

JULY 2022

RUTHVEN SUBSTATION



Artist's impression only, subject to change

The Victorian Government is upgrading important rail infrastructure on the Clifton Hill group, including the Hurstbridge and Mernda lines, that will enable more train services, less crowding on peak trains and better connections to public transport in Melbourne's north east.

As part of these upgrades, a new substation will be built in Reservoir, on Ruthven Station Reserve, to enable additional services on the Mernda line. It will regulate the power source for Mernda line trains, allowing more trains to run more reliably.

The new Ruthven substation is part of broader upgrades on the Mernda and Hurstbridge lines that includes the removal of the nearby dangerous and congested Keon Parade level crossing and building a new Keon Park Station. Ruthven Station will also receive a \$1.03 million upgrade to lighting and facilities, with works set to start in late 2022.

Q&As

What is a substation?

A substation provides the power required to operate Melbourne's trains and signalling equipment and are common across the entire metropolitan network. It is a fully enclosed building that is owned by VicTrack and operated by Metro Trains Melbourne (MTM).

Why does the rail network need substations?

As demand for train services continues to grow and major rail infrastructure projects such as Metro Tunnel and the Level Crossing Removal Project provide capacity for more trains across Melbourne's network, rail power and signalling needs to be upgraded to enable more trains to run.

Substations also reduce the potential for faults to occur, which can cause unplanned disruptions to train services.

How do substations work?

Trains need a direct and constant source of power that can't be met by the street power supply. Substations do not generate power; they convert the local street power supply from power lines to the voltage required to run trains.

How are locations for substations chosen?

To provide optimum power for trains, substations are evenly placed along the rail corridor.

Power modelling for the Hurstbridge and Mernda lines indicates there is a need for additional power supply between existing substations at Thomastown and Reservoir to run more services.

The design, construction and operation of the substations are based on the principle of providing a safe and functional electrical supply. MTM has undertaken detailed modelling to determine the location of the new substation and to align with the required power output and temperature control to support the service uplift on the Mernda line.

The location for the new substation in Reservoir means the Mernda Line will have a more reliable power source, minimising unplanned disruptions to train services and enabling more trains to run.

When will the substation be built?

The site will begin to be occupied from early May for preliminary works to prepare for the substation installation. The substation will be prefabricated offsite and delivered in September 2022, and commissioned in early 2023.

How big is the substation?

Substations are typically six metres high from the ground, however by lowering the ground level at Ruthven, the substation will be only 3.76 metres high at street level. The substation will be 28 metres long and six metres wide.

The full substation area will be approximately 45 metres long and 15 metres wide and will include building footprint and staff car parking. It will be built within the existing rail corridor on VicTrack land.

What will the substation look like?

The substation will have architectural fencing, for safety and security.

What landscaping will be done?

24 new trees will be planted and around 500sqm of new garden bed with understorey planting and up to 2000 new plants and 1800sqm of re-seeded/reinstated grass areas will be created. A strip of garden bed will be planted between the footpath and the substation.

When will the substation be operational?

The substation will be operating from early 2023. The substation will typically be accessed by staff between 7.00am and 5.00pm. Emergency maintenance works may require the substation to be accessed outside of these hours.

For more information contact **1800 105 105** or email at contact@levelcrossings.vic.gov.au

Ruthven substation

