



Frequently asked Questions - Banyo

Concept design information and community feedback for detail design consideration

What design stages are required to commence construction of the Banyo stabling facility in January 2016?

The design process involves extensive analysis and local area investigations to develop detailed drawings that the construction team can use to build the facility. Main construction will commence in March 2016 once the detailed design is finalised.

Key phases include:

Reference design – Throughout 2014 and early 2015, Queensland Rail and the Department of Transport and Main Roads received feedback from the Banyo community about the reference design which was included and addressed in the scope of works which was issued to the market as part of the competitive tender process.

Concept design – In April 2014, Expressions of Interest were called from suitably qualified contractors for the design and construction of the four stabling facilities. After a shortlisting process, a Request for Proposal was issued to qualified proponents in August 2014. As part of this process, each contractor submitted a concept (preliminary) design which addressed Queensland Rail specifications and enhanced or modified the original reference design. In May 2015, Leighton Contractors was awarded the design and construction contract.

Detailed design – Once the concept design is developed, refined and approved, the detailed design of the Banyo stabling facility begins. It will be broken up into appropriate multi-disciplinary packages. It provides a high level of detail on all features of the site such as drainage, fencing, lighting and facility buildings. This is used for construction of the project.



What will the stabling facility look like?

A typical stabling facility is a fenced open-air site with usual rail infrastructure including train tracks, connection to the main line, overhead power supply, signaling and communications systems, CCTV and lighting. Additional infrastructure and buildings are required to support stabling operations. This includes train crew facilities consisting of offices and staff amenities (toilet and shower facilities), staff carparks, roads and walkways.

What additional information is contained in the concept design that will provide a better understanding of the stabling facility?

Stabling facility operations

- A maximum of four six-car trains (24 carriages) will be parked in the stabling facility
- The length of the stabling facility is approximately 330 metres and when combined with the main access road and crew facilities 480 metres
- New train crew facility building and amenities required for up to 36 personnel
- 24 car parks for train crew facility
- The train crew facility building will comprise offices, staff amenities (including toilet and shower facilities and storage rooms)
- Track tie-ins to the existing Shorncliffe railway line at both the northern and southern ends of the facility
- Mainline works will be required for the stabling exit and entry roads at either end of the facility.

Roads and access

- An access road will be constructed to allow safe entry to the train crew facility via the existing Queensland Rail car park entry off Royal Parade East
- A pedestrian path will connect the existing Banyo Station to the new train crew facility for staff via the St Vincents Road level crossing.

Storm water management

- Sewer and water connections will be made into existing council utilities.

Visual barrier along Royal Parade

- A visual barrier will be constructed between the new stabling facility and the residences on Royal Parade. The visual barrier will be at least 2.2 metres high and approximately 490 metres long
- Construction of the visual barrier may require the removal of a small number of existing gum trees (approximately seven) located on the existing Queensland Rail fence line. All practical measures will be put into place to preserve the existing vegetation screen along Royal Parade, primarily made up of mature paperbark trees (approximately 64).

For your information



- Consultation on the final appearance and finish of the visual barrier will take place with residents along Royal Parade in late November and early December 2015.

Lighting

Lighting for the new stabling facility must comply with Queensland Rail's safety and security standards:

- Generally, lights will be pole mounted, limited to 10 metres in height across the stabling facility
- LED lighting will be targeted and pointed directly at the ground
- Lighting will also be fixed to decanting structures, train crew facilities and other similar items
- Some lighting fixtures will be integrated into structures such as access platforms and must allow for maintenance access.

Prior to the completion of detailed design, what information can be provided regarding the construction schedule?

Construction of the Banyo stabling facility will be completed over six major stages:

Stage 1 – Site preparation

The ground is excavated down or built up to the level that will form the railway foundation. Underground drainage and services such as power, water and electricity are then installed. Work starts on the construction of crew facilities, boundary fencing and access roads. A layer of ballast is placed for each line which will form the track bed.

Stage 2- Laying concrete sleepers

Concrete rail sleepers are placed on the ballast along the rail alignment as a base support for the rail. Sleepers are positioned by a front-end loader with a sleeper 'grab' attachment which picks up a set of sleepers and lays them in the configuration for the rail tracks to be attached.

Stage 3 - Laying the rail track

The steel rail is placed on top of the concrete sleepers and clipped into place by either a track mounted machine or by hand. The rail is then welded together using 'flash butt-welding' which melts two rail pieces together forming a seamless rail track.

Stage 4 – Ballast

Ballast is a specific type of rock used for supporting the sleepers and rail track, keeping them in place while trains run. A special ballast train rides the new tracks and places the ballast over the sleepers and between the tracks.

Stage 5 - Settling the rail

A track mounted machine called a tamping machine rides along the new track, lifting the tracks, and vibrating the ballast into place. It then sets the track into its final position. This process is repeated numerous times to ensure the rail line settles and is ready for operation.

Stage 6 - Installing over-head equipment

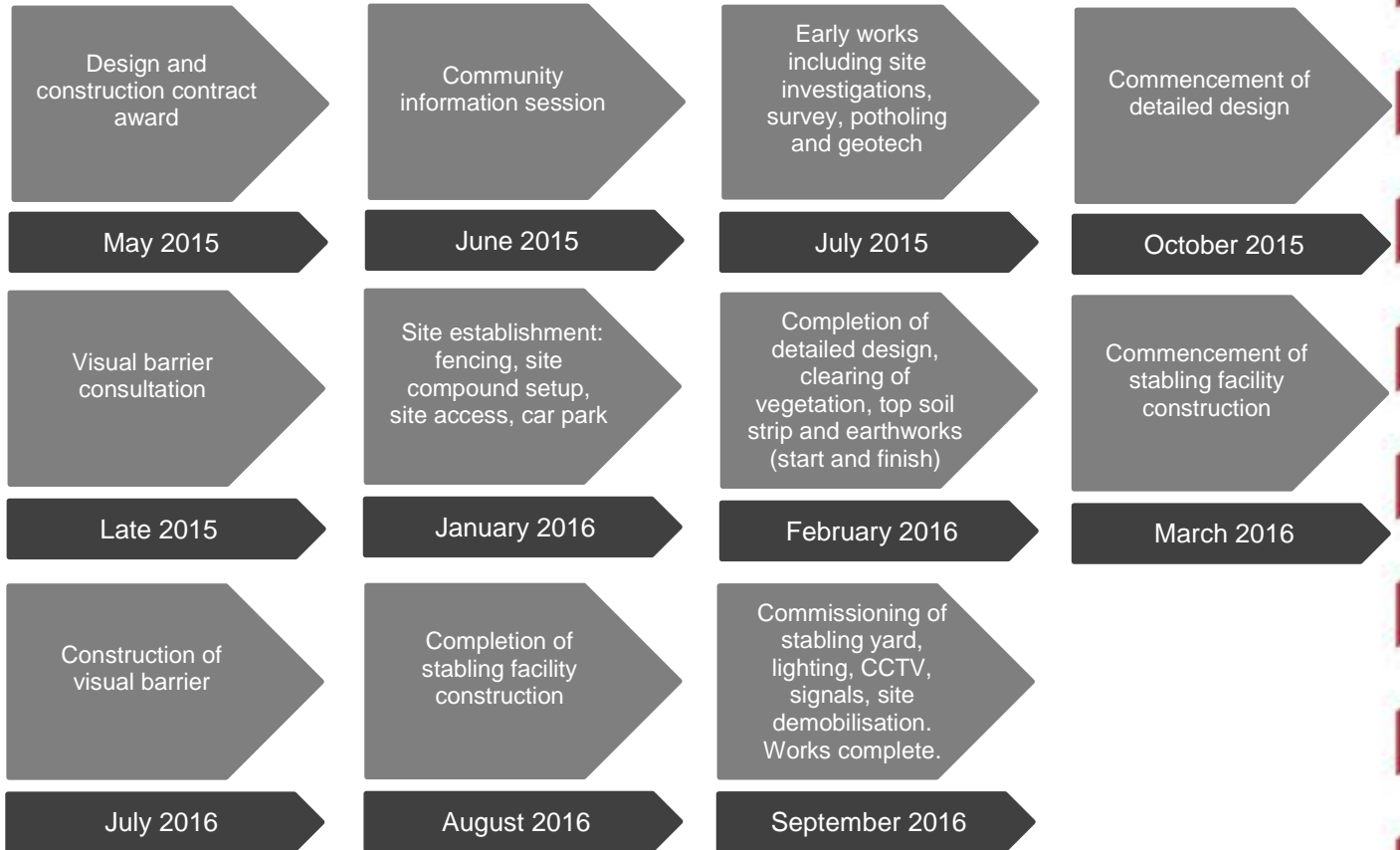
Masts are installed along the rail alignment to support the equipment which provides electricity to operate trains. Signaling structures are installed along the rail route. Security fencing around the facility is put in place.

For your information



Key construction dates

Key dates relating to the design, construction and commissioning of the Banyo stabling facility include:



Where can I find out more information?

If you have any questions or would like to register for more information, please contact the Project Team on **1800 783 334 (free call)** or **stabling@qr.com.au**. Visit **www.queenslandrail.com.au/stabling** anytime for more information and updates.