



# Coffs Harbour bypass

Transport for NSW

## Fact Sheet

### Temporary concrete batch plant for the Coffs Harbour bypass | October 2023

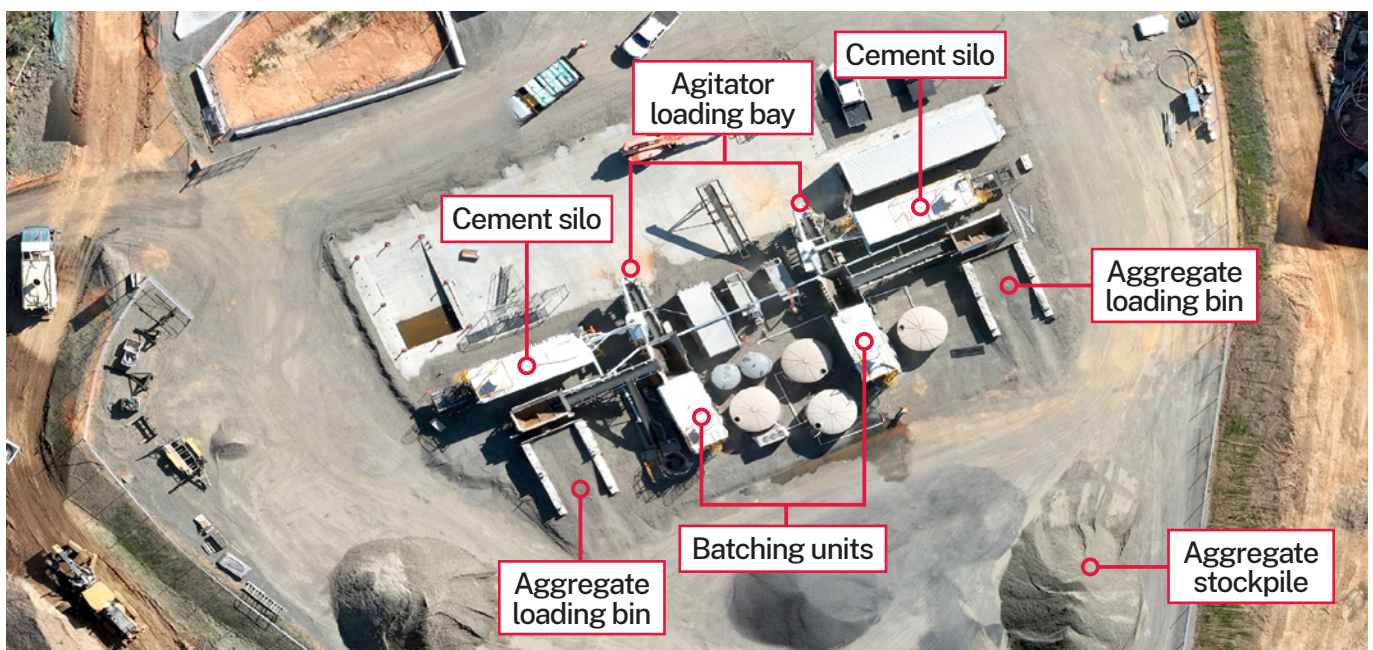
The Australian and NSW governments are funding the \$2.2 billion, 14-kilometre Coffs Harbour bypass project. The bypass will boost the regional economy and improve connectivity, road transport efficiency and safety for all local and interstate motorists.

In late 2019, the NSW Department of Planning and Environment approved the use of temporary concrete batch plants for the Coffs Harbour bypass project. At this time, the team will only be setting up one temporary concrete batch plant which will be located within the project boundary on Englands Road, North Boambee.

The temporary batch plant will be accessed directly from Englands Road. Deliveries of concrete from the batch plant for the project will be on approved routes, and in most cases, along the alignment.

This approach minimises the number of heavy vehicles on local roads. This batch plant will be used until 2027 and will then be demobilised. The site will be returned to its pre-existing condition at the end of the project.

The project may also need to procure additional concrete from local producers to meet our needs throughout construction. This batch plant will only service the project and will be operated by an experienced concreting contractor.



Aerial view of the concrete batch plant on Englands Road

## Why we need concrete to build the bypass

For this project, we will need to produce about 170,000m<sup>3</sup> of concrete. We will use this concrete to build different elements of the project including bridge piles, decks, and parapets; retaining walls; noise wall foundations; tunnel linings; drainage structures, and kerb; and pavement.

At times, some construction activities will require continuous concrete pours to ensure the best possible outcome. For this project, this will include tunnel linings, some bridge decks and some other large concrete slab work.

## How we build a concrete batch plant

The building process for our batch plant will involve:

- Installing environment controls including water treatment facilities and air quality gauges
- Building hard stand areas using excavators, heavy vehicles and vibratory machinery
- Installing batch plant modules including using a crane to lift the modules into place
- Establishing wash down areas, truck parking bays and stockpile areas for storing materials including sand and aggregates.

In addition to the batch plant, the site will have stockpiles, parking for heavy vehicles and machinery, and an office.

All work will be carried out in line with the project's Conditions of Approval and Construction Environment Management Plan.

## How we make concrete

We use cement, and aggregates such as sand and fly ash, which are sourced from a mix of local and regional suppliers. From these materials, we will use our batch plant to make concrete which will then be delivered along the alignment for our work.

Dry materials are stored in silos and stockpiles on site. These are then added to the aggregate loading bins before being put into the batching units where water is added and the materials are mixed together. The concrete is then loaded into trucks (called agitators) and taken to the construction areas along the alignment.

When mixing and pouring concrete, temperature is key – it can't be too hot or too cold. If it is too hot, the concrete dries too quickly and if it is too cold, the chemical reaction can slow down and impact the setting process. To ensure the concrete is consistent, we will be regularly carry out slump and cylinder testing on site.

Slump tests are carried out regularly to check the consistency and the uniform quality of concrete. Cylinder tests are also regularly carried out and they provide information about the compressive strength of concrete.

## Sustainability outcomes

For concrete on the Coffs Harbour bypass, we will be using a higher than usual percentage of fly ash (a waste product of coal-fire power generation). The benefits of our approach means better concrete durability because it is stronger and requires less maintenance, and it also uses less water to make the concrete.

The challenge is that this concrete takes longer for the chemical reaction to occur meaning it can take longer to set and dry.

## Construction vehicle movements

Establishing the batch plant within the project boundary reduces the number of heavy vehicle movements on the Pacific Highway and local road network.



**The Englands Road concrete batch plant arrangement**



At peak production, up to 500m<sup>3</sup> will be used on site each day, which will be transported from the batch plant along the project alignment.

At peak production, daily traffic movements for concrete will be:

- About 90 heavy vehicles making deliveries of materials via the Pacific Highway and Englands Road
- About 160 agitator trucks transporting concrete using the project alignment and, at times, the local road network including crossing North Boambee, Coramba, Mackays roads and Shephards Lane
- About 40 workforce personal and construction light vehicles accessing the site compound.

## Noise

The facility is located more than 400 metres from the nearest residential property minimising noise impacts on nearby residents. Other measures we use to minimise noise impacts include:

- Monitoring noise to manage any potential impacts and adjusting the work activity as required
- Turning off machinery when it's not in use and positioning noise generating plant and equipment away from residential properties, where practicable
- Fitting equipment with devices to minimise noise, particularly reversing squawkers
- Encourage drivers to limit compression braking
- Servicing and maintaining plant and equipment so they are in good working order.

Additional noise mitigation measures may be adopted depending on noise levels at the site and closest receivers.

## Air quality

The design of the batch plant includes dust suppression components such as dust bags on the silos to prevent cement and fly ash dust escaping during the batching operation. To minimise materials becoming airborne, they are pumped into onsite storage tanks then piped from the storage tanks to the silos.

Water carts and ensuring work areas are kept clean will be used to minimise dust around the batch plant and stockpile areas. Air quality gauges will be used to monitor dust levels and ensure the project does not exceed approved limits.

## Water quality

The project team will conduct ongoing water monitoring as required under the project's Environmental Protection Licence.

Water quality risks will be managed through implementing standard site mitigation measures including clean water diversions, stabilising disturbed ground and exposed soils, installation of erosion controls and using appropriate storage with secure bunding for chemicals and fuels in accordance with our Progressive Erosion and Sedimentation Control Plan. Soil and water environmental safeguards for the storage and stockpiling of materials, fuel and wastes during site establishment, including spill prevention and response procedures, are included in Construction Soil and Water Management Plan.

## Jobs

At peak construction, there will be about 15 new jobs created as part of the batch plant operations for the project.



## Contact us

If you have any enquiries and complaints, please contact the project team on 1800 550 621 or [community@chbteam.com.au](mailto:community@chbteam.com.au)



## Translation and interpreting service

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