CoastConnect
Caloundra to Maroochydore
Concept Design and Impact Management Plan – In Brief
Summer 2010/11
Purpose

The Department of Transport and Main Roads has prepared and finalised a Concept Design and Impact Management Plan (CDIMP) for the CoastConnect - Caloundra to Maroochydore project.

The CDIMP provides a breakdown of the project’s anticipated benefits and impacts, including typical mitigations for potential impacts that will be addressed in future detailed design and construction phases.

This ‘In Brief’ is an easy-to-understand summary of the main findings of the CDIMP.

For a more detailed look at the project’s anticipated benefits, potential impacts and proposed mitigation measures please refer to the corresponding chapters in the complete CDIMP.

You can obtain a CD copy of the CDIMP by calling the project team on 1800 848 000 (*Freecall) *Higher rates apply from mobile phones and pay phones or by visiting the CoastConnect website www.tmr.qld.gov.au/coastconnect.

Hard copies of the CDIMP are also available at Maroochydore, Kawana and Caloundra libraries.
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Introduction and overview

The Sunshine Coast is a great place to live, work and play – and we want to keep it that way.

The Queensland Government is planning and delivering a balanced transport system to help manage the massive growth pressures facing our region. Currently, the Sunshine Coast has the lowest rate of public transport use in South East Queensland. In the future, we will need to move more people more efficiently or pay the price of worsening congestion and poorer air quality.

CoastConnect will provide an attractive and sustainable alternative to the car – helping to keep the Sunshine Coast clean and green into the future.

What is CoastConnect?

CoastConnect is a Queensland Government initiative to improve public transport and sustainable travel on the Sunshine Coast. It is an important part of the Queensland Government’s long-term plan to meet the transport needs of the fast-growing Sunshine Coast by providing faster and more reliable public transport options.

This project proposes a mixture of transport infrastructure improvements to suit different parts of the coast, including:

- bus lanes – dedicated lanes for buses and emergency vehicles
- bus queue bypasses – an additional length of lane to enable buses to bypass the traffic waiting at traffic lights
- dedicated on-road cycle lanes
- bus stations in key activity areas
- bus stop upgrades.

The need for CoastConnect is outlined in the South East Queensland Regional Plan 2009-2031 (Department of Infrastructure and Planning 2009), the South East Queensland Infrastructure Plan and Program 2010-2031 (Department of Infrastructure and Planning 2010), the draft Connecting SEQ Plan 2031: an Integrated Regional Transport Plan (Transport and Main Roads 2010) and the Translink Network Plan 2010 (Translink Transit Authority 2010). The South East Queensland Infrastructure Plan and Program 2010-2031 estimates the staged delivery of the project will occur between 2014 and 2019.
Possible connection to Caloundra rail station. Location of station subject to further investigation.
Planning so far
Planning for this project began in late 2007. Since then, the department has worked closely with the local community to develop the concept designs. We have consulted on draft concept designs on two separate occasions (in September 2008 and then in mid–2009). We have considered both community feedback and the results of technical studies and have finalised the concept design.

The impact management plan contains a preliminary analysis of the project’s anticipated benefits and impacts, including typical mitigations to address potential impacts. These will be developed in future detailed design and construction phases.

Update on options
The draft plans released in mid-2009 contained options at Mooloolaba and Alexandra Parade. To ensure local values and visions are achieved in Mooloolaba, the Sunshine Coast Regional Council is now leading the planning through this section. Council will continue to work with Transport and Main Roads to ensure a balanced outcome in this section. Along Alexandra Parade, the preferred option is to provide bus queue bypass lanes at major intersections and a new set of signals at Mari Street. Provision of bus lanes and a realignment of Okinja Road are no longer being considered.

Following community feedback, a realignment of Alexandra Parade near Boolarong Crescent is now preferred. This will provide some much-needed pedestrian space on the beach side.
The need for the project

One of the things people love about the Sunshine Coast is being able to easily move around to make the most of the great coastal lifestyle. The coast does not yet face the major congestion problems that other cities face.

If plans are not put in place to manage the massive growth pressures facing the region, it may not always be this way.

In 2007, the estimated resident population of the Sunshine Coast Regional Council area was 303,050 people. However, population growth projections suggest the population in 2031 could be as high as 558,880 people. That is an increase of up to 84% between 2007 and 2031.

This massive growth brings with it the need to move more people more efficiently between the key centres of Caloundra, Kawana, Mooloolaba and Maroochydore.

The principal challenge for the region is to manage this growth in ways that will sustain the Sunshine Coast’s lifestyle.

Better public transport will:
- make sure the Sunshine Coast keeps moving
- improve mobility for those without ready access to a car
- cater for the increasing number of people who are choosing to travel in a more sustainable way.

We need a balanced transport solution to effectively manage our rapidly growing population. That means the right mix of good roads and quality public transport.

The Queensland Government is planning major improvements to the road network on the Bruce Highway, Sunshine Motorway and future Multi-Modal Transport Corridor. But we also need to plan ahead to make sure public transport is an attractive option.

Moving more people more efficiently will mean fewer car trips, less congestion and less pollution.

Planning for better public transport now is a smart way to make sure we keep the Sunshine Coast clean, green and attractive – just the way we all like it.

In 2031, the projected population is expected to be as high as 558,880 people. That is an increase of up to 84% between 2007 and 2031.

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1. Planning Information and Forecasting Unit, Population and Housing Fact Sheet [Sunshine Coast Regional Council], Department of Infrastructure and Planning, March 2009.
Part of a balanced transport system

The Queensland Government has a comprehensive transport plan for the Sunshine Coast. The transport network on the Sunshine Coast must mature to cater for future growth and provide adequate access between key community facilities, emerging residential areas and the existing coastal activity centres.

Importance of the Multi-Modal Transport Corridor

This corridor is planned to contain a new high-speed arterial road and a rail line (also known as CAMCOS) between Caloundra and Maroochydore. Together with CoastConnect, these projects are the key to the Sunshine Coast’s transport future.

Once built, the Multi-Modal Transport Corridor road and rail line will ‘do the heavy lifting’ in terms of moving the majority of commuters at high speed between Caloundra and Maroochydore and beyond (see Figure 3 for diagram). These are large scale transport projects and are subject to more planning and analysis for delivery in the longer term. CoastConnect is designed to cater for a higher proportion of local trips by local residents, shoppers and tourists.

There is a risk that as the coast grows, more cars and more congestion could mean that the CoastConnect corridor could grind to a halt. The bus lanes, bus stations and the bus priority at some intersections are designed to make sure this does not negatively impact future bus travel. CoastConnect will ensure that no matter how congested these roads become in the future, buses will have a level of priority that will provide the community with a reliable and efficient bus service.
Benefits

CoastConnect will make public transport more:

- **Reliable**: Buses will have their own space in the transport network, making them more efficient and reliable.
- **Frequent**: More bus services will take you where you want to go between Caloundra and Maroochydore.
- **Comfortable**: New stations will be built at Maroochydore, Kawana, Currimundi and Caloundra and improvements will be made to over 70 bus stops.
- **Accessible**: Additional stops, more accessible locations and feeder bus services to main transport routes.

Better public transport means:

- **Less congestion**: More reliable and frequent bus services means more people will leave the car at home and take the bus instead.
- **Cleaner air**: Fewer cars on the road means less exhaust emissions and better air quality for everyone.
- **Better access**: CoastConnect will improve connections to where people live, work and play, particularly for those people who don’t have a car or choose to travel more sustainably.
- **A stronger economy**: Faster and more reliable travel times stimulate economic growth through improved productivity. Also, better public transport will help promote the Sunshine Coast as a place that is easy to get around – that is good for tourism and good for business.
- **A healthier community**: Public transport fosters a more active lifestyle by encouraging people to walk or cycle to stops and stations. New cycle lanes are proposed as part of the project.
When will it be built?

The CoastConnect project is proposed to be built in stages. This is a major benefit of bus-based transport improvements – they can be built as needed and as funding becomes available. This means public money can be spent effectively when and where it is most needed. The timing of other transport and local development projects are also important considerations where staging is concerned.

The South East Queensland Infrastructure Plan and Program 2010-2031 indicates that the CoastConnect – Caloundra to Maroochydore improvements are planned to be completed in stages between 2014 and 2019. As with all major infrastructure projects, the availability of funding will depend on competing infrastructure priorities across the state and is subject to future government consideration.

This staging information is indicative only. The project’s staging and delivery timings are subject to ongoing review and investigation. The Queensland Government will decide on staging priorities after a complete analysis of the project’s anticipated economic benefits and impacts, with key dates to be announced in the future.

Maroochydore Bus Station

The Maroochydore bus station was identified as a priority during concept planning for the CoastConnect project to address the inefficient bus facility currently located within Sunshine Plaza.

Design of the station is expected to be finalised by late 2010 and construction is expected to be finished in late 2011.

The new bus station will address the safety and capacity constraints at the existing station and be built to TransLink’s high safety and quality standards.

For further information please contact the project team:

Phone: 1800 192 112 (freecall) *Higher rates apply from mobile phones and pay phones
Email: maroochydore@tmr.qld.gov.au
Possible connection to Caloundra rail station. Location of station subject to further investigation.
Consultation

Extensive community consultation has been undertaken to help guide the planning and ensure the project meets the needs of existing and future residents and public transport users.

Comments from the community, property owners and stakeholders, along with the results of technical studies, have been used to refine the plans during the life of the project. The consultation program for the project consists of four separate phases (see table below).

A number of methods were used to inform and consult with the community, including the establishment of a project hotline, email, reply paid postal service, website, print and radio advertisements, newsletters, direct mail letters to key stakeholders and property/business owners, individual meetings, flyers, fact sheets, feedback forms, information kits, project displays, information sessions, a stakeholder liaison group and a community reference group.

Between late 2007 and August 2009, the project team received 330 formal written submissions and had one-on-one discussions with more than 1000 community members and stakeholders.

Based on the feedback, the community generally wants the project to make bus trips faster and more reliable, reduce impacts on property and parking, minimise impacts on Alexandra Parade and Aerodrome Road, and ensure construction impacts can be appropriately mitigated. The principal issue from community consultation was the proposed solution for Alexandra Parade and Aerodrome Road.

Based on community feedback and the results of technical studies, the draft plans were revised to minimise impacts on these areas.

Property and business owners from whom a potential land requirement exists were priority stakeholders and received the highest level of consultation and communication with the project team. Individual letters and meetings were organised to ensure issues could be dealt with in private and with confidentiality.

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<thead>
<tr>
<th>Phase</th>
<th>Subject of communications</th>
<th>Timing</th>
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<tbody>
<tr>
<td>One</td>
<td>Terms of Reference</td>
<td>19 November to 16 December 2007 (completed)</td>
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<tr>
<td>Two</td>
<td>Draft plans</td>
<td>8 September to 17 October 2008 (completed)</td>
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<tr>
<td>Three</td>
<td>Revised draft plans</td>
<td>29 June to 7 August 2009 (completed)</td>
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<tr>
<td>Four</td>
<td>Close out</td>
<td>Summer 2010/11 (underway)</td>
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Consultation statistics (late 2007 to August 2009):

- 330 submissions
- 188 project and property hotline calls
- 182 feedback forms
- 385 attendees at information sessions and displays
- 267 property meetings
- 197 calls to property owners.
Key findings of the CDIMP

The CDIMP contains the results of preliminary transport, social, economic and environmental studies. It identifies benefits, impacts, and typical impact management strategies to the level required to allow the state government to preserve the corridor for future construction. In general, more detailed impact management planning will be undertaken just prior to construction.

Transport and traffic

Planning to protect our lifestyle

The population is growing and the number of trips between Caloundra and Maroochydore is increasing. To ensure we have a balanced transport system that helps maintain the great coastal lifestyle, we need to take steps now to plan for a better public transport system for the future. Better public transport will make sure the coast keeps moving, improve mobility for those without ready access to a private car and cater for those who choose to travel in a more sustainable way.

The Sunshine Coast doesn’t yet face the major congestion problems of other cities – it’s still relatively easy to move around the coast. But if we don’t put plans in place to deal with the massive growth pressures facing the region, it won’t always be this way. We need to plan for the future.

Better bus travel for local residents, tourists and shoppers

CoastConnect caters for both express services between Caloundra and Maroochydore and for shorter, all-stop services. For express services travelling between Caloundra and Maroochydore, new bus lanes along Nicklin Way will make these trips quicker and more reliable. Express services will use the Sunshine Motorway-Nicklin Way corridor. For all-stop bus services, intersection improvements along Alexandra Parade and Aerodrome Road will improve these shorter journeys.

CoastConnect = reliability

As the Sunshine Coast grows, traffic congestion will become a daily reality, not just something that happens during holiday peaks. Pretty soon, car drivers and bus passengers may have to get used to the everyday congestion and plan for it. The bus priority measures provided for by CoastConnect will improve the reliability of bus services and their ability to stick to the scheduled timetable. This means public transport users can expect to reach their destination on time more often and with fewer significant delays.
What transport modelling tells us

A transport and traffic analysis was undertaken to assess the transport benefits and impacts of the project. The modelling shows that the project will increase public transport patronage and shorten travel times for buses by up to 13 minutes in peak times between Caloundra and Maroochydore. These are substantial travel time savings that will also bring about associated social, environmental and economic benefits to the Sunshine Coast community. These types of travel time savings will make bus travel fast, frequent and reliable and will make catching the bus an attractive transport option for the future.

How CoastConnect will improve the transport system

- Buses will bypass congestion. CoastConnect will give buses their own space in the transport network (either in dedicated bus lanes or in bus queue bypasses at major intersections)
- High-quality on-road stations and interchanges will make the bus system more attractive.

According to the modelling, car travel times may increase slightly along the corridor as a result of the project. The benefits of improved public transport patronage combined with quicker and more reliable bus travel are expected to significantly outweigh the slight increase in car travel time. And one full bus equals 40 fewer cars on the road.
Parking
The parking chapter of the CDIMP describes the location and extent of parking impacts, considering local business, land use and parking demand. It also investigates and identifies mitigation measures, such as the creation of replacement parking areas.

For businesses
On-street parking is important for many businesses. The project team has listened to community feedback and reduced the number of parking impacts in the corridor. Areas for replacement parking are possible in a number of locations at Boolarong Crescent, Katoa Street, near the Seabreeze Caravan Park and along Kingsford Smith Parade in Maroochydore. There is potential for replacement parking to be provided at a redeveloped site on the southern side of Aerodrome Road between Rose Street and Second Avenue. Further investigation into the viability of the proposed replacement parking areas is to be undertaken to more accurately determine suitable layouts and timing of implementation. This is to be undertaken in conjunction with the Sunshine Coast Regional Council closer to delivery.

For local residents
In the future, the department will work with the Sunshine Coast Regional Council on appropriate parking controls near stations. This will be undertaken closer to construction in consultation with the community.

For commuters
No park ‘n’ rides are proposed for this project. TransLink will design bus routes that make it easy for patrons to access the CoastConnect corridor via their local bus at their local stop. This reduces the need to drive to a station, as local buses will continue to do their neighbourhood rounds before heading onto the bus priority corridor. The future Beerwah to Maroochydore rail line is likely to include provision for park ‘n’ rides at several locations. Whilst no bus stations will have park ‘n’ rides, the department has explored opportunities for appropriate kiss ‘n’ ride areas at a number of locations, where feasible. Providing kiss ‘n’ ride areas at bus stations encourages people to use public transport rather than drive all the way to their destination.
Cycle and pedestrian access

It is important to make it easy for people to access public transport. Cycling and walking are the most environmentally friendly ways of accessing the CoastConnect corridor.

Promoting pedal power

As parts of the project alignment run along the existing or future Principal Cycle Network (as set out in South East Queensland Principal Cycle Network Plan 2007 – the plan that guides the future development of cycle infrastructure in the region), there are opportunities to deliver improvements to the cycle network as part of the project. The project proposes significant improvements to cycle infrastructure in line with the network plan along parts of Nicklin Way and Alexandra Parade.

New cycle lanes are proposed along:
- Nicklin Way between Buderim Street and the Mooloolah River
- Lake Kawana Boulevard between Nicklin Way and Central Boulevard
- Main Drive and Metier Linkway
- Alexandra Parade.

Bike racks or storage are proposed at major bus stations and stops.

Beach access and amenity

The project recognises that Alexandra Headland needs to be protected and improved where possible. Changes to the road network in this area will be minimal. Short sections of bus priority lanes leading in and out of intersections are proposed at Buderim Avenue, Pacific Terrace, Mari Street, Okinja Road and Sixth Avenue. Also, the project team has explored ways to retain and improve beachside parking as much as possible. Improvements in pedestrian access to the beach will be made in liaison with the Sunshine Coast Regional Council.

Looking ahead

Consultation will continue between the Department of Transport and Main Roads, the Sunshine Coast Regional Council and the TransLink Transit Authority on the provision of pedestrian and cycle infrastructure in the future.

The department recognises the role Council will play in providing or improving connecting pathways in partnership with this project.

Pedestrian access

The project acknowledges the importance of good pedestrian connections. Bus stations will be designed for maximum accessibility by passengers on foot. Recommendations have been made for improvements to pedestrian connections, including potential pedestrian overpasses at key stations and changes to pedestrian crossings to maximise safety and accessibility at key locations.
Bus services

When completed, CoastConnect will be another addition to the Sunshine Coast’s expanding public transport network. The Network Integration chapter of the CDIMP outlines the proposed strategy for operating buses on the CoastConnect corridor and integrating the corridor with the broader public transport network.

Planning local services

To help design the bus priority corridor, transport planners and bus operation specialists have examined the existing transport network and considered where bus stations, depots, bus lanes and bus priority at intersections should be located. They have also examined the type and frequency of bus services that would be needed in the future and are working towards identifying where new or improved services might be needed to meet population growth or changes to business or commercial precincts. Detailed planning on how local routes will service communities will be undertaken closer to the project opening.

However, capacity for these extra services has been considered in station and infrastructure designs.

Generally, new services will be required to cope with the expected extra demand that CoastConnect will help bring about. Experience with other bus priority projects shows that providing fast, frequent and reliable public transport attracts passengers. The Department of Transport and Main Roads expects patronage on buses to grow in the future, based on general population growth and through the provision of improved services and infrastructure.
Urban design

Achieving the right ‘look and feel’ for CoastConnect is an important part of the project. Good urban design has the ability to take a functional, physical entity – the bus corridor and its stations – and give it character through smart architecture, lighting, tailored design features, signage, furniture and artworks.

The urban design chapter of the CDIMP describes the existing character of the corridor and proposes ways in which the project can be custom-designed to fit in with the communities it will serve. Landscaping is also an important element of urban design. The Department of Transport and Main Roads will work with the Sunshine Coast Regional Council to deliver improved landscape treatments at all major stations and at other important locations throughout the corridor.

The urban design drawings shown in the CDIMP are conceptual designs only and are offered as an idea of what could be achieved. They are intended to illustrate how the CoastConnect corridor could look in the future and are not intended to be viewed as final designs. Additional urban design studies and investigations will be needed in future design stages, closer to construction. These would include pedestrian and movement studies around proposed stations and further detailed considerations of the best strategies to achieve the right ‘look and feel’ for the CoastConnect corridor.

Artist’s impression of possible integration of urban design with bus infrastructure at Cooma Terrace.
Ecology

The CoastConnect project is proposed within a corridor that is highly urbanised and developed. Much of the area’s original vegetation has been cleared and replaced by residential, business/commercial, industrial and community facility land uses. While some small pockets of green and/or open space are still present, these areas are fragmented. They have also been highly altered and generally do not represent vegetation with high ecological integrity. Despite this, these green and/or open spaces are valued at a social and community level because they provide places in which to recreate and undertake outdoor activities.

What we know about the ecology of the study area

Desk-top and field-based assessments of ecological values within the proposed project area were undertaken to inform the study. The studies found that ecological impacts are likely to be focussed around bridge widenings (Currimundi Creek, Tokara Canal, Lake Kawana, Cornmeal Creek), the proposed removal of small pockets of coastal vegetation, and the proposed removal of small pockets of on-street landscaping.

Where marine plants will be disturbed or cleared, a permit will be required from the Department of Employment, Economic Development and Innovation pursuant to the Fisheries Act 1994 and off-sets may be required. Where development works will occur in close proximity to waterways, implementation of a construction management plan is recommended. Other typical mitigation strategies would include introduction of coastal planting to supplement and strengthen dunal vegetation and coastal landscaping and replacement of on-street landscaping in accordance with the Sunshine Coast Regional Council provisions.

Minimising impacts on flora and fauna

To ensure ecological values within the project area are properly identified and protected, habitat values within the project corridor should be investigated in more detail closer to delivery of the project. Detailed marine plant surveys and fauna investigations and monitoring in the vicinity of bridge works would be of benefit in future project stages.

With appropriate mitigation, no long-term ecological impacts as a result of the CoastConnect project are predicted.
Noise and vibration

An ambient noise monitoring study was conducted along the corridor. The noise monitoring results indicated that existing traffic noise levels were high along the corridor, particularly adjacent to Nicklin Way, Alexandra Parade and Maroochydore.

A preliminary analysis of construction noise and vibration was performed. It found that administrative controls and physical mitigation measures are likely to be required for construction activities near sensitive locations. Further detailed assessments of construction noise and vibration will be required closer to the construction phase of the project.

A preliminary study of potential bus noise and combined bus and traffic noise was conducted. The results of this study indicated that bus noise alone will not exceed the relevant allowable noise levels. A comparison of the traffic noise levels in year 2026, with and without the bus corridor, in all sections, indicated that there would be no significant increase in traffic noise levels with the presence of the bus corridor. Further detailed assessments of traffic noise and vibration will be required in detailed design phases of the project.
Air quality

Public transport is a clean and green mode of travel

The greatest pressure on air quality over the next 20 years will come from the expected increase in car travel. Getting more people out of their cars and onto public transport is one way to improve air quality and help the environment. A desktop analysis and air quality modelling has been undertaken to assess the potential air quality impacts and benefits of the CoastConnect project.

What the studies tell us about local air quality

The desktop review found that current air quality on the Sunshine Coast is generally good. To better understand the air quality impacts and benefits of the project, a quantitative assessment of potential future air quality has been undertaken.

Predicted air quality impacts and emission profiles for identified traffic volumes have been compared for 2016 and 2026 with and without the proposed CoastConnect project. Overall emission rates and associated pollutant levels are generally predicted to decrease or remain static when compared to levels without the project. Potential pollutants and particulates are expected to be within acceptable levels right along the corridor based on the predictive calculations.

Overall, it is anticipated that the project would provide an overall minor net benefit to the air quality in the area. This is based on the assumption that a reliable and frequent bus service would reduce car dependency, thereby slowing the growth in private vehicle use along the Sunshine Coast by encouraging motorists to take cleaner and greener public transport.

It is anticipated that there will be dust impacts during the construction phase of the project. However, the implementation of mitigation and management measures to be included in the construction environmental management plan will help minimise impacts.
Ground conditions
This study included excavation and sampling of 47 test pilots. This was carried out to assess the existing physical environment, including the presence or absence of acid sulfate soils, along the proposed transport corridor. The study comprised a review of available published geology and spatial system data.

Topography
In general terms the topography of the corridor comprises three distinct geomorphic terrains as follows:

- Southern topographic high area with gently to moderately inclined slopes at Battery Hill/Caloundra with surface levels (RL) up to 30 m Australian height datum (AHD) in Caloundra and up to about 20 m AHD in Battery Hill.

- The central coastal plain portion of the proposed corridor is on a flat, low lying, swamppy terrain between Currimundi and Mooloolaba. Prior to urban development, this area was subject to frequent flooding and was poorly drained. Laterally extensive but shallow filling is anticipated in this area. RL of the coastal plain before filling was generally about 1.5 m to 2.5 m AHD.

- Northern topographic high area along the proposed corridor is at Alexandra Headland. The RL along the eastern loop portion of the corridor is about 5 m to 15 m AHD along Mooloolaba Esplanade and up to 25 m AHD along Alexandra Parade.

Underlying geology
The proposed corridor is underlain by the following geological units:

- Landsborough Sandstone – Jurassic age sedimentary rocks comprising sandstone, shale and siltstone.

- Tertiary age poorly consolidated sediments comprising quartzose to sublabile sandstone, claystone, conglomerate and minor olivine basalt.

- Quaternary – Pleistocene and Holocene age alluvial deposits comprising, clay, silt, sand and gravel, floodplain alluvium.

- Quaternary – Pleistocene and Holocene age estuarine and tidal delta sediments comprising, sandy mud and muddy sand.

The proposed works are not anticipated to impact on current geomorphic processes. Where any excavation works disturb acid sulphate soils, they will be managed in accordance with an acid sulphate soils management plan.
**Flooding and water quality**

Assessing the way in which a project may affect the health of local waterways and the movement of water is an important part of infrastructure planning. This CDIMP chapter discusses the potential corridor impacts on flooding and surface water quality.

**What we know about flooding and water quality in the corridor**

Much of the project corridor passes through flat, low lying coastal land in which the stormwater drainage systems have been extensively modified by urban development. The road widening works will involve extensions to existing systems, which may require considerable pipe upgrades where the existing systems do not comply with current standards for capacity.

Low lying sections of the existing roads may currently be vulnerable to flooding. Under current conditions, this presents significant problems in providing adequate drainage and flood immunity. Future design stages would benefit from more detailed consideration of the potential impacts brought about by climate change (such as rising sea levels and higher intensity rainfall) and how the project could best respond to these potential impacts.

**Maintaining water quality**

Given the sensitivity of the receiving waters, systems also need to be constructed for the treatment of water quality for discharges from the road surface. It is recommended that a water quality monitoring program is implemented in a future design stage. The purpose of the water quality monitoring programme is to verify current conditions, which would assist the design of the stormwater quality treatment devices and compliance with the site-based water quality objectives.
Social environment

Improving our community

Providing new public transport infrastructure isn't just about building new bus lanes. It’s about improving the area and protecting the coastal quality of life into the future. The department has undertaken a social impact assessment to examine what sort of social effects – positive and negative – the project may have on the local community.

The study area is an important population centre and a highly desirable place of residence, with the projected average growth of 2.1% per annum for the next 20 years. Population is distributed unevenly within the study area, with greater concentration occurring in coastal centres in Caloundra, Kawana, Mooloolaba, Alexandra Headland and Maroochydore. Employment and other activities of regional significance are concentrated in these centres. A significant amount of travel occurs between these centres and is expected to increase markedly into the future.

Social benefits

The project’s social benefits are significant and extend to the wider community. They include providing more reliable public transport options, increasing the convenience and connectivity of public transport to major employment and recreation centres and the health, and recreation and lifestyle benefits associated with improvements to cycle facilities.

Acquiring private property

Directly affected property owners will be compensated in accordance with the relevant Queensland legislation (Acquisition of Land Act 1967 and the Transport Planning and Coordination Act 1994). Where possible, the Queensland Government will seek to acquire private properties by negotiated agreement with the affected property owner. Resumption is based on well-established principles of procedural fairness, natural justice, compensation at a fair market price, rights of appeal, prompt settlement and compassion. Compensation is valued at the time of the acquisition and is based on the market value of the property unaffected by the project for which it has been resumed. The usual processes provide for the landowner to obtain independent expert valuation and legal advice at the department’s expense to assist in the compensation process. The project team is dealing individually with potentially impacted landowners.

Getting the balance right

Negative impacts are largely focused in areas immediately adjoining the project alignment, relating to such issues as property resumptions, some localised reduction in onstreet car parking and the construction phase impacts. Successful delivery of the project relies on mitigating impacts on communities. In this regard the project will need to provide support to people who need to relocate, manage construction impacts to maintain neighbourhood amenity during construction, and maintain a focus on improving amenity in the longer term through improved public transport and pedestrian and cycle infrastructure.

The assessment found that with the implementation of proposed mitigation measures to minimise impacts, CoastConnect is expected to make an overall positive contribution to equity, quality of life and community values in the study corridor.
Cultural environment

Every place has a history, a value, or a meaning to someone and the Caloundra to Maroochydore corridor is no different. Many sites in the study corridor are important to different groups for different reasons. The purpose of the cultural heritage investigations is to identify any areas of cultural heritage significance and detail how any adverse impacts may be able to be managed in the future. Registers and historical agencies were consulted to determine the presence of known historical or Indigenous sites within the study area.

Cultural heritage

Three items of local cultural heritage, one of which is listed on the Caloundra City Council heritage register, may be indirectly impacted by the proposed development.

For the most part, the CoastConnect proposal is located within previously disturbed areas. The majority of the land within the study area has been subject to previous disturbance from road construction, residential, commercial and industrial development.

The proposed activities in the study area are generally unlikely to harm Aboriginal heritage where the development remains within the previously constructed road reserve or highly disturbed areas. The potential for Aboriginal sites to be uncovered at locations where road widening is required or in previously undisturbed areas is considered to be moderate. The relevant Aboriginal party should be consulted in future design phases with regards to their involvement in the project.
Economic environment

Rapid population growth and increasing congestion on the Sunshine Coast present a compelling case for improvements to public transport infrastructure. This project will encourage more sustainable travel in the Caloundra to Maroochydore corridor, which will result in significant economic benefits to not only existing bus and road users, but the community at large.

The CDIMP reviews the available literature and provides case studies to show that smaller cities and communities can successfully reduce their private car dependence by encouraging the use of public transport and non-motorised travel. It provides a preliminary analysis of the potential economic benefits and impacts of the project, including discussion on user benefits, community benefits, and how proposed parking changes might affect business activity in the corridor.

How better public transport boosts the economy

This qualitative economic assessment demonstrates that public transport can bring significant economic benefits to both large and small cities. Benefits include a reduction in community transport costs, supporting city development, boosting employment and local business, providing land use opportunities through urban regeneration, and boosting the productive capacity of the economy.

Parking and local businesses

The potential economic effects of changes to on-street parking are also examined in the CDIMP. Research suggests that the impact of the CoastConnect changes would be negligible if on-street parking reduction is accompanied by appropriate mitigation and parking management measures. Moreover, CoastConnect is likely to stimulate long-term business turnover by improving access to the commercial precincts corridor and by facilitating higher density developments at key station sites.

Long-term economic benefits of CoastConnect

The anticipated long-term economic benefits of the CoastConnect proposal are expected to significantly outweigh any potential short-term economic impacts. A quantitative economic analysis would be undertaken in a future planning phase to assist government with future decisions around staging and construction funding.
Land use and planning

The coastal strip of the Sunshine Coast between Caloundra and Maroochydore is typified by low density residential development with higher densities emerging at key centres including Caloundra and Kawana (as major activity centres under the South East Queensland Regional Plan 2009-2031) and Maroochydore (as principal activity centre under the South East Queensland Regional Plan 2009-2031). Planning strategy at a state, regional and local level is generally supportive of an increase in densities around these activity centres. Crucial to this is the provision of a fully integrated public transport network, of which CoastConnect will become a key part.

CoastConnect will impact the surrounding area both during the construction and operational phases. Potential benefits of CoastConnect include:

- improved accessibility, particularly to key activity centres
- the provision of high quality public transport to support transit oriented development within key centres.

Other impacts resulting from CoastConnect are expected to include:

- noise, dust, vibration and light impacts, particularly during the construction phase.
- changes to existing pedestrian, cycle and property access, particularly during the construction phase
- resumption of private property necessary for the project, including partial and complete acquisition
- increased pressure on existing infrastructure as a result of stimulated development

Measures will be put in place to mitigate impacts as far as possible. The design of CoastConnect may change over time and planning processes may change. It is expected that documentation and recommended mitigation of any planning and design changes will be incorporated into future planning phases.
Conclusion

Future planning phases
The CDIMP contains the results of preliminary transport, social, economic and environmental studies. Its aim is to provide enough information to allow the Queensland government to preserve the corridor for future construction. More detailed impact management planning will be undertaken during the detailed design of each stage.

The next stage of impact management planning will investigate the project alignment in more detail and update management strategies where appropriate to maximise benefits and minimise impacts of the project. This is because CoastConnect is proposed to be delivered in stages and impacts identified today are likely to be different in five or ten years time. This ensures that strategies consider any advancements in technology that could contribute to better outcomes for the community.

Next steps
The final CoastConnect concept design is to be protected under the provisions of the Transport Planning and Coordination Act. The concept design will then be preserved for future staged delivery, subject to funding and need.

Any development that is proposed within the protected corridor is subject to assessment by the Department of Transport and Main Roads. This means the department can place conditions on new developments to ensure they are well integrated with the CoastConnect project.