry
- .. business
- .. infrastructure
- .. community facilities
- .. urban open spaces.

However, some areas within the urban footprint may be constrained by physical, environmental, cultural or other factors and therefore unsuitable for urban purposes.

The areas between and around the townships are included in the Regional Landscape and Rural Production Area. These areas are generally to be retained for rural activities and urban development in these areas is unlikely to be approved.

The definition of Urban Footprint and retention of 'green space' between them is a key principle in the SEQ Regional Plan. It seeks to accommodate growth by increasing densities in urban centres rather than a continuing pattern of suburban sprawl. In the life of the current SEQRP, urban development in the Sunshine Coast region is focused in the coastal areas with a comparatively small area of developable land identified around the townships in the project area. Whilst these could be expanded as the SEQRP is periodically reviewed, it is anticipated that the strategic intent of constraining urban sprawl and maintaining green spaces will be upheld.

Beerwah and Nambour are identified in the SEQ Regional Plan as being Major Activity Centres and Commercial/General Economic Activity Centres, complementing the principal Activity Centre of Maroochydore. The SEQRP defines a Major Activity Centre as:

'serving catchments of regional significance and accommodating key concentrations of employment. They also provide business, service, limited comparison and major convenience retail functions. As a secondary sub-regional focus of administration, they accommodate district or branch offices of government and cultural and entertainment facilities of regional significance. Providing a focus for residential intensification, these centres typically comprise key suburban or inter-urban nodes of the regional public transport system. Residential development densities of between 30 and 80 dwellings per hectare (net) or greater should be achieved in proximity to Major Activity Centres.'

Whilst it is recognised that Beerwah is not located within the project area, the scale of development envisaged and the proposed rail connection from Beerwah to Caloundra and Maroochydore (CAMCOS) could affect future residential and economic development in the project area, particularly in Landsborough.

Planning schemes

Whilst Caloundra City Council and Maroochy Shire Council are now part of the SCRC, a formal Planning Scheme for the SCRC is yet to be prepared. Therefore, the Planning Schemes for both Caloundra City and Maroochy Shire have been considered during the selection of the preferred route and the preparation of the EIS.

Caloundra City Plan 2004

The *Caloundra City Plan* prepared by the former Caloundra City Council provides a management framework for development on private and public land to achieve ecologically sustainable outcomes. The *Caloundra City Plan* covers the southern section of the SCRC local government area. Landsborough, Mooloolah and Mooloolah Valley are some of the 16 Planning Areas in the *Caloundra City Plan*.

The Desired Environmental Outcomes (DEO) relevant to the project are discussed in Table 3.2.3a.

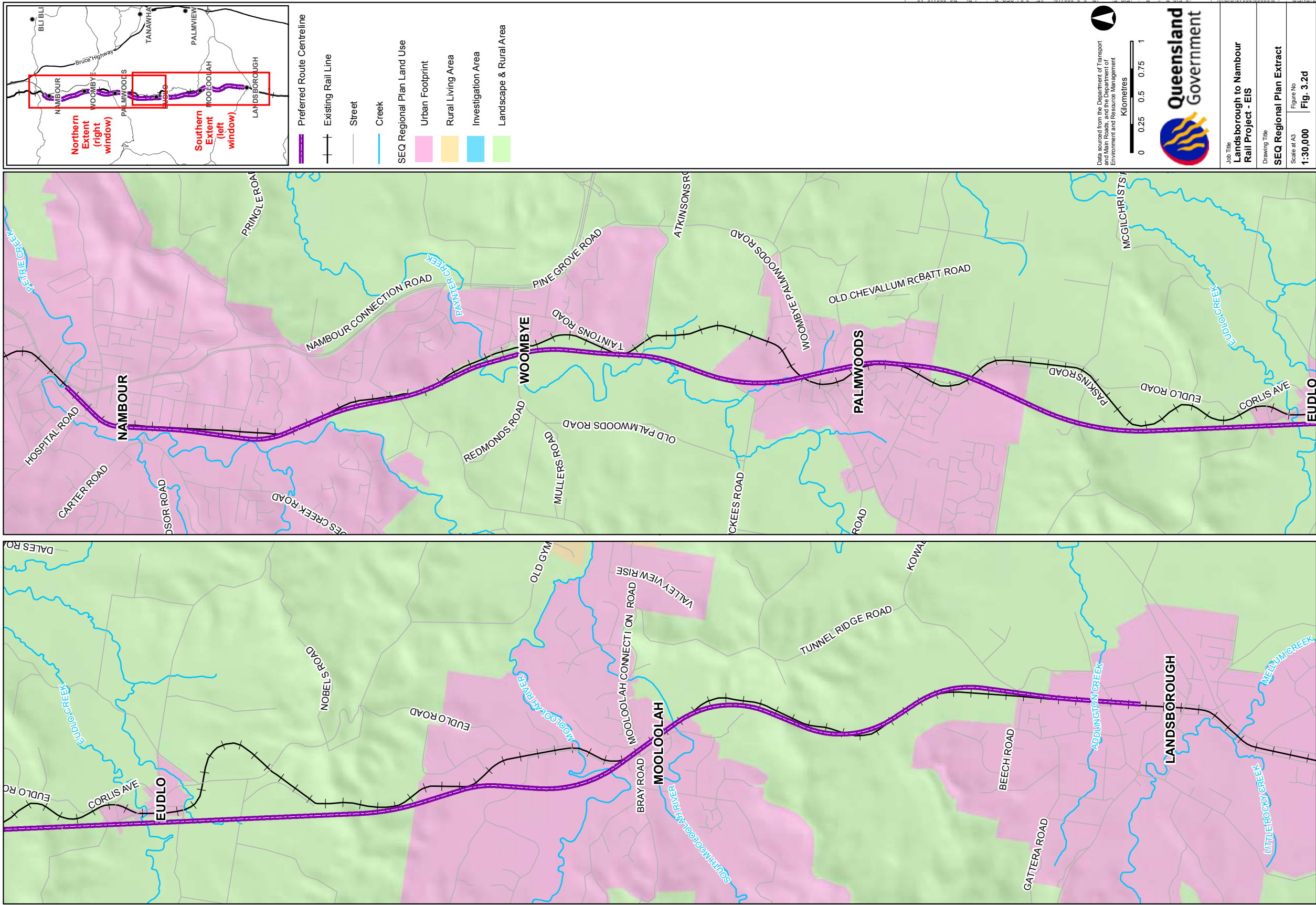
Maroochy Plan 2000

The *Maroochy Plan*, prepared by the former Maroochy Shire Council comprises the Strategic Plan, desired environmental outcomes and Planning Areas, Precincts and Precinct Classes. The project traverses five of the Planning Areas, which are Nambour, Palmwoods, Woombye, Eudlo Creek Valley and Southern Hinterland. The Maroochy Plan covers the central area of the SCRC. The desired environmental outcomes and consideration of their relevance to the project are discussed in Table 3.2.3b.

Table 3.2.4a: Caloundra City plan 2004 desired environmental outcomes

Desired Environmental Outcome	Considerations for the project
<p>DEO No. 1 – Economic Development</p> <p>Seeks to support a ‘diverse, dynamic and sustainable economy’ through protection of natural resources such as forestry resources and agricultural land and support for local industry including rural enterprises.</p>	<ul style="list-style-type: none"> “ minimise alienation of forestry resources, Class A agricultural land and other natural resources. “ ensure the location of, and access to, rail stations achieve improved access to goods, services, staff and clients for local enterprises <p>These aspects were considered during the identification of the preferred route, and the assessment of impacts of the project.</p>
<p>DEO No. 2 – Community Life and Wellbeing</p> <p>‘The wellbeing of the whole community depends on the wellbeing of its members. Caloundra City has socially diverse, cohesive and identifiable communities’ with:</p> <p>‘defined urban growth boundaries which create distinct urban and rural township communities’</p> <p>‘integration of new communities with existing communities’</p> <p>‘safe, healthy and pleasant living environments’</p> <p>‘access to appropriate and affordable housing’</p> <p>‘business centres that contribute to a sense of community life and belonging’</p> <p>‘development which maintains enduring social networks, positive community identity, and services which support individual and family wellbeing and economic security’</p>	<p>The retention of stations as close as possible to the existing townships should help to deliver community benefits through access to public transport.</p> <p>Consideration of the context and character of the surrounding townships should be a key determinant for station design.</p> <p>The project is also likely to release areas of existing rail corridor (after the project is commissioned) for future uses, including open space, mixed use and community uses. The project has presented the SCRC with the opportunity to examine desired future land uses within the town centres, and also with the opportunity to guide development that is well integrated with the station developments.</p>
<p>DEO No. 3 – Natural Assets and Systems</p> <p>‘Natural resources are managed in a sustainable way, to maintain biodiversity, ecological processes, character, lifestyle, and community wellbeing with the individual and cumulative impacts of development on natural resources comprehensively assessed and effectively managed’.</p> <p>This includes ecosystems vegetation, wildlife and specifically nominates, national parks, conservation parks, state forest reserves, environmental reserves, other conservation areas, coastal areas, natural waterways, wetlands, floodplains, catchments and groundwater.</p>	<p>The preferred route was selected to avoid areas of significance wherever possible and feasible. An assessment of the project impacts, along with recommended mitigation measures is contained in this EIS.</p>
<p>DEO No. 4 – Character and Identity</p> <p>The character and identity of Caloundra City are ‘maintained and strengthened, and remain distinctive from the rest of the Sunshine Coast’. It includes:</p> <p>‘the inter-urban breaks which separate each hinterland township by the North Coast Railway’</p> <ul style="list-style-type: none"> “ national parks “ conservation parks “ State forest reserves “ environmental reserves “ other conservation areas <p>‘Development in rural townships is sensitive to and enhances their local character, identity, lifestyle and customs and incorporates architectural design sympathetic to the traditional building form.’</p>	<p>This DEO will be particularly relevant to the future detailed design of stations within the townships. Throughout the EIS process, a number of design criteria and objectives have emerged, which will help with the future integration of significant new infrastructure into the existing urban fabric.</p>

Figure 3.2d: SEQ Regional Plan Extract



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Table 3.2.4a: continued

Desired Environmental Outcome	Considerations for the project
<p>DEO No. 5 – Access and Mobility</p> <p>Envisages ‘an accessible city served by efficient, safe and convenient movement systems offering a choice of transport modes’ including:</p> <p>‘the continued operation and expansion of the major movement networks’;</p> <p>provision of regular public transport services in to business centres and other areas that ‘generate a significant level of human activity’;</p> <p>The DEO also identifies a need to ‘protect residential amenity in development adjoining existing and proposed major transport corridors.’</p>	<p>The north coast line, whilst not specifically identified in this DEO, is a major transport corridor servicing the Sunshine Coast. The project would improve this service, consistent with the intent of the DEO, however selection of station locations takes into account the intent of the DEO.</p> <p>Selection of the preferred route and subsequent preliminary design have been mindful of the impacts on current and anticipated residential land uses.</p> <p>Identification of mitigation measures to address residential amenity is included in this EIS. Additionally, the concurrence powers of the Department of Transport and Main Roads under the <i>Integrated Planning Act 1997</i> and the identification of the corridor provide the Department of Transport and Main Roads with the scope to ensure future development along corridor is compatible.</p>
<p>DEO No. 6 – Infrastructure</p> <p>‘Caloundra City is supported by physical and social infrastructure systems which meet the differing needs of coastal and rural communities and which provide for the optimum use of services and existing infrastructure capacities’.</p>	<p>The project represents a significant investment in infrastructure for the Sunshine Coast region, and would improve public transport services for both coastal and rural communities.</p>

Table 3.2.4b: Maroochy Plan 2000 desired environmental outcomes

Desired Environmental Outcome	Considerations for the Project
<p>DEO No. 1 – Environmental Management</p> <p>‘The Shire’s unique natural, open space, climatic, rural and scenic attributes are protected to maintain biodiversity, ecological processes, and visually attractive and varied landscapes and managed so as to provide a sustainable focus and setting for the Shire’s community and economic development.’</p> <p>Specifically nominates: ecosystems and associated species; prominent natural landscape elements; the Maroochy, Mooloolah and Mary River systems and other water resources; and water and air quality.</p>	<p>The project area contains significant ecosystems, which are further discussed in Chapters 11–13 of this EIS. The project area also traverses flood prone lands and flood management areas associated with Petrie Creek at Nambour, Paynter Creek at Woombye and Eudlo Creek at Eudlo which all form part of the Maroochy River catchment.</p> <p>The process of route identification sought to minimise impact on these various values, and this EIS assesses the impacts and proposes mitigation for these impacts.</p>
<p>DEO No. 2 – Social Equity and Liveability</p> <p>‘Vibrant, attractive and safe local communities provided with quality lifestyle choices and amenity for all people (including youth, aged people and people with disabilities)’.</p> <p>This can be achieved through the following:</p> <ul style="list-style-type: none"> “ integrated land use and transport planning “ ‘appropriate land use planning’ “ ‘separation and management of potentially conflicting land uses’ “ ‘consolidate residential forms around Centres’ “ ‘provide for a diversity, choice and mix of housing styles, with housing designed to be responsive to local character, climactic conditions and community needs’ 	<p>The retention of stations as close as possible to the existing townships should help to deliver community benefits through access to public transport.</p> <p>Consideration of the context and character of the surrounding townships should be a key determinant for station design.</p> <p>The project is also likely to release areas of existing rail corridor (after the project is commissioned) for future uses, including open space, mixed use and community uses. The project has presented the SCRC with the opportunity to examine desired future land uses within the town centres, and also with the opportunity to guide development that is well integrated with the station developments.</p> <p>Future noise sensitive developments should be setback or buffered from major sources of noise generation.</p>
<p>DEO No. 3 – Economic Sustainability</p> <p>‘A prosperous, productive and broad economy which reinforces the Shire’s strengths in tourism, commercial/ business services, rural activities, educational and health facilities, and transport infrastructure, whilst diversifying this base in a manner consistent with the Shire’s character and the sustainable use of the Shire’s resources.’</p> <p>Specifically includes the retention of good quality agricultural and other productive rural land.</p>	<p>Throughout the development of the preliminary design for the project, the economic impacts of the land requirements for the project have been a key consideration. The identification of land release areas from the existing rail corridor may also support this DEO.</p> <p>The project also aimed to minimise alienation of productive agricultural land holdings.</p>
<p>DEO No 4 – Transport and Accessibility</p> <p>Provision of an ‘efficient, safe, convenient and attractive transport network’, including:</p> <ul style="list-style-type: none"> “ a viable and coordinated public transport system; “ a choice of effective and environmentally responsive transport modes including rail; “ ease of movement within and between communities, major centres, employment areas and public transport interchanges; and, “ high capacity and secure freight movement. 	<p>The north coast line has both freight and public transport functions, consistent with the intention of the DEO.</p> <p>The retention of stations as close as possible to the existing townships should help to deliver community benefits through access to public transport.</p>

Table 3.2.4b: continued

Desired Environmental Outcome	Considerations for the Project
<p>DEO NO 5 - Community and Cultural Development</p> <p>This DEO seeks to provide and maintain community, recreational and cultural services and facilities provided including:</p> <ul style="list-style-type: none"> “ accessible public parkland “ public places for people to gather, meet and socially interact “ opportunities to create or strengthen local community identity “ places and items of historic and indigenous cultural heritage significance to be conserved. 	<p>Chapter 9 of this EIS further discusses the heritage places within the project area, in terms of precinct, building, artefact or vegetation classifications. It is intended to minimise impacts on these sites.</p> <p>Maroochy Shire Council has identified a number of heritage sites, and has nominated the hinterland villages of Palmwoods, Woombye and Eudlo as heritage precincts. The old railway stations and the presence of the railway in the town contribute to the heritage character of these towns.</p>
<p>DEO No. 6 – Urban Design, Heritage and Character</p> <p>This DEO seeks to have a ‘<i>high quality, built environment</i>’, with the following characteristics:</p> <ul style="list-style-type: none"> “ ‘consistent with local desired character’ “ premises that ‘are in keeping with the community, transport and utility infrastructure’ “ retail or commercial areas that should create a ‘positive community focal point that contributes to the sense of place and community identity’ “ ‘strengthen positive architectural, landscape, scenic, and conserve cultural and built heritage features’. 	<p>This DEO will be particularly relevant to the future detailed design of stations within the townships. Throughout the EIS process a number of design criteria and objectives have emerged, which will help with the future integration of significant new infrastructure into the existing urban fabric.</p>
<p>DEO No. 7 – Physical Infrastructure</p> <p>‘Orderly and sequenced development which allows for the efficient, affordable and environmentally acceptable provision (and ongoing maintenance) of engineering infrastructure by service providers in a way which ensures the sustainable use of the Shire’s water and other resources’.</p>	<p>By planning for the project now, the council has the opportunity to consider the needs for infrastructure in the lead up to the project.</p>

Intermediate planning mechanisms

The *Integrated Planning Act 1997* requires each local government authority to amend its planning scheme to reflect the planning intent of the Regional Plan and to develop and adopt detailed plans for achieving the outcomes identified in the Regional Plan.

Both Maroochy Shire and Caloundra City Councils were in the process of releasing or had just released their Local Growth Management Strategies for their respective authority areas. These documents are now part of the supporting documentation for the SCRC Growth Management Position Paper (July 2008), prepared as part of the SEQRP review process. This document also discusses the need for the implications of climate change, both caused by and the impacts of, to be considered in the revision of the SEQRP.

Caloundra City Local Growth Management Strategy 2007

The former *Caloundra City Local Growth Management Strategy* (CCC LGMS) was released in 2007. It identified approximately 52 hectares of greenfield land within Landsborough township and 77 hectares of greenfield land within Mooloolah township for future urban development, which is broadly consistent with the urban footprint identified in the Regional Plan.

The CCC LGMS included a sequencing strategy for land development which has regard to the strategic directions, policies, principles and targets established by the SEQRP and the SEQIPP, whilst also taking account of existing development approvals and commitments made in the *Caloundra City Plan 2004*. The sequencing strategy identifies the available greenfield land within Landsborough and Mooloolah townships as suitable for development in the short term, namely 2007 to 2015. Overall, the strategy aims to accommodate an additional 6000 persons in the hinterland townships of Maleny, Mooloolah, Landsborough, Glass House Mountains and Beerburum between 2004 and 2026. The sequencing strategy does not identify any further land in the project area for development beyond 2015. A number of areas significantly removed from the project area, in the vicinity of Caloundra, Palmview and Kawana, have been identified for significant population growth for the medium term (2016 to 2025) and long term (2026 to 2045).

Maroochy Shire draft Local Growth Management Strategy 2008

The former Maroochy Shire Council released a draft *Local Growth Management Strategy* (MSC Draft LGMS) for public comment on 23 January 2008. This strategy was developed to protect the lifestyle, natural and biodiversity values of the Shire, whilst providing a framework for further settlement patterns, to protect sensitive areas from development.

The draft LGMS stated that the *Maroochy Plan 2000* currently provides sufficient capacity to meet the SEQRP mandatory infill and total dwelling targets. Unlike the CCC LGMS, the MSC Draft LGMS does not identify future populations for the townships.

The MSC Draft LGMS does not identify additional greenfield land in Eudlo, Palmwoods, Woombye or Nambour. Further, the MSC Draft LGMS does not identify a sequencing strategy for Eudlo, Palmwoods or Woombye.

The MSC Draft LGMS identifies Nambour as a Major Activity Centre, which supports the SEQ Regional Plan.

Other local government plans and policies

A number of other local government plans and policies have been reviewed during the identification of the preferred route and the preparation of this EIS. These are discussed on the following pages.

Landsborough Art, Community and Heritage Precinct Master Plan

Strategies/principles

This Master Plan applies to both council and community owned and managed land to the south of Landsborough Town Centre bounded by Maleny Street, Old Landsborough Road and Mellum Creek.

The Master Plan is based upon the following vision:

‘Landsborough is the playground of the hinterland, offering a family-friendly environment for residents and visitors of all ages, with a focus on history, heritage, nature and play’

The aim of the Master Plan is to establish potential synergies between Landsborough Museum, community facilities, walking trails, open space, other art, community and heritage activities on council and community controlled land south of Landsborough town centre.

Response

This project does not affect the area covered by this Master Plan.

Landsborough Sportsground Draft Master Plan

Strategies/principles

A Draft Master Plan has been developed for Landsborough Sportsground with the following features:

- “ additional interim/junior practice oval
- “ additional storage shed
- “ improved landscaping of the area
- “ new controlled access point with restricted access
- “ new radio control car track precinct
- “ new viewing stand
- “ picnic facilities and play area
- “ upgrade of existing skate park and shelter.

The development of the sportsground is expected to be completed in the short to medium term (one to ten years).

Response

The project impacts on the western edge of the Landsborough Sportsground. This will affect the proposed circulation road, and screening vegetation between the railway and the sportsground. Although the project does not impact on sports field areas, it may be necessary for Council to review the proposed traffic circulation element.

*Caloundra Tourism Plan 2002 -2012 and Caloundra Tourism Action Plan 2002-2005***Strategies/principles**

1. A recognised Caloundra brand that promotes Caloundra City as a highly desirable tourist destination all year round.
2. New niche tourism products that in combination with existing tourism products offer visitors a diversity of experiences across the region that visitors themselves value.
3. Visitors that are informed of and motivated by the range of tourism opportunities available across the City.
4. A tourism industry that is operating at its fullest potential and contributing significantly to Caloundra City's economic well being and reflecting the identity of the City.
5. A tourism industry that is recognised for its optimised employment opportunities and its outstanding endeavours in the provision of high quality service.
6. A sustainable tourism industry that works in strong partnership with the community in pursuit of economic, environmental and social sustainability.
7. An improved tourism infrastructure, available for the whole community, that complements the City's scenic amenity and lifestyle.
8. A sustainable open space system that protects the diversity of landscapes which provide the foundation of the City's tourism industry.
9. A successful marketing program, that incorporates high quality promotion strategies and effective marketing activities that are based on current and reliable market research and can be performance measured.
10. A commitment to continuous research and development to maintain, evaluate and refine the Caloundra Tourism Plan.
11. An agreement to review performances and establish benchmarks to measure success in achieving the goals.

Response

The upgrade of the stations may assist the local tourism industry to grow. The decommissioned railway land has been identified as potential rail trails, and the release of rail corridor land no longer required in the town centres could offer opportunities for tourism activities to be centered in these townships, and potentially attract tourists.

*Caloundra City Council Bicycle and Pedestrian Strategy (2008 amendment)***Strategies/principles**

1. Infrastructure hierarchy - recognise the various needs of different users and plan an infrastructure hierarchy to provide travel options to users
2. Planning and design standards - develop consistent standards for the supply of cycling and pedestrian infrastructure, giving priority to active modes of travel during the design phase
3. Education packages - plan cycling and walking events, create 'how to' education packages, provide high-quality route mapping and signage, and educate motorists to improve tolerance of other road users
4. Enforcement - advocate police for enforcement of road rules and helmet use
5. Network construction - provide a connected network to meet the needs of diverse users with signage and end-of-trip facilities to improve user-friendliness.

Response

The decommissioning of the existing railway corridor would provide the opportunity to be developed as a major pedestrian and cycle route.

Strategies/principles

The Caloundra City Recreational Links and Trails have the following principles:

Principle 1 - 'They aim to provide a diversity of links, recreational experiences and facilities'.

Principle 2 - 'The trails network will build primarily upon existing trails and linkages on public lands'.

Principle 3 - 'Trails will be constructed and maintained using best practice in resource management to ensure visitor safety, equitable access and environmental protection.'

Principle 4 - Caloundra City Council will manage the trails network with the assistance of land managers and the community.

Principle 5 - 'Comprehensive communication based on relationships of trust and respect will underpin trails management.'

The following trails within the project area are proposed:

Ewen Maddock Dam Trails suitable for walkers, cyclists and horse riders, classified as a District Trail.

Mooloolah Diamond Valley Trail suitable for walkers, cyclists and horse riders, classified as a Signature Trail.

Mooloolah River Corridor connection - This will be used to link the coast to the hinterland. It is suitable for walkers, cyclists and canoeists and is classified as a Signature Trail.

Dularcha Rail Trail - using the 'existing track along the old Rail alignment between Landsborough and Mooloolah within the Dularcha National Park. It is suitable for walking, cycling and horse riding and is classified as a District Trail.

Dularcha NP - Ewen Maddock Link - a proposed trail that would link Ewen Maddock Dam and Mooloolah township via Dularcha NP. It is suitable for walking, cycling and horse riding and is classified as a District Trail.

Mooloolah - Maleny Link - a proposed trail that would link Mooloolah and Maleny via 'existing and unformed roads within Caloundra City and Maroochy Shire'. It is suitable for walking, cycling and horse riding and is classified as a District Trail.

Mellum Creek Walk - proposed walking trail using public esplanade land along Mellum Creek. It is suitable for walkers and cyclists and is a Local Trail.

Landsborough - Ewen Maddock Circuit - proposed trail within the Landsborough State Forest via Ewan Maddock Dam along existing road reserves and fire tracks and trails. It is suitable for walkers, cyclists and horse riding. It is also a Local Trail.

Caloundra - Landsborough (southern link) - a proposed trail to the south of Caloundra Road. However, it depends on 'future open space acquisition to the south' of Caloundra Road. It is suitable for walking, cycling and horse riding and is classified as a District Trail.

Response

The proposed trails in the project area have been taken into consideration in the identification of the preferred route, and assessment of the project's impacts.

The decommissioning of the existing railway also provides opportunities for additional trails in the future. This would help create a better trails network for a variety of uses, such as walking, cycling and horse riding.

*Caloundra City Draft Outdoor Recreation Strategy***Strategies/principles****Outdoor Recreation Strategy Principles:**

- “ conservation and protection
- “ diversity of setting and opportunities
- “ multifunctional
- “ flexibility and sustainability
- “ linkages
- “ community involvement
- “ safety and security
- “ accessibility and proximity
- “ balancing public access with commercial provision.

The new Outdoor Recreation opportunities (related to the project area) that are being investigated are as follows:

- “ Mooloolah River Trails – includes horse trails and canoe trails
- “ ‘possible future use (long term planning horizon) of extraction sites (e.g. Mooloolah River Extraction Site)
- “ access to conservation parks/reserves for outdoor recreation purposes
- “ link from Landsborough Station to Rocky Creek campsite.

Landsborough Outdoor Recreation Assessment (Map)

- “ future paths on Maleny Street, Railway Street, Gympie Street North, Diamond Valley Road, Tunnel Ridge Road and some paths of Caloundra Street

Mooloolah Township Outdoor Recreation Assessment (Map)

- “ future paths on Brandenburg Road and Diamond Valley Road

Mooloolah Valley Outdoor Recreation Area

- “ future paths on Neill Road and Eudlo Road.

Response

There are opportunities for the decommissioned railway and surplus land to be used for recreational purposes, such as parks, horse riding, walking and cycling. This could be linked with existing and proposed Outdoor Recreation areas in Landsborough and Mooloolah, and be a consideration in council master planning activities.

Strategies/principles

Key Issues:

- “ average age in Caloundra City is 41 years, which would have an impact on the future
- “ trend of young families and young people in the hinterland
- “ Caloundra City's need for recreational facilities for all ages
- “ community's interest in one-day events
- “ walking and cycling paths being 'high priorities for future infrastructure development'
- “ libraries being the 'most important policy for future planning', according to surveyed residents.

Policy Objectives:

- “ 'to provide a policy framework to guide Council in the planning, development and management of recreation now and in the future'
- “ 'to ensure that the community and individual benefits of participation in recreation are clearly acknowledged and form an integral component of the City's future'
- “ 'to provide a policy framework in response to the social, economic and environmental outcomes articulated in the Corporate Plan which can be achieved through recreation'
- “ 'to meet Council's requirement for relevant State and Federal Government legislation and initiatives in relation to recreation and community wellbeing.'

Action Plans that relate to the project area:

1.2.6 - continue to provide interpretive signage to provide simple information in relation to the environmental values of reserves

1.2.12 - investigate management and maintenance solutions being used to minimise the impact of horse riding on ecological/bushland trails and implement solutions in our reserves

1.3.2 - review standards as set out in the draft Bicycle and Pedestrian Strategy to ensure suitable standards of design and construction. Provide safe shared walking/cycle paths

1.3.3 - identify paths where shared use of walking/cycling is unsafe and designate .walk only. areas for safety of pedestrians and provide alternative cycle paths or devise solutions, utilising signage and markings, that will ensure safe and appropriate use of paths and trails

1.4.1 - adopt design guidelines for the City that promote functional, flexible and attractive development in our parks, reserves and community spaces.

Other notes:

- “ implementation of Landsborough Sportsground Master Plan included in the document
- “ investigation of swimming pools in Mooloolah and Landsborough (25m each)
- “ implementation of Master Plans for Mooloolah Valley Country Club and Mooloolah Recreation Reserve
- “ implementation and completion of the Mooloolah River Trail Master Plan.

Response

Future recreation facilities that may be located in the decommissioned railway land should be for all ages.

Caloundra Open Space Strategy – Parks and Recreation

Strategies/principles

Policy Statement:

‘The Open Space Network in Caloundra City is highly valued by the community and visitors and provides a wide range of values which support and enhance our biodiversity, create and protect our character and identity, support our economic vitality and encourage and support a healthy and active community. The Open Space Network will be managed and maintained at an affordable and sustainable level for the present and future generations.’

Guiding Principles:

- “ conservation and protection
- “ cultural heritage, landscape and character
- “ active and healthy
- “ diversity of settings and opportunities
- “ multi functional
- “ flexibility and sustainability
- “ linkages
- “ community involvement
- “ safety and security
- “ accessibility and proximity
- “ financial viability.

Response

The objectives of the *Open Space Strategy – Parks and Recreation Policy* have been considered in the recommendation to propose recreational trails for the decommissioned railway.

Nambour – Hub of the Hinterland (Nambour Draft Structure Plan)

Strategies/principles

The key strategies and development outcomes are categorised into eight areas: Urban Structure; Land Use Areas; Community Use Areas; Built Form, Town Centre Character and Cultural Heritage; Integrated Movement Network; Open Space and Waterways; Water Management; Infrastructure. The strategies have been summarised to create the following list:

- “ integrate the former mill site, civic centre and marshalling yards into the town centre
- “ integrate and link public and open green spaces with the town centre and other existing uses
- “ enhance the landscaping, physical and visual connection between the town centre and Petrie Creek
- “ protect scenic amenity of vistas to and from Nambour through appropriate building location, form, and shape
- “ plan for an appropriate mix of residential, retail and commercial uses to make Nambour a vibrant and active centre
- “ ensure all developments contribute to a sub-tropical ‘hinterland’ architectural and landscape quality that is climatically appropriate and sustainable
- “ provide an integrated network of publicly owned, accessible and usable open space, civic spaces, and waterway corridors to allow for recreational activities
- “ incorporate water sensitive urban design practices
- “ recognise the Nambour transit (rail/bus) interchange as a key focus of the town centre to achieve transit oriented development
- “ improve the street network through the identification of new roads within the centre
- “ develop an integrated pedestrian and cycle network linking the town centre surrounding residential areas
- “ achieve efficient, effective, timely, and sustainable infrastructure to support the development and implementation of the Nambour Structure Plan.

Response

The project would support the intent for Nambour to become a transit (rail/bus) interchange.

The development of the decommissioned railway into a walk and cycle route where possible would also be a key contributor to creating a pedestrian and cycle network linking the town centre surrounding residential areas.

3.2.5 Native title

The project area currently is within an area over which no registered or unregistered native title claims exist. However, in the past, two previously registered claims (by the Jinibara People and the Gubbi Gubbi No.2) were over the area, and these are still currently relevant in giving direction on the Aboriginal Parties with whom consultation would be required.

The Jinibara People have a registered native claim for lands situated to the west of the current railway alignment, as shown in Figure 3.2f. Until its recent re-registration, the eastern boundary of the Jinibara native title claim was the current north coast rail corridor. The eastern boundary of the claim is now located to the west of the existing rail corridor. To the east of this corridor, the previous registered Gubbi Gubbi No 2 native title claim existed until its discontinuation by the Federal Court in 2004. In accordance with sections 34 and 35 of the *Native Title Act 1993*, those people who were applicants on the Jinibara and Gubbi Gubbi No.2 claims are currently the Aboriginal Parties for east and west of the north coast rail corridor.

It is vital that the appropriate Aboriginal Party for land within the project area be accurately identified and notified at the time of the development proposal, in order to facilitate consultation to provide effective recognition, protection and conservation of Aboriginal cultural heritage and compliance with the duty of care prescribed by the *Aboriginal Cultural Heritage Act 2003*.

Although no registered or unregistered native title claims exist over the project area, previously registered native title claims guide selection of the Aboriginal Parties. Chapter 10, Cultural Heritage describes the cultural heritage management plan process.

Properties required for the project are likely to be affected by native title claims in the future. These include unallocated State land, water ways that are not part of a private property, national park land and State forest land.

3.2.6 Land of environmental value or concern

The preferred route was selected to avoid or minimise impacts to areas of environmental value or concern wherever feasible. Areas of environmental value that are likely to be affected by the project are discussed in Chapter 21, **Special management areas**. These include:

- “ creeks and habitat areas associated with listed threatened species

The project crosses Addlington Creek approximately 1km north of Landsborough station. Aquatic fauna surveys conducted along the waterway revealed the presence of the Giant Barred Frog (*Mixophyes iteratus*) tadpoles to the west of the existing railway. This species is listed as Endangered under the EPBC Act. The alignment of the project largely coincides with the existing alignment in this area. Currently, the rail crosses the waterway on a culvert. It is proposed to remove and replace the existing culvert.

South Mooloolah River is located 325 m north of Dularcha National Park. There are two branches of the river that the project crosses and they are approximately 175 m apart. Aquatic fauna surveys conducted along the waterway identified the presence of the Giant Barred Frog (*Mixophyes iteratus*) to the west of the existing railway. This species is listed as Endangered under the EPBC Act. It is proposed to remove the existing bridges and implement new bridges at South Mooloolah River. The details of the bridges are specific to the continued use of the area by *M. iteratus* and promote the breeding and movement of the species, reduce the need for vegetation clearance and improve water quality.

The Mooloolah River is located to the north of Mooloolah township. The project crosses the river at one point to the west of the existing railway. Aquatic surveys indicated that the Mooloolah River typically contains a high diversity of aquatic habitats that are in good condition. Terrestrial fauna surveys conducted along the waterway revealed the presence of the Giant Barred Frog (*Mixophyes iteratus*) to the west of the existing railway.

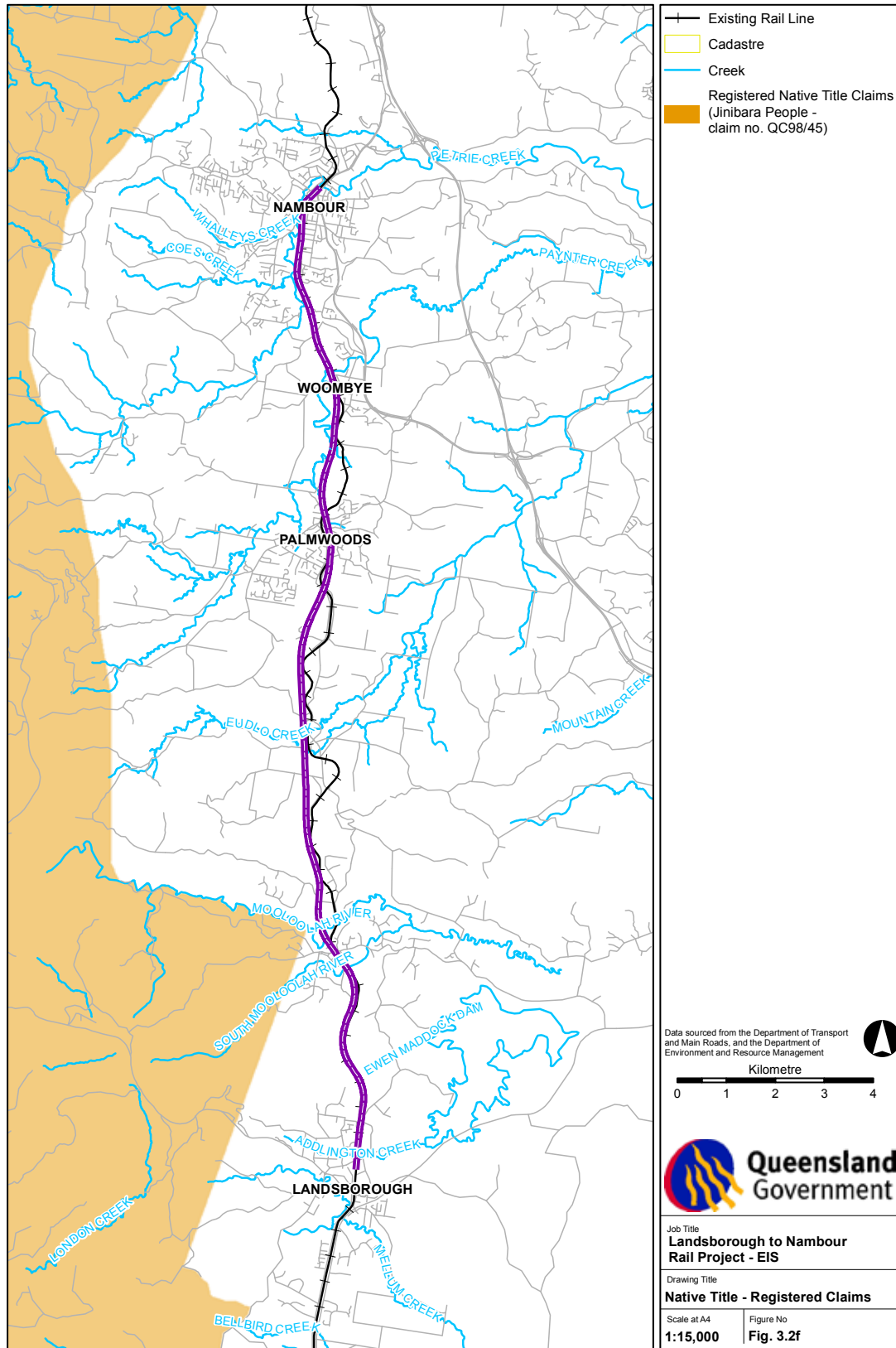
The river crossing's location has been reviewed, with the project now crossing the Mooloolah River at a break in the remnant vegetation at a single, narrow point of the river. Therefore, the details of the bridge are specific to the continued use of the area by *M. iteratus* and promote the breeding and movement of the species, reduce the need for vegetation clearance and improve water quality. In addition to the provision of a bridge at the Mooloolah River crossing, the project will be on structure over a large portion of the floodplain surrounding the Mooloolah River. This will result in a narrow rail corridor (area of disturbance) and avoid alterations to local drainage patterns that may impact upon *M. iteratus* habitat.

Eudlo Creek flows from Mooloolah to the north of Eudlo. The current habitat values of this section of Eudlo Creek are limited, although there were three Migratory (under EPBC Act) species noted in the area. The project crosses Eudlo Creek at five points, with three of these crossings in a cleared landscape and the remaining two affected by riparian vegetation. Due to the height of the proposed structure and the allowance for fauna to pass underneath, it is anticipated that the creek could function as a local wildlife corridor. The value of this corridor will be greatly enhanced by rehabilitation of the riparian zone.

- “ Dularcha National Park

Dularcha National Park is approximately 1.38 km² in size and stretches from north of Landsborough to south of Mooloolah following the existing railway. It contains vegetation that is mostly of high conservation status, habitat to significant fauna species. It was originally declared a national park to protect the scenery along the rail corridor and is split in two by the existing railway. Mooloolah Forest Reserve runs along Dularcha NP western boundary, contributing to the significance of the area.

Figure 3.2f: Native Title - Registered Claims



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“ The Pinch Lane (bioregional wildlife corridor)

The Pinch Lane is a small local road that traverses through an area situated along the ridgeline that denotes the boundary between the former local government areas of Caloundra and Maroochy. Due to the steep topography in this location, the majority of the vegetation along the ridge line has been retained. The area is recognised as being of State significance in the Biodiversity Planning Assessment (BPA) mapping by the Department of Environment and Resource Management. The project incorporates a tunnel through the ridgeline to lessen earthworks in steep terrain and disturbance to the vegetation.

The tunnel is approximately 310 m long, compared to the existing 170 m long tunnel. This will allow for vegetation retention on the ridgeline to maintain the connectivity of the bioregional corridor.

“ Eudlo Creek National Park

Eudlo Creek National Park is situated approximately one kilometre north of Eudlo township. It stretches approximately 1.6 km from the north of Eudlo to the south of Palmwoods. It is linear in shape and was originally declared to protect the scenery along the existing rail in 1921. It is approximately 0.43 square kilometre in size and ranges between 350 m and 400 m wide. As a conservation area, it is relatively isolated as there are no other protected areas within close proximity. However, it is surrounded by a significant amount of remnant vegetation.

The Eudlo Creek National Park contains vegetation that is mostly of high conservation status. Previous records have shown a variety of significant fauna species to be utilising the park. Field surveys located tadpoles of *M. iteratus* within one of the major drainage lines running through Eudlo Creek National Park. This indicates that the species is breeding within the park. The existing railway currently represents a barrier to movement as it is raised on embankment and protected by fencing. The project has been located to the west of the existing rail corridor. This provides an opportunity to consolidate the Eudlo Creek National Park through decommissioning of the existing railway. A benefit will arise from the decommissioning of the rail and the complete rehabilitation of the rail through the national park.

“ Paynter Creek

Paynter Creek flows from Palmwoods to the north of Woombye. The project crosses the creek at three points between Palmwoods and Woombye. Aquatic surveys indicated that Paynter Creek typically contains a diversity of aquatic habitats that are in reasonable condition. The crossing of Paynter Creek by the project has been subject to a review by the design team in conjunction with interested members of the community. The project now crosses Paynter Creek with one perpendicular crossing at a point where a tributary connects to the main creek. This tributary feeds into a large dam and serves a hydrological purpose rather than a function for wildlife movement. The alignment will impact upon a 50 m stretch of the main channel of Paynter Creek but the height of the structure will allow fauna to pass under the bridge.

“ Petrie Creek

Petrie Creek flows through Nambour adjacent to the existing rail. It has high value as a local wildlife movement corridor given that the majority of the creek line is vegetated to some extent. The project has been located to the east of Petrie Creek, however, there are two points where the earthworks associated with the project may impinge on the waterway if not managed appropriately. The focus of the management strategies has been to avoid impact to the riparian zone and increase opportunities for successful weed management.

Community feedback has identified these areas are of concern and value to the local community.

The project was referred to the Commonwealth Department of Environment, Heritage, Water and the Arts in April 2008. A copy of the referral and decision notice is included in **Appendix F**. The project was determined to be not a controlled action, and a number of general and specific management measures proposed in the referral are now included as management measures in this EIS.

In addition to the areas listed, the following areas have been identified as of value or concern to local residents:

“ Federation Walk, Eudlo

This is a linear revegetation project, undertaken by the local voluntary Landcare group. Its ecological values are discussed in **Chapter 11, Nature conservation: Terrestrial flora**. Specific management measures and rehabilitation measures are discussed in **Chapter 21, Special management areas**.

“ Kolora Park, Palmwoods.

This recreational area in the heart of Palmwoods contains the duck pond, gardens and regrowth vegetation. Recreational facilities include picnic shelters and play equipment. A number of historical interpretation signs have recently been installed, which document the history of the local region, including its agricultural past.

The assessment of impacts to areas of environmental value or concern is discussed in **Chapters 11, 12, 13 and 21**.

3.2.7 Contaminated land

A search of the contaminated land register was undertaken, for properties directly affected by a land requirement for the project. Properties designated for railway purposes that form part of the existing rail corridor are not considered to be subject to a land requirement for the project. However, the majority of the properties that make up the existing Rail Corridor are on the Environmental Management Register due to historic herbicide use. This search identified that 25 properties are already on the Environmental Management Register of the former Environmental Protection Agency now Department of Environment and Resource Management, 24 of which are used for railway purposes. These are shown on Figure 3.2g.

The Landsborough Sportsfield, Lot 301 M332061 is on the environmental management register due to its historic use for livestock (livestock dip or spray race).

Lot 710 M332060, which is located adjacent to the existing railway and the Landsborough sportsfield, should also be considered for inclusion in any future sampling or contaminated land site investigations, due to its tenure (leased for railway purposes) and proximity to the Landsborough sportsfield.

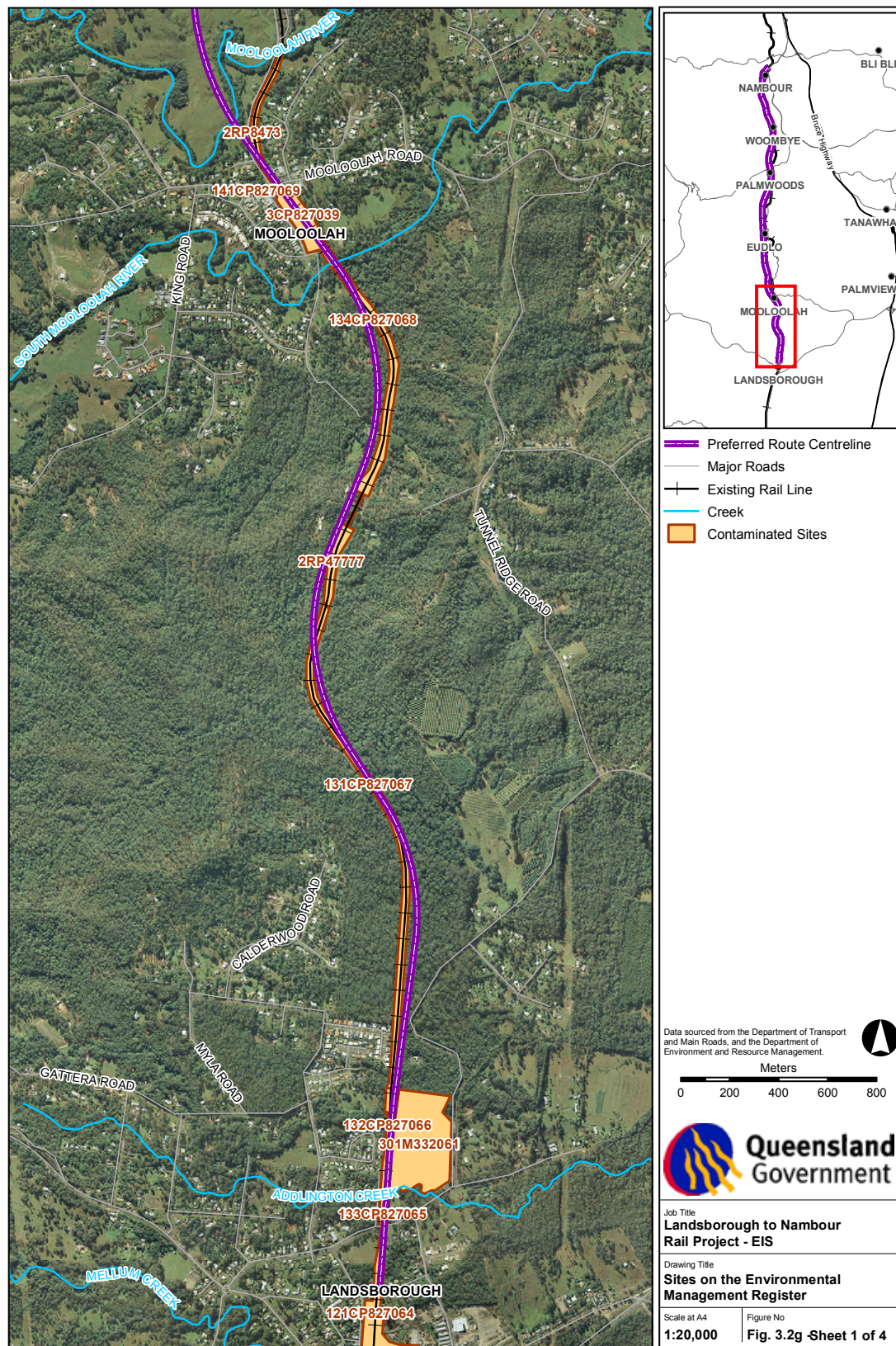
Implications of contaminated land for the project and requirements for future investigation and treatment are further discussed in Chapter 5, Geology and Soils.

3.2.8 Good Quality Agricultural Land (GQAL)

State Planning Policy 1/92 – Development and The Conservation of Agricultural Land identifies the need to conserve Good Quality Agricultural Land (GQAL) and sets out broad principles to protect this resource from inappropriate development. It is important to protect and manage GQAL as it is a finite resource that is essential to maintain the future productivity and efficiency of rural activities.

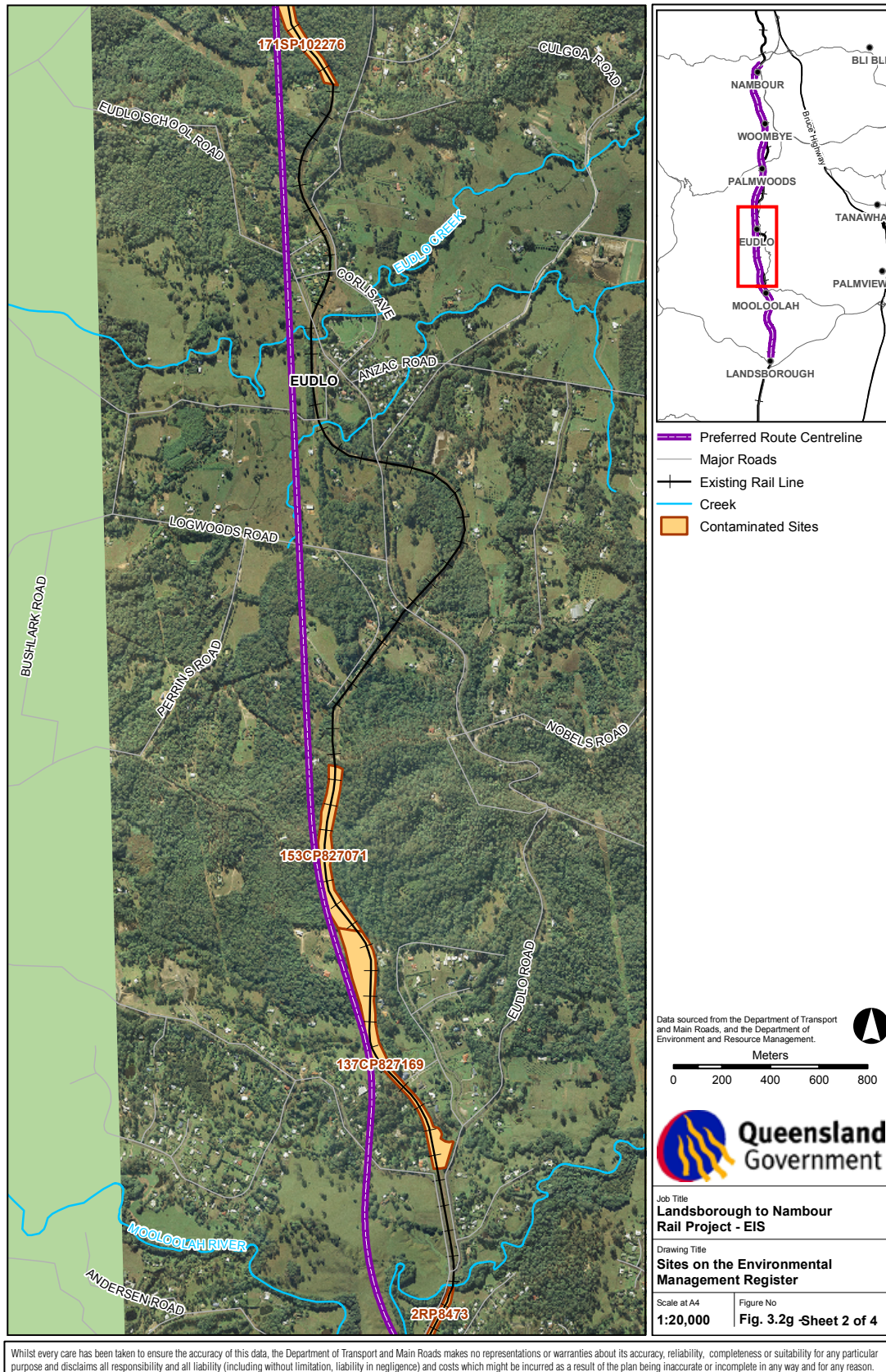
GQAL data was collated from Caloundra City Plan and Maroochy Plan (in which GQAL is called Agricultural Protection) and were used to identify the areas affected by the project. Figure 3.2h shows GQAL in Landsborough and Mooloolah, and Agricultural Protection areas in Eudlo, Palmwoods, Woombye and Nambour.

Figure 3.2g: Sites on the Environmental Management Register



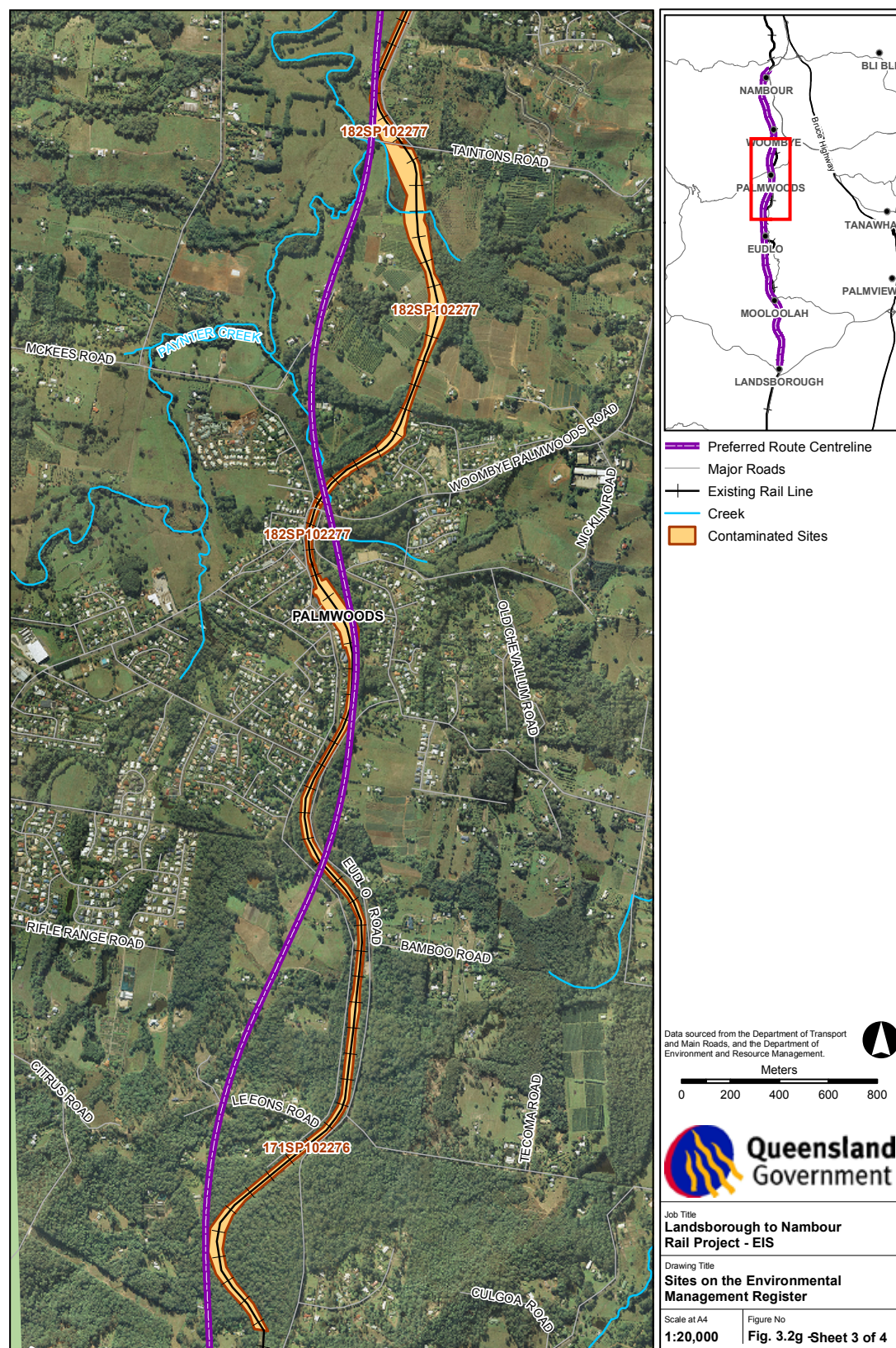
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Figure 3.2g: Sites on the Environmental Management Register



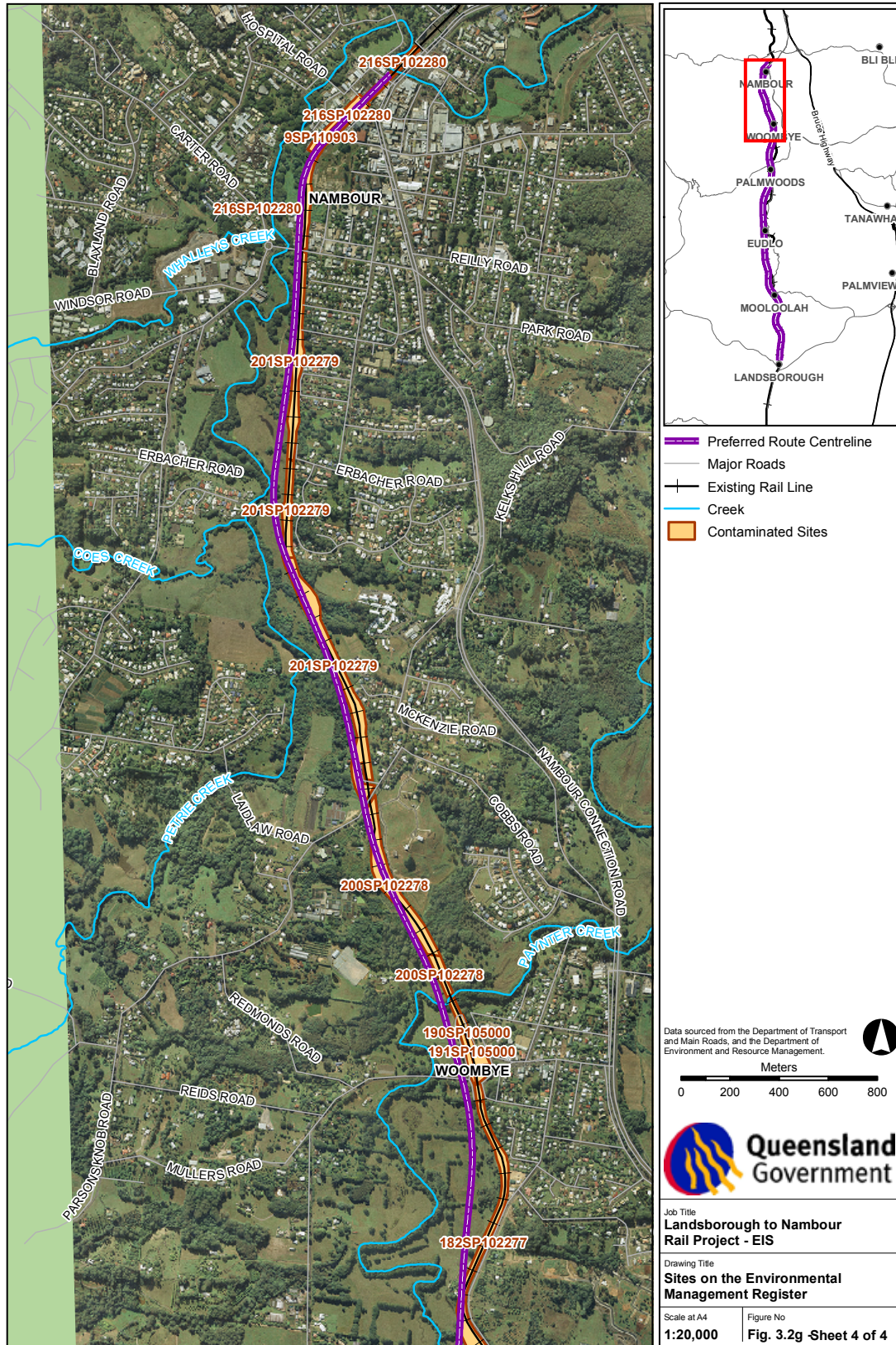
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Figure 3.2g: Sites on the Environmental Management Register



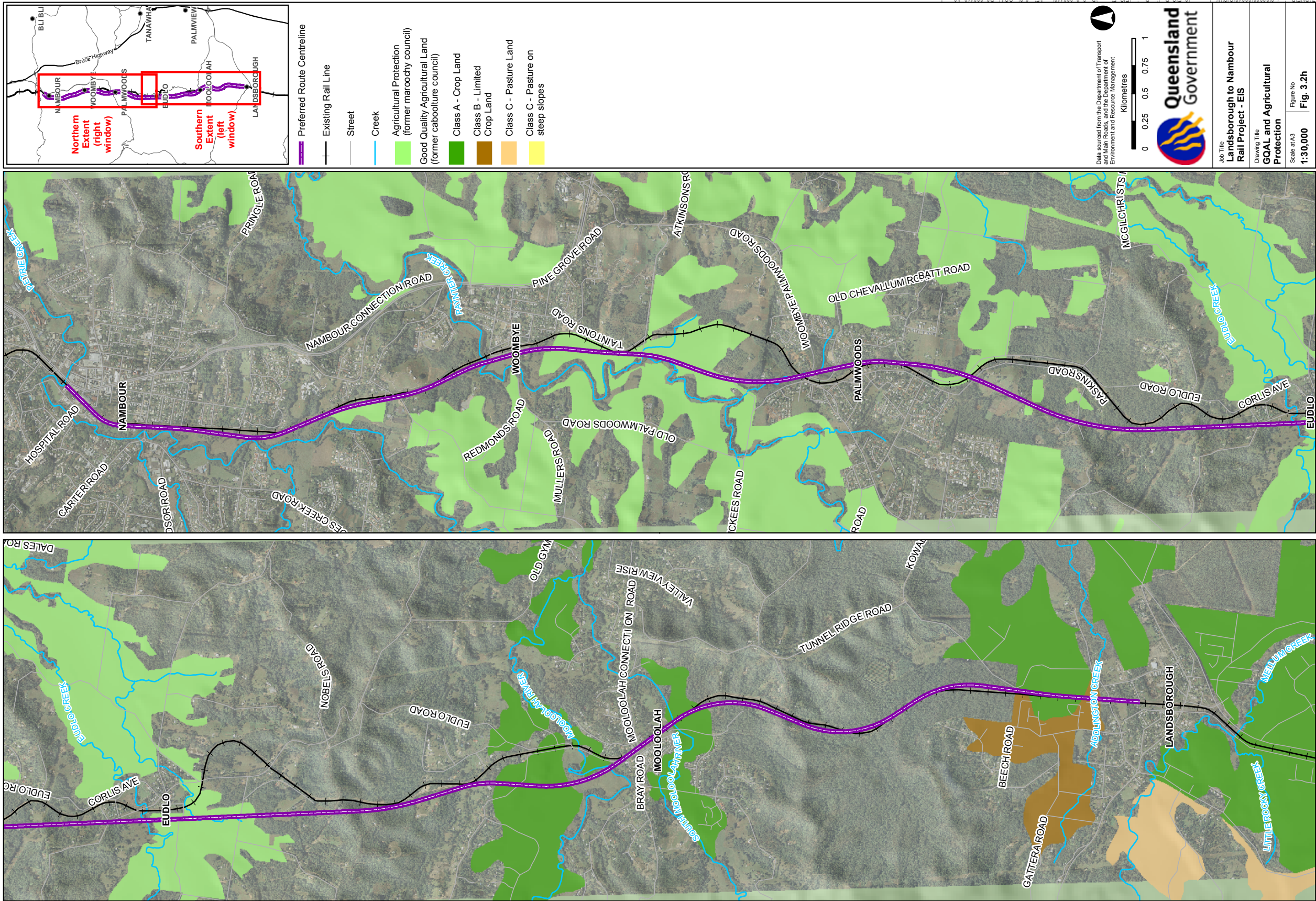
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Figure 3.2g: Sites on the Environmental Management Register



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Figures 3.2h: GQAL and Agricultural Protection



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3.3 Description of environmental conditions: infrastructure

3.3.1 Roads

The local road network is discussed in Chapter 7, Transport. This includes existing road crossings or roads crossed by the project.

3.3.2 Road and rail bridges

Rail bridges were typically constructed to cross a waterway, floodplain or change in topography and road accesses were constructed to follow. Currently, the road clearances

of underpasses under the existing railway do not meet the minimum clearance requirement of 5.5 metres for roads adopted for this project, as recommended in the Road Planning and Design Manual of the former Department of Main Roads.

There are also a number of road-over-rail bridges on the existing railway.

Table 3.3.2 describes the existing rail and road bridges associated with the existing railway, according to a review of QR Limited information and field investigations (this does not include minor culverts). These are also shown on Figure 3.3a.

Table 3.3.2: Existing bridge locations and descriptions

Location	Over/Under bridge	Road/ River	Road Clearance (if applicable)
South of Mooloolah	Rail over watercourse	Rail bridge over the South Mooloolah River	-
North of Mooloolah	Rail over road	Rail bridge over Eudlo Road, at the intersection with Neill Road	Road Clearance 3.2m
North of Mooloolah	Rail over watercourse	Rail Bridge over the Mooloolah River	
South of Eudlo	Road over rail	Single lane bridge - Palmwoods- Mooloolah Road	-
South of Eudlo	Road over rail	Single lane bridge - Palmwoods- Mooloolah Road	-
South of Eudlo	Rail over road and watercourse	Acrobat Creek and Highlands Road (combined), 1 lane per span	Road clearance 3m
Eudlo	Rail over road and watercourse	Eudlo School Road and Eudlo Creek	Road clearance 2.4m
Palmwoods	Rail over road	Woombye – Palmwoods Road	Road clearance 3.9m
Palmwoods	Rail over watercourse	Watercourse	-
Woombye	Rail over road and watercourse	Blackall Street/ Back Woombye Road and Paynter Creek	Road clearance 2.9m
North of Woombye	Road over rail	Single lane bridge, Blackall Range Road	-
Nambour	Rail over road	Arundell Ave	Road clearance 4.6m

3.3.3 Power line crossings

ENERGEX has a significant network of overhead power lines varying from local feeders to major distribution cables. Large 132 kV towers run in an east-west direction directly across the NCL approximately midway between Eudlo and Palmwoods. These were identified as a significant constraint for the project, which was one of the considerations during the identification of the preferred route.

Other power utilities identified in the project area are 33 kV or less and are not considered a significant constraint to the project.

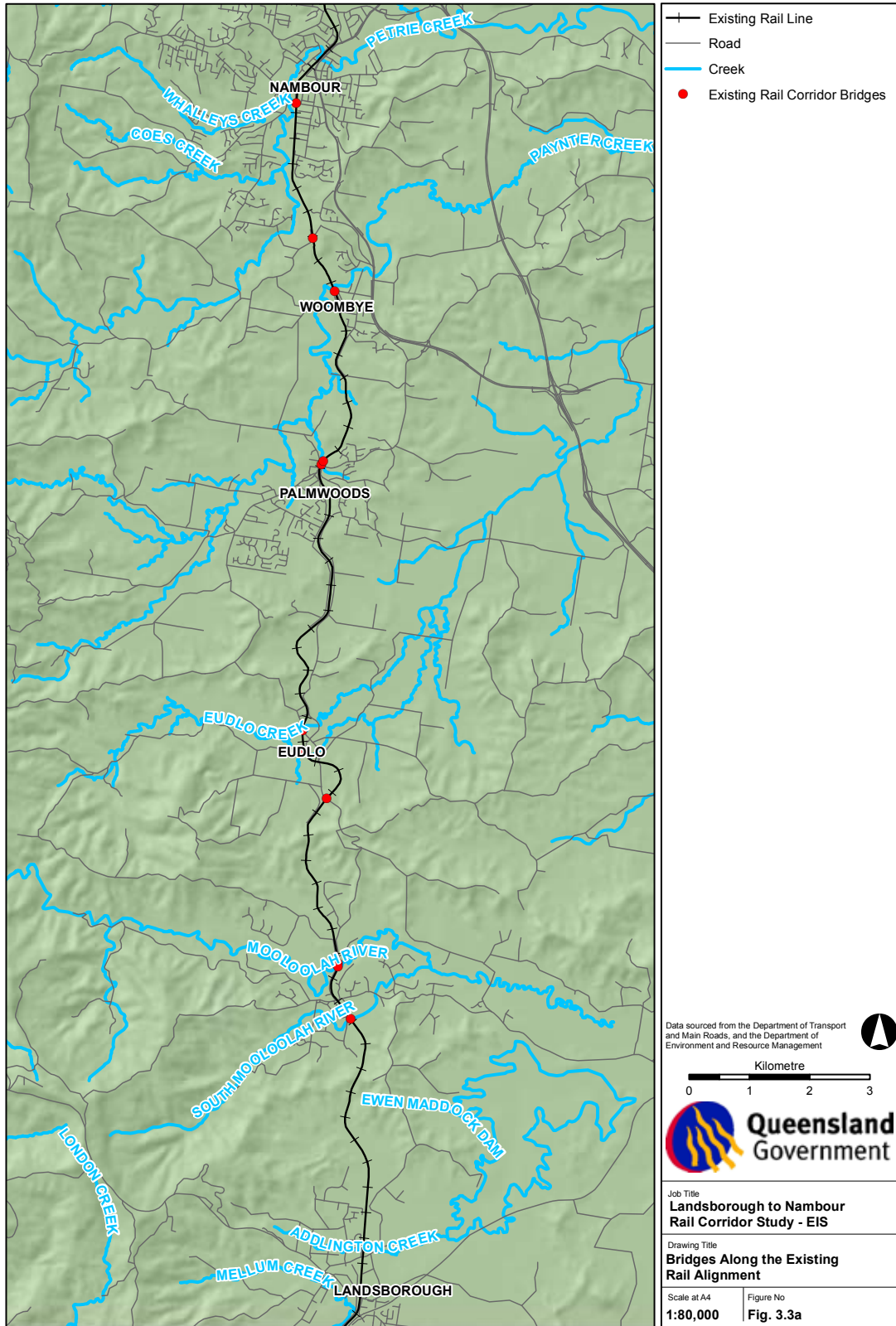
Table 3.3.3 lists the location and type of powerline crossings over the existing railway. These are also shown on Figure 3.3b.

Table 3.3.3: Existing rail/power line crossing point and descriptions

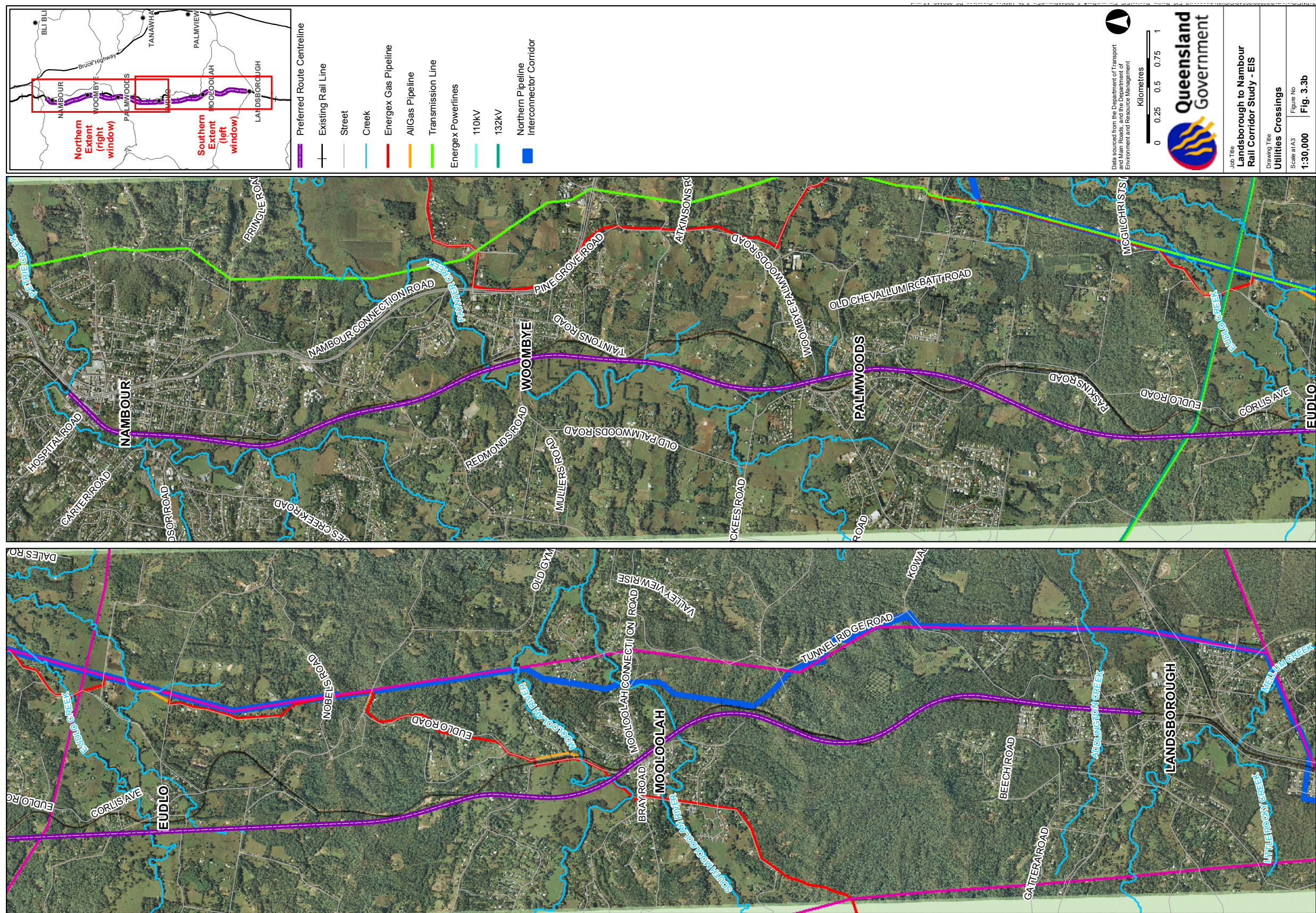
Location of Rail/Power line Crossing Point	Voltage	Location of Rail/Power line Crossing Point	Voltage
Gympie Street North, Landsborough	11kV	Between Paskins Road and Eudlo Road, Palmwoods	33kV
Mooloolah Connection Road, Mooloolah	11kV	Woombye-Palmwoods Road, Palmwoods	11kV
Between Neill Road and Eudlo Road, Mooloolah	11kV	North of Woombye Railway Station, Woombye	11kV
East of Codgen Road, Eudlo	11kV	Blackall Range Road, Woombye	11kV
Mooloolah-Eudlo Road	11kV	Arundell Avenue, Nambour	11kV
South of Ash Lane, Eudlo	11kV	Colless Lane, Nambour	11kV
South of Eudlo Creek National Park, Eudlo ²	132kV	West of Mill Street, Nambour	11kV

² Also the location of the Suncoast Power project- duplication of the existing 132kV transmission lines in the existing power easement

Figure 3.3a: Bridges Along the Existing Rail Alignment



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Other existing infrastructure

To aid the planning and design process, and to help ensure that adequate land requirements are identified, each service authority was consulted to identify existing utilities and any proposed or approved major works that may be undertaken in the foreseeable future.

Public Utility Plant (PUP) information has been provided by the former Caloundra City and Maroochy Shire local authorities, including existing stormwater, sewer and water reticulation assets. There are numerous PUP within the project area. These were considered during the route identification process, but were not as significant a constraint as infrastructure/ utilities with high replacement or alteration costs like sewerage gravity mains, treatment plants and high voltage transmission lines.

Service coordination layouts are shown in **Drawings C029 to C036**.

Three existing sewage-pumping stations are located in the area, two at Palmwoods and one in Nambour. A medium sized sewerage pressure main runs along the existing rail corridor connecting Palmwoods to Woombye.

Optus

Of particular significance is the existing Optus Vision Stream (former Reef Networks) optic fibre which runs for the entire length of the project area in the existing north coast rail corridor. The optic fibre is considered a constraint to the corridor selection.

Telstra

Telstra has a significant number of assets within the project area. In general, the density of the Telstra assets is directly related to the density of the properties. The assets are broken into three main categories:

- “ metropolitan main cables
- “ rural main and local cables
- “ local cables.

‘Metropolitan’ cables are large optical fibre and copper cables. ‘Rural’ cables are large and can sometimes contain optical fibre. The metropolitan cables are extensive and are located throughout the project area.

Aquagen

A trunk main is located at Pinch Street between Mooloolah and Eudlo, connecting into Landers Shute. These pipes are part of the main water supply into the town, on top of a ridge which is heavily vegetated.

Proposed infrastructure

The following proposed infrastructure is shown on **Figure 3.3b**.

SunCoast project (Energen)

The Suncoast project involves the duplication of the 132 kV transmission lines primarily in the existing easement from the existing Powerlink Palmwoods substation to the existing ENERGEX West Maroochy substation. The existing easement traverses the project area, passing over both the existing rail and the project approximately 1km to the north of the town of Eudlo, at chainage 92300 on **Drawing C015**. ENERGEX has been consulted as to the design and constraints associated with the traversing of this corridor.

An Environmental Impact Statement has been prepared for the Suncoast project. This has been reviewed for spatially relevant information. The outcomes of this review are summarised in **Chapter 20, Cumulative impacts**.

The Northern Pipeline Interconnector

The proposed Northern Pipeline Interconnector (NPI) pipeline is a drought emergency pipeline, with completion of construction of Phase 1 (between Morayfield and Mooloolah) scheduled for December 2008. The pipeline easement is on the eastern side of the Landsborough to Nambour project from Landsborough to Nambour. The EIS has recently been released for public comment (Jan-March) for phase 2 of the project, which runs from the end point of Phase 1 to the Noosa water treatment plant. The Coordinator-General is currently assessing submissions to determine whether a supplementary report to the EIS is required.

The study team has liaised with the NPI team on several occasions, due to the location of the pipeline, in relation to the project. The Environmental Impact Statement prepared for Phase 1 of the NPI project was also reviewed for spatially relevant information. The outcomes of this review are summarised in **Chapter 20, Cumulative impacts**.

Gatton to Gympie gas pipeline

A corridor has been identified for a future gas pipeline between Gatton and Gympie. The corridor runs from the south west to north east into Mooloolah, crossing the project area to continue on the eastern side of Eudlo, Palmwoods, Woombye and Nambour. Timing for the design and construction of this pipeline could not be confirmed at the time of writing.

3.3.4 Sensitive receptors

For this EIS, sensitive receptors have been defined to include:

- “ dwellings, permanent or impermanent (hotels, motels, holiday accommodation, caravans, camping sites)
- “ child care institutions (child care centre, kindergartens, schools, or other educational institution)
- “ medical facilities including medical centres, nursing homes
- “ places of worship (churches etc).

Commercial receptors, include shops, businesses (excluding childcare centres and medical facilities), industrial and other commercial premises are also considered.

These receptors are recognised in this EIS as they may be adversely affected by:

- “ noise and vibration impacts
- “ light and visual intrusion
- “ air quality impacts
- “ traffic.

Sensitive receptors are associated with urban land uses and rural residential areas. Impacts to sensitive receptors are discussed in:

- “ chapter 6, Landscape character and visual amenity
- “ chapter 7, Transport
- “ chapter 9, Social environment
- “ chapter 15, Noise and vibration
- “ chapter 16, Air quality.

3.4 Information provided by the community

Throughout the project, there has been on-going community consultation. Details of activities and information releases is discussed in **Chapter 1, Section 1.9**. Issues raised to date and considered in both the route identification process and the assessment of the impact of the projects is discussed in **Table 3.4**.

Table 3.4: Community feedback, related to land use and infrastructure

Issues Raised in Community Feedback	Response	Section
Concern over industrial land availability in Nambour - Concerns over land subdivision as well.	The proposed upgrade of Nambour station impacts on several industrial and commercial properties on Price Street. The extent to which this impact can be mitigated is limited, however special management actions have been recommended to address these impacts.	These impacts are addressed in Chapter 21, Special management areas .
Social impacts and future development potential effects of a perceived reduction of land within the urban footprint as a result of the project.	A range of possible future reuse opportunities for surplus rail corridor land to further mitigate potential impacts and provide for community development have been identified. These opportunities have been recommended to the SCRC for consideration as part of the Council's current master planning for the railway townships along the proposed corridor. The Department of Transport and Main Roads will continue to work closely with the SCRC as the project progresses to ensure consistency between the future development of the rail town ships revealed through the master planning process and the opportunities created by improved rail services to the area.	Chapter 21, Special management areas
Concerns over town segregation	<p>It is acknowledged that the project traverses the towns of Landsborough, Mooloolah, Palmwoods, and Nambour, and skirts the western fringe of Eudlo and Woombye. However, the project alignment through these towns is generally at a similar location as the existing railway, or in close proximity e.g.</p> <ul style="list-style-type: none"> “ Landsborough- no change “ Mooloolah- station and railway remains in similar location to existing “ Eudlo- station moves approx 70m to the west of the existing station “ Palmwoods – station moves approximately 100m to the north east of the existing station “ Woombye- station moves approximately 50m to the west of the existing station. <p>The project has been designed to provide opportunities to reconnect towns physically and visually.</p>	Chapter 3, Land use and infrastructure, Chapter 6, Landscape and visual amenity, Chapter 8, Economic environment, Chapter 9, Social environment
Concerns over impacts to community facilities	The project impacts on several community facilities. Management and mitigation strategies are identified in the chapter on special management areas.	Chapter 21, Special management areas
Concerns over multiple infrastructure projects being carried out in the project area	The identification of the preferred route and preliminary design for the project has been undertaken with knowledge of the location, design and construction requirements for these other infrastructure projects.	Chapter 3, Land use and infrastructure
Concern over impacts to town centres and their economic viability	The preferred route was selected so as to retain key public transport in close proximity to existing town centres and services. In particular, the preliminary design of the project has been refined so as to offset future impacts to commercial areas of Mooloolah. Opportunities for reuse of areas of surplus or redundant rail corridor land (i.e. after decommissioning) have been identified for Mooloolah, Eudlo, Palmwoods and Woombye.	Chapter 3, land use and infrastructure, Chapter 8, Economic environment, Chapter 9, Social environment, Chapter 21, Special management areas.

3.5 Assessment of potential impacts and mitigation measures

The project will result in a corridor approximately 60 m wide (the maximal earthworks width vary between 20 m and 74 m) and 20 km long, within which the new two track railway will be constructed. Potential impacts to land use associated with the construction and operation of the project will be discussed in this section.

The potential impacts of the project to existing land use, planned land use and infrastructure are as follows:

- .. land acquisition/ requirement impacts
- .. construction impacts
- .. operational impacts
- .. decommissioning impacts and benefits.

3.5.1 Design

Land requirements - tenure

The project crosses land with different tenure types, as shown in Figure 3.2a. These tenure types are freehold, State land, national parks, reserve, railway and Lands Leased. Land required for the project will be acquired by the Department of Transport and Main Roads prior to the construction phase of the project and will ultimately be transferred over to unallocated State land, and subleased for rail purposes.

The tenure of land required for the project is shown in Table 3.5.1a and 3.5.1b. This includes 34 sections of the existing north coast line. QR Limited leases the existing railway corridor and the land on Gympie Street North, Landsborough (between the existing railway and the Pound Reserve).

The project will directly affect 25 easements (27,649 square metres) and 11 SCRC reserves, or properties under control of council. Road reserves and easements are also shown in Figure 3.2a. This includes power easements (Energen) and road reserves for roads (formed or unformed).

Table 3.5.1a: Lands leased or used for railway purposes, required for the project

Lot	Plan	Tenure	Lot	Plan	Tenure
216	SP102280	LL	710	M332060	LL
201	SP102279	LL	132	CP827066	LL
216	SP102280	LL	133	CP827065	LL
182	SP102277	LL	2	RP47777	LL
201	SP102279	LL	131	CP827067	LL
201	SP102279	LL	134	CP827068	LL
200	SP102278	LL	137	CP827169	LL
200	SP102278	LL	2	RP8473	LL
182	SP102277	LL	5	SP119729	LL
182	SP102277	LL	190	SP105000	LL
193	SP141559	LL	141	CP827069	LL
191	SP105000	LL	3	CP827039	LL
171	SP102276	LL	121	CP827064	LL
153	CP827071	LL	9	SP110903	FH
3	RP802185	FH	30	SP181277	FH
10	SP110903	FH	40	SP181278	FH
340	CG1481	RY	194	SP110902	RY

A total of 162 properties are affected by a land requirement for the project. The land requirement identified is for the four track corridor, and associated road realignments. This has been calculated based on a five metre offset from the edge of the earthworks required for the construction of the project. These properties are listed in Table 3.5.1b.

Table 3.5.1b: Other land affected by a land requirement for the project

Lot Plan	Tenure ⁹	Lot Plan	Tenure ⁹
1RP893091	FH	20RP28182	FH
5SP111724	FH	4RP204815	FH
3RP4326	FH	5SP110908	FH
2RP817180	FH	1RP218403	FH
30RP160218	FH	11RP181021	FH
2RP224806	FH	31RP160218	FH
2RP190651	FH	2SP194478	FH
3SP181277	FH	3SP194478	FH
421CP893394	FH	17RP28182	FH
19RP146374	FH	1RP28258	FH
4RP172897	FH	5RP179034	FH
9RP28182	FH	8RP881340	FH
4SP181278	FH	1SP157051	FH
1RP190651	FH	2RP849374	FH
1RP216194	FH	4SP115725	FH
2RP79967	FH	6RP179376	FH
8RP811418	FH	7RP881340	FH
1RP849374	FH	693CG2097	FH
4RP811897	FH	765SP120414	FH
2SP157051	FH	2RP893091	FH
2RP209705	FH	2SP108810	FH
4SP110908	FH	13RP835260	FH
7RP179376	FH	4RP181021	FH
1RP142843	FH	453CG2136	NP ¹⁰
3RP56701	FH	111NPW552	NP ¹¹
12P4456	FH	454CG2136	NP ¹²
18RP146374	FH	4RP845241	FH
18RP28182	FH	3RP817180	FH
6SP111724	FH	2RP28214	FH
1RP62838	FH	3RP56760	FH
2RP62838	FH	3RP845294	FH
4CG2097	FH	16SP159202	FH
1RP92814	FH	1RP908527	FH
2RP94471	FH	4SP134323	FH
1BUP12479	FH	21SP205408	FH
11P4456	FH	1CG233	FH
2RP188265	FH	389CG322	FH

⁹ LL: Lands Leased; NP: National Park; FH: Freehold; RY: railway-land vested for railway purposes in the Department of Transport and Main Roads or QR.; SL: State Land; RE: Reserve

¹⁰ Dularcha National Park

¹¹ Eudlo Creek National Park

¹² Dularcha National Park

Table 3.5.1b: continued

Lot Plan	Tenure ⁹	Lot Plan	Tenure ⁹
1CG1328	FH	2RP845294	FH
5RP163950	FH	2RP204815	FH
1RP207581	FH	751CG3940	RE
63RP45367	FH	1CG1466	SL
258CP819422	FH	368CP893394	SL
6SP141477	FH	178SP197756	FH
2SP145590	FH	1RP147086	FH
3RP40323	FH	4SP115741	FH
1RP223607	FH	2RP231014	FH
4RP849374	FH	10RP28182	FH
2RP182362	FH	7SP134323	FH
722CG3852	RE	3RP231014	FH
999CG6008	RE	3RP204815	FH
455CG2348	FH	21RP881327	FH
100RP881340	RE	68RP45367	FH
301M332061	RE	42RP26509	FH
711CG6392	RE	3BUP12479	FH
3RP893091	FH	2BUP12479	FH
43RP26509	FH	2RP8474	FH
3CP906107	FH	11RP28182	FH
7RP43971	FH	8SP141477	FH
5RP907803	FH	1RP48601	FH
2RP181003	FH	3RP62838	FH
6SP156942	FH	2RP49230	FH
12SP161836	FH	3RP849374	FH
19RP28182	FH	2SP173065	FH
3SP145590	FH	2RP81009	FH
22SP205408	FH	1RP149059	FH
1RP803627	FH	4RP224789	FH
1RP209705	FH	1SP119729	FH
177SP197756	FH	0BUP12479	FH
3CG1466	RE	26USL31180	SL
17RP26509	FH	437CG1973	LL
2RP911740	FH	3RP802185	FH
419CG1740	FH	10SP110903	FH
543CG3620	FH	9SP110903	FH
5RP802616	FH	30SP181277	FH
1RP193239	FH	40SP181278	FH
3SP115725	FH	340CG1481	RY
36SP159377	FH	194SP110902	RY
1RP28091	FH	8RP28182	FH
9RP811418	FH	193SP141559	LL
0BUP12479	FH	2RP215960	FH
3RP911740	FH	4RP911740	FH

The project traverses two segments of Dularcha National Park and the edge of Eudlo Creek National Park. Both national parks are protected tenures under the *Nature Conservation Act 1992*. The selection of the preferred route for the rail corridor was undertaken

to avoid these tenures wherever possible. The project has been designed to minimise the requirements from national park land as much as possible. In Dularcha National Park, the project has been designed as close to the existing railway as possible, whereas the project crosses the southwest edge of Eudlo Creek National Park.

The project also affects State land. These are Kolara Park in Palmwoods and Crown land in Mooloolah. The railway will be built on structure above Kolara Park to avoid the loss of this State land, which is highly valued by the community.

Reserve land affected by the project includes Landsborough Recreation Reserve, Pound Reserve (Old Mellum Cemetery), Mooloolah Pony Club and Woombye Recreational Grounds.

Land requirements – land use

The project has a land requirement from 162 properties (excluding land already leased for railway purposes). This includes (categorised by general land use planning designations):

- “ 15 Rural Residential properties
- “ 28 Commercial/Industry/Business properties
- “ 67 Rural properties
- “ two Community Purpose properties
- “ five properties identified as Open Space, Conservation or Waterways
- “ four Open Space Park and Recreational or Sport and Recreational
- “ 38 Residential properties
- “ three properties associated with rail.

Of the 162 properties, 26 of these have been identified as government owned (State or local government), with the remainder privately owned.

Property impacts through land requirements (by land use type) are shown in Figure 3.5a.

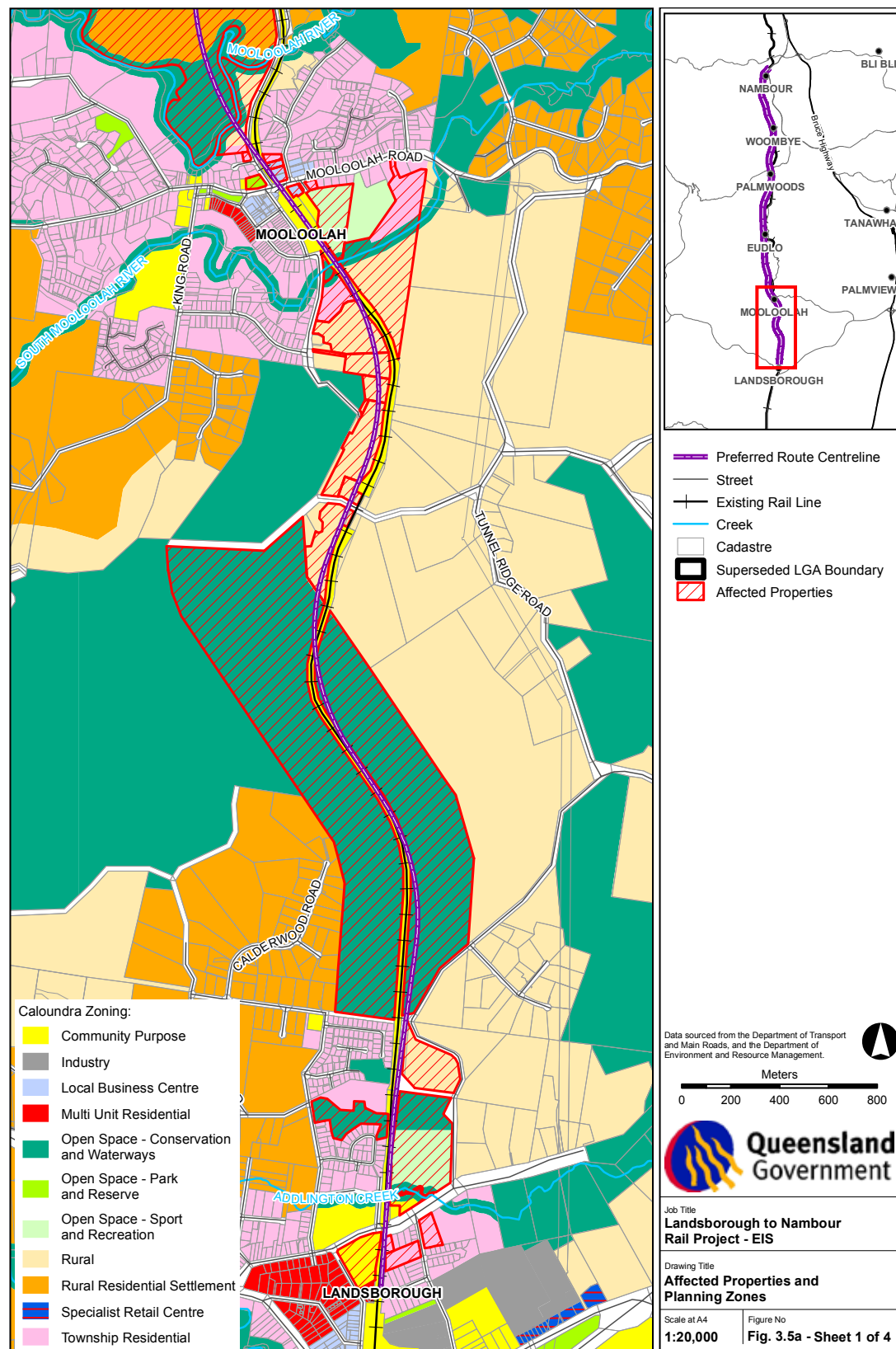
Landsborough to Mooloolah

The project is not considered to have a significant land use impact in the township of Landsborough, as it begins north of Landsborough station and generally follows the same corridor as the existing railway. Between Landsborough and Mooloolah, it affects several rural properties, the western edge of the Landsborough Primary School sports field and the eastern edge of the Landsborough recreation reserve. Proposed future grade separation of Gympie Street North will also have additional impacts on a further property when the proposed grade separation and associated realignment of Tytherleigh Avenue, shown on SK001, is constructed.

The preferred route for the project follows the existing railway as closely as possible through Dularcha National Park, however it would have impacts on the edges of the national park. The project passes in tunnel under Rose Road, through several rural residential properties. Future stages of the project would investigate whether volumetric resumptions are appropriate in the vicinity of tunnels.

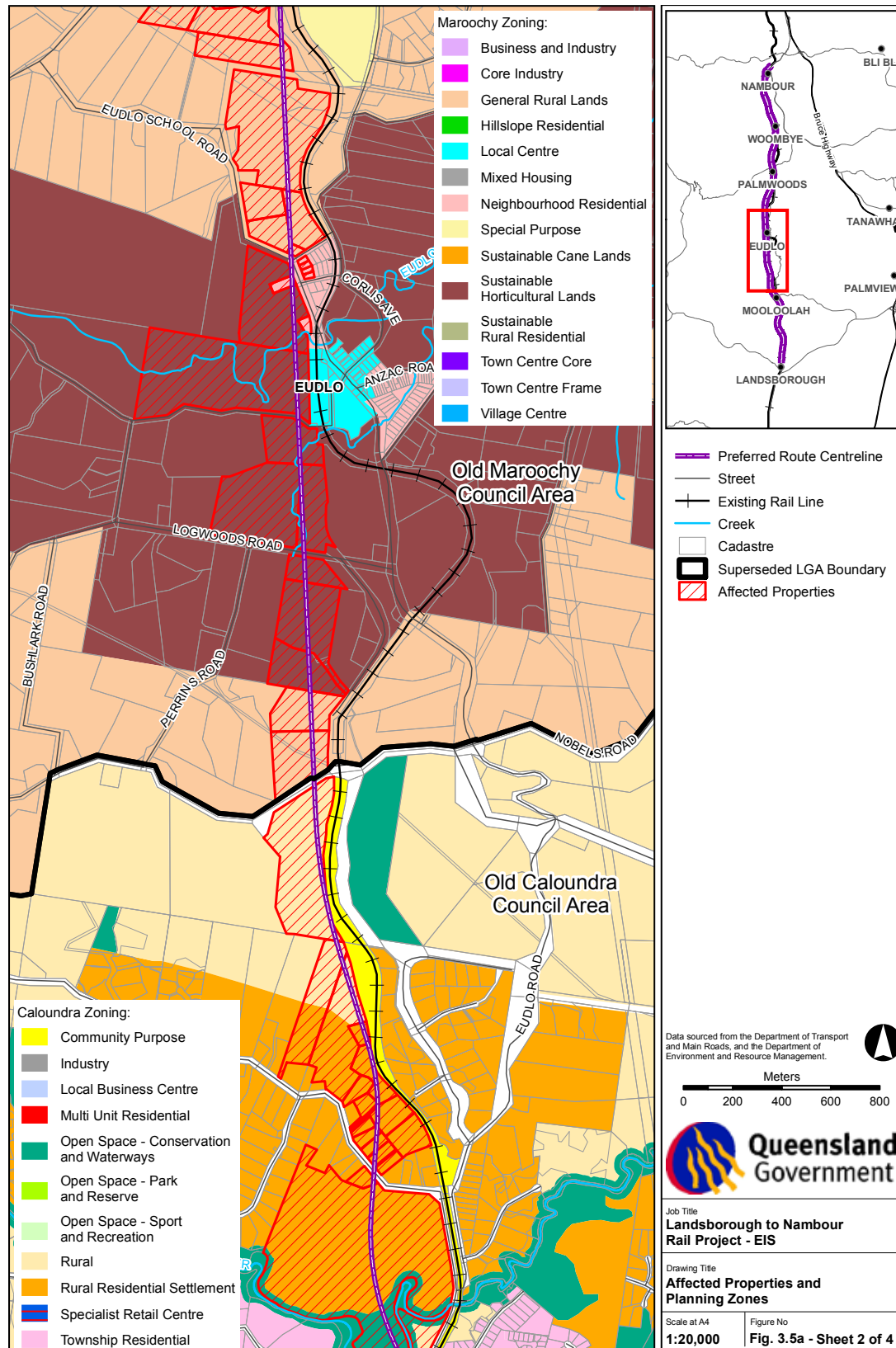
Property impacts by land use type are shown in Figure 3.5a.

Figure 3.5a: Affected Properties and Planning Zones



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Figure 3.5a: Affected Properties and Planning Zones



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Figure 3.5a: Affected Properties and Planning Zones

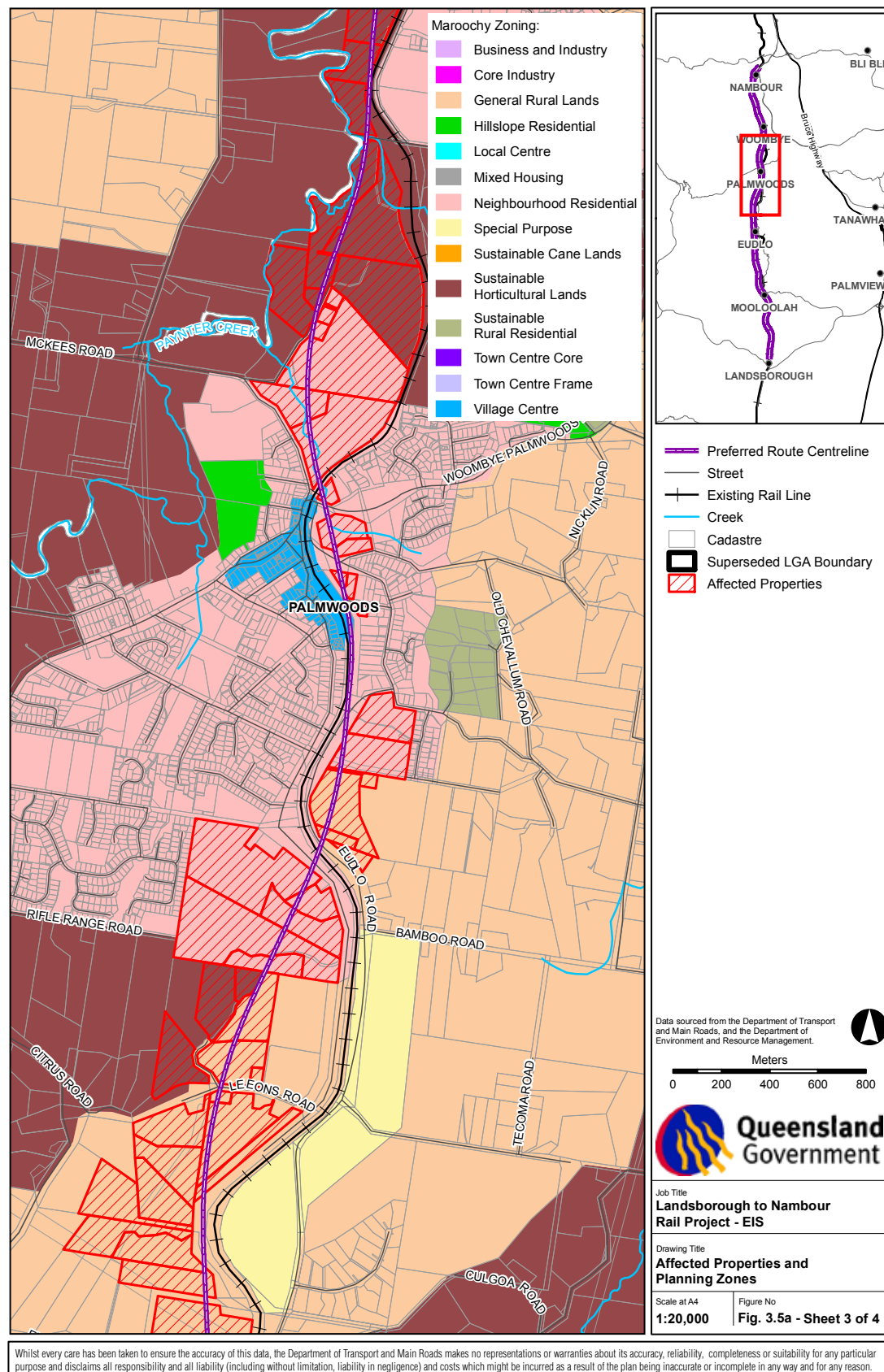
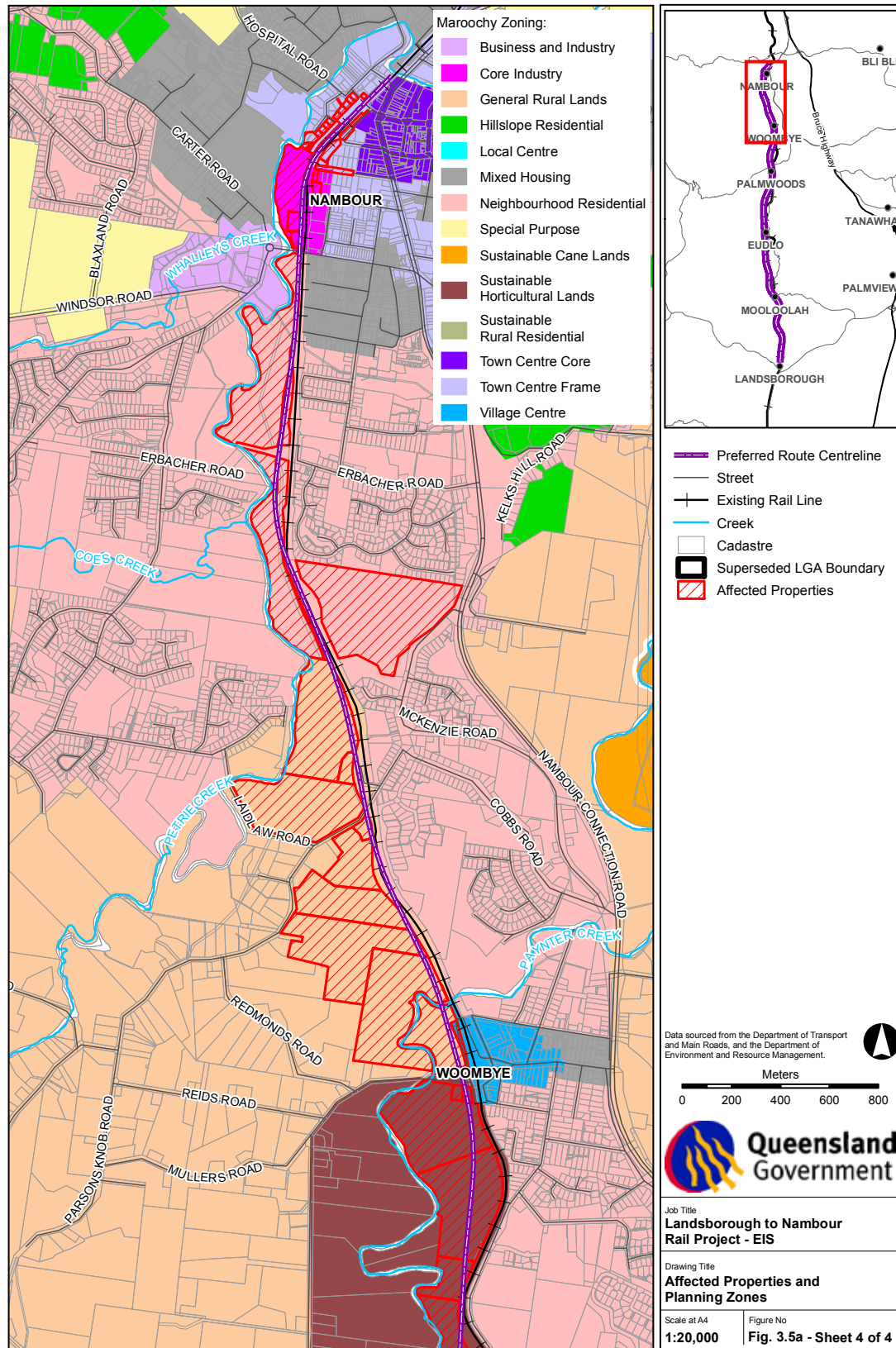


Figure 3.5a: Affected Properties and Planning Zones



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Mooloolah to Eudlo

The project follows the existing alignment closely into Mooloolah, through several rural residential properties which would be affected by land requirements.

The study team has focused on reducing the impact of the project to both the Mooloolah Township and the Mooloolah River, in response to concerns raised about ecological effects and the effects of the railway on the town centre.

The alignment of the preferred route for the project through Mooloolah has been refined, to address community concerns about the effects of an ultimate four track corridor through the town. Currently, two tracks run through the town, crossing Mooloolah Connection Road at an open level crossing. The track, station layout and platform arrangements at Mooloolah station have been developed to minimise the footprint associated with the initial construction through town and to provide opportunities for future grade separation and reuse of surplus rail corridor land. This is discussed in further detail in **Chapter 21, Special management areas**.

The alignment of the Mooloolah River crossing has been refined in recognition of its environmental significance and in response to community feedback. Improvements to the Mooloolah River crossing included:

- “ identification of an optimised crossing point and angle, and reducing the footprint of riparian vegetation affected by the project
- “ identification of environmentally sensitive bridge design recommendations.

The land requirements identified for the project and associated road realignments⁷ through Mooloolah would affect a number of land uses in the town centre, including:

- “ the western edge of the Mooloolah Pony Club
- “ the childcare centre, adjacent to the existing station
- “ a commercial property, to the east of the childcare centre
- “ two commercial properties on Karanne Drive
- “ a residential property on Lornal Court
- “ the back (western edge) of several residential properties on Karanne Drive
- “ the edge of the Martin Rungert Park.

An initial two track layout is proposed from chainage 86400, on **Drawing C107**, to chainage 88600, on **Drawing C109** to service access to both platforms at Mooloolah. To provide a compact long term solution, a central through running track is also shown. Overall, this three track configuration passes from south of Mooloolah Station, through the station, and on to a point 500 metres before the next tunnel, at Pinch Lane. The initial requirements are for two tracks. The central through running track will not be operational until required.

⁷ Including the proposed future grade separation between Mooloolah Connection Road and Jones Street

This three track configuration allows for a central through running track and an eastern and western side track, serviced by two side platforms, one of which would form a future island platform, when the fourth easternmost track is implemented. **Drawing C007 and Drawing C107** show the initial two to three track layout. By planning for this initial three track configuration through Mooloolah, the footprint of the initial and future station and railway land requirements can be minimised. This allows the project construction to occur, but does not require land from the properties from Karanne Drive, until the need for construction of the fourth track arises.

The proposed future grade separation option in Mooloolah would potentially impact on further commercial properties, the western edge of the Mooloolah Pony Club, the existing station car park and access to properties on Jones Street. The proposed grade separation option is shown on **Drawing C007, C107, SK003 and SK004**.

Opportunities have been identified for the relocation of impacted businesses and facilities to surplus rail corridor land. These opportunities and other grade separation options considered during the development of the preliminary design are discussed in **Chapter 21, Special management areas**.

Continuing north, the project traverses rural properties to the south and north of the Mooloolah River and north of Neill Road.

Property Impacts in Mooloolah are shown in **Figure 3.5a**.

Eudlo to Palmwoods

The project passes to the west of Eudlo, primarily affecting rural properties. A residential area to the east of Eudlo School Road would be also impacted, primarily due to the construction of the road over rail crossing of Eudlo School Road. The footprint of this structure has been minimised as much as possible, by designing a cut and cover bridge over the rail. The project passes through the eastern fringe of Eudlo Creek National Park. Environmental impacts associated with this land requirement are discussed in **Chapter 11, Nature conservation: Terrestrial flora** and **Chapter 21, Special management areas**.

Continuing north, the project passes through rural properties on the western side of Paskins Road, and then re-enters the existing rail reserve, to the south of Palmwoods town centre. Property impacts between Eudlo and Palmwoods are shown on **Figure 3.5a**.

Palmwoods to Woombye

The construction of the project would temporarily disrupt recreational activities in open space and recreation areas such as Kolora Park (the ‘duck pond’), the Bowls Club, and the barbecue area on Chevallum Road. As the railway structure would be built on structure above these areas, construction may temporarily disrupt recreation and community activities in these areas.

Several residential properties to the east of the existing railway would be affected by the project. A commercial property is also directly impacted by the project.

Continuing north, the project passes through a number of rural properties and impacts a residential area on Spackman Lane.

Property impacts between Palmwoods and Woombye are shown on Figure 3.5a.

Woombye to Nambour

The project impacts two recreation and community activity areas in Woombye: Woombye Recreation Ground and Victory Park. As a proportion of land in Woombye Recreation Ground has been identified for use for the future railway station, the areas used by the pony and soccer clubs would be affected. Other community areas that would be affected by the project are the Evangelical Lutheran Trinity Congregation and the edge of the Nambour Christian College, which current backs onto the existing railway.

Potential impacts of the construction of the project to these areas include loss of recreational and community activities, vegetation clearing and noise. Continuing north, several rural properties, including a significant nursery business are affected by the project.

Property impacts between Woombye and Nambour are shown on Figure 3.5a.

Nambour

Approaching Nambour, the project aligns more closely with the existing rail corridor. Several rural properties east of Petrie Creek are affected by land requirements. The eastern edges of these rural properties would potentially lose vegetation due to earthworks.

The Price Street commercial/industrial precinct would be significantly impacted, as a result of the land requirements identified for future station development use.

Property impacts in Nambour are shown on Figure 3.5a.

Impacts to future planned land use

Both State and local government have planned for the future development of the railway towns and surrounds through the *South East Queensland Regional Plan*, the *Draft Caloundra Local Growth Management Strategy*, and the *Draft Maroochy Local Growth Management Strategy*, which now form background documentation to the SCRC Growth Management Position Paper (July 2008), prepared as part of the SEQRP review process.

Although the local government planning framework has been considered in the selection of the project, it is not necessarily a key driver for the project itself. The need for improved public transport in the region, including an upgraded rail service is recognised at a strategic level in the local government planning framework, but provision of infrastructure to achieve this outcome is not addressed at a land use level in any of the planning documents, as this is a State responsibility. As the project requires consideration of planning beyond 2026, which exceeds the life span of the current Regional Plan and local government planning schemes, it is intended that these plans would, in time, be amended to reflect the opportunities and constraints arising from the project.

In recognition of this, this EIS identifies land use opportunities that may be suitable for location in land areas released by the decommissioning of the existing railway. It is understood that the SCRC will develop a master plan for the railway townships, to address the potential land use changes in the railway townships of the project area, and help guide the adaptation of townships in the lead up to construction of the project.

For the purposes of the EIS, the impacts of the project to the future land uses identified in the local government planning framework have been assessed. Map 4-1 (Residential Strategy) is included as Figure 3.5b, and shows where future residential development (greenfield development) is planned.

Potential opportunities for reuse of the decommissioned areas of railway land are identified in Chapter 21, **Special management areas**.

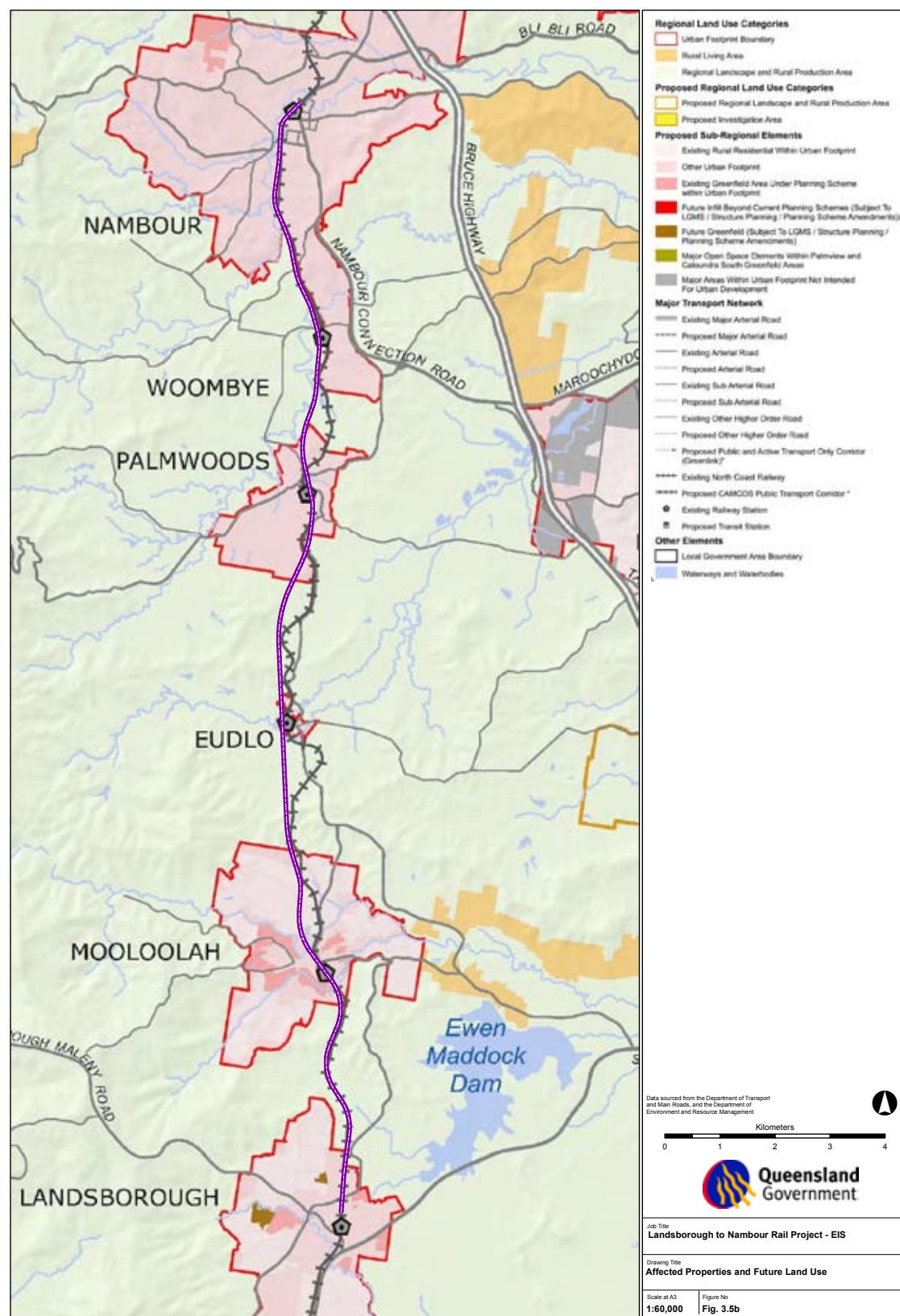
Landsborough

The (former) Caloundra Local Government Management Strategy (LGMS) have allocated the areas to the east of Tytherleigh Street and to the west of Toorbul Street as Greenfield Areas, as shown on Figure 3.5b. These areas are intended for low and mixed density residential housing. The LGMS also states that mixed density housing within 800 metres of Landsborough Railway Station is intended in the future.

The proposed future grade separation of Gympie Street North and associated realignment proposals for the intersection with Tytherleigh Avenue may have an impact on the development potential of the proposed greenfield site east of Tytherleigh Avenue. Opportunities for future access provisions to these areas from Gympie Street North may also be affected.

However, as the project is intended to provide enhanced service levels of public transport to the area, the project could be seen as supportive of council's intent to encourage mixed density residential housing in the vicinity of Landsborough Station.

Figure 3.5b: Affected Properties and Future Land Use



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Mooloolah

The (former) Caloundra LGMS recognises future development in Mooloolah as Short Term Development, within the 2007 to 2015 timeframe. The project impacts on an area of land between Paget Street and the existing railway that has been identified for future residential land use, as shown in Figure 3.5b. A large greenfield area to the west of the crossing of the Mooloolah River has also been identified for future residential development.

Eudlo

The potential for further development in Eudlo is recognised as extremely constrained, as reflected by the small size of its Urban Footprint. The project lies just to the west of Eudlo's Urban Footprint, and is not expected to affect any further development potential.

Palmwoods

The (former) Maroochy Draft LGMS recognises Palmwoods for its long-term potential to become a community and public transport hub. The project may influence council's plan to develop Palmwoods as a community and public transport hub, and may result in amendments to existing plans and assumptions for the area. The release of surplus rail corridor land, once decommissioning of the existing railway is complete, would also provide significant opportunities for land use change in this township, and the SCRC is working closely with the Department of Transport and Main Roads in the identification of potential future uses for this area. No potential greenfield areas have been identified in the Palmwoods area.

The project may affect a site identified as a potential future sport and recreation park in the (former) Draft Maroochy LGMS, shown in Figure 3.5b. This would result in possible relocation and disruption to sport and recreational activities in Palmwoods.

Woombye

Similar to Palmwoods, Woombye has also been recognised in the (former) Maroochy Draft LGMS as having a long-term potential to become a community and public transport hub. As the project is located to the west of the existing railway, the project may influence the intent identified in the LGMS, and would require further consideration as part of the ongoing council master planning exercise. A significant area of surplus rail corridor land (2.46 ha) has been identified for potential reuse after decommissioning of the existing railway, the identification of future uses for these areas should in the first instance aim to replace the community land uses that were affected as a result of the project. This includes consideration of the viability of these areas for reuse for sporting and recreational areas affected by the project to the west.

Woombye is also recognised as a Local Centre to provide services for the daily needs of local residents and visitors. Therefore, the local residents and visitors that use the railway to access the services in Woombye may be affected during to the construction of the project.

Nambour

Nambour is recognised by the SEQRP as one of the Major Activities Centres in South East Queensland. It is identified as a Major Activity/Specialist Centre in the (former) Maroochy Draft LGMS as there is a forecasted increase of small to medium-sized commercial and industrial businesses in the future. Therefore, the construction phase of the project may temporarily disrupt these businesses and would have other impacts such as noise and air quality issues.

A proposed open space on Colless Street would also be affected by the project.

3.5.2 Mitigation of design impacts

Although the project design sought to minimise disruptions to existing land-uses, impacts will need to be mitigated by maintaining access to affected land-uses as well as finding suitable land for relocation of affected community and commercial land-uses.

Planned land-uses have been taken into account during the design phase of the project. However, the impacts of the project to planned land-uses can be effectively mitigated by integrating the project into the local government planning framework in future reviews. The ongoing discussions between the Department of Transport and Main Roads and the SCRC seek to ensure that the project is integrated in the future planning framework.

3.5.3 Construction impacts**Mining and extractive industry**

Several extractive resources are located in the broader region, as identified in Section 3.2.6. The project would not have a significant impact on sand and extraction as the project does not traverse any of these areas. However, the construction of the project would require hard rock resources, especially for ballast. The sourcing of this material will need to take into consideration transport impacts and benefits, availability and longevity of nearby resources, and other demands for the use of the same resource.

Good Quality Agricultural Land (GQAL)

The following GQAL and Agricultural Protection areas will be affected by the project:

- “ east and west of the existing railway – Landsborough
- “ large crop land bordered by the Mooloolah River and Neill Road – Mooloolah
- “ east of Paget Street in Mooloolah
- “ some rural properties along Neill Road – Mooloolah
- “ north and south of Highlands Road – Eudlo
- “ north and south of Logwoods Road – Eudlo
- “ north of Toby Court – Palmwoods
- “ rural properties along Spackman Lane – Palmwoods
- “ rural properties between Paynter Creek and Taintons Road – Woombye
- “ north of Victory Park – Woombye.

Severance of agricultural holdings and economic impacts are addressed in **Chapter 8, Economic environment**. Approximately 50 of the rural zoned properties affected by a land requirement for the project have been identified as being actively used for grazing, crops or horticultural purposes. The location of Good Quality Agricultural Land was a consideration in the selection of the preferred route for the project.

Infrastructure

Existing infrastructure potentially affected by the project includes:

- “ Telstra optic fibres and copper cables
- “ Optus Vision Stream
- “ ENERGEX cables
- “ Aquagen water supply main.

The proposed Drought Emergency Pipeline (Northern Pipeline Interconnector), which runs to the east of the project, the Energex SunCoast Power project and the Gatton to Gympie gas pipeline will be constructed in the vicinity of the rail corridor. Given the proposed timeframes for these projects, it is assumed that they will be in place by the time of construction of the project. The project is not expected to interfere with the proposed corridors for the Northern Pipeline Interconnector and the future gas pipeline. The Energex SunCoast Power project involves an additional line on an existing easement. The line will cross the project to the north of Eudlo at chainage 92300. However, the project would run in a cut and cover structure at that location and would not impact on the proposed additional transmission line.

Drawings C029 to C034 show the location of the existing and future infrastructure in relation to the existing and proposed rail corridors. The project has been designed to avoid costly relocation of existing infrastructure.

Where linear infrastructure crosses the project, relocation will be necessary. For instance, the Optus (formerly Visionstream) communications cable will be relocated, as it crosses the project in several locations.

The proposed Gatton to Gympie gas pipeline crosses the project at chainage 87000. As it has not yet been designed, and the timeframe for construction is unknown, further design stages for the gas project can be refined to take the project requirements into account. A memorandum of understanding or wayleave agreement between the authority responsible for the pipeline and the future railway is likely to be required, so that the interface between these two infrastructure elements can be safely operated and maintained.

Underground Telstra cables following Logwoods and Highlands Roads cross the project on structure at chainages 90415 and 90960. To the north of the station in Palmwoods, the project on structure will not interfere with water mains, Visionstream Optus cable and Telstra cables it crosses.

At chainage 82200, the overhead electrical cables alongside Gympie Street North will need to be re-instated when the proposed grade separation of Gympie Street North occurs. The water main and overhead electrical cables alongside Blackall Range Road will also need to be re-instated on the bridge over the project at chainage 99670.

Chapter 7, Transport details the impacts of the project on existing roads and bridges. It is proposed that Neill Road in Mooloolah will be realigned. **Table 7.6.1j** of **Chapter 7** lists the proposed new bridges. Where road realignments are required, the associated infrastructure, such as road lighting and signage, will be upgraded to current standards in the affected section.

3.5.4 Mitigation of construction/ initial impacts

The following mitigation strategies have been identified for the construction phase of the project.

Current land use

The following mitigation measures are recommended to address impacts to land use:

- “ provide noise and safety barriers to mitigate noise and any safety hazards during construction, where required (as discussed in **Chapter 15, Noise and vibration**)
- “ provide temporary access for rural properties immediately affected by the railway corridor to mitigate disruption to productivity

- “ identify land use opportunities within the surplus rail land for the potential relocation of businesses affected by a land requirement
- “ provide appropriate compensation for property owners affected by land requirements
- “ provide temporary access to and from commercial, community and open space and recreation areas
- “ ensure regular communication with land owners and relevant stakeholders about the project
- “ ensure timely notification of planned construction activities to avoid impacts to existing land uses in proximity to the corridor, where possible
- “ rehabilitate rural land used for agricultural purposes such as grazing and crops by revegetating affected areas as soon as possible once construction works are complete in an area
- “ stage construction so as to delay the need to relocate commercial businesses, particularly within Mooloolah.

Once the project has been approved, the formal process of land acquisition can begin. Generally, this does not occur until just prior to construction, which is potentially a number of years away, as discussed in Chapter 2, Description of the project. While formal land requirements for this project may not occur for a number of years, property owners directly affected by the preferred route can apply to the Department of Transport and Main Roads in the meantime for a hardship acquisition. Each application will be assessed against the Department of Environment and Resource Management hardship acquisition policy, which can be accessed at www.nrw.qld.gov.au.

Future planned land use

The impacts on planned land use are likely to be minimal, given the long-term nature of the project. However, mitigation during the construction phase of the project will include ensuring that the project is included in the ongoing development of Sunshine Coast's planning scheme and master planning activities.

Infrastructure

Crossing of transmission lines and pipelines will be managed with reference to a safety management plan that will form part of the project construction Environmental Management Plan (EMP). Where relocations are necessary, consultation with service providers will need to be undertaken in relation to the relocation methods. Access points to the existing and relocated infrastructure will need to be maintained at all times.

3.5.5 Operation impacts

Current land use

Once the railway has been completed, there will be no need for further vegetation clearing, land requirement or demolition of dwellings.

Impacts associated with noise, visual amenity, access and vegetation clearance are discussed in:

- “ Chapter 15, Noise and vibration

Noise barriers are proposed to reduce the noise impact of the project on surrounding sensitive land-uses. With the use of mitigation measures, it is expected that the residual noise impact of the project on existing properties would be low adverse.

- “ Chapter 6, Landscape and visual amenity

Impacts on visual amenity would mainly result from the widening of the existing railway corridor or the creation of a new railway corridor bisecting the landscape, vegetation clearance, associated railway infrastructure (bridges, railway on embankment/in cutting, tunnels, signals, level crossings, etc.) and new railway stations.

It is generally proposed to mitigate these impacts through landscaping and sensitive architectural design of bridges, station buildings and other major structures.

- “ Chapter 11, Terrestrial flora

The project involves clearing of 21.7 ha of protected vegetation under the *Vegetation Management Act*.

- “ Chapter 20, Cumulative impacts.

The re-use of parts of the existing railway corridor for alternative uses, in particular for a recreational rail trail, could result in a beneficial impact on pedestrian and cycle movements, recreational land use and the social environment.

Future planned land use

The impact of the project to future planned land uses will have similar effects as outlined for current land use.

Good Quality Agricultural Land

Those areas identified in Section 3.5.3 and Figure 3.2g will be unavailable for agricultural uses, for the life of the corridor. Minimising the impacts to good Quality Agricultural Land was one of the considerations for the selection of the preferred route.

Infrastructure

At the time of operation, it is assumed that the relocation of infrastructure will have been undertaken. Therefore, no ongoing infrastructure impacts are anticipated.

Road reprovisions and changes to the road network are discussed in Chapter 7, Transport.

3.5.6 Mitigation of operational impacts

Current land use

The following mitigation strategies should be implemented during the operation of the project:

- .. rehabilitation of the areas impacted during construction but not required for operation or maintenance of the railway
- .. encourage the establishment of appropriate new uses in the surplus rail land areas adjacent to the railway stations, particularly in Mooloolah, Palmwoods and Woombye
- .. replace and enhance open space and recreation areas lost during construction, in particular in Mooloolah, Eudlo, Palmwoods and Woombye
- .. encourage the provision of a park or open space between the project and the Urban Footprint in Eudlo, that is closely integrated with the Federation Walk area
- .. facilitate pedestrian and cyclist connectivity through the station precincts
- .. integrate existing and future commercial, community and residential areas with the new railway stations where feasible and desirable
- .. provide good-quality noise barriers to minimise noise impacts, particularly in residential and rural residential areas, where identified as required in Chapter 15, Noise and vibration
- .. station precincts and connections to township areas to be incorporate Crime Prevention Through Environmental Design (CPTED) principles.

Further discussion on these mitigation strategies is included in Chapter 21, Special management areas, and Chapter 15, Noise and vibration.

Future planned land use

The following operational mitigation measures should be implemented. It is anticipated that the majority of these will need to be undertaken by the project operator and/or developers:

- .. maintain good-quality noise barriers to minimise noise impacts in future residential and rural residential areas
- .. encourage day and night activities within close proximity to the future rail stations, in association with the land uses identified as part of council's master planning for the townships.

3.5.7 Decommissioning and rehabilitation of the current rail corridor

Impacts of the decommissioning

The realignment of the railway will result in the potential decommissioning of the majority of the existing railway corridor. Impacts of decommissioning corridor land depend on how the land is disposed of/ used in future. Possible impacts of decommissioning are:

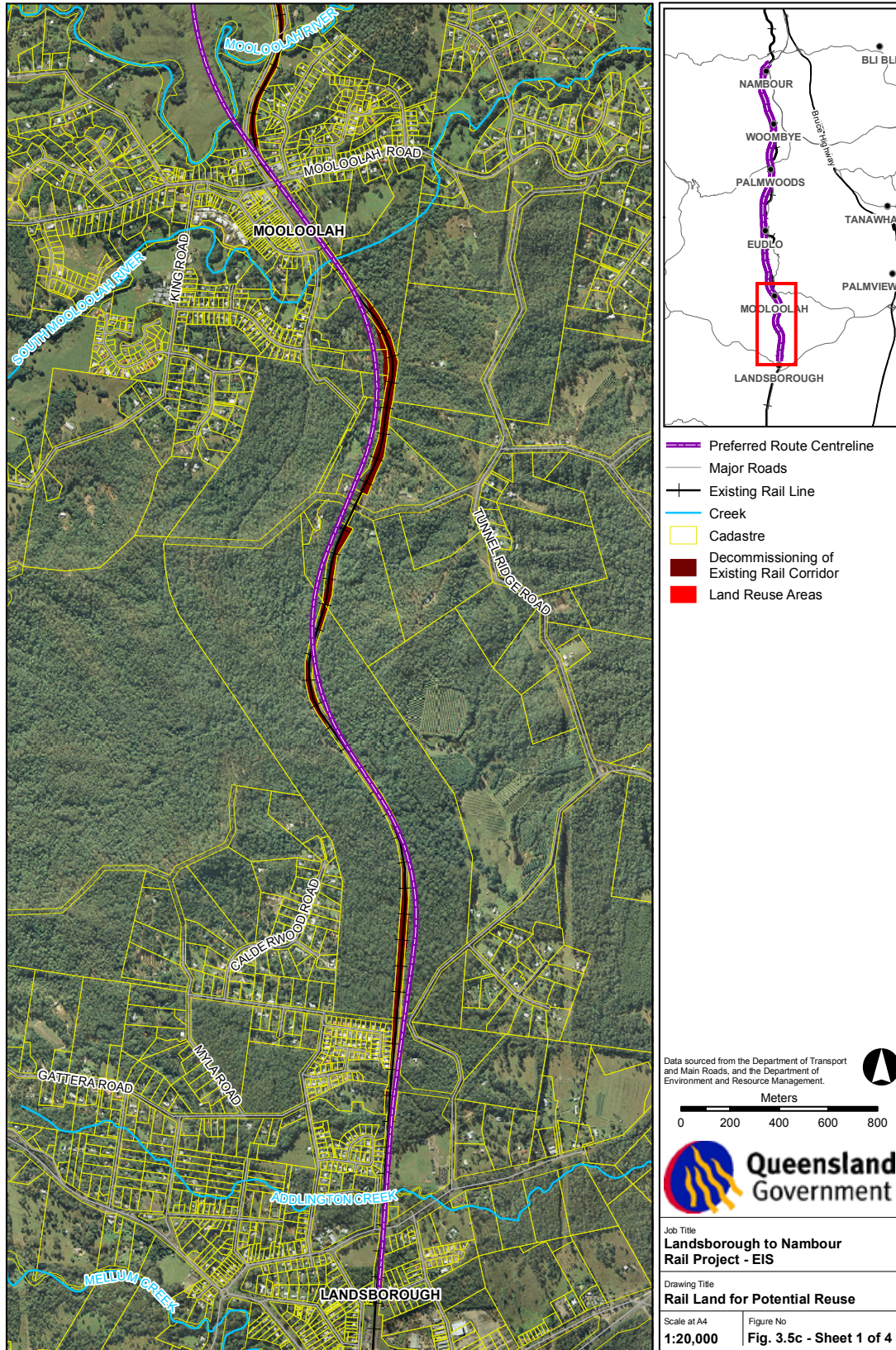
If land is left idle and neglected;	This would result in the lost opportunity for use of decommissioned railway land, resulting in potential weed invasion, and or ongoing maintenance requirements for QR Limited. This may also affect the visual amenity of nearby townships and viewpoints. Therefore, the significance of this impact may be considered moderate adverse.
If land is used for inappropriate or incompatible uses; or	This would result in an inefficient use of land and may cause nuisance or disruption to adjacent uses. The significance of this impact is minor adverse.
If land is used for appropriate and favourable purposes	This would result in the efficient use of land which is of benefit to the townships, the region and may also generate tourism benefits. These uses may include: tourist and recreational routes/ pathways. The significance of this impact is beneficial.

To ensure appropriate use of decommissioned land and stations, land use opportunities has been examined as part of this EIS.

Mitigation of the decommissioning impacts for the railway tracks

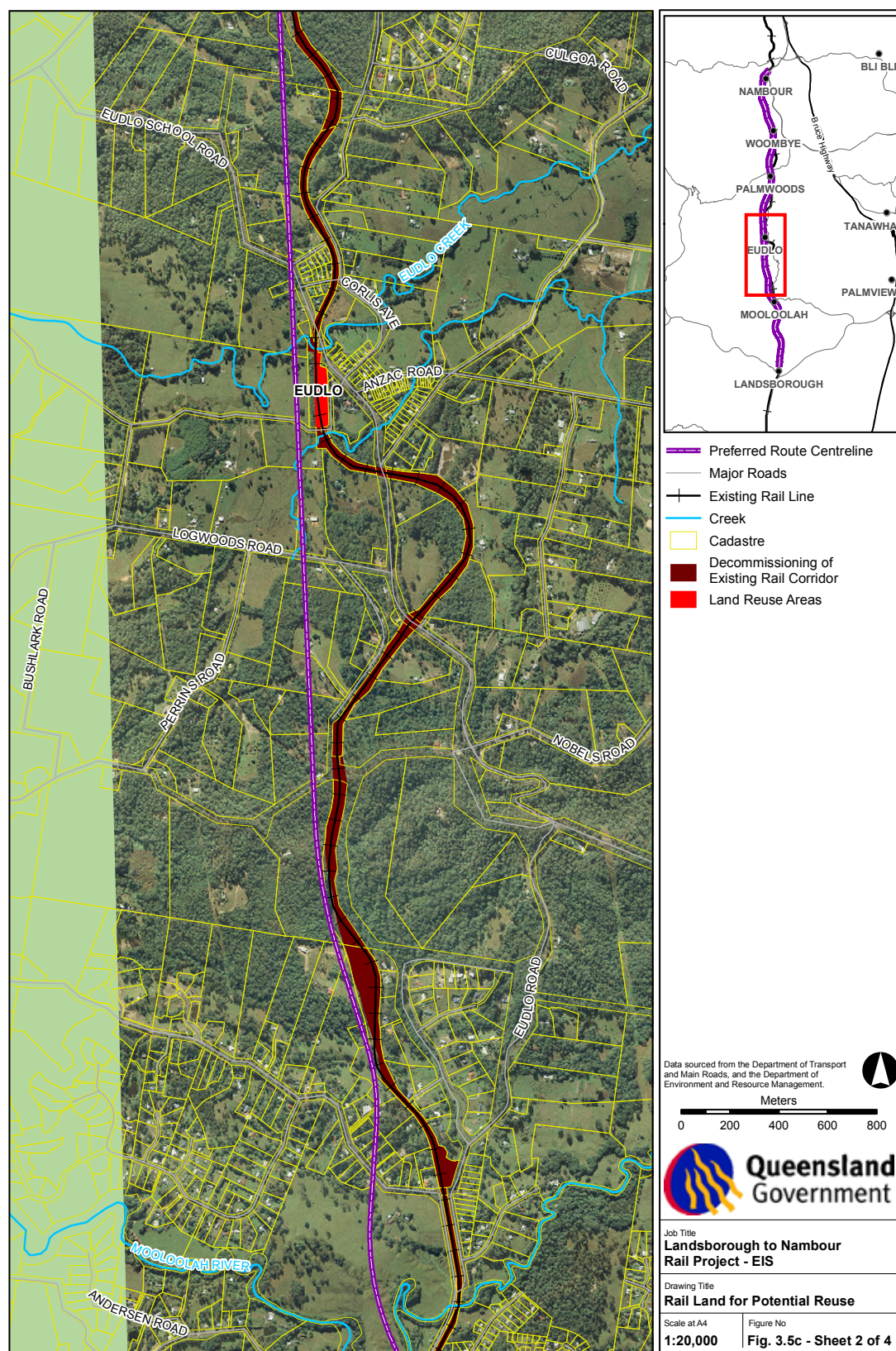
Sections of the current rail corridor which could be decommissioned upon commissioning of the project are shown on Figure 3.5c. The decommissioning of the existing railway offers an opportunity for rehabilitation and reconnection of previously fragmented vegetation. Recreational uses such as walk, cycle, and equestrian tracks would allow for rehabilitation of decommissioned corridor land and create scope for attracting visitors to the area. Such tracks, referred to as 'rail trails', can be linked to existing tracks around the area, and are particularly suitable for the areas around Landsborough, Mooloolah and Eudlo due to their scenic landscapes and existing equestrian activity.

Figure 3.5c: Rail Land for Potential Reuse



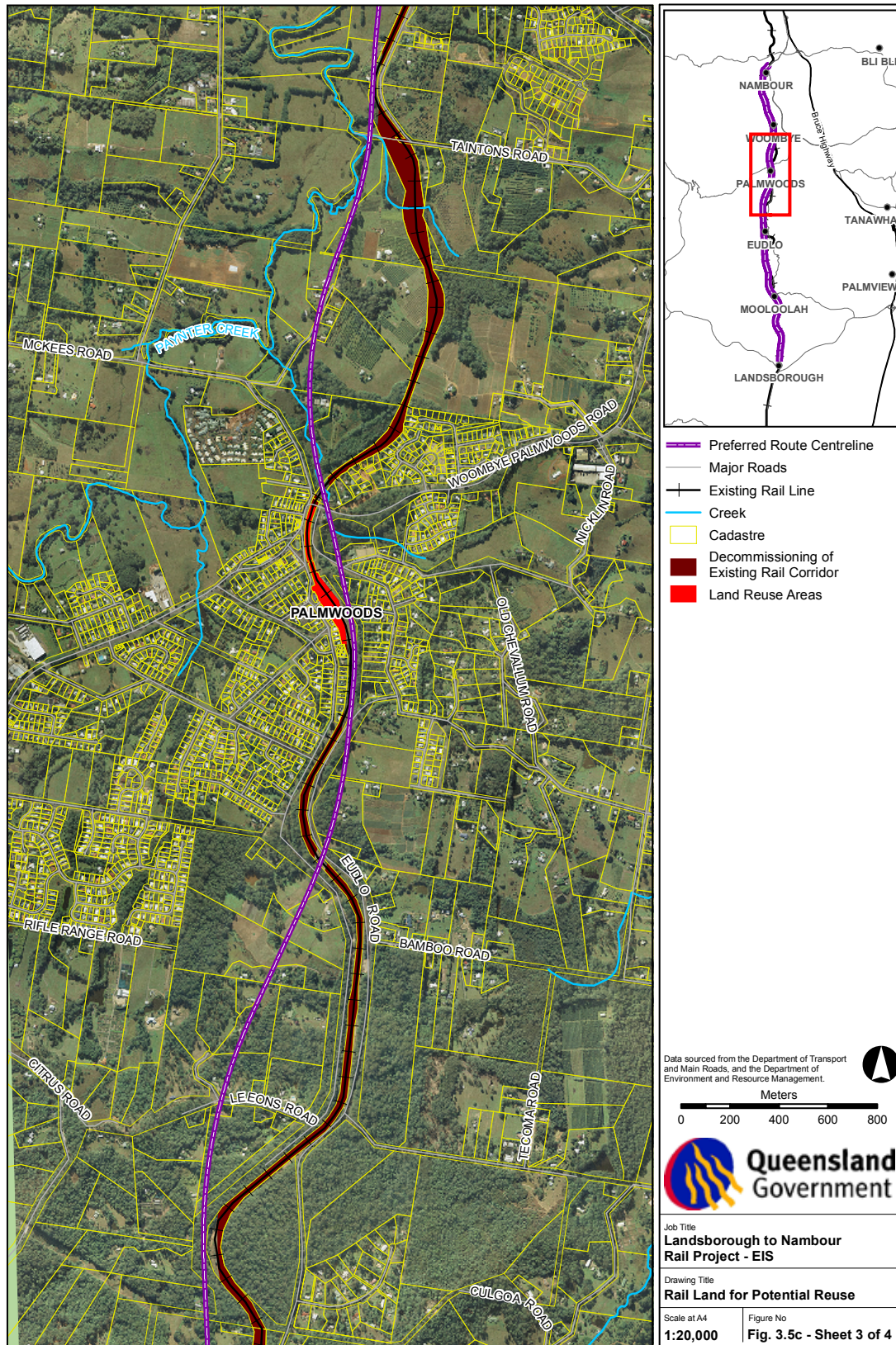
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Figure 3.5c: Rail Land for Potential Reuse



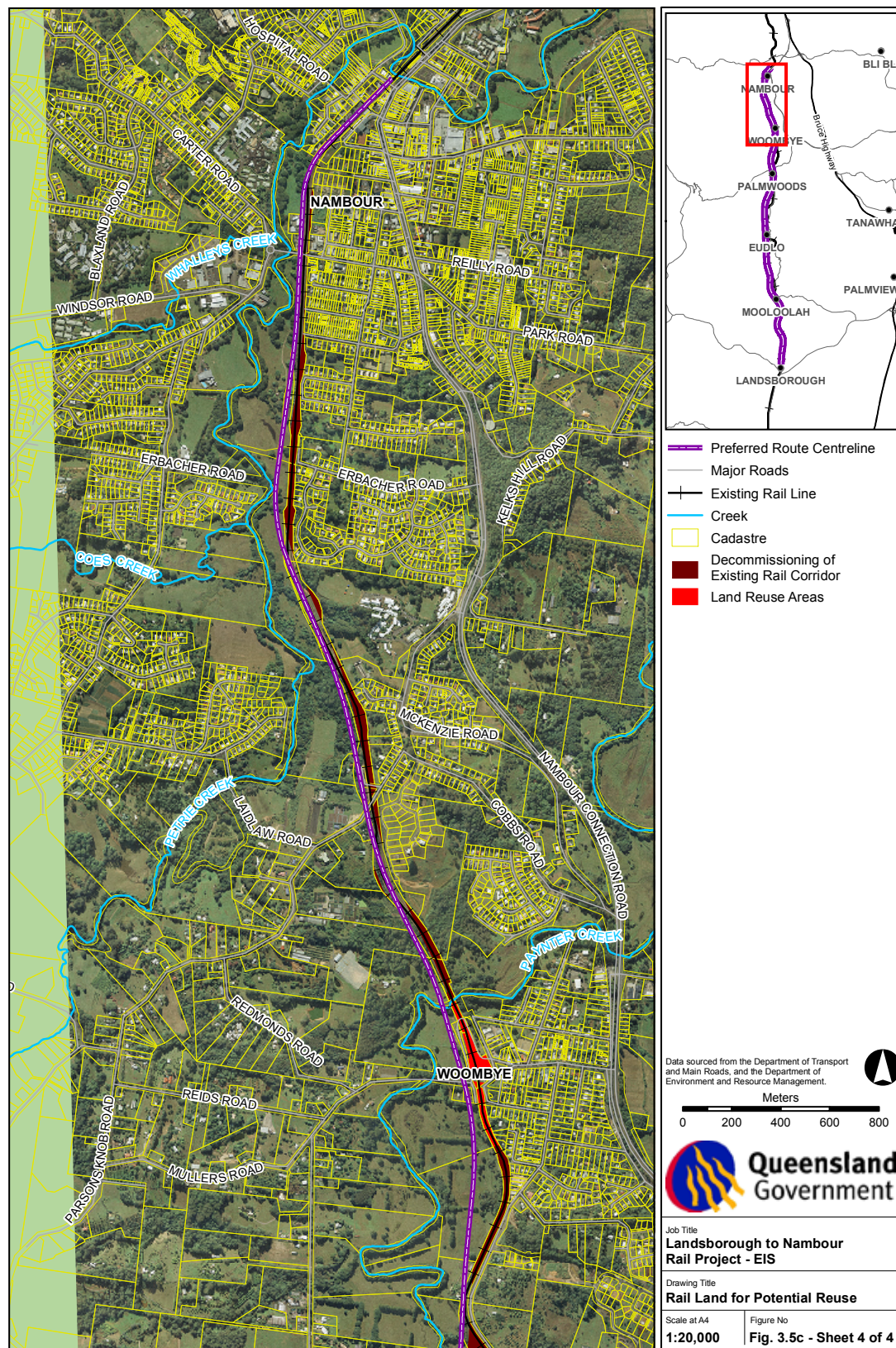
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Figure 3.5c: Rail Land for Potential Reuse



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An existing recreational path exists along the historic rail corridor through Dularcha National Park, to the east of the existing operational rail corridor. Figure 3.5d shows the proposed heritage rail trail in relation to other tourist routes.

Figure 3.5d: Possible rail trail linking the townships



These uses would also support and connect existing recreational and open space areas in the townships, such as the skate park adjacent to Eudlo station. This could potentially have lifestyle and health benefits, providing opportunities for walking, cycling and horse riding, at comfortable grades, between settlement areas. This is further discussed in **Chapter 7, Transport**.

However, the development of rail trails will need to be undertaken in association with any proposed rehabilitation where the existing railway crosses creeks or rivers, and the benefit of removal of bridge structures and rehabilitation of waterways has been identified. This is discussed in **Chapter 20, Cumulative impacts**.

This project provides the opportunity to address segregation and accessibility problems created by the railway line at Palmwoods. To improve connectivity throughout the town, it is recommended that walk and cycle paths be developed along the decommissioned corridor with east-west links stemming off the main route. This recommendation would also apply to the decommissioned railway corridor from Woombye through to Nambour, as it would improve non-motor vehicle accessibility to the Woombye Township, and in

particular to the new station, where a mixed-use precinct is also envisaged. This would address the town's issues with connectivity and accessibility between Nambour and Woombye, which were expressed during consultation, at a pedestrian and cyclist level. This is further discussed in **Chapter 7, Transport**.

The issue of contaminated land within the rail corridor will need to be addressed in association with proposed future uses, for both recreational trails and reuse of railway areas in townships.

Figures 3.5e to 3.5j show a mix of layouts and types which could be considered for this project, however, it would depend on the location of the path as to the amenities provided. For instance, paths approaching/departing from the towns would be more likely to include seating, cover structures and more formed paths. Between towns it would be more likely to include the decomposed granite/ cleared paths. Interpretation signage can be included along the paths to highlight features i.e. tunnels, fauna, flora, railway and local history. The following figures show examples of use of other trails in Queensland as well as the existing trail in Dularcha National Park.



Figure 3.5e: Dularcha National Park Rail Trail - Approaching the tunnel from the Landsborough end. (June 2006, Andrew Graham, source: www.railtrails.org.au)



Figure 3.5h: Brisbane Valley Rail Trail - Leaving Blackbutt (A.M. 2007, source: www.railtrails.org.au)



Figure 3.5f: Watawa Recreation Trail Road - crossing at Cemetery Road (Peter Watling, source: www.railtrails.org.au)



Figure 3.5i: Brisbane Valley Rail Trail - Start of the trail at Fernvale (A.M. 2007, source: www.railtrails.org.au)



Figure 3.5g: Brisbane Valley Rail Trail - Between Lowood and Fernvale - (Leon Steinhardt, 2004, source: www.railtrails.org.au)



Figure 3.5j: Brisbane Valley Rail Trail - between Benarkin and Linville (A.M. 2007, source: www.railtrails.org.au)

Mitigation of the decommissioning impacts for the old railway stations

Mooloolah, Eudlo, Palmwoods and Woombye Stations would be decommissioned. Changes to the locations of the stations are as follows:

- “ Mooloolah – rebuild close to existing station location
- “ Eudlo – relocated to the west
- “ Palmwoods – relocated to the east
- “ Woombye – relocated to the west

The existing structures at Eudlo and Woombye are considered to be generally unsuitable for continued use as railway stations, and thus are not proposed for relocation or reuse as part of the new stations.

The preservation and reuse of the Mooloolah waiting shed and pedestrian overbridge would need to be considered in the context of their heritage value and cultural significance. This is further discussed in Chapter 10, Cultural heritage and Chapter 21, Special management areas.

Within the area of railway corridor land identified as potentially available for reuse after decommissioning of the existing railway, the reuse of the existing railway buildings at Palmwoods station should be a key consideration in the development of this area. There are a number of railway buildings associated with the Palmwoods station precinct that may have future community or commercial uses, subject to their structural integrity and health and safety considerations. Uses which may be considered appropriate include art galleries, cafés, museums, community spaces or commercial purposes. This is further discussed in Chapter 10, Cultural heritage and Chapter 21, Special management areas.

Mitigation of decommissioning impacts for the surplus railway land

As a result of the decommissioning of the existing railway, approximately 7.2 ha of surplus railway land will be available for other uses in the townships. Possible uses are recommended for the surplus rail land, which could be incorporated in council master planning.

Mooloolah

A small area of land on the west and adjacent to the existing railway station has been identified for potential future use. This is shown in Figure 3.5k. Initial land use and urban design investigations have identified that this area may be suitable for the future development of a small commercial/ mixed use precinct, integrated into the future station development at Mooloolah Station. The future grade separation of Mooloolah Connection Road to Jones Street may impact on the access to this area, however future detailed design and master planning

work is expected to determine an appropriate land use mix and road network hierarchy. This potential mixed use/ commercial area could be developed in the event that the fourth track is required in Mooloolah, which would impact on commercial property on the corner of Karanne Drive. Further discussion on the planning for the future land use of surplus rail corridor land in Mooloolah is contained in Chapter 21, Special management areas.

Eudlo

As shown in Figure 3.5l, approximately 1.9 ha of rail land along the existing corridor between Highlands Road and Rosebed Street at Eudlo would also be available for reuse after decommissioning of the existing railway. As this area is within the urban footprint, there is opportunity for development to occur here. However, consultation with council has identified that the future growth potential for Eudlo is limited, and therefore uses in this surplus rail land are likely to be community based, focused on open space and recreational opportunities. The integration of these areas, with Federation Walk and is a preferable outcome for this area.

Palmwoods

As the project is located slightly to the east of the existing railway through Palmwoods, a significant area of rail land (approximately 2.7 ha) along Main Street would become available upon decommissioning of the existing railway, as shown in Figure 3.5m. It is recommended that some of this land be used for open space or recreational purposes to enhance connectivity to the neighbouring Kolora Park and the access to the new station. Given the terrain and size of the area, it may also be possible to integrate some mixed use development opportunities into this area, including commercial/retail and community purposes. It may also be possible to integrate this area with the existing Main Street area, which currently only supports development on the western side.

Woombye

As the railway would be realigned to the west in Woombye, approximately 2.5 ha of rail land along Back Woombye Road would be made redundant as shown in Figure 3.5n. There is scope to develop this area as a new mixed-use precinct. However, as part of the sports fields to the east of the existing alignment would be resumed, some of the sporting activities located to the west could potentially be relocated here. If the area or dimensions of the land that becomes available after decommissioning is not appropriate for relocation of these facilities, further investigations would need to be undertaken so that new facilities can be established and operational prior to the commencement of construction.

Figure 3.5k: Mooloolah Future Landuses



Figure 3.5I: Eudlo Future Landuses

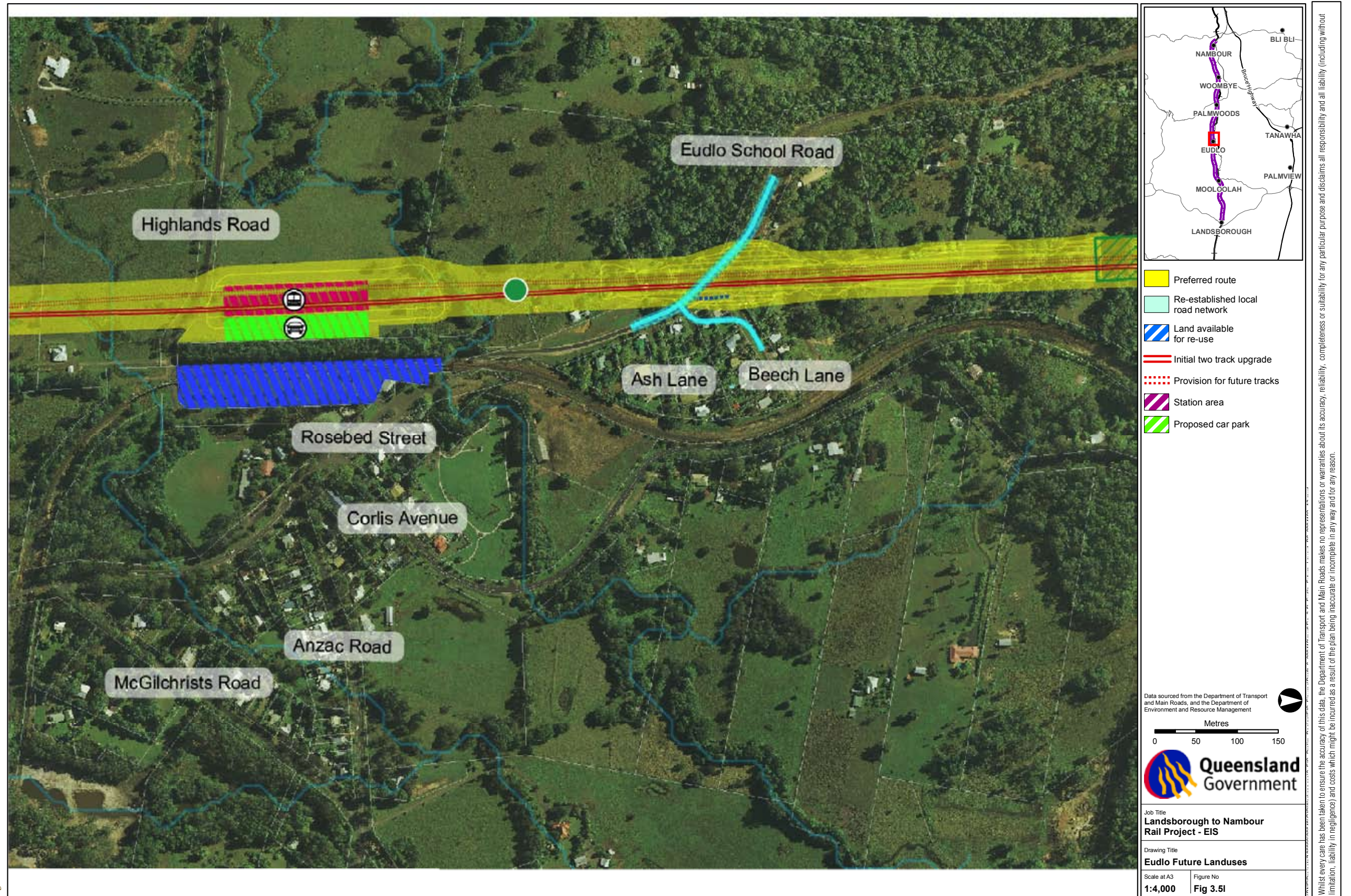
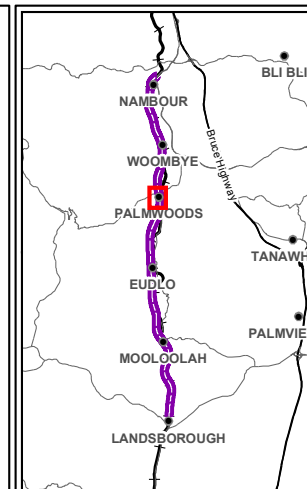
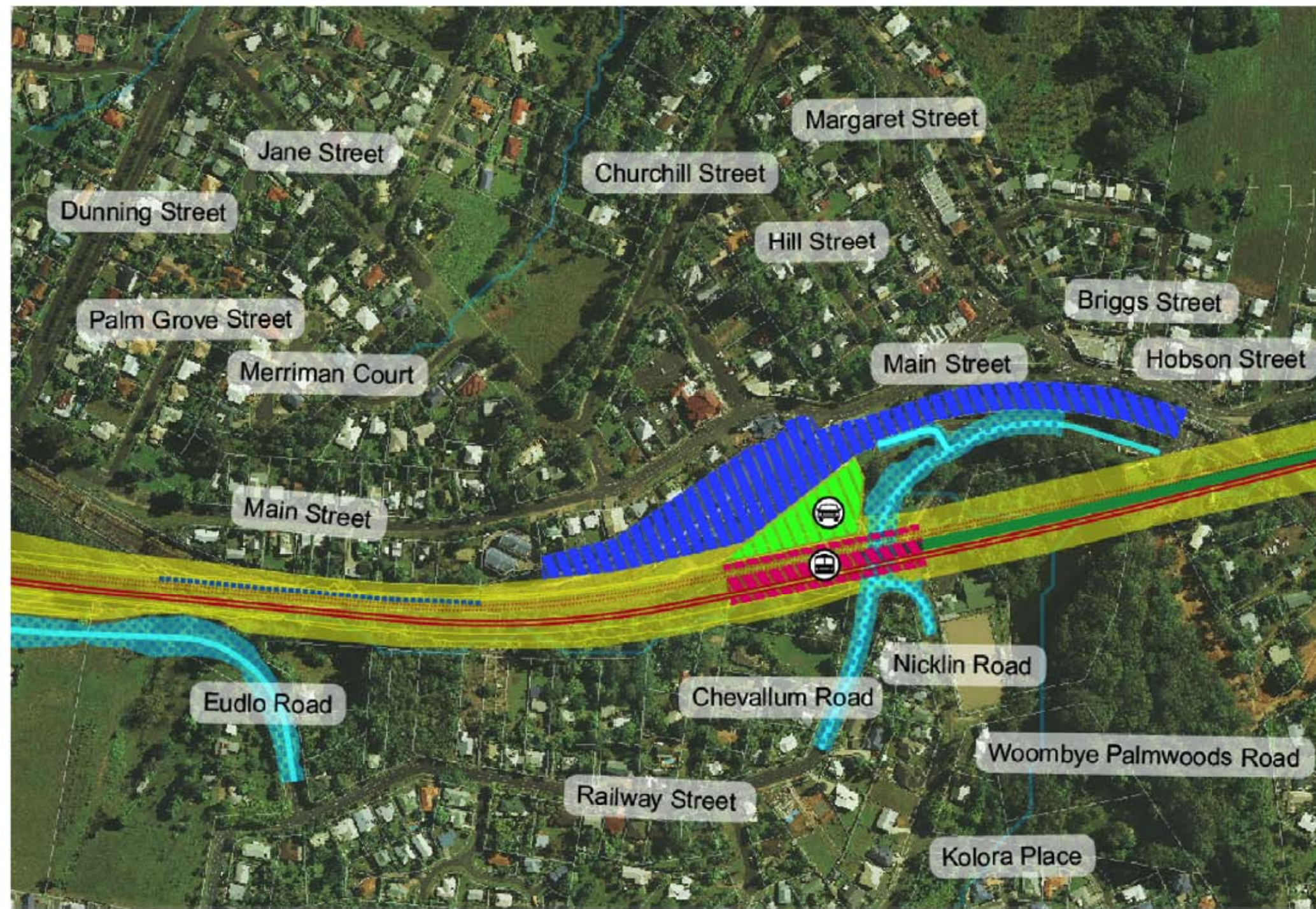
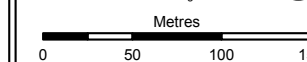


Figure 3.5m: Palmwoods Future Landuses



- Preferred route
- Re-established local road network
- Land available for re-use
- Initial two track upgrade
- Provision for future tracks
- Station area
- Proposed car park

Data sourced from the Department of Transport and Main Roads, and the Department of Environment and Resource Management



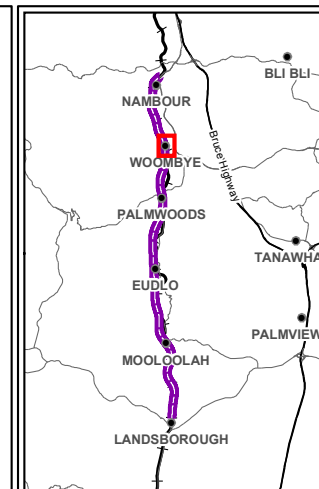
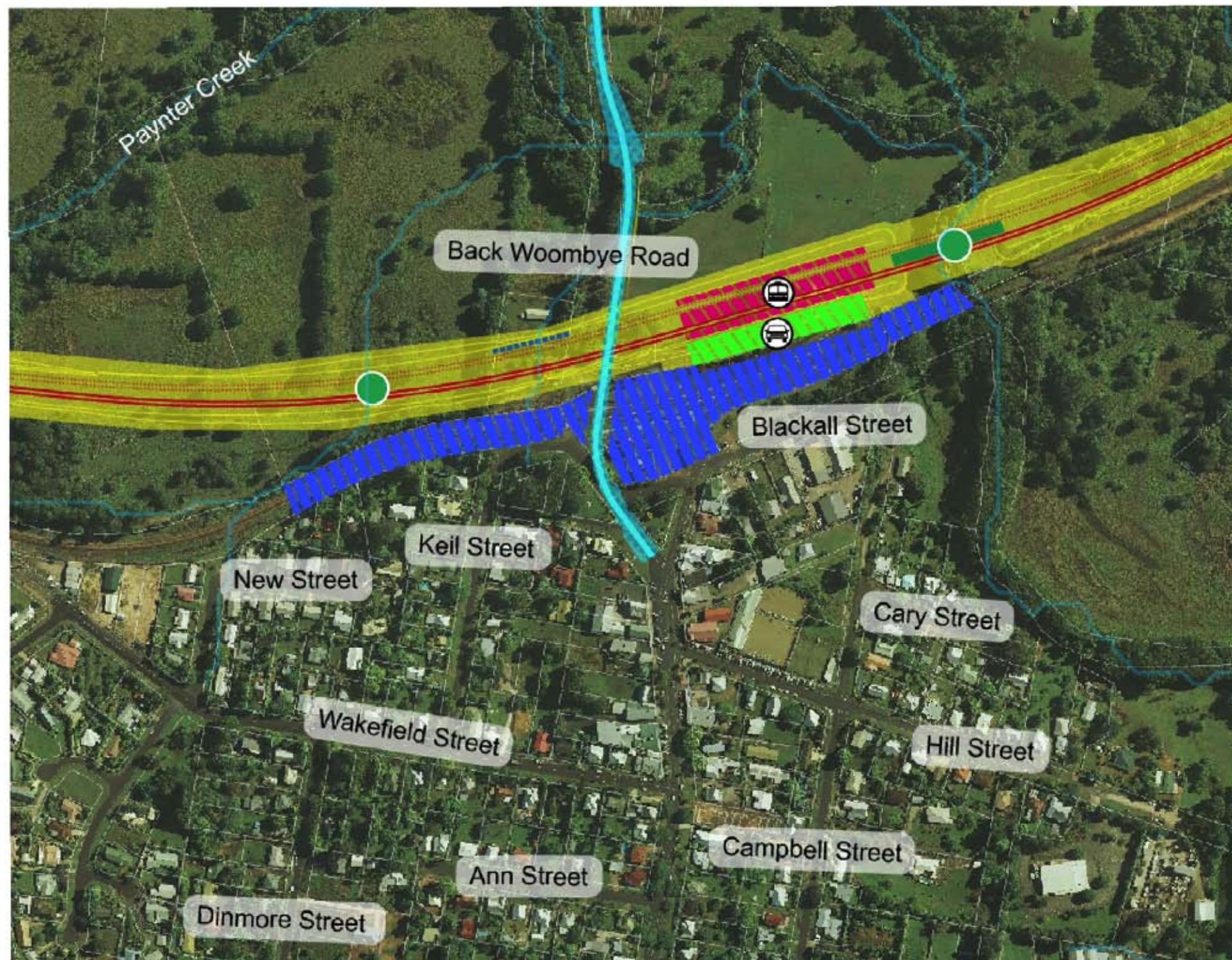
Job Title
Landsborough to Nambour Rail Project - EIS

Drawing Title
Palmwoods Future Landuses

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Figure No
Fig 3.5m

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- Preferred route
- Re-established local road network
- Land available for re-use
- Initial two track upgrade
- Provision for future tracks
- Station area
- Proposed car park

Data sourced from the Department of Transport and Main Roads, and the Department of Environment and Resource Management

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Job Title
Landsborough to Nambour Rail Project - EIS

Drawing Title
Woombye Future Landuses

Scale at A3
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Fig 3.5n

Figure 3.5n: Woombye Future Landuses

3.5.8 Residual impacts

As described in Chapter 1, Section 1.8.1, residual impacts are assessed after the mitigation or management measures have been applied to the element affected.

Construction

The residual impacts to land use and infrastructure have been assessed as moderate adverse based on the significance criteria listed in Table 3.1.4.

Operation

The residual impacts to land use and infrastructure have been assessed as beneficial based on the significance criteria listed in Table 3.1.4.

Decommissioning

As the recommended uses of decommissioned land are non-obtrusive and considered compatible with the activities and character of the towns, the decommissioning of the railway would not adversely impact on the project area. Redundant/surplus rail land which is strategically located within the townships has been identified as potentially suitable for future use and would also provide opportunities to mitigate the land use impacts of the project. For instance, existing uses that would be impacted by the project could be relocated to the decommissioned land (e.g. Mooloolah).

Furthermore, the opportunities arising from the decommissioning, such as the creation of walking and cycling trails are compatible with surrounding sensitive land-uses and could be greatly beneficial to the project area, resulting in a beneficial residual impact.

3.6 Summary and conclusions

Currently, land uses surrounding the project are characterised by residential development clustered around economic and community service centres in each of the towns. The density of residential development disperses on the town fringes into a rural landscape which comprises rural residential properties.

The project would generate some impacts to the various land uses in the area as certain aspects of the project may be considered incompatible with some adjacent land uses. Further, due to the linear nature of the rail infrastructure, it has not been possible to avoid the loss of residential, rural, commercial, industrial, open space and recreation areas. The project would result in land acquisition, possible land fragmentation and temporary disruption to some commercial and rural activities. Residents may also experience noise and air quality issues, which are addressed in Chapters 15, Noise and vibration and Chapter 16, Air quality, respectively.

The future land uses surrounding the project area identified in the SEQRP, The (former) Caloundra Draft LGMS and (former) Maroochy Draft LGMS Strategy may also be affected by the project. Plans for the project area which may be impacted or enhanced by the project include:

- “ to develop mixed density housing within 800 metres of Landsborough Station
- “ to develop low density housing between the project and Paget Street, in Mooloolah
- “ to develop a sport and recreation ground in Palmwoods and develop the township as a community and public transport hub
- “ to develop Woombye as a community and public transport hub
- “ to support Nambour's development as a Major Activity Centre.

This chapter has proposed strategies to mitigate the identified potential impacts. Table 3.6 outlines the potential impacts, mitigation strategies and the significance of the residual impacts.

Table 3.6: Summary of impacts and mitigation

Potential Impact	Mitigation Strategy	Residual Impact Significance
Land requirement impacts on land tenure, including severance	<ul style="list-style-type: none"> compensate owners of properties affected by a land requirement identify opportunities for land swaps or property amalgamations, however agreements should not be entered into until after construction is complete maintain access between severed portions of properties wherever possible, determining most appropriate solution in consultation with landowner during the detailed design stage. 	Low adverse
Construction impacts on current and planned uses and infrastructure	<ul style="list-style-type: none"> provide noise and safety barriers to mitigate noise created by the construction of the project (as outlined in Chapter 15, Noise and vibration) provide temporary access to properties immediately affected by construction follow the Queensland Government legislation and guidelines for the acquisition of properties affected by a land requirement for the project implement the formal land acquisition process to acquire the necessary land for the project ensure regular communication with land owners and relevant stakeholders ensure timely notification of planned construction activities manage crossing of transmission lines and pipelines with a safety management plan that will form part of the project EMP conduct consultation with PUP providers regarding relocation methods for infrastructure requiring relocation. 	Moderate adverse
Operation impacts on current and planned uses	<ul style="list-style-type: none"> identify potential land use opportunities for areas of surplus railway land after decommissioning of the existing railway, for further consideration by the SCRC as part of its master planning develop station precincts that enhance walkability and access within the townships encourage the integration of existing and future commercial, community and residential areas into the new station precincts where appropriate and in character with the township provide good quality noise barriers to minimise noise impacts, particularly in residential areas, including future residential areas provide day and night activities within close proximity to the future rail stations. 	Negligible to beneficial
Decommissioning impacts on land use, safety, and aesthetics	<ul style="list-style-type: none"> ensure unobtrusive and appropriate use of decommissioned railway land and stations rehabilitate and reconnect previously fragmented vegetation encourage the historic value of stations to be a key feature in the future land use potential of areas of decommissioned railway land, and consider the possibility of relocation and reuse of station buildings (particularly at Palmwoods) as galleries or cafés. 	Beneficial