Cairns Bruce Highway Upgrade - Sheehy Road to Ray Jones Drive

Frequently Asked Questions (FAQ)

QUICK LINKS:

PROJECT BACKGROUND

When did planning for the Cairns Bruce Highway Upgrade project commence?

Planning for the Cairns Bruce Highway Upgrade project commenced in October 2008 with a planning study to develop a 30 year master plan for 14kms of the Bruce Highway corridor south of Cairns, between Wrights Creek south of Edmonton, and Draper Street near the Cairns city centre.

The master plan determined to outline the infrastructure requirements to provide a safe and reliable access on the southern entrance to Cairns to meet the future needs of the region and community.

The development of the master plan passed through a number of stages, many of which included extensive rounds of community engagement. On 7 July 2010, the Federal Minister for Infrastructure and Transport and the Queensland Minister for Main Roads released the master plan, along with plans for the bus-based Cairns Transit Network, completed by the Department of Transport and Main Roads.

The $150 million, 3.4km upgrade of the Cairns Bruce Highway from Sheehy Road at White Rock to Ray Jones Drive at Woree is the first stage of the master plan to be constructed.

Who funded the first stage of works?

The Australian Government committed $150 million towards the first stage of the Cairns Bruce Highway Upgrade master plan project. This funding was provided

through the Nation Building Program and was part of the Australian Government's $8.6 billion investment in land transport infrastructure in Queensland.

Why is this stage of the master plan being upgraded first?
This stage of the master plan was identified as the number one priority due to traffic congestion, as the intersections along this section of the highway were already operating at capacity. Traffic growth in the area has seen the intersections of Sheehy Road, Anderson Road, Ray Jones Drive and Kate Street exceed their capacity, causing traffic congestion and delays.

Upgrading the 3.4 km section of the Cains Bruce Highway from Sheehy Road to Ray Jones Drive will result in:

Return to top

- improved safety for road users, pedestrians and cyclists;
- improved access for motorists entering and exiting the highway
- reduced traffic signals along the highway resulting in reduced travel times, delays and queuing for motorists;
- removal of two open level rail crossings;
- additional capacity and improved freight efficiency;
- improved service road connections on both sides of the highway;
- the addition of over 7 km of on and off road cycle lanes to the wider Cairns cycleway network;
- safe pedestrian and cycle links across the highway; and
- improved pedestrian safety around the Red Hill cane railway line.

This first stage sets the framework for future upgrades of the Bruce Highway within the master plan rollout.

What will be in the next stage of the master plan rollout and when will these works start?
There is no fixed timeframe or order of works for the roll out of the master plan. The next stage to be constructed will be determined by the rate of urban growth within the southern corridor and the availability of funding.

While the Queensland Government allocated $500,000 in late 2011 to undertake planning improvements to the bridge over Wrights Creek, no further funding has been allocated yet for the remaining stages of the master plan.

Why not build a second corridor into Cairns?
A major study carried out between 1999 and 2001, the *Southern Cairns Integrated Land Use and Transport Study* considered and ruled out the option of a second corridor at that point in time.

This study recommended the department focus on upgrading the existing transport system to cater for demand for the next 20-30 years, including the construction of a rapid transit system and commuter cycleway.

Who can I talk to/how can I find out more about the master plan?
For more information about the Cairns Bruce Highway master plan you can contact the project team by:

- phone 1800 184 317*
- email transportplanningcairns@tmr.qld.gov.au
- fax 07 4054 7353
- visit www.tmr.qld.gov.au/projects
- post Cairns Bruce Highway Upgrade Project
  Reply Paid 5971
  PO Box 6185
  Cairns QLD 4870

**Free call from anywhere in Australia. Call charges apply for calls from mobile phones and payphones.*

PROJECT OVERVIEW

What's involved with stage one of the Cairns Bruce Highway Upgrade project?
Stage one of the Cairns Bruce Highway Project involves a 3.4km upgrade of the Cairns Bruce Highway from Sheehy Road at White Rock to Ray Jones Drive at Woree. Key elements of the upgrade include:

Return to top

Forest Garden Boulevard/Sheehy Road

- Construction of a half diamond interchange at the entrance to the Forest Gardens estate
- Removal of the Forest Gardens Boulevard/Sheehy Road/Bruce Highway traffic signals
- Construction of a service road from George Cannon Drive through to Rigg Street at Woree
- Construction of dedicated pedestrian/cycle facilities on the Forest Gardens Boulevard/Sheehy Road overpass
- Closure of the open level rail crossing
- Construction of new pedestrian and cycle facilities between Forest Gardens and Ray Jones Drive

Anderson Road

- Removal of the Anderson Road/Bruce Highway traffic signals
- Construction of a new service road on the western side of the Bruce Highway, linking George Cannon Drive to Rigg Street at Woree
- Construction of a cul-de-sac at the southern end of Loretta Avenue
- Construction of a new pedestrian path from Anderson Road to Charlotte Close

- Construction of a service road on the eastern side of the Bruce Highway (adjacent to the Cairns Golf Course) linking Kowinka Street to Walters Street
- Closure of the open level rail crossing
- Construction of a new pedestrian/cycle over-bridge to link Woree and White Rock

Ray Jones Drive

- Construction of an overpass from the Bruce Highway, over Ray Jones Drive, to Mulgrave Road
- Construction of a more efficient freight and heavy vehicle exit from the Bruce Highway to Ray Jones Drive
- Upgrade of the Rigg Street intersection to improve safety and access between the service road and Ray Jones Drive
- Upgrade of Ray Jones drive to six lanes approaching Kate Street
- Construction of new off-road cycle and pedestrian facilities along Ray Jones Drive

What is an overpass?
An overpass is the name for a road that passes over another road, eliminating the requirement for an intersection. It allows users to cross over a road without the need to stop traffic on the other road.

What is an interchange?
An interchange is an overpass that allows access to and from the highway without impeding traffic flow on the highway. They replace traffic signals and allow for a smoother flow of much higher volumes of traffic, helping to reduce transit times along highways.

When did project works start and when will they be finished?
The project started in late 2011 and works are scheduled for completion by the end of 2013, weather permitting.

Who is the contractor undertaking this first stage of works?
CairnsConnect, a joint venture between BMD Constructions and Albem Operations Pty Ltd were the successful tenderers for the contract to design and construct the first stage of the Cairns Bruce Highway Upgrade project.

The CairnsConnect team offers strong local knowledge, extensive experience and excellent technical skills, and will assist the Department of Transport and Main Roads in delivering a transport solution that will reduce congestion and improve safety for motorists travelling on the southern access into Cairns for many years to come.

Return to top

Who can I talk to/how can I find out more about construction of the Cairns Bruce Highway Upgrade project?
For more information about stage one of the Cairns Bruce Highway Upgrade Project you can contact the project team by:

- phone 1800 657 724*
- email cbhu@bmd.com.au
- fax 07 4054 7353

- visit www.tmr.qld.gov.au/projects
- post Cairns Bruce Highway Upgrade Project Team
  Reply Paid 85041
  PO Box 994
  Bungalow QLD 4870

You can also visit the project site office located on the corner of Ray Jones Drive and Kate Street, Woree (next to the service station) between 8 am and 5 pm Monday to Friday (other times available by appointment).

**Free call from anywhere in Australia. Call charges apply for calls from mobile phones and payphones.*

CONSTRUCTION INFORMATION

What are the standard working hours during construction of the project?
Standard working hours for this project are between 6 am and 6 pm, Monday to Sunday. While the majority of works will be carried out during these hours, some night works may also be required to improve safety and reduce the impact of construction on highway operations.

Why is it necessary to do construction works at night?
This section of the highway is already operating at capacity. When certain works are likely to have an adverse impact to highway traffic, or safety requirements deem it necessary to close a section of the highway, these works must be completed at night to minimise delays to commuters and to maintain a safe environment for road users and road workers.

Residents and businesses likely to be affected will be given advance notice of work that needs to be undertaken outside normal working hours.

What impacts can be expected during the construction works?
Potential impacts that may be experienced during road upgrade and bridge construction works could include:

- traffic delays, diversions or detours;
- changed cycle and pedestrian pathways;
- increased dust levels;
- noise from plant equipment, tools and vehicles;
- ground-borne vibrations;
- changes to the visual amenity of an area.

How will you manage dust during the works?
Return to top
The generation of increased dust will be managed by incorporating various strategies into daily work construction methods, including:

- using multiples water carts to keep disturbed areas throughout the site dampened;
- engaging street sweeper to regularly clear dried dirt from the roads;
- excavating Red Hill in stages and grassing the batters as works progress to cover exposed areas; and
- installing rumble grids at gate entrances and laying gravel over internal access roads.

What is piling?
Piles are used in construction to provide solid foundations for structures in areas where soils close to the surface do not have enough strength to support the structures.

The process involves either drilling a hole deep into the ground and filling it with steel reinforcement and concrete, or driving a pre-cast concrete pile into the ground to a depth where the geological conditions are strong enough to support the structure.

The piling method chosen for a particular area depends on factors such as soil type and the size of load each pile must bear.

What type of piling is being used on this project?
For this project, driven piling techniques will be used. This involves hammering a pre-cast concrete pile to a predetermined depth using a piling rig. In some cases, where the depth of the pile is greater than one pre-cast length, two lengths can be spliced together and driven accordingly.

What type of machinery will be used during the construction works and can their use cause damage to our property?
The type of plant and equipment that have the potential to generate noise and ground-borne vibrations during the construction works include:

- dozers and excavators
- loaders and dump trucks
- vibrating rollers
- compactors
- piling rigs
- rock breakers
- asphalt pavers

The effect of vibrations on nearby properties can be influenced by many factors, including how close a property is to the source of vibration, the energy output of the equipment being used and local geological conditions.

Most people will generally hear and feel the effects of ground-borne vibrations at levels much lower than those that would cause structural damage.

What should I do if I notice damage to my property that wasn't there before works started?
Contact the project team if you are concerned or as soon as you have any indication that your property may be experiencing damage as a result of the construction works. The project team will then be able to determine what course of action will be required.

VIBRATION AND NOISE

Return to top

How will you manage construction vibrations to ensure properties are not damaged?
Where possible/practical, measures to mitigate damage from vibration-generating activities will include:

- selecting low impact machinery;
- using construction methods that minimise vibration impacts;
- providing an adequate distance (buffer) between the source of vibration and the property;

- regular servicing of plant, equipment and machinery as per manufacturer's recommendations to ensure good working order; and
- undertaking vibration monitoring when using heavy machinery.

The project team understands that construction vibration may cause residents concern, or affect the amenity of their surroundings and will ensure every effort is made to minimise the impact of construction vibration on nearby properties. A key to this is keeping residents informed about the nature of works to help alleviate concerns.

What is the standard for acceptable vibration levels?

There is no Australian Standard currently in place for the assessment of building damage caused by vibrational energy; however, the *British Standard 7385: Part 2: Evaluation and Measurement for Vibration in Buildings* can be used as a guide to assess the likelihood of building damage from ground vibration.

The table below demonstrates recommended ground vibration limits for ongoing construction activities and for a single event (e.g. blasting):

Type of Receptor	Particle Velocity (VRmax) for construction activity	Particle Velocity (VRmax) for single event
Historic buildings, monuments and buildings of special value or significance	2.0 mm/s	2.0 mm/s
Houses and low rise residential buildings, commercial buildings not included below	5.0 mm/s	10.0 mm/s
Commercial and industrial buildings or structures of reinforced concrete or steel construction including bridges	5.0 mm/s	25.0 mm/s

How will you know if you're exceeding recommended limits?

Monitoring is an essential step used in measuring and managing the effects of construction vibrations. During vibration-intensive activities, vibration monitors will be placed within 10 metres and 50 metres of equipment to record and measure the ppv to ensure the works are within the allowable limits.

I can see/feel vibrations from the construction works; is this causing damage to my property?

During construction works vibrations may be felt around your property, however it is likely that the vibration will be well below levels that cause structural damage.

The extent of any impact from vibratory works will vary depending on the geological conditions, the type of works being carried out and the type and condition of the structure located near the works. You will generally hear and feel the effects of ground-borne vibrations at levels much lower than those that would cause structural damage.

Return to top

The table below gives an indication of typical human perception of vibrations:

Approximate vibration level (mm/s)	Degree of perception

0.10	Not felt
0.15	Threshold of perception
0.35	Barely noticeable
1.0	Noticeable
2.2	Easily noticeable
5.0	Very noticeable - construction activity limit (unlikely to cause damage)
6.0	Strongly noticeable

How far away should vibration-generating equipment be from my property?

The vibration causing plant and equipment used will be far enough away from properties so that structural damage would be unlikely. The distance will vary depending on the type of construction activity being completed.

For equipment likely to cause significant vibration, the project team will implement a buffer zone from property boundaries to reduce the chance of structural damage. Vibration monitoring equipment will also be placed between the source of vibration and properties to record and measure the vibration to ensure works are within the specified levels.

Will there be noise generated during the construction works?

Yes, noise is an unfortunate element of all road and construction activities, particularly during bridge construction works the piles are driven into the ground.

How will you manage noise during the construction works?

All construction activities undertaken will be compliant with Queensland construction noise guidelines. The project team understands that some construction noise may cause residents concern, or affect the amenity of their surroundings and will make every effort to minimise the impact of these activities.

Some of the measures to be used will include:

- locating loading and unloading activities as far away as practical from residential properties;
- avoiding dropping materials from a height into or out of trucks or skip bins;
- ensuring engine plant and equipment covers are kept closed when in operation;
- locating stationary noise generating equipment, where possible, away from noise sensitive receivers;
- using a resilient pad (dolly) between piles and the hammer head;
- restricting activities such as concrete sawing and jack hammering to less sensitive times e.g. late morning or daytime periods;
- giving residents relief by providing respite periods (breaks) during the work activity; and
- ensuring all the plant and equipment used has noise mitigation equipment installed and has been maintained in good working order.

Return to top

Regular monitoring will also be carried out to gauge the effectiveness of these mitigation strategies and ensure compliance with guidelines.

Will there be noise barriers installed to help adjacent properties with the traffic noise?

Noise modelling was carried out for the upgraded section of the highway to determine if noise barriers would be required. Based on established road traffic noise criteria, only isolated sections of the new road infrastructure will require the installation of a noise barrier.

Where required, the project team has been in contact with property owners affected by the requirement of a noise barrier to discuss its design and installation.

Will you plant extra trees to help with the road noise?

While landscaping and revegetation plays a significant role in this project, vegetation will not be used as a method of noise mitigation. Studies show that vegetation does not make an effective noise barrier or act as an effective noise absorber unless the vegetation is densely planted in an area greater than 50 metres thick.

I've heard of properties being surveyed for damage before works started. How come my property wasn't surveyed?

While no adverse impacts are expected during the works, in the interest of all parties a building condition survey was offered to properties situated within a certain distance (zone) from the construction works.

This involved an independent licensed building inspector recording the structural condition of the property, both inside and outside the dwelling, and taking photographs and notes as a record. A Building Condition Report was produced and sent to the property owner as a record of the current condition of the property prior to any construction activity taking place.

If your property was situated within the identified zone, the registered property owner was sent a letter of offer for the undertaking of a building condition survey on their property. Participation was entirely voluntary and was provided at no cost to the property owner. While a majority of properties identified were surveyed, not all property owners chose to proceed with the survey.

If your property was not located within the identified zone it was deemed highly unlikely to be affected by construction activity. However, if you still have concerns about potential property damage as a result of the works, you can choose to engage a building inspector and have a building condition report produced at your own cost.

TRAFFIC MANAGEMENT

How will you minimise traffic delays and disruptions?

A detailed Traffic Management Plan (TMP) has been developed for the project that focuses on ensuring the safety of road users, construction workers and the community. Constructing priority sections of the road and pedestrian areas is an underlying strategy of this TMP. As works areas are completed, these will be opened and the community should start seeing immediate improvements on travel times and queuing.

For the safety of road users and road workers, traffic controllers, variable message signage boards, speed restrictions and temporary detours will be used to minimise disruption during peak hours.

In some instances, works that will impact peak-hour traffic or require temporary road closures will be undertaken at night, outside of the standard working hours, to reduce the impact to highway operations.

Return to top

On a project of this nature however, traffic disruptions and changes to traffic conditions are required to ensure the works are completed as safely and as efficiently as possible.

How do I find out about traffic changes?

Motorists using the southern access into Cairns are made aware of major traffic changes via variable message signs situated along the roadside that provide information about detours, closures and potential delays.

Project notifications, including notices about changed traffic conditions and night works are also emailed to local businesses, residents and other interested parties generally one week prior to the activity (where possible). If you would like to receive these notices please send an email to the project team.

For up-to-date information on road and traffic conditions you can phone the Queensland Government's Traffic and Travel Information service on 13 19 40, or visit their website at www.131940.qld.gov.au and choose "Far North" from the Region drop-down menu.

What about after the works; will the road be noisier from more cars using it?
With the removal of the signalised intersections from the highway and subsequent reductions in vehicle queuing, there will be significant improvements to the reduction of noise caused by heavy vehicle compression braking, and vehicles stopping and accelerating. This will also produce significant environmental benefits by reducing the carbon footprint of the section of road.

Resurfacing of the existing highway will also help to reduce road traffic noise while improving the rideability for commuters.

How do I find out when a particular road will be closed / opened / diverted?
Contact the project team for specific information on particular road changes.

Local residents and businesses directly affected by a street opening, closure or diversion will be notified generally one week prior to the change (where possible). Major changes to the Bruce Highway and Ray Jones Drive will be advertised in the local paper.

You can also contact the Queensland Government's Traffic and Travel Information service on 13 19 40 for up-to-date information on road and traffic conditions, or visit their website at www.131940.qld.gov.au and choose "Far North" from the Region drop-down menu.

Will these works affect public transport in the area?
During the construction works there will be very little impact to the public transport services travelling through the project area.

However, once the road upgrade is completed there will be some changes made to the bus network in this area. More information about bus services and timetables can be found on the service provider's website.

Will vehicle emissions coming from the highway get worse or better?
Removing several signalised intersections from the highway will improve transport efficiency, reducing overall vehicle emissions.

ENVIRONMENT AND CULTURAL HERITAGE MANAGEMENT

Return to top

How are you managing environmental impacts during construction?
A detailed Environmental Management Plan (EMP) has been developed that outlines the procedures, processes and practices to be undertaken in order to manage environmental risks and effectively minimise impacts on the surrounding environment while ensuring compliance with regulatory authorities. This EMP includes details around the management of:

- erosion and sediment control;
- water quality;
- air quality;
- acoustic environment;
- biodiversity values;
- cultural heritage values; and
- acid sulphate soils and contaminated land.

Which indigenous groups does the project affect?
The project area is important to three Aboriginal groups, namely the Gimuy Walubara Yidinji, the Mundingalbay Yidinji, and the Yirriganyji. All groups have historical (post-contact) association with the area, as do many other indigenous groups.

Will any places of cultural heritage be affected during the project?
After consultation with traditional owners, and on the basis of available historical information, no sites of cultural heritage are likely to be affected by the works. A detailed Cultural Heritage Management Plan (CHMP) has been prepared with each traditional owner group that outline the primary management strategies to ensure the works have minimal impacts on Cultural Heritage, such as:

- providing induction sessions to inform all relevant project personnel about Cultural Heritage;
- monitoring agreed areas for the presence of Cultural Heritage;
- establishing appropriate management strategies for Cultural Heritage items found as a result of the monitoring process; and
- establishing appropriate contingencies for Cultural Heritage items found as a result of the road construction works.

Will the vegetation clearing works displace local fauna?
The project area was fully inspected by an independent fauna spotter who investigated all trees, ground lying branches, logs and any debris before construction works started. This included turning over any suspect items and checking for wildlife habitat signs.

In line with the project's Environmental Management Plan, any fauna found was captured and relocated to an appropriate location outside of construction work site areas.

Will the area be revegetated at the end of the project?
As part of an extensive landscaping plan for the project, areas disturbed during construction works will be rehabilitated in accordance with this detailed landscaping and other urban design plans. This includes implementing an environmental "net gain" philosophy, where five plants are planted in replace of every one tree removed from the project site.

Return to top