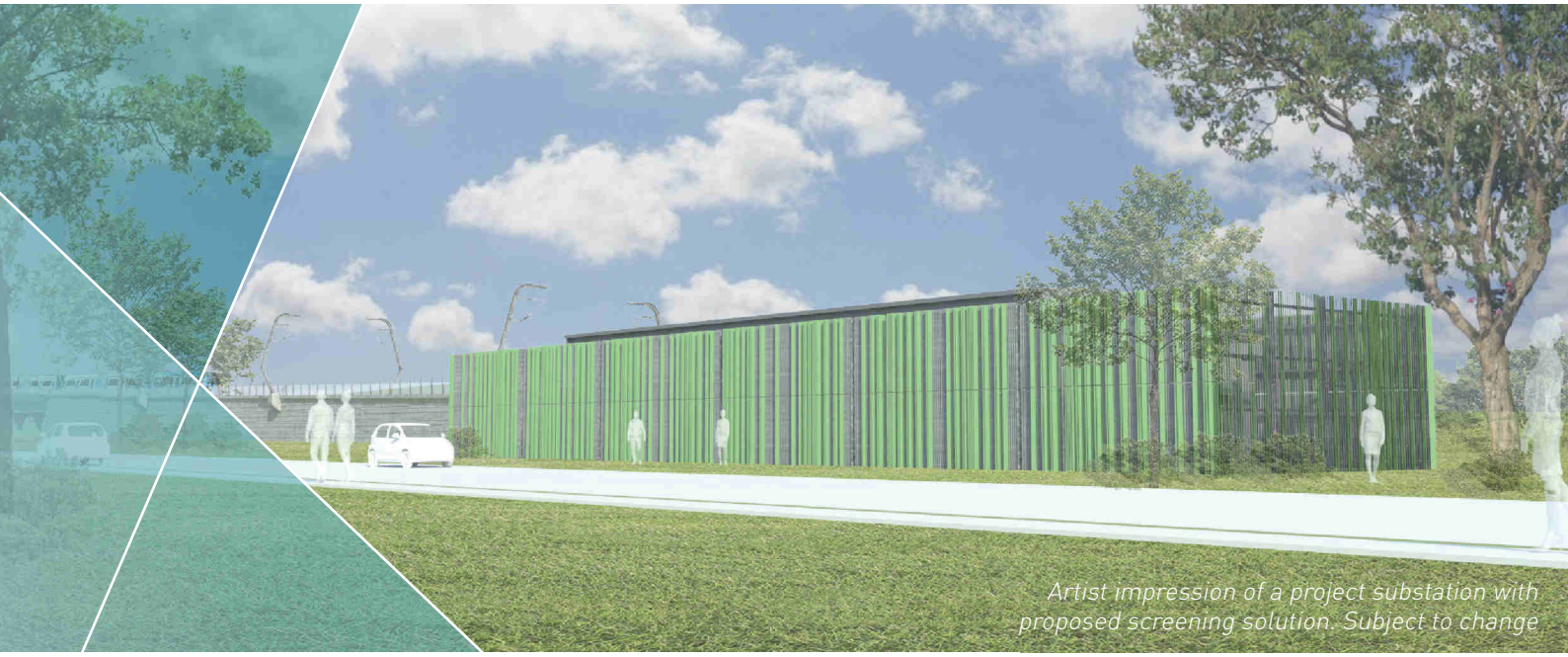
NEW ELECTRICAL SUBSTATIONS

LEVEL CROSSING REMOVAL PROJECT



Artist impression of a project substation with proposed screening solution. Subject to change

The Level Crossing Removal Project: Caulfield to Dandenong is removing nine level crossings and rebuilding five stations on the Cranbourne Pakenham train line. The project will reduce congestion on the local road and rail network, and deliver a safer and more reliable train service, contributing to a 42 per cent increase in capacity.

To be able to make these improvements and prepare the lines for new High Capacity Metro Trains (HCMTs) in 2019, we need to install 12 new electrical substations and upgrade 9 existing substations along the Cranbourne Pakenham line.

What is a substation and what are they used for?

A substation provides the necessary power to operate trains, signals and communication equipment.

As part of the Caulfield to Dandenong Project, the Level Crossing Removal Authority will be constructing 12 new substations and upgrading 9 existing on behalf of PTV.

Why do you need more substations along the network?

Substations are an integral part of Melbourne's train network. They convert and supply household electricity to operate trains, signals and communication equipment.
In order to make improvements to the capacity of the network, such as the introduction of HCMTs in 2019, we need to build new substations.
By undertaking these upgrades, more trains will be able to run along the Cranbourne Pakenham lines, ensuring the network can cater for future growth.

How were the locations for the new substations chosen?

The locations of substations have been determined by the power requirements of the new train and the proposed service plans, and to ensure the train receives a minimum voltage to be able to operate.

Where possible we are upgrading existing substations, and new substations have been placed to strengthen the network where there are no existing substations.

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LEVEL CROSSING REMOVAL AUTHORITY

VICTORIA State Government

How long will it take to build the substations?

Installation of the first substation started during July 2017 in Dandenong. Installation of the remaining substations will continue through 2017 and 2018. Each substation is expected to take two or three months to complete, dependent on the location, weather and ground conditions.

Will there be screening and landscaping around the substations?

New substations in residential areas will have screening and landscaping treatments.

The project team will also work to identify screening and planting opportunities for new substations in non-residential areas.

How big are the substations?

The 12 new substations are prefabricated buildings with the following standard dimensions:

Length	35 metres
Width	5.2 metres
Height	4.7 metres*

**This includes the substation foundations which are approximately 1.2 metres high.*

The nine substations that are being upgraded vary in size. At these substations, only the electrical equipment inside and outside the substation building will be upgraded.

Screening, vehicle access, parking and security bollards will extend past the perimeter of the substation. There will also be an external yard with electrical equipment at one end of the building.

Will the substations be noisy?

Noise modelling shows that noise from the substations will be minimal and in accordance with Australian Standards and Environmental Protection Authority Guidelines.

Will the substation affect my health and wellbeing?

The substation will access power through the street overhead power lines already running along the road reserve, therefore the electromagnetic emissions from the substation are not expected to be greater than the levels already produced by the power lines in the area.

All electrical equipment within the new substation complies with state and national standards and, as with the installation of substations across the metropolitan network, poses no risk to surrounding residents.

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