

# East Bank Flood Resilience Program



*Artist impression of the new substation, this is a concept only and will be subject to change through planning approvals*

## Substation relocation

*Reducing flood risks to critical electrical infrastructure*

### Powering the pumps

During the 2011 flood event, the substation behind the East Bank Pump Station was centimetres from being inundated by flood water, putting the main electricity supply to the pump station at risk. If the East Bank Pump Station and substation were inundated, recovery could take months.

After a flood, we need to get the Mount Crosby Water Treatment Plants operating as quickly as possible, because water is critical for human health and large volumes will be needed in the flood clean up. Relocating the substation will ensure the pump station can be back up and running as quickly as possible after a major flood.

To improve flood resilience, Seqwater and Energex are working together to increase the flood immunity of critical electrical infrastructure that provides power to the East Bank Pump Station at Mount Crosby.

This will involve constructing a new substation and high voltage switch room, communications room and auxiliary generator, on higher ground. The old substation behind the pump station, which is nearing the end of its life, will be decommissioned once the new substation is operational.

### New substation location

The site for the new substation is Seqwater-owned vacant land on the northern side of Stumers Road, adjacent to the Brisbane City Council-owned community hall.

The site was chosen because of its proximity to existing water infrastructure, low flood risks and minimal impact to the area's natural environment and cultural heritage.

### Energex substation

The new substation will provide power to both the East Bank Pump Station and East Bank Water Treatment Plant. The substation site will consist of two transformers, a switch room to convert the electrical voltage from 33,000 to 11,000 kV for operational use, internal roads and parking.

### Project timing

Detailed design of the substation has begun and we are working with Energex to consider the environment and cultural heritage of the area in designing the substation buildings.

At this stage, construction of the new substation is expected to start in late-2019 and will take about 18 months to complete, subject to approvals.

### About the project

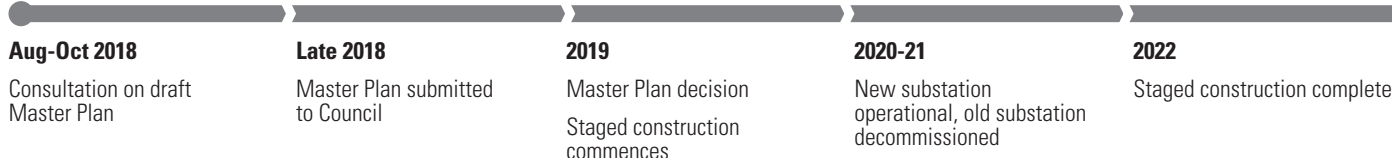
Seqwater's East Bank Flood Resilience Program (EBFRP) involves improvements over five years, to reduce flood risks to critical bulk water infrastructure at the historical East Bank Pump Station site in Mount Crosby.

Seqwater has developed a Master Plan for the East Bank Pump Station site and surrounding area to improve flood resilience and protect South East Queensland's water supply, celebrate the area's rich cultural heritage and increase connectivity.

The development application for the Master Plan was submitted to Brisbane City Council in November 2018.

# East Bank Flood Resilience Program

## Project timing



## Site selection process

The costs and benefits of a number of options were assessed in the Mount Crosby and Karana Downs area.

The main objectives for the options assessment were to:

- identify a site for a new Energex substation and associated electrical infrastructure with a minimum flood immunity of 1:10,000 Annual Exceedance Probability (AEP)
- identify a site within close proximity to our existing water infrastructure, with safe road access during flood events.

Each option was assessed against the following criteria:

- flood immunity
- technical suitability
- constructability
- operability and accessibility
- cost
- environmental impact
- community impact
- cultural heritage impact.

The options assessment also considered using existing Seqwater-owned land in the vicinity of the pump station to reduce the need for additional associated infrastructure such as overhead power lines.

## What is the Annual Exceedance Probability?

AEP is the probability of a flood of a given size being exceeded in any year. The probability can be expressed as a percentage or a ratio such as 1:100 or 1:10,000 AEP.

## Contact us

For more information about the East Bank Flood Resilience Program or to speak to a member of the project team, phone **1800 771 497** or email [communications@seqwater.com.au](mailto:communications@seqwater.com.au).

## Cultural heritage

The site for the new substation was the original location of the former Chief Engineer's residence, which was built in the 1890s along with a group of houses for the plant's operators.

A cultural heritage investigation was conducted at the site in late-2017 and, while remnants of the former residence were discovered, there were no historical artefacts in the area.

Seqwater is working with a cultural heritage specialist to develop a plan, to protect heritage buildings and artefacts within the precinct.

## Road works

The project will involve upgrading the intersection on Stumers Road, in front of the future substation site, to allow safe access. We will keep local residents informed as planning progresses and if temporary changes to traffic conditions are required at any stage.

## Environment

There will be some tree clearing required to build the new electrical infrastructure. Environmental management plans will be in place during construction, however we expect there to be minimal impact on native plants and habitats.



*The sites of the existing and new substations*